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Dixie National Forest Motorized Travel Plan

Final Environmental Impact Statement

Garfield, Iron, Kane, Piute, Washington, and Wayne Counties, Utah

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Dixie National Forest
Motorized Travel Plan
Final Environmental Impact Statement

Garfield, Iron, Kane, Piute, Washington, and Wayne Counties, Utah

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Abstract: This Final Environmental Impact Statement (FEIS) discloses the effects of modifying the current motorized travel plan for the Dixie National Forest to ensure compliance with new travel management regulations. Effects of the current travel plan are shown in analysis of Alternative A, the No Action Alternative. Under this alternative, use of the current travel system is maintained, including the allowance of cross-country travel on 61 percent of the Forest. Each of the four action alternatives describes a different combination of route designations for the approximately 6,000 miles of authorized and unauthorized routes on the Forest. All of the action alternatives would close the Forest to cross-country travel.

Project Website: http://www.fs.fed.us/r4/dixie/projects/MTP

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Summary

Purpose and Need for Action

The purpose of this project is to designate a system of authorized roads, trails, and/or areas for motor vehicle use in order to better protect natural resources, provide legal access, and improve recreation management and enforcement related to motor vehicle use on the Dixie National Forest. This purpose and need is in accordance with 36 CFR Parts 212, 251, 261 (which also incorporate Executive Orders 11644 and 11989), and 295 Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule (hereafter referred to as the Travel Rule).

Proposed Action

The action proposed by the Dixie National Forest to meet the purpose and need is to designate a motorized travel system that addresses the following four components:

1. Cross-country travel.
    a. Prohibition of motorized cross-country travel (travel off designated roads or trails) except as specified for permitted uses (e.g., firewood gathering, allotment maintenance), emergency fire suppression, search and rescue activities, law enforcement activities, military operations, and Forest Service administrative uses and purposes.
2. Designation of authorized National Forest System roads and motorized trails.
    a. Closure of currently authorized routes that will not be designated for motorized use and will therefore be removed from the National Forest System of roads and motorized trails. All routes removed from the system will be decommissioned.
    b. Designation of unauthorized routes that will be added to the National Forest System of roads and motorized trails, thereby becoming authorized routes.
3. Designation of authorized uses of National Forest System roads and motorized trails.
    a. Designation of routes that will be open to all uses.
    b. Designation of routes needed to accommodate administrative activities and permitted uses.
    c. Designation of routes needed for access to private lands, rights-of-way, easements, and other jurisdictions.
    d. Designations of routes with seasonal restrictions or routes that only allow certain types of vehicles.
4. Construction or relocation of designated National Forest System roads and motorized trails.
    a. Construction or relocation of routes to improve the transportation system or to respond to evaluation findings.

Issues

An issue is a concern, dispute, or debate about the environmental effect of an action. Issues were identified through the scoping process and internal review. Significant issues are defined

as those directly or indirectly caused by implementing the proposed action. Non-significant issues are identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Dixie National Forest identified the following four significant issues as the biophysical and social elements that drove the development, design, and analysis of the alternatives.

Access

The majority of the concerns or debates received by the Dixie National Forest during scoping regarded access. Many of those who commented preferred keeping all existing motorized routes in order to conduct traditional forest activities, to provide opportunities for family activities, and to maintain recreational access. Others wanted a decrease in motorized opportunities due to perceived negative impacts to biological and physical resources from motorized use. Many people were in favor of closing the Forest to cross-country travel.

Management of Administrative Routes

Administrative routes are Maintenance Level 1 roads that are closed to the public but may be used for administrative or permitted purposes. During scoping, people questioned whether or not the Dixie National Forest was able or willing to enforce the closure of administrative roads to the public. Others questioned more specifically if the Forest Service could maintain those administrative routes and suggested the number of administrative routes be reduced.

Physical and Biological Resources

Many people expressed concern over the potential negative impacts of motorized travel (both on and off of designated routes) on physical and biological resources. Some requested that any routes that are determined to be contributing to soil erosion be closed, while others expressed concern that OHV impacts to water quality on the Forest be considered. Riparian areas, including wet meadows and lakeshores, were also cited as areas of critical wildlife habitat where motorized routes should not be allowed.

Inventoried Roadless Areas

Inventoried Roadless Areas (IRAs) are those areas identified in a set of inventoried roadless area maps contained in the Forest Service Roadless Area Conservation, FEIS, Volume 2, dated November 2000. These IRAs are valued for their undeveloped character. Comments received during the scoping period revealed conflict and concern regarding the use of motorized vehicles in these IRAs.

Alternatives

Alternative A

This is the No Action Alternative. This alternative would retain all existing National Forest System roads and motorized trails as open. No non-system or unauthorized motorized routes would be added to the system. Current restrictions on cross-country travel (off-road or trail) would remain in place: cross-country travel would continue to be allowed on 1,150,113 acres (61 percent of the Forest), but would be prohibited on 735,943 acres (39 percent of the Forest).

Alternative B

This alternative emphasizes the protection of natural and cultural resources. Cross-country travel would be prohibited forest-wide. Some unauthorized routes, including those that must remain open for private property access, permitted uses, or administrative access, would be added to the system. Some system routes that are negatively impacting soil, water, and wildlife resources would be closed.

Alternative C

Alternative C was developed to address public and agency input received during scoping related to access and physical and biological resources. This alternative allows for a higher level of motorized access than does Alternative B. Cross-country travel would be prohibited forest-wide. More unauthorized routes, including routes that must remain open for private property access, permitted uses, or administrative access, would be added to the system than under Alternative B. Some system routes that are negatively impacting soil, water, and wildlife resources would be closed.

Alternative D

This alternative allows for a higher level of motorized access than does Alternative B or C, but less than Alternative E. Alternative D is a modified version of the proposed action released in December 2006. It includes changes made in response to public and government input made during scoping. Under this alternative, cross-country travel would be prohibited forest-wide. Some unauthorized routes, including those that must remain open for private property access, permitted use, or administrative access, would be added to the system. Some system routes that are negatively impacting soil, water, and wildlife resources would be closed.

Alternative E

This alternative provides the most motorized access on designated routes. With the exception of routes that are currently closed and/or decommissioned and those routes covered under previous and pending decisions, all non-system or unauthorized routes would be added to the system and designated as open to public motorized travel. All trails that are currently designated as non-motorized, however, would remain non-motorized. Cross-country travel would be prohibited forest-wide. There are approximately 215 routes or segments of

unauthorized routes currently located in IRAs. Under the Roadless Area Conservation Rule, no roads in IRAs may be added to the system, though motorized trails may be added. Under Alternative E, however, all 215 of these routes or segments of routes would be added to the system.

Comparison of Alternatives

The following table illustrates the differences between alternatives aggregated forest-wide.

Table S-1. Route Designation by Alternative – Forest-wide

Designation	Alternative				
	A	B	C	D	E
Administrative	631	959	1,037	962	399
Closed Classified	203	1,043	756	462	179
Closed Unauthorized	354	1,335	1,247	1,074	213
Existing Motorized Trail	97	101	89	103	90
Existing Non-motorized Trail	821	823	817	821	803
Existing Highway	139	139	139	139	139
Not Closed (Unauthorized)	1,022	0	0	0	0
Open - Street Legal	32	53	24	65	21
Open to All	2,768	1,445	1,648	2,284	4,276
Proposed Admin/Permittee ATV Only	0	0	0	<1	0
Proposed Motorized Trail	6	92	203	85	11
Proposed Motorized Trail Construction	0	0	0	1	1
Proposed Non-motorized Trail	3	133	148	88	3
Seasonal	87	38	53	74	36
Total	6,163	6,161	6,161	6,158	6167

All mileages rounded to the nearest 1 mile. Differences between totals by alternative due to minor mapping discrepancies in GIS

Affected Environment

Soils

Motorized vehicle use off roads and trails can degrade soil productivity. Direct mechanical impacts have several components: abrasion, compaction, shearing, and displacement. Indirect impacts include hydraulic modification (such as the disruption of surface water flow), reduction in infiltration and percolation, surface ponding, and the loss of water-holding capacity. In addition, disturbances from roads and trails can increase erosion and sediment delivery. Existing roads and trails are a primary source of long-term management-related sediment. Accelerated erosion and sediment delivery have been identified as a primary source of water quality pollution in many Dixie National Forest watersheds. Finally, soil productivity on the Dixie National Forest has been directly impacted by the type, extent, and location of designated roads, motorized trails, and cross-country motor vehicle use.

Hydrology

The major watersheds associated with the Dixie National Forest are the Virgin River, Colorado River, and Great Basin watersheds. Each of these larger watersheds are further sub-divided into 5th Hydrologic Unit Code (HUC) watersheds and numerous smaller 6th HUC watersheds of about 20,000 acres in size (31 square miles). There are 39 5th HUC watersheds and 179 6th HUC watersheds, which include areas on and off National Forest System (NFS) lands. Water quality impairments are associated with 40 of these 6th HUC watersheds (USDA 2009g). Most of the waters within the Forest boundary are considered High Quality Waters (Category I). The exceptions to this may be found in the Standards of Quality for the Waters of the State (UAC 2008b).

Rare Plants

Plant species selected for this analysis are composed of species that are listed as Threatened, Endangered, or Proposed under the Endangered Species Act (USDI 2005), and Sensitive Species listed on the Intermountain Region Proposed, Endangered, Threatened, and Sensitive Species list (USDA 2003a) that have habitat within areas open to cross-country travel. There are no Endangered plant species on the Forest (Rodriguez 2008). *Townsendia aprica* (Last Chance townsendia) is the only Threatened species located within the project area. The recovery plan for *Townsendia aprica* does not designate any critical habitat; however, threats to this species include road development and road building (USDI 1993). The following table lists those Sensitive plants considered in this analysis.

Table S-2. Rare Plant Species Analyzed

Scientific Name (Common Name)	Status	Presence and Location
Townsendia aprica (Last Chance townsendia)	T	Known on Teasdale
Astragalus limnocharis var. *tabulaeus* (Table Cliff milkvetch)	S	Known on Escalante; suspected on Powell
Botrychium paradoxum (paradox moonwort)	S	Known on Escalante
Castilleja aquariensis (Aquarius paintbrush)	S	Known on Escalante and Teasdale
Castilleja parvula var. *revealii* (Reveal paintbrush)	S	Known on Cedar City, Escalante, and Powell
Cryptantha ochroleuca (yellow-white catseye)	S	Known on Escalante and Powell
Cymopterus beckii (pinnate spring-parsley)	S	Known on Teasdale
Cymopterus minimus (Cedar Breaks biscuitroot)	S	Known on Cedar City, Escalante, and Powell
Eriogonum aretiodes (Widtsoe buckwheat)	S	Known on Escalante and Powell
Gilia caespitosa (Rabbit Valley gilia)	S	Known on Teasdale
Heterotheca jonesii (Jones goldenaster)	S	Known on Escalante
Penstemon bracteatus (Red Canyon beardtongue)	S	Known on Powell
Penstemon parvus (little penstemon)	S	Known on Escalante and Teasdale
Penstemon pinorum (pinyon penstemon)	S	Known on Pine Valley
Salix arizonica (Arizona willow)	S	Known on Cedar City, Powell, and Teasdale
Senecio malmstenii (podunk groundsel)	S	Known on Cedar City, Escalante, and Powell
Silene petersonii (Maguire campion)	S	Known on Cedar City and Powell
Sphaeromeria capitata (rock tansy)	S	Known on Powell
Thelesperma subnuda var. *alpina* (Bicknell thelesperma)	S	Known on Teasdale

T = Threatened; S = Sensitive.

Vegetation and Fire and Fuels

Vegetation on the Dixie National Forest consists of trees, shrubs, grasses, and forbs. Some of the most common uses of Forest vegetation include:

- Conifers and aspen: saw timber, mine timbers and props, fence material (poles and posts), house logs, firewood, Christmas trees, and cones and seeds,
- Shrubs: deer and elk forage, limited livestock forage, ornamentals, berries for wildlife and humans, and
- Grass and forbs: elk and livestock grazing, seeds (wildlife food source).

The vegetation on the Forest has been affected by change elements including wildfire, drought, and insect infestations. Thinning, salvaging dead trees, and treating accumulations of dead wood to reduce fuels require a reasonable level of motorized access. Decades of wildfire suppression has kept fire out of aspen groves. Low or absent demand for aspen wood products has resulted in minimal acres of aspen managed for regeneration. The current forest products program on the Forest averages timber harvest on 1,500 to 2,000 acres annually. Tree seedlings are planted on about 500 acres annually across the Forest to replenish stands killed by bark beetles or fire, and a few stands receiving regeneration harvest (Jump 2008).

Aquatic Biota

Aquatic biota on the Forest can be broken into four broad categories: sport fish, non-game fish, amphibians, and aquatic macroinvertebrates. The more inconspicuous forms of aquatic biota such as aquatic mollusks and aquatic plants have not generally been studied across the Forest, and there is little trend data on macroinvertebrates. The Forest contains portions of 39 5th field Hydrologic Unit Code (HUC) watersheds. Only those 22 watersheds within the Forest boundary that support self-sustaining fisheries have been analyzed.

Terrestrial Wildlife

Habitat effectiveness for many species is affected by road-associated factors that negatively affect habitats and populations of terrestrial vertebrates. These factors include habitat fragmentation, disturbance, mortality, and loss of habitat facilitated by motorized access (Wisdom et al. 2000). The following table lists those wildlife species considered in this analysis.

Table S-3. Wildlife Species Analyzed

Common Name	Status
California condor	E*
Mexican spotted owl	T
Mojave Desert tortoise	T
Utah prairie dog	T
American peregrine falcon	S
Bald eagle	S
Flammulated owl	S
Greater sage grouse	S
Northern goshawk	S
Pygmy rabbit	S
Spotted bat	S
Townsend's big-eared bat	S
Three-toed woodpecker	S
Mule deer	MIS
Northern flicker	MIS
Rocky Mountain elk	MIS
Wild turkey	MIS
Black-throated gray warbler	O
Brewer's sparrow	O
Broad-tailed hummingbird	O

* = Endangered west of I-15, Experimental non-essential population east of I-15; T = Threatened; S = Sensitive; MIS = Management Indicator Species; O = Other species of concern.

Social and Economic Resources

The Dixie National Forest is associated with quality of life values for a variety of people. Among other contributions that the Forest provides, and for which roads and trails are used:

- Homeowners and visitors value the scenery and nearby recreation opportunities the Forest provides,
- Permitted ranchers utilize the Forest to provide grazing for sheep and cattle,
- Vegetation is managed through a variety of projects that include commercial logging,
- Communities and private landowners benefit from a number of special use authorizations that facilitate including water improvements, roads, and utilities,
- Game species populations are largely managed through seasonal hunting by the public,
- Commercial recreation opportunities are permitted to occur on the Forest, such as skiing, resorts, and guided recreation.

The landownership patterns in Garfield, Iron, Kane, Piute, Washington, and Wayne counties are dominated by federal land. Less of the area's economic base is now reliant on resource extraction and gathering of forest products than it once was. Recreation and tourism are becoming the major industry in some counties, with federal land providing much of the opportunity.

Livestock Grazing

Livestock grazing has been an historic and traditional use of the Dixie National Forest for over 100 years. Grazing on the National Forest is authorized by Congress and is a significant use on the Dixie National Forest. Livestock forage is an important Forest product and many permittees use this forage to meet at least part of their year-round grazing needs. There are 104 grazing allotments on the Dixie National Forest (81 cattle and 23 sheep allotments). Approximately 18,000 head of cattle and their calves, and 11,000 head of sheep and their lambs are permitted on the Forest (USDA 2006a). Presently about 263 grazing permittees are authorized to graze their livestock on 104 grazing allotments. About 769,000 acres (41 percent) of the Dixie National Forest are suitable for grazing cattle and sheep.

Noxious Weeds

The Forest Service defines noxious weeds as ". . . plants designated as noxious weeds by the Secretary of Agriculture or by the responsible State official. Noxious weeds generally possess one or more of the following characteristics: aggressive and difficult to manage, poisonous, toxic, parasitic, a carrier or host of serious insects or disease and being native or new to or not common the United States or parts thereof" (FSM 2080.5). Currently, there are 53 species identified on the Regional Designated Noxious Weed and Undesirable Plant List. Twenty-one of these species occur in Utah and nine occur on the Dixie National Forest. Two additional weeds have been proclaimed noxious by Iron County and Garfield County: bull thistle and field bindweed, respectively. Noxious weed species on the Dixie National Forest:

1. Bull thistle (*Cirsium vulgare*),[1]
2. Canada thistle (*Cirsium arvense*),
3. Dalmatian toadflax (*Linaria genistifolia* spp. *dalmatica*),
4. Field bindweed (*Convolvulus arvensis*),[2]
5. Musk thistle (*Carduus nutans*),
6. Perennial pepperweed (*Lepidium latifolium*),
7. Russian knapweed (*Acroptilon repens*),
8. Scotch thistle (*Onopordum acanthium*),
9. Spotted knapweed (*Centaurea maculosa*),
10. Whitetop (*Cardaria draba*), and
11. Yellow star-thistle (*Centaurea solstitialis*).

Special Uses

There are currently over 400 issued special use permits within the boundaries of the Dixie National Forest's Motorized Travel Plan project area. Permitted uses include, but are not limited to, fixed improvements, easements, and recreational activities. Special use authorizations can vary greatly in length of time. Some term permits are only authorized for a few months, while others, such as those for winter resorts, may be authorized for 40 years. Special uses also vary greatly in requirements, with some such as short-term recreation events only using a few trails during the summer months, while an oil and gas pipeline may require a 30-year permit and the use of large areas of land.

[1] Noxious weed in Garfield County.
[2] Noxious weed in Iron County.

Recreation

Recreation is a primary use of the Dixie National Forest. Visitors come to the Forest for a wide variety of activities and experiences ranging from primitive wilderness settings to developed campgrounds to permitted resorts and a downhill ski area. There are 42 recreation residences on the Forest. Thirty-nine outfitter-guides are authorized to operate on the Forest, providing guided hunting, fishing, OHV and mountain bike touring, and horse riding trips. Dispersed camping, including dispersed use for large family reunions and hunting camps, is popular.

According to the National Visitor Use Monitoring results, approximately 20.7 percent of visits to the Dixie National Forest in 2003 were by people from Washington County, Utah. Approximately 7.4 percent were from Iron County, Utah, and approximately 8.6 percent were by people from Clark County, Nevada. Two percent were from Garfield County and approximately 1.4 percent were from Kane County. Approximately 0.8 percent were from Salt Lake City.

Some of the more popular recreation uses of the Forest include camping, trail use (both motorized and non-motorized), and hunting and fishing.

Developed Camping: Camping at developed recreation sites is a popular recreation activity, with 26 campgrounds and 5 picnic sites on the Forest.

Dispersed Camping: Dispersed camping, or camping in non-developed areas, is a common recreation activity on the Dixie National Forest, occurring primarily during the summer and the fall hunting season. There are currently 1,624 inventoried dispersed campsites on the Forest.

Motorized Trail Use: There are 1,500 miles of trails on 266 designated trails providing recreation opportunities including hiking, biking, horseback riding, and OHV riding.

Non-motorized Trail Use: There are 1,087 miles of designated non-motorized trail on the Forest, 155 miles of which are located in federally-designated wilderness areas.

Great Western Trail: The Great Western Trail (GWT) is a long distance trail that traverses approximately 4,455 miles across five states; 226 of these miles are on the Dixie National Forest. The GWT provides for approximately 139 miles of motorized opportunities and 87 miles of non-motorized opportunities.

Motorized Use: There are a total of 3,475 miles of roads and trails open to OHV/ATV recreation: 413 miles of designated motorized trails, 2,580 miles of level 2 roads, and 482 miles of level 3 roads.

Hunting and Fishing: There is extensive hunting use on the Forest during the general season deer and elk hunts. Limited Entry elk hunts occur in the Panguitch Lake area north of Highway 14 on the Cedar City Ranger District, the Mount Dutton area north of Highway 12 on the Powell Ranger District, and the Thousand Lake area on the Teasdale portion of the Fremont River Ranger District. The Paunsaugunt Limited Entry Deer hunt occurs south of Highway 12 on the Powell Ranger District. A Limited Entry antelope hunt occurs in the Panguitch Lake, Paunsaugunt, Mount Dutton, and Pine Valley areas as well. Popular fishing sites are numerous and include opportunities for anglers to catch various trout and smallmouth bass.

Scenery

In 2000 the Forest Plan was amended to update from the Visual Management System to the Scenery Management System. The amendment specified Scenery Integrity Objectives (SIOs) for each management area. Scenic integrity is defined as "a measure of the degree to which a landscape is visually perceived to be 'complete.' The highest scenic integrity ratings are given to those landscapes that have little or no deviation from the character valued by constituents for its aesthetic appeal" (USDA 1995b). Scenic Integrity Objectives describe the objectives for management, or the desired future conditions.

Roadless and Unroaded and Undeveloped Areas

For purposes of this report, two categories of areas will be discussed. IRAs refer to those specific areas identified in the Roadless Area Conservation Final FEIS (USDA 2000c); Unroaded and undeveloped areas refer to an inventory conducted for plan revision of areas with unroaded and undeveloped characteristics. Although IRAs and unroaded areas may have some overlap, the map layers were developed independently of each other and were therefore analyzed separately.

IRAs: There are 42 IRAs covering a total of approximately 771,960 acres, which represents approximately 43 percent of the analysis area for this EIS. Several of the IRAs are smaller than 5,000 acres, but are adjacent to larger tracts of wilderness, within other IRAs, or adjacent to potential wilderness on land administered by the BLM. The following table lists the acreage of IRAs on the Dixie National Forest by ranger district.

Table S-4. Inventoried Roadless Area Acreage on the Dixie National Forest by Ranger District

Ranger District	IRA Acres
Pine Valley Ranger District	
Pine Valley IRA Total	252,057
Cedar City Ranger District	
Cedar City IRA Total	48,055
Powell Ranger District	
Powell IRA Total	166,958
Escalante Ranger District	
Escalante IRA Total	100,083
Teasdale Portion of Fremont River Ranger District	
Teasdale IRA Total	204,805
Forest-wide IRA Total	771,958

Unroaded and Undeveloped Areas: There is no policy, law, or directive guiding the management of unroaded/undeveloped areas that lie outside of IRAs or wilderness. Currently, the only guidance for these areas is general forest or management area direction. On the Dixie National Forest, there were 50 areas identified as unroaded and undeveloped that were evaluated for wilderness potential. Of the 1,056,221 acres in that inventory, only about 29 percent fall outside an IRA or designated wilderness area. The table below shows the total area of the unroaded areas identified on the Dixie National Forest by ranger district.

Table S-5. Unroaded and Undeveloped Area Acreage on the Dixie National Forest by Ranger District

Ranger District	Acres
Pine Valley Ranger District	
Pine Valley Unroaded/Undeveloped Total	380,180
Cedar City Ranger District	
Cedar City Unroaded/Undeveloped Total	100,249
Powell Ranger District	
Powell Unroaded/Undeveloped Total	203,114
Escalante Ranger District	
Escalante Unroaded/Undeveloped Total	169,943
Teasdale Portion of the Fremont River Ranger District	
Teasdale Unroaded/Undeveloped Total	202,735
Forest-wide Total of 2005 Unroaded and Undeveloped Acres	1,056,221

Cultural Resources

The cultural resources of the Dixie National Forest represent a wide diversity of site types, cultural groups, time periods, and even resources (including paleontological resources). A limited number of sites have been identified for public use, though they are currently in various stages of formal designation. These include the Spanish Trail designated by Congress as a National Historic Trail in 2002, and the Hell's Backbone Bridge. Several administrative sites, including the Podunk, Cowpuncher, and Aquarius guard stations, have been designated for use under the Forest Service Rustic Cabin Rental program. Lower and Upper Enterprise Reservoir Dams, Leeds Creek Kiln, and several other sites are in the process of being designated.

Two sites on the Forest and one adjacent with features on the Forest have been listed on the National Register of Historic Places: Long Flat Archaeological Site, designated in 1978; the Mountain Meadows Massacre District, designated in 1975; and Historic Iron Town, designated in 1978. Many other sites on the Forest are potentially eligible for nomination to the National Register.

Individuals from adjacent American Indian tribes continue to utilize areas within the Dixie National Forest visiting sites and gathering and using resources from the area. Some have ties to natural features, ancient villages, campsites, rock art, and burial sites that they consider sacred. There are no Treaty Rights within the boundaries of the Forest with any of the Tribal groups adjacent to the Forest.

Transportation

In 1996 the Dixie National Forest began inventorying all motorized routes on the Forest. This effort resulted in a Global Positioning System motorized route inventory that was completed in summer 2005. This inventory provides the base data layer for this travel planning project.

Table S-6. Total Miles of Road on the Forest

Area	Current System Miles	Current Non-System Miles	Total
Cedar City	1,011	393	1,404
Escalante	794	333	1127
Pine Valley	468	198	666
Powell	805	455	1260
Teasdale	348	104	452
Forest-wide	3,426	1483	4,909

*Includes miles from previous and pending decisions.

The maintenance categories vary the frequency and intensity of all maintenance activities. Road maintenance standards are set by the road's maintenance level and are described in the Forest Service's Road Preconstruction Handbook (FSH 7709.58,10). The following table summarizes the maintenance levels of the current system.

Table S-7. Miles of Road by Operational Maintenance Level

Area	Miles by Operational Maintenance Level					Total
	1	2	3	4	5	
Cedar City	84	753	140	19	15	1,011
Escalante	226	423	145	0	0	794
Pine Valley	9	364	87	8	0	468
Powell	27	694	75	9	0	805
Teasdale	27	291	29	1	0	348
Forest-wide	373	2,525	476	37	15	3,426

The Forest performs road maintenance on the Forest road system as funding allows. On the Dixie National Forest it is estimated that approximately 25 percent of the road system miles receives some annual maintenance, including maintenance done by the counties.

Environmental Consequences

Soils

Alternatives B, C, and D (in the same order of preference) would result in beneficial cumulative effects to soil resource in response to past, present, and future implementation of travel management actions on the Forest. Some of these actions are included in signed decisions that have yet to be implemented on the ground. All of these projects either reduced total motorized route mileage or reduced route encroachment on steep soils or highly erodible areas. These actions have been initiated primarily to improve watershed function and aquatic and terrestrial habitat conditions. Alternative A would have a continuance of negative effects as it would allow continued cross-country travel on 61 percent of the Forest. Alternative E would increase the number and miles of road on the Forest and would also increase negative effects.

Hydrology

Since detrimental disturbance to soils from proposed road mileage does not exceed the 5 percent threshold in any of the riparian influence zones, none of the watersheds are expected to display impacts initially under Alternative A. In time, however, this would change as the proliferation of user-created routes within the riparian influence zone, coupled with effects from other forest uses, would exceed the 5 percent threshold and lead to detrimental changes in vegetation health, stream channel integrity, water quality, and bedload.

Since detrimental disturbance to soils from proposed road mileage does not exceed the 5 percent threshold in any of the riparian influence zones, none of the streams are expected to display any cumulative impacts from implementation of Alternatives B, C, or D. In fact, if disturbance from other past, present, and future uses were doubled, the impacts to the riparian influence zone in all 179 watersheds would still not exceed the 5 percent threshold.

Under Alternative E detrimental disturbance to soils from proposed road mileage does not exceed the 5 percent threshold in any of the riparian influence zones, and none of the streams are expected to display any cumulative impacts. With the exception of one watershed, if disturbance from other past, present, and future uses were doubled, the impacts to the riparian influence zone in all 179 watersheds would still not exceed the 5 percent threshold. The single watershed where the threshold would be exceeded if disturbance were doubled is Cottonwood Creek (160300020406) on the Powell Ranger District.

Rare Plants

The action alternatives (Alternatives B, C, D, and E), all of which close the Forest to cross-country travel and restrict travel to designated routes, would have little to no affect on any populations of the 18 analyzed Sensitive plant species with known populations on the Dixie National Forest. In addition, Alternatives B and C would have no detrimental effect to *T. aprica*. Under these alternatives cross-country travel is closed and travel routes are limited; these alternatives have deterred possible future damage. Alternatives D and E would have a may affect, not likely to adversely affect determination for populations of *T. aprica*. This determination is based on the fact that suitable habitat and a few individuals in some populations may continue to be affected, while other populations would not be affected. Any of the action alternatives would be more restrictive than Alternative A. Populations of *T. aprica* would be benefited by any action alternative over time due to the substantial reduction of the area where motorized activity would be allowed.

Vegetation and Fire and Fuels

All alternatives would provide reasonable motorized access to all of the vegetation management projects planned on the Dixie National Forest for the next five years. All alternatives would also provide motorized access to major portions of suitable timber lands. Alternative E provides the greatest number of miles of open roads for these purposes and for general public access. Alternatives A and D also provide open public roads to most forested areas. Alternatives B and C offer the least amounts of motorized access, and some roads closed in these alternatives might need to be reopened in the future to manage vegetation resources.

Effects of the motorized transportation system on wildfire suppression cannot be quantified as fires begin in somewhat random locations. Where motorized access exists, it is logical to assume that fire crews and equipment can get to fires faster so fires would have less time to burn before initial attack begins. This should result in generally smaller fires where they are accessible by motorized travel. Alternatives A and E would therefore offer a somewhat lower risk of larger fires. Alternative B would offer the highest risk of larger fires since fewer miles of roads are open. Alternatives with more roads, however, offer additional areas accessible to people in vehicles and a corresponding higher risk of human-caused fires. Alternative B has the fewest miles of open road so would offer a somewhat lower risk of human-caused fires. Alternatives A and E have the most miles of open roads so would offer higher risks of human-caused fires.

Aquatic Biota

Selection of any of the action alternatives would result in slight beneficial effects to aquatic biota populations and habitat on the Forest. This is primarily a response to the elimination of cross-country travel. Additionally, Alternatives B, C, and D would reduce total motorized route mileage across the Forest and within certain watersheds. However, these effects are not likely to result in marked improvement in fish biomass production or a wholesale improvement in aquatic habitats on the Forest. Selection of Alternative A would result in a continuation of current deleterious effects to aquatic biota populations and habitat associated with the motorized travel system. The primary causative factor behind these effects is the continuation of cross-country travel and the persistence of specific routes within riparian areas and key watersheds.

Terrestrial Wildlife

A reduction in the number and miles of motorized roads and trails and elimination of areas open to cross-country travel are expected to reduce access into wildlife habitat and result in an increase in habitat effectiveness. This is true for all alternatives but Alternative A. Benefits include:

- An eventual restoration of lost habitat, and reduction in fragmentation and edge as the habitat returns,
- A decrease in disturbance, displacement, harassment, or mortality,
- A decrease in snags and downed wood lost to firewood collection, and
- A decrease in barriers to movement.

Social and Economic Resources

Garfield and Kane Counties

Under Alternative B there would be greater pressure on the counties' economies to change and provide services to non-motorized visitors. As motorized recreation opportunities would be reduced from those available in Alternative A, Alternative B would have the highest chance of creating a disruption to the existing social and economic conditions in Garfield and Kane Counties. Under Alternative C there would be more motorized opportunities available than in Alternative B, but not as many as in Alternatives A, D, and E. This alternative would have the

second highest potential disruption to social and economic conditions in the counties. There would not likely be much impact upon the economic and social resources in Garfield or Kane County under Alternative D. Under Alternative E, a very large number of motorized roads and trails would be open to the public. This could create some positive impacts to businesses that deal directly with recreation vehicle sales, rental, and repair. Motorized opportunities at this scale could, however, create a disincentive for other visitors (e.g., those pursuing non-motorized opportunities) to visit either county.

Iron County

Under Alternative B, the reduction of roads and trails open to the public could impact the organized groups and ATV events in Iron County. This alternative would have the largest impact on those activities. The impacts under Alternative C would be slightly less than Alternative B, but otherwise similar. Alternative D would not negatively impact ATV clubs or events, but non-motorized users and businesses that depend upon their patronage could be impacted. Under Alternative E, the provision of a large amount of motorized roads and trails could impact the sectors of the economy that depend upon other types of trail users (e.g., hiking and mountain biking). The differences between alternatives are not great as far as their impacts on the county as a whole. Overall, social and economic resources in Iron County are not likely to be impacted under any alternative.

Piute County

Dixie National Forest lands make up only about one-half of one percent of Piute County's land base, and there are no identified roads or trails on the Forest in the county. There would be no social or economic impacts in any alternative.

Washington County

Under Alternative B the reduction in the mileage of roads and trails open to the public could impact organized groups and ATV events in Washington County. This alternative would have the largest impact on those activities. The impacts under Alternative C would be slightly less than Alternative B, but otherwise similar. Alternative D would not negatively impact ATV clubs or events, but non-motorized users and businesses that depend upon their patronage could be impacted. Under Alternative E, the provision of a large amount of motorized roads and trails could impact the sectors of the economy that depend upon other types of trail users (e.g., hiking and mountain biking). The differences between alternatives are not great as far as their impacts on the county as a whole. Overall, social and economic resources in Washington County are not likely to be impacted under any alternative.

Wayne County

Alternative B would represent the biggest change from the current use patterns in Wayne County. Since the county's economy is very specialized and vulnerable to disruptions, Alternative B would have the greatest potential impact on the county's social and economic resources. Impacts would be less than in Garfield and Kane County, however, because there

are no clubs or events that depend upon motorized recreation, and only a few businesses that do. Under Alternative C there would be more motorized opportunities available than under Alternative B, but not as many as in Alternatives A, D, and E. Alternative C would have the second highest potential disruption to social and economic conditions in Wayne County. There would not likely be much impact upon the aspects of the social and economic resources in Wayne County under Alternative D. There would be a very large number of motorized roads and trails open to the public in Alternative E. Motorized opportunities at this scale could, however, create a disincentive for other visitors to come to the county.

Livestock Grazing

Livestock grazing activities, whether affecting the livestock themselves or the permittee, are not expected to be affected by implementing any of the travel management alternatives. Permittees may be allowed motorized access to maintain or develop range improvements assigned in their grazing permits or for other authorized administrative activities. No direct or indirect effects are anticipated under any of the alternatives as motorized access is and can be authorized through the grazing permit regardless of the configuration of the Forest's motorized travel system.

Noxious Weeds

Increases in noxious weed invasion and spread can occur as a result of increased miles of road, ground disturbance, or fire. It is anticipated that new weeds would continue to invade public lands and other lands from various sources. Existing infestations would continue to be treated aggressively until they are controlled, contained, and/or eradicated. Project design features would be used with any new federal projects, which would aid in decreasing the introduction and spread of noxious weeds and invasive species. None of the alternatives would appreciable accelerate the spread of noxious weeds over the existing trend.

Special Uses

All alternatives could cause some displacement of recreation-related permitted operations within the cumulative effects area. Displacement of permitted activities could be further impacted if locations adjacent to the project area implement land management actions that severely reduce motorized route mileage. Adjacent areas would generally fall under authorization of the BLM (Richfield, Kanab, St. George, and Cedar City field offices) and the Forest Service (Fishlake National Forest). Recreation-related permitted holders seeking a non-motorized or primitive experience would see a positive cumulative effect across all action alternatives.

Non-recreation special uses are not anticipated to experience any cumulative effects from the action alternatives because the alternatives were designed to maintain known access. However, non-system routes identified as necessary for private property, permittee, or administrative access within areas closed to cross-country travel areas would not be open to motorized travel, thus potentially jeopardizing occupancy or re-issuance of special use permits.

Recreation

Implementation of any alternative could result in the displacement of some Forest visitors. A travel plan that does not offer the particular desired setting or desired mode of transportation on

a preferred road, trail, or area could displace some people to other areas or they may choose to engage in other activities. In addition, adjacent areas may see an increase in impacts associated with increased use with the implementation of the Dixie National Forest Motorized Travel Plan. This could be especially true with Alternatives B, C, and D due to the fact that these alternatives reduce motorized route mileages as compared with Alternative A.

Scenery

The major influences on scenery within and adjacent to the project area have been timber harvest, insect infestations, fuel treatment, fire, roads, trails, and recreation development, all of which have the potential to change the vegetative cover and landform being viewed on the Forest. Both of the routes proposed for construction in Alternatives D and E may diminish the views that Forest users would experience. This may be particularly true for those seeking a more primitive experience or those whose expectations are altered or are not met due to the presence of motorized routes and associated impacts. However, due to the scale of acres affected, impacts are not significant for the cumulative effects area.

Roadless and Unroaded and Undeveloped Areas

Alternative B, C, or D would not add cumulatively to impacts on roadless characteristics or wilderness values. Alternative E may provide the potential for increased use within some areas. Foreseeable activities that would impact roadless characteristics or wilderness potential of IRAs or unroaded areas include oil and gas development and utility construction. There are existing utility corridors within or adjacent to IRAs and unroaded areas that were established prior to RACR or the unroaded inventory. Future development may occur throughout these corridors and could impact both roadless character and wilderness potential. In the event that oil or gas production is initiated, the roads and associated infrastructure are not likely to occur within an IRA so long as RACR is in place. However, with so much of the Forest falling within IRAs, a development could potentially occur adjacent to an IRA and within an existing unroaded area. The apparent naturalness of the area adjacent to the development would be impacted.

Cultural Resources

The increase in regional population and popularity of the Dixie National Forest is correlated to an increase in damage to archaeological and historical resources from visitation, including that caused by vandalism. As the popularity of OHVs and recreation activities increases, the increase of impacts to all cultural resources on the Forest is now at a critical stage. As cultural resources are nonrenewable, it is critical that we preserve and protect those remaining resources. Archaeological resources, historical sites, and paleontological resources within the Forest would continue to be impacted by natural process. The agency and other development projects conducted by non-agency groups would continue to be conducted in the foreseeable future. Prior to any activities either conducted by the Forest Service or outside groups under special use permits, all ground-disturbing activities would have cultural resource surveys conducted prior to their implementation as outlined in law governing the protection of these resources.

Transportation

All alternatives maintain primary access to major sites and facilities. Alternatives B, C, and D reduce the miles of designated roads, which reduces overall motorized access to the Forest. However, even under Alternative B, which has the lowest miles of designated roads, access to private property, most permitted activities, and forest administrative uses should remain intact. All Operational Maintenance Level 3, 4, and 5 roads would remain open. These roads provide important access for Forest management activities and form the backbone of the Forest Transportation System. Moreover, the existing public access to and through the Forest provided by county and state roads would remain the same for all alternatives.

Appendices

Appendix A: Data Tables and Designation Key

The tables in this appendix display route data broken out by ranger district. All mileages are rounded to the nearest one mile. The designation key, including crosswalks to the open and closed summary and the MVUM designations, is located in this appendix.

Appendix B: Response to Comments

In May 2008, the Dixie National Forest circulated the DEIS for comment. In response, the Forest received approximately 175 letters, emails, and other comment types. In accordance with 40 CFR 1503, the Agency has evaluated the comments that were received in response to the DEIS. Appendix B contains summaries of each comment and the associated Forest Service response.

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Chapter 1: Purpose of and Need for Action

1.1. Location of Project Area

The Dixie National Forest is the largest of the six national forests in Utah, covering close to two million acres and stretching for over 200 miles. The Forest is located in Garfield, Iron, Kane, Piute, Wayne, and Washington counties in southcentral and southwestern Utah. There are currently four ranger districts on the Forest: Cedar City, headquartered in Cedar City; Escalante, headquartered in Escalante; Pine Valley, headquartered in St. George; and Powell, headquartered in Panguitch. The Supervisor's Office is collocated with the Cedar City Ranger District in Cedar City.

In March 2006 the Teasdale Ranger District on the Dixie National Forest and the Loa Ranger District on the Fishlake National Forest were consolidated into the Fremont River Ranger District. This new ranger district is administered by the Fishlake National Forest, though the area that was the Teasdale Ranger District remains part of the Dixie National Forest. As this Motorized Travel Plan was begun prior to the reorganization, the Teasdale portion of the Fremont River Ranger District is included in this analysis. The Fremont River Ranger District is headquartered in Loa, and the Fishlake National Forest Supervisor's Office is in Richfield.

The project area for the Motorized Travel Plan comprises approximately 1,883,730 acres. The area is portrayed on the following two maps: State of Utah Vicinity Map on page 1-3, and Southern Utah Vicinity Map on page 1-4.

Map name: State of Utah Vicinity Map
File name: ch1_map01_vicinity_state.pdf
File size: 653 KB

Map name: Southern Utah Vicinity Map
File name: ch1_map02_vicinity_so_utah.pdf
File size: 483 KB

1.2. Background

Increased recreational use and demand, including increased off-highway vehicle (OHV) use, on the Dixie National Forest has been linked to the immense population growth of southwestern Utah, Salt Lake City, and Las Vegas, Nevada, over the past decade. Concurrent growth of subdivisions located within and adjacent to the Dixie National Forest has also occurred, accounting for hundreds of building permits issued annually for private residential and vacation homes. Increased OHV use and related impacts have been observed surrounding these growing forest communities.

Dale Bosworth, former Chief of the Forest Service, identified unmanaged recreation – particularly impacts from OHVs – as one of the key threats facing national forests today. Locally, as well as regionally and nationally, unmanaged OHV use on federal lands has resulted in unplanned roads and trails, erosion, watershed and habitat damage, impacts to cultural sites, and increasing degradation of recreational experiences, especially a loss in opportunities for solitude, primitive hunting, and other quiet experiences.

The current Dixie National Forest Travel Map relies on the “open unless posted closed” enforcement method, which is complicated to interpret and difficult to administer. In addition, the lack of consistent management policies between the Dixie National Forest and other nearby national forests and other land management agencies is confusing for the public and inhibits cooperative law enforcement and successful prosecution of offenders.

All of the factors described above have contributed to the current situation where some motorized travel is occurring on routes where motorized use is prohibited. In some areas of the Forest open to cross-country travel there are networks of user-created routes that are causing use conflicts and resource impacts. Problems do not occur equally throughout the analysis area. Some of this use has occurred in riparian areas and on highly erosive slopes. In other areas, use is very light and little or no effects from motorized cross-country travel are evident. Types of impacts include the introduction and spread of invasive plants, displacement and compaction of soils, impacts to rare plants, rutting of wetlands, disturbance of wildlife and livestock, damage to cultural resources, degradation of water quality, and impacts to riparian and fisheries habitat.

The Fishlake National Forest began the process of updating their motorized travel plan in 2004. In December 2006, the Fishlake Forest Supervisor signed a Record of Decision, and implementation of the Fishlake motorized travel plan began late summer 2007. The decision covers motorized travel on the Loa portion of the Fremont River Ranger District. The Dixie National Forest has worked closely with the Fremont River Ranger District to ensure that decisions made on the Teasdale portion are consistent with those made earlier on the Loa portion.

1.3. Route Analysis

In January 2001 the Forest Service issued interim administrative directives requiring that all road management activities, including construction, reconstruction, or obliteration, must be

preceded by a roads analysis that identifies the need for a road and emphasizes a minimum road system (USDA 2001).[1] In 2003 the Dixie and Fishlake National Forests completed a combined Roads Analysis Process report (RAP) (USDA 2003b). This analysis evaluated the need for and determined the environmental impacts of operational maintenance level 3, 4, and 5 roads. These are higher standard roads that are maintained for low clearance (passenger car) vehicles.

As part of this Motorized Travel Plan, a supplemental RAP was completed for the remaining maintenance level 1 (closed) and 2 (high clearance vehicle) roads, as well as for all motorized trails on the Forest and all non-system (unauthorized) routes (USDA 2006c). Routes covered in previous and pending decisions, however, were not included as those decisions either contained a separate RAP and/or a travel management component. The supplemental RAP considered the need for the remaining system and non-system roads and trails and weighed those needs against possible environmental, social, and safety concerns. It also made recommendations for management of those roads and trails.

A Travel Analysis Process (TAP) as described in the draft directives generally is a more broad analysis than that conducted under a RAP, but extends to trails and designated areas, not just the roads required in a RAP. The RAP prepared for the Dixie (comprising the original 2003 version and the 2006 supplement) provides a more detailed analysis of all roads and motorized trails on the Forest than the analysis required in a TAP. None of the action alternatives propose any designated areas on the Forest.

1.4. Desired Condition

The Dixie National Forest's goal related to OHV management is to manage the use of OHVs in partnership with other federal and state land management agencies, local governments, and communities and interest groups to protect public lands and resources while providing opportunities for the safe use and enjoyment of OHVs on designated roads and trails that comply with the Dixie National Forest's Land and Resource Management Plan (hereafter referred to as the Forest Plan) (USDA 1986, pp IV-3 and IV-11).[2]

The desired condition is to provide a range of motorized recreation opportunities, recognizing their legitimate use while minimizing the current or anticipated effects on wildlife and their habitat, soil, vegetation, water, fish, and other users.

1.5. Purpose of and Need for Action

The purpose of this project is to designate a system of authorized roads, trails, and/or areas for motor vehicle use in order to better protect natural resources, provide legal access, and improve recreation management and enforcement related to motor vehicle use. This purpose and need is in accordance with 36 CFR Parts 212, 251, 261 (which also incorporate Executive Orders

[1] Directives to guide implementation of the 2005 Travel Rule have not yet been finalized.
[2] Information on Forest Plan consistency is located later in this chapter in the *Relationship to Other Plans, Decision Documents, and Regulatory Authority* section on page 1-11 and in the *Forest Plan Consistency* section of Chapter 3.

11644 and 11989), and 295 Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule (hereafter referred to as the Travel Rule).

The purpose of and need for action was developed over the course of three years beginning in 2004 as the Dixie National Forest conducted an assessment in accordance with the National Forest Management Act (NFMA). This NFMA analysis included a detailed agency review of each motorized route for known or potential effects to the environment, legal access issues, or other social uses, and was augmented by pre-planning public input. Broad, landscape-scale and site-specific considerations were made, identifying opportunities to improve watershed and wildlife habitat health, as well as the connectivity of communities, and recreational access. The Forest also considered opportunities to improve non-motorized and motorized trail systems and to facilitate desirable recreation activities. The Forest used the *Motor Vehicle Route and Area Designation Guide* to assist in the designation process (USDA 2005c).

1.6. Proposed Action

The action proposed by the Dixie National Forest to meet the purpose and need is to designate a motorized travel system that addresses the following four components:

1. Cross-country travel.
    a. Prohibition of motorized cross-country travel (travel off designated roads or trails) except as specified for permitted uses (e.g., firewood gathering, allotment maintenance), emergency fire suppression, search and rescue activities, law enforcement activities, military operations, and Forest Service administrative uses and purposes.
2. Designation of authorized National Forest System roads and motorized trails.
    a. Closure of currently authorized routes that will not be designated for motorized use and will therefore be removed from the National Forest System of roads and motorized trails. All routes removed from the system will be decommissioned.
    b. Designation of unauthorized routes that will be added to the National Forest System of roads and motorized trails, thereby becoming authorized routes.
3. Designation of authorized uses of National Forest System roads and motorized trails.
    a. Designation of routes that will be open to all uses.
    b. Designation of routes needed to accommodate administrative activities and permitted uses.
    c. Designation of routes needed for access to private lands, rights-of-way, easements, and other jurisdictions.
    d. Designations of routes with seasonal restrictions or routes that only allow certain types of vehicles.
4. Construction or relocation of designated National Forest System roads and motorized trails.
    a. Construction or relocation of routes to improve the transportation system or to respond to evaluation findings.

As authorized by section 212.50 (b) of the Travel Rule, previous and pending decisions that allow, restrict, or prohibit motor vehicle use on National Forest System roads, trails, or areas have been incorporated into this travel management decision.

1.7. Decision Framework

Given the purpose and need for this action, the Forest Supervisors will review the proposed action, the alternatives, anticipated effects, and public comments to decide on motorized routes that will be added to or deleted from the current authorized system. The Forest Supervisors will also decide on the type and season of motorized use to be allowed on the authorized system.

All routes not designated will be considered unauthorized routes and motorized use of those routes will be illegal. Motorized cross-country travel will be prohibited except as specified for the purposes of dispersed camping, emergency fire suppression, search and rescue, law enforcement, military operations, and Forest Service administrative use, including uses authorized by permit such as firewood gathering.

User-created motorized routes that develop after the decision will be considered unauthorized, and will be closed or removed by the Forest Service upon discovery. No public process or analysis will be necessary to remove such a route.

The assessment will consider the effects of forest travel management on adjacent lands. The decision does not include travel management for State lands, Bureau of Land Management (BLM) lands, or adjacent private lands or private “in-holdings.”

This analysis and decision can neither validate nor deny R.S. 2477 assertions made by a county. The status of R.S. 2477 roads will be determined by state and/or federal courts.

This analysis does not address the potential effects of illegal or criminal activities. Violations of state law, federal regulation, forest direction, or forest orders are outside the scope of this analysis. Prohibitions with respect to acts or omissions on National Forest System lands, including the use of motor vehicles, are provided at 36 CFR 261.

1.8. Public Involvement

In October 2004 the Dixie National Forest held a series of workshops in Cedar City, St. George, Ruby’s Inn (now Bryce Canyon City), Torrey, and Las Vegas, Nevada. Participants were asked to review the route inventory and evaluation questions and provide feedback on the evaluation process. At the same time, a working group of citizens who provided suggestions for motorized travel in revising the Dixie Land and Resource Management Plan was reconvened to make suggestions for the proposed travel system and evaluation process. Input received from cooperating agencies, the public, and the work group contributed to the proposed action.

The Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published in the Federal Register on December 5, 2006. The NOI asked for comments on the proposed action by January 31, 2007. Prior to release of the NOI, the Forest Service briefed local government officials, motorized advocacy groups, environmental groups, and businesses. Public involvement efforts after release of the NOI included public open houses in St. George, Cedar City, Panguitch, Escalante, Torrey, and Salt Lake City, Utah. The project website (http://www.fs.fed.us/r4/dixie/projects/MTP) was also used to disseminate information and gather comments. About 500 scoping responses from individuals, advocacy groups, and state and other federal agencies were received and analyzed. Subsequent to the open houses,

comments on the project were reviewed and the proposed action was revised. The Forest also developed two additional alternatives based on public comments.

The Notice of Availability (NOA) for the Draft Environmental Impact Statement (DEIS) was published in the Federal Register on May 23, 2008. Legal notices announcing the DEIS' availability were published on May 28, 2008, in both papers of record, The Spectrum and The Richfield Reaper. Publication of the NOA started the official 45-day public comment period. Multiple groups requested an extension to the comment period. The deciding officials extended the comment period an additional 15 days, for a cumulative comment period of 60 days. An amended NOA announcing the extended comment period was published in the Federal Register on May 27, 2008. Legal notices announcing the extension were published in The Spectrum on July 3, 2008, and in The Richfield Reaper on July 9, 2008. A postcard announcing the extension was also mailed to the over 800 individuals and groups on the project mailing list.

During the comment period the Forest held four public open houses in June 2008 in Bicknell, Cedar City, St. George, and Cedar City. The purpose of these open houses was to present the DEIS, answer questions, and encourage and assist people in submitting comments. In response to public requests, the Forest hosted an additional open house in Cedar City on July 10, 2008.

For information on the comments that were received, please see *Appendix B: Response to Comments*.

1.9. Scope of the Project and Analysis

This DEIS is a site-specific document with a focus on route designation for motorized use. The analysis, however, requires a broad geographic scope since the project covers the entire Dixie National Forest. This project will update and replace the current Dixie National Forest Travel Map. It is not intended to address all aspects of unmanaged recreation or motorized use. Dispersed camping, the most desirable route system for long-term multiple use, resource protection, and access needs are addressed to varying degrees depending on site-specific considerations and the context provided by the purpose of and need for action. Travel by over-snow vehicles is outside the scope of the route designation project.

The analysis area is limited to National Forest System lands, but the Dixie National Forest has coordinated with and will continue to seek consistency with the Fishlake National Forest, Cedar Breaks National Monument, Bryce Canyon National Park, Grand Staircase-Escalante National Monument, Capitol Reef National Park, state lands, and BLM district and field offices. The Forest does not have jurisdiction on all routes that are located on National Forest System lands. The mapped designations for routes under other jurisdictions are provided so that the public can see how the route system interconnects.

1.10. Issues

An issue is a concern, dispute, or debate about the environmental effect of an action. Issues were identified through the scoping process and internal review. Significant issues are defined as those directly or indirectly caused by implementing the proposed action. Non-significant

issues are identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations explain this delineation in Sec. 1501.7(a)(3), "Identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3), ..."

There were many non-significant issues raised during scoping and internal review. All comments received during scoping are part of the project record and are available for review upon request. The Dixie National Forest identified the following four issues as the biophysical and social elements that drove the development, design, and analysis of the alternatives.

1.10.1. Issue 1: Access

The majority of the comments and concerns heard at the open houses and in the comments received during scoping regarded access. Most individuals listed specific routes and their specific recommendations for those routes, whether for recreational uses, permitted uses, hunting access, emergency access, private property access, or general Forest access. Those specific recommendations included converting routes to motorized use, converting routes to non-motorized use, and closing or rerouting routes to prevent resource damage.

Many people stated that they wanted all existing motorized opportunities maintained, others wanted an increase in motorized opportunities for full-sized vehicles and OHVs, and others wanted OHVs banned from the Forest. Those who wanted all existing motorized opportunities maintained mentioned access to conduct traditional forest activities, opportunities for family activities, recreational access, and potential negative impacts to local communities and businesses if access were decreased. Some who wanted an increase in motorized opportunities cited increased sales of OHVs and growing demand for OHV opportunities. Some who wanted a decrease in motorized opportunities referenced negative impacts to biological and physical resources, and potential negative impacts to local communities and businesses if motorized opportunities remained at their current levels. Many people were in favor of closing the Forest to cross-country travel.

Some individuals were concerned about designating motorized routes in largely non-motorized areas, and others stated the need to retain areas for non-motorized opportunities. Others urged the Forest Service to ensure that designations on Forest Service land matched route or area designations on neighboring federal lands (e.g., do not designate a motorized route that dead-ends at a boundary with National Park Service or BLM lands where motorized use is not allowed).

1.10.2. Issue 2: Management of Administrative Routes

Administrative routes are Maintenance Level 1 roads that are closed to the public but may be used for administrative or permitted purposes. Often these roads are gated to prevent unauthorized use by the general public. Many people questioned whether or not the Dixie National Forest was able or willing to enforce the closure of administrative roads to the public. Others questioned more specifically if the Forest Service could maintain those administrative routes that are gated (which could also include roads gated during seasonal closures or where frequent administrative, permittee, or private property access is needed).

Some individuals requested that all routes recommended as administrative routes be open to public use as well. Some stated that the public should be able to travel everywhere Forest Service employees can. Others questioned why the Forest Service needed so many administrative routes, and suggested the number of administrative routes be reduced. In areas where administrative routes were located in critical wildlife areas, some stated that Forest Service employees should only use non-motorized transportation methods. Some asked if it wouldn't be more effective to close or mothball administrative routes that aren't needed in the immediate future to improve enforcement.

When use of an administrative route is authorized through permit, some questioned how that use would be managed so as to provide the permitted access but prevent abuse, especially during hunting season.

1.10.3. Issue 3: Physical and Biological Resources

Many people expressed concern over the potential negative impacts of motorized travel (both on and off of designated routes) on physical and biological resources. Some stated that nothing in the travel plan should lead to any adverse impacts to threatened, endangered, or sensitive species. Some stated that soil, water, wildlife, and other natural resources should be protected above all other uses. Others commented on the negative impacts of noxious weeds and invasive species on native ecosystems, and how use of OHVs can result in increased infestations.

Some requested that any routes that are determined to be contributing to soil erosion (and subsequent sedimentation of waterbodies) be closed, while others expressed concern that OHV impacts to water quality on the Forest be considered, particularly in areas where local communities depend on watersheds located on the Forest. Riparian areas, including wet meadows and lakeshores, were cited as areas of critical wildlife habitat where motorized routes should not be allowed.

1.10.4. Issue 4: Inventoried Roadless Areas

Some people expressed concern that OHV use in Inventoried Roadless Areas would negatively impact roadless and wilderness area characteristics. Some also believed that motorized trails would impact roadless area characteristics.

1.11. Relationship to Other Plans, Decision Documents, and Regulatory Authority

Direction and authority for the proposal come from the NFMA, NEPA, and CEQ, all of which provide general land management and environmental analysis direction. The NFMA requires that all projects and activities proposed and considered be consistent with the Forest's Forest Plan. If a project or activity cannot be conducted consistent with the Forest Plan, it cannot go forward as planned unless the Forest Plan is amended. The *Forest Plan Consistency* section in Chapter 3 of this EIS documents those components of the various alternatives that would require an amendment to the Forest Plan if selected.

Federal Codes of Regulation 36 CFR 212 and 261 have given the Forest Service the authority to manage OHV use and provide specific regulations for the agencies based on Executive Orders 11644 and 11989. The agency maintains other discretionary authorities such as the ability to issue emergency closure orders that allow enforcement or modification of the motorized travel plan or that regulate use and occupancy of National Forest System lands.

1.12. Decisions to Be Made

Based on the environmental analysis in this DEIS, the Forest Supervisors of the Dixie National Forest and the Fishlake National Forest will decide whether or not to retain, close, construct, relocate, or decommission roads and motorized trails within the Motorized Travel Plan project area in accordance with 36 CFR Parts 212, 251, 261, and 295, the Travel Rule, and with Forest Plan goals, objectives, and desired future conditions. The Forest Supervisors will also decide whether to implement an action alternative, a modified action alternative, or the no action alternative.

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Chapter 2: Alternatives

This chapter describes and compares the alternatives considered for the Motorized Travel Plan. It includes a description of each of the alternatives. Maps of each alternative are located at the end of the chapter.

The terminology used to describe the alternatives, particularly in the comparison tables, contains important distinctions. The term “routes” applies to both roads and trails. The term “roads” applies to travelways where full-size vehicle use is allowed. If used generally, the term “trails” refers only to motorized trails 50 inches in width or less. Wherever a reference to non-motorized trails or a motorized trail for vehicles over 50 inches in width is intended, that specific language will be used.

2.1. Alternative Development

In order to gain substantial agreement about the proposed action, input was collected beginning in spring 2004 from members of the public; state, local, and other federal governments; and interest groups. A series of public workshops was held in the fall of 2004. Input received during the Forest Plan Revision process was also used, especially information provided by the Topical Working Groups (TWiGs).

A route evaluation process was used by the Forest’s interdisciplinary team in development of the proposed action. Each route was evaluated using an extensive series of questions developed and reviewed by Dixie National Forest employees, the MTP Work Group, interested members of the public, and cooperating governments. A series of public workshops was held in fall 2004 in Cedar City, St. George, Ruby’s Inn (now Bryce Canyon City), Torrey, and Las Vegas, Nevada. These workshops provided opportunities to participate in the development and review of the evaluation process.

As the proposed action was reviewed with the public during the scoping period, there appeared to be substantial agreement about many of the designations of individual routes, of which there were 8,440 reviewed during the pre-NEPA route evaluation. There were between 100 and 200 routes that were the subject of specific disagreement as far as designation. There also appeared to be agreement about most of the uses and impacts that were identified for each route during route evaluation; however, broader issues related to motorized travel management tended to be a general source of disagreement.

In reviewing the scoping comments, disagreement seemed to center upon differing perspectives about motorized recreation. Some examples are summarized below:

- Some individuals wished to see a reduction in overall miles of open routes in order to facilitate non-motorized recreation experiences or to provide better protection of natural and cultural resources. Other individuals wished to see an increase in overall miles of open routes in order to enjoy more motorized recreation activities and access. Some people perceive the popularity of the Dixie National Forest as a destination area for OHV recreation as an increase in demand, and wanted to see no reduction in the motorized

recreation opportunity. Other people believed that now is the time to make choices about where motorized recreation should be allowed to occur.

- Some individuals believed it would be important to designate open motorized routes into blocks of largely non-motorized landscapes in order to allow easier access into an already limited area. Other individuals preferred to see such routes closed in order to maintain primitive, non-motorized recreation qualities and protect natural resources within large blocks of land.
- Some individuals wanted to see motorized travel restricted in certain areas during the big game hunt in order to improve non-motorized hunting success and to provide a degree of sanctuary to game animals. Others did not wish to see a reduction in motorized access during the hunt and believed that restrictions would result in crowding on fewer open routes and reduce overall hunting success.

2.2. Alternatives Considered in Detail

2.2.1. Alternative A

This is the No Action Alternative. This alternative would retain all existing National Forest System roads and motorized trails as open. No non-system or unauthorized motorized routes would be added to the system. Current restrictions on cross-country travel (off-road or trail) would remain in place: cross-country travel would continue to be allowed on 1,150,113 acres (61 percent of the Forest), but would be prohibited on 735,943 acres (39 percent of the Forest).

Although no non-system or unauthorized routes would be added to the system, use of non-system or unauthorized routes located in areas that allow cross-country travel would continue to be allowed. In areas where cross-country travel is not allowed, non-system routes identified as necessary for private property access, permitted uses, or administrative access, or routes necessary for public access (as determined through the route evaluation process) would not be open to motorized travel. System routes that have been identified as unnecessary or undesirable (again, as determined through the route evaluation process) would remain open.

No new motorized trails would be proposed for construction.

Maps of Alternative A by ranger district are located on page 2-30 (Cedar City), page 2-35 (Escalante and Teasdale), page 2-40 (Pine Valley), and page 2-45 (Powell).

2.2.2. Alternative B

This alternative emphasizes the protection of natural and cultural resources. It would also provide the most opportunity for enhanced non-motorized recreation experiences: there would be fewer miles of motorized routes and therefore fewer conflicts with motorized users. Cross-country travel would be prohibited forest-wide. Some unauthorized routes, including those that must remain open for private property access, permitted uses, or administrative access, would be added to the system. Some system routes that are negatively impacting soil, water, and wildlife resources would be closed. Alternative B retains the fewest miles of open motorized routes of all the action alternatives.

This alternative was developed to respond to the Sustained Multiple Use Alternative submitted by a group of 10 organizations (see page 2-28). It also includes suggestions made by other individuals and organizations during scoping.

No new motorized routes would be proposed for construction.

Maps of Alternative B by ranger district are located on page 2-31 (Cedar City), page 2-36 (Escalante and Teasdale), page 2-41 (Pine Valley), and page 2-46 (Powell).

2.2.3. Alternative C

Alternative C was developed to address public and agency input received during scoping related to access and physical and biological resources. This alternative allows for a higher level of motorized access than does Alternative B. Alternative C would close approximately 468 additional miles of road for wildlife and hydrology concerns as compared with Alternative D. Under Alternative C, cross-country travel would be prohibited forest-wide. More unauthorized routes, including routes that must remain open for private property access, permitted uses, or administrative access, would be added to the system than under Alternative B. Some system routes that are negatively impacting soil, water, and wildlife resources would be closed. Motorized access for recreation, administrative uses, and permitted uses is allowed to a higher degree than under Alternative B.

No new motorized routes would be proposed for construction.

Maps of Alternative C by ranger district are located on page 2-32 (Cedar City), page 2-37 (Escalante and Teasdale), page 2-42 (Pine Valley), and page 2-47 (Powell).

2.2.4. Alternative D

This alternative allows for a higher level of motorized access than does Alternative B or C, but less than Alternative E. Alternative D is a modified version of the proposed action released in December 2006. It includes changes made in response to public and government input made during scoping.

Under this alternative, cross-country travel would be prohibited forest-wide. Some unauthorized routes, including those that must remain open for private property access, permitted use, or administrative access, would be added to the system. Some system routes that are negatively impacting soil, water, and wildlife resources would be closed. Motorized access for recreation, administrative access, and permitted use is allowed to a higher degree than under Alternative B or C, but to a lower degree than under Alternative E.

Two new motorized routes would be proposed for construction as shown in the table below. A map of these routes is included in the *Recreation and Scenery* section of Chapter 3.

Table 2-1. Proposed Motorized Trail Construction – Alternatives D and E

Route #	District	Geographic Area	Length in Miles
T34070	Cedar City	Panguitch/Mammoth	0.65
U24028A	Cedar City	Panguitch/Mammoth	0.61
Total miles			1.26

Maps of Alternative D by ranger district are located on page 2-33 (Cedar City), page 2-38 (Escalante and Teasdale), page 2-43 (Pine Valley), and page 2-48 (Powell).

2.2.5. Alternative E

This alternative provides the most motorized access on designated routes. With the exception of routes that are currently closed and/or decommissioned and those routes covered under previous and pending decisions, all non-system or unauthorized routes would be added to the system and designated as open to public motorized travel. All trails that are currently designated as non-motorized, however, would remain non-motorized. Cross-country travel would be prohibited forest-wide.

This alternative designates a system of routes for motorized travel that includes all routes that must remain open for private property access, permitted use, and administrative access. This alternative includes suggestions made by some individuals, organizations, and government officials who commented during scoping.

Two new motorized routes would be proposed for construction as shown in the table above. These are the same routes proposed for construction in Alternative D. A map of these routes is included in the *Recreation and Scenery* section of Chapter 3.

Maps of Alternative E by ranger district are located on page 2-34 (Cedar City), page 2-39 (Escalante and Teasdale), page 2-44 (Pine Valley), and page 2-49 (Powell).

There are approximately 215 routes or segments of unauthorized routes currently located in Inventoried Roadless Areas (IRAs). On September 20, 2006, the Roadless Area Conservation Rule (RACR) was reinstated. Under the rule, no roads in IRAs may be added to the system, though motorized trails may be added.

Under Alternative E, however, all 215 of these routes or segments of routes would be added to the system. As RACR is currently in place, Alternative E would have to be modified regarding the designation of those routes that would be added as roads (though those added as trails would not be affected). If Alternative E were to be selected and RACR were still in effect, those roads in IRAs could not be added to the system except by the Chief of the Forest Service.

2.3. Comparison of Alternatives

The following pages contain tables illustrating the differences between alternatives aggregated forest-wide. Tables containing more detailed information disaggregated by ranger district

(instead of the forest-wide totals shown here) are located in *Appendix A: Data Tables and Designation Key*. As implied by its title, Appendix A also contains a key describing each route designation.

Table 2-2. Route Designation by Alternative – Forest-wide

Designation	Alternative				
	A	B	C	D	E
Administrative	631	959	1,037	962	399
Closed Classified	203	1,043	756	462	179
Closed Unauthorized	354	1,335	1,247	1,074	213
Existing Motorized Trail	97	101	89	103	90
Existing Non-motorized Trail	821	823	817	821	803
Existing Highway	139	139	139	139	139
Not Closed (Unauthorized)	1,022	0	0	0	0
Open - Street Legal	32	53	24	65	21
Open to All	2,768	1,445	1,648	2,284	4,276
Proposed Admin/Permittee ATV Only	0	0	0	<1	0
Proposed Motorized Trail	6	92	203	85	11
Proposed Motorized Trail Construction	0	0	0	1	1
Proposed Non-motorized Trail	3	133	148	88	3
Seasonal	87	38	53	74	36
Total	6,163	6,161	6,161	6,158	6167

All mileages rounded to the nearest 1 mile. Differences between totals by alternative due to minor mapping discrepancies in GIS.

Table 2-3. Summary of Routes Open and Closed to the Public – Forest-wide

Designation	Alternative									
	A		B		C		D		E	
	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Open to Public	4,275	80%	1,867	36%	2,173	42%	2,742	52%	4,563	85%
Closed to Public*	1,063	20%	3,337	64%	3,040	58%	2,496	48%	790	15%
Total	5,338	100%	5,204	100%	5,213	100%	5,238	100%	5,353	100%

All miles rounded to the nearest 1 mile. Differences between totals by alternative due to minor mapping discrepancies in GIS.
* Includes administrative routes and routes to be decommissioned.

Table 2-4. Disposition of Unauthorized Routes by Alternative – Forest-wide

Designation	Alternative									
	A		B		C		D		E	
	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Closed as "unauthorized"	354	24%	1,334	90%	1,244	84%	1,072	73%	214	14%
Added as "administrative"	18	1%	82	6%	147	10%	228	15%	20	1%
Added as "open to all"	87	6%	18	1%	31	2%	103	7%	1,249	84%
Added as "open to full size vehicles only"	0	0%	4	<1%	1	<1%	6	<1%	0	0%
Added as "seasonal"	0	0%	1	<1%	1	<1%	1	<1%	0	0%
Added as "proposed motorized trail"	0	0%	9	1%	22	1%	36	2%	4	<1%
Added as "proposed non-motorized trail"	1	<1%	30	2%	33	2%	30	2%	0	0%
Not closed (unauthorized)*	1,021	69%	0	0%	0	0%	0	0%	0	0%
Total	1,481	100%	1,476	100%	1,478	100%	1,476	100%	1,487	100%

All miles rounded to the nearest 1 mile. Differences between totals by alternative due to minor mapping discrepancies in GIS.
Previous and pending decisions have already been applied to all alternatives. For example, all unauthorized routes are added to the system under Alternative E as noted on page 2-5. This table only shows 84% of unauthorized routes being added as open to all as the other 16% are covered by previous and pending decisions. Of the 84% of routes not addressed by previous or pending decisions, 100% are added as open to all.
* Only applicable to Alternative A. These are unauthorized routes in the 61 percent of the Forest open to cross-country travel.

Table 2-5. Summary of Alternatives by Issue and Topic

Issue/Topic	Alternative				
	A	B	C	D	E
Issue 1: Access					
Cross-country travel	Currently allowed on 61% of Forest	No cross-country travel allowed on the Forest	Same as Alt. B	Same as Alt. B	Same as Alt. B
Disposition of unauthorized routes (approx. 1,500 miles)[1]	25% of miles closed; 6% open; <1% non-motorized trail Additionally, 69% of miles are not closed, but use will continue to be allowed as these miles of unauthorized routes occur in the 61% of the Forest where cross-country travel is allowed	96% of miles closed; 1% open; 1% motorized trail; 2% non-motorized trail	94% of miles closed; 2% open; 2% motorized trail; 2% non-motorized trail	88% of miles closed; 8% open; 2% motorized trail; 2% non-motorized trail	16% of miles closed; 84% open; <1% motorized trail
Total open versus closed[2]	77% of routes open to public; 23% closed	46% of routes open to public; 54% closed	51% of routes open to public; 49% closed	60% of routes open to public; 40% closed	87% of routes open to public; 13% closed
Percent of Forest within specified distance of a motorized route	0 to 0.5 miles: 70% 0 to 1 mile: 88% 0 to 2 miles: 98% 0 to 3 miles: 100%	0 to 0.5 miles: 59% 0 to 1 mile: 81% 0 to 2 miles: 96% 0 to 3 miles: 99%	0 to 0.5 miles: 62% 0 to 1 mile: 83% 0 to 2 miles: 96% 0 to 3 miles: 99%	0 to 0.5 miles: 66% 0 to 1 mile: 86% 0 to 2 miles: 97% 0 to 3 miles: 100%	0 to 0.5 miles: 71% 0 to 1 mile: 89% 0 to 2 miles: 98% 0 to 3 miles: 100%
Proposed new motorized trail construction	No new motorized trail construction proposed	Same as Alt. A	Same as Alt. A	1.26 miles (2 routes) proposed	Same as Alt. D

[1] "Closed" includes "closed" and "administrative/permittee/private property access." "Open" includes "open to all," "open to street legal," and "seasonal." All alternatives carry forward the closure of 16% of unauthorized routes from previous and pending decisions. Additionally, a greater percentage of miles are shown as closed in Alternative A as these are unauthorized routes in the 39% of the Forest closed to cross-country travel. Under Alternative E, only those 16% of miles carried forward as closed from previous and pending decisions are closed, as all other unauthorized routes would be added to the system.

[2] As noted in the previous footnote, for this summary, "closed" includes "closed" and "administrative/permittee/private property access." "Open" includes "open to all," "open to street legal," and "seasonal."

Issue/Topic	Alternative				
	A	B	C	D	E
Issue 2: Management of Administrative Routes					
Administrative routes	631 miles of administrative routes (10% of entire system)	959 miles of administrative routes (16% of entire system)	1,037 miles of administrative routes (17% of entire system)	962 miles of administrative routes (16% of entire system)	399 miles of administrative routes (6% of entire system)
Issue 3: Physical and Biological Resources					
Soils	108 miles of road intercepting slopes ≥35% 64 miles of road on highly erodible soils	73 miles of road intercepting slopes ≥35% 39 miles of road on highly erodible soils	84 miles of road intercepting slopes ≥35% 47 miles of road on highly erodible soils	95 miles of road intercepting slopes ≥35% 54 miles of road on highly erodible soils	112 miles of road intercepting slopes ≥35% 72 miles of road on highly erodible soils
Watershed	Projected increase in road density in most of the 179 watersheds. Road mileage within Riparian Influence Zone (RIZ) is either greater than or equal to that in Alts B, C, and D	Projected reduction in road density in 149 of the 179 watersheds. Reduction in road mileage within RIZ in 108 of the 179 watersheds	Projected reduction in road density in 149 of the 179 watersheds. Reduction in road mileage within RIZ in 108 of the 179 watersheds	Projected reduction in road density in 143 of the 179 watersheds. Reduction in road mileage within RIZ in 91 of the 179 watersheds	Projected increase in road density in 97 of the 179 watersheds. Increase in road mileage within RIZ in 53 of the 179 watersheds
Threatened plant species (*Townsendia aprica*)	Greatest negative impact from cross-country travel provision.	Motorized cross-country travel prohibited. 62% decrease in miles of motorized routes. 5.58 miles open to administrative use adjacent to *T. aprica*.	Motorized cross-country travel prohibited. 57% decrease in miles of motorized routes. 5.58 miles open to administrative use adjacent to *T. aprica*.	Motorized cross-country travel prohibited. 40% decrease in miles of motorized routes. 1.5 miles open to administrative and public OHV use, and 5.58 miles open to all uses adjacent to *T. aprica*.	Motorized cross-country travel prohibited. 7% decrease in miles of motorized routes. 7.11 miles open to all uses adjacent to *T. aprica*.

Issue/Topic	Alternative				
	A	B	C	D	E
Vegetation, Fire & Fuels	**Access to vegetation mgt. projects:** provides motorized access to all planned for the next 5 years. **Access to suitable timber:** provides motorized access within ½ mile to 87% of suitable timber. **Fire suppression:** roads in critical strategic locations remain open. **Access to fuels mgt projects:** provides access to all planned for the next 5 years.	**Access to vegetation mgt. projects:** provides reasonable motorized access to planned for the next 5 years, though some roads may need to be reopened. **Access to suitable timber:** provides motorized access within ½ mile to 73% of suitable timber. **Fire suppression:** same as Alt. A **Access to fuels mgt projects:** provides access to all planned for the next 5 years.	**Access to vegetation mgt. projects:** same as Alt. B **Access to suitable timber:** provides motorized access within ½ mile to 78% of suitable timber. **Fire suppression:** same as Alt. A **Access to fuels mgt projects:** provides access to all planned for the next 5 years.	**Access to vegetation mgt. projects:** same as Alt. A **Access to suitable timber:** provides motorized access within ½ mile to 85% of suitable timber. **Fire suppression:** same as Alt. A **Access to fuels mgt projects:** provides access to all planned for the next 5 years.	**Access to vegetation mgt. projects:** same as Alt. A **Access to suitable timber:** provides motorized access within ½ mile to 88% of suitable timber. **Fire suppression:** same as Alt. A **Access to fuels mgt projects:** provides access to all planned for the next 5 years.
Aquatic biota	Would permit further development of increasing networks of user-created routes, resulting in persistent and expanding degradation to aquatic habitats.	Would limit current and future expansion and creation of unauthorized routes, thus limiting potential degradation of high value aquatic habitats.	Same as Alt B.	Same as Alt B.	Degradation to aquatic biota habitats and population would be reduced when compared to Alt. A. Provides the least amount of benefit to resource of the action alternatives.

Issue/Topic	Alternative				
	A	B	C	D	E
Wildlife – general	Increased potential for disturbance, and increased habitat degradation and fragmentation for all species analyzed given continued open route mileage and opportunity for cross-country travel. Habitat effectiveness would not increase, and may decrease for all species.	Greatest increase in habitat effectiveness for all species analyzed given net reduction of open motorized route miles and prohibition of cross-country travel.	Increased habitat effectiveness for all species analyzed, though less of an increase than Alt. B, given net reduction of open motorized route miles and prohibition of cross-country travel.	Increased habitat effectiveness for all species analyzed, though less of an increase than Alts. B or C, given net reduction of open motorized route miles and prohibition of cross-country travel.	Decreased potential for disturbance to all species given increase in open motorized route miles, but prohibition of cross-country travel. Elimination of cross-country travel will lead to an increase in habitat effectiveness, though least of all the action alternatives.
Wildlife – mule deer	Total Motorized Road Density (TMRD)[3] over 2 miles/sq. mile: Panguitch Lake, Paunsaugunt, and Zion Wildlife Management Units (WMUs). Open Motorized Road Density (OMRD) over 2 miles/sq. mile: Panguitch Lake, Paunsaugunt, and Zion WMUs.	TMRD over 2 miles/square mile: Zion WMU. OMRD over 2 miles/sq. mile: Zion WMU.	TMRD over 2 miles/sq. mile: Zion WMU. OMRD over 2 miles/sq. mile: Zion WMU.	TMRD over 2 miles/sq. mile: Paunsaugunt and Zion WMUs. OMRD over 2 miles/sq. mile: Zion WMU.	TMRD over 2 miles/sq. mile: Panguitch Lake, Paunsaugunt, and Zion WMUs. OMRD over 2 miles/sq. mile: Panguitch Lake, Paunsaugunt, and Zion WMUs.

[3] Total Motorized Road Density (TMRD) calculations include all routes; Open Motorized Road Density (OMRD) calculations exclude Maintenance Level 1 routes and unauthorized routes within the 39 percent of the Forest closed to cross-country travel.

Issue/Topic	Alternative				
	A	B	C	D	E
Wildlife – Rocky Mountain elk	TMRD: Same as mule deer. OMRD over 2 miles/sq. mile: Panguitch Lake and Paunsaugunt WMUs.	TMRD: Same as mule deer. OMRD over 2 miles/sq. mile: None.	TMRD: Same as mule deer. OMRD over 2 miles/sq. mile: None.	TMRD: Same as mule deer. OMRD over 2 miles/sq. mile: None.	TMRD: Same as mule deer. OMRD over 2 miles/sq. mile: Panguitch Lake and Paunsaugunt WMUs.
Noxious weeds	Highest risk to increase the spread of noxious weeds forest-wide as cross-country travel permitted on 61% of the Forest.	Overall, Alt. B would have the least risk of spreading noxious weeds, followed next by Alt. C, then Alt D.	Same as Alt. B.	Same as Alt. B.	This alternative has the second highest risk to increase noxious weeds and invasive species because it has the greatest number of miles of routes open to the public.

Issue/Topic	Alternative				
	A	B	C	D	E
Issue 4: Inventoried Roadless Areas					
Routes in Inventoried Roadless Areas (IRAs)	No unauthorized routes within IRAs would be added to the system.	No unauthorized routes within IRAs would be added as roads to system; 8 miles (7 routes) would be added as motorized trail.	Same as Alt. B.	Same as Alt. B.	Approx. 90 miles (138 routes) of unauthorized routes within IRAs would be added to the system.[4] (134 routes added as roads; 4 added as motorized trails)
Routes in Unroaded and Undeveloped Areas	Of the 1,056,221 acres of unroaded and undeveloped areas, only 29% are outside an IRA or wilderness. Areas will continue to be managed for multiple resource benefits while maintaining their undeveloped character to the extent possible.	Same as Alt. A.	Same as Alt. A.	Same as Alt. A.	Same as Alt. A.
Cross-country travel in IRAs	58% of IRAs open to cross-country travel.	No cross-country travel allowed on the Forest.	Same as Alt. B.	Same as Alt. B.	Same as Alt. B.
Cross-country travel in Unroaded and Undeveloped Areas	56% of Unroaded and Undeveloped Areas open to cross-country travel	No cross-country travel allowed on the Forest.	Same as Alt. B.	Same as Alt. B.	Same as Alt. B.

[4] As noted above under the discussion for Alternative E beginning on page 2-5, Alternative E would need to be modified if it were to be selected and RACR were still in effect as those roads in IRAs could not be added to the system or the Chief of the Forest Service would have to be petitioned to add them to the system.

Issue/Topic	Alternative				
	A	B	C	D	E
Other Resources					
Social and Economic	No impacts	Potential impacts in Garfield, Kane, and Wayne counties (in that decreasing order) due to clubs, events, focus of economy, and a few businesses	Some impact on Garfield, Kane, and Wayne counties, but not as high as under Alt. B	Not much impact	Potential impact on other (non-motorized) recreation uses.
Livestock Grazing	Livestock grazing activities, whether affecting the livestock themselves or the permittee, are not expected.	Same as Alt. A	Same as Alt. A	Same as Alt. A	Same as Alt. A
Non-Recreation Special Uses and Easements	Holders of special use authorizations have the right to access their facilities for operation and maintenance on NFS lands.	Same as Alt. A	Same as Alt. A	Same as Alt. A	Same as Alt. A
Recreation Special Uses	May be impacts on permit holders who seek to use unauthorized routes in areas currently closed to cross-country travel, and on those whose permits depend on larger areas closed to motorized travel (i.e., big game outfitter and guides)	Recreation-related permit holders who seek motorized opportunities may see the greatest impact due to the decrease in motorized access. Those who seek non-motorized opportunities would see greatest benefit.	Recreation-related permit holders who seek motorized opportunities may see impacts due to the decreased amount of motorized access, though impacts would be lower that in Alt. B. More benefit for those seeking non-motorized opportunities, but less than in Alt. B.	Recreation-related permit holders who seek motorized opportunities should see fewer impacts than those associated with Alts. B and C.	Recreation-related permit holders who seek vast motorized opportunities may see the least amount of impact. Those seeking non-motorized opportunities would see the most impact.

Issue/Topic	Alternative				
	A	B	C	D	E
Recreation	Approximately 828 miles of non-motorized trails; more miles of motorized routes than Alts. B, C, or D.	Approximately 960 miles of non-motorized trails; provides the least amount of miles for motorized travel.	Approximately 969 miles of non-motorized trails; provides the second least amount of miles for motorized travel.	Approximately 915 miles of non-motorized trails; mid-range among motorized travel. Generally allows for a higher level of motorized access than Alt. C.	Provides the most motorized access by designating all routes as open to public motorized travel with the exception of routes designated through previous and pending decisions.
Scenery	Vast majority of the Forest would meet or exceed Scenic Integrity Objectives.	Same as Alt. A	Same as Alt. A	Construction of routes T34040 and U24028A may result in impacts that reduce scenic integrity from high to moderate.	Same as Alt. D
Cultural Resources	Unauthorized routes would continue to be developed by the public in the 61% of the Forest open to cross-country travel, impacting cultural and paleontological sites and resources. Sites and resources would continue to be impacted intentionally and unintentionally by visitors and natural processes.	Impacts to sites and resources would be least among alternatives. Sites and resources would continue to be impacted intentionally or unintentionally by visitors and natural processes.	Impacts to sites and resources would be more intense than under Alt. B, but fewer than under A, D, and E, in that order. Sites and resources would continue to be impacted intentionally or unintentionally by visitors and natural processes.	Impacts to sites and resources would be more intense than under Alts. B and C, but fewer than A or E. Cultural resource surveys, review, and concurrence from the State Historic Preservation Office would be conducted on the 2 proposed motorized trails prior to construction. Sites and resources would continue to be impacted intentionally or unintentionally by visitors and natural processes.	Impacts to sites and resources would be fewer than in Alt. A, but greater than in B, C, and D. Cultural resource surveys, review, and concurrence from the State Historic Preservation Office would be conducted on the 2 proposed motorized trails prior to construction. Sites and resources would continue to be impacted intentionally or unintentionally by visitors and natural processes.

Issue/Topic	Alternative				
	A	B	C	D	E
Transportation	61% (1,150,113 acres) of Forest open to motorized cross-country travel. Cross-country travel would remain prohibited on 39% (735,943 acres). Site-specific planning and enforcement of OHV regulations would continue at current levels.	Closing the Forest to motorized cross-country travel would reduce the potential for direct and indirect off-route interactions and impacts with other land uses.	Same as Alt. B	Same as Alt B	Same as Alt B

2.4. Features Common to All Alternatives

A variety of resource protection measures and policies are currently in place to mitigate potential adverse effects of travel routes on the Forest. Forest Plan standards and guidelines apply to all alternatives. CFR 261.5 parts A and B allow district rangers to close, re-designate, or impose restrictions on roads or trails at any time if further use poses an immediate risk to public safety or if adverse effects are occurring. These closures or restrictions are intended to be short-term in nature; however, future decisions can be made to change route designations for the long-term. Therefore the designations in this decision have an adaptive management component.

2.4.1. Exemptions to Cross-country Travel Prohibitions

The following vehicles and uses are exempted from the prohibitions to motorized cross-country travel by 36 CFR 212.51:

- Aircraft,
- Watercraft,
- Over-snow vehicles,
- Limited administrative use by the Forest Service,
- Use of any fire, military, emergency, or law enforcement vehicle for emergency purposes,
- Authorized use of any combat or combat support vehicle for national defense purposes,
- Law enforcement response to violations of law, including pursuit, and
- Motor vehicle use that is specifically authorized under a written authorization issued under federal law or regulations.

2.4.2. Emergency Access

The travel plan does not restrict responses to emergency events to protect human life, property values, structures, and forest resources (see the list of vehicles and uses that are exempted from prohibitions to motorized cross-country travel above). Emergency activities are coordinated through the authorized official.

2.4.3. Private Land Access

Private land access would be provided within National Forest boundaries as required by Section 1323(a) of the Alaska National Interest Lands Conservation Act of 1980.

Routes on private land within National Forest System lands are not under the jurisdiction of the Forest Service and would remain open to the public through rights-of-way or easements obtained for the purposes of public access. Routes without rights-of-way or easements may not be open to public access, depending on landowner preference.

2.4.4. Disabled Access

All alternatives would provide equal access to people with disabilities. Wheelchair travel is considered non-motorized travel. OHV vehicles are not classified as mobility devices or wheelchairs.

2.4.5. Permitted Activities

Permitted activities often require motorized access. Permitted activities such as livestock operations, mineral development, outfitter-guide operations, and access to special use developments are approved or denied through the permit process and operating plan. Some of the routes authorized for permittee use are not designated for public use and are depicted as administrative use or non-motorized trails on the alternative maps. In all cases, permitted uses are non-recreational, intended to allow maintenance of utilities, water improvements, etc., and/or to haul materials needed for the permitted operation. Permit holders and agency officials are allowed motorized access only for official purposes.

2.4.6. Minerals Management and Administration

All alternatives recognize the rights of access under the various mineral laws. Activities within the constraints of regulations implementing those acts are deemed consistent with or in compliance with this travel plan.

2.4.7. Over-snow or Winter Travel

Most areas of the Forest are open to cross-country over-snow vehicle (e.g., snowmobile) use when adequate snow cover exists, as currently allowed by Forest Special Order #0407-04-03 (USDA 2004e). This travel management decision does not address over-snow travel, as noted earlier in *Chapter 1: Purpose of and Need for Action*, *Section 1.9: Scope of the Project and Analysis*. The decision to restrict over-snow vehicles to designated routes will be made over time, if necessary, to address disturbance in big game winter range areas.

2.4.8. Parking

Parking is allowed along the edge of designated routes and should only occur where a vehicle can safely pull over and where meadows, streams, and riparian areas are avoided. Roads and closed gates are not to be blocked. This allowance provides the public reasonable access off designated routes to park their vehicle to fish, picnic, hike, etc., during the snow free-season. If parking is causing unacceptable resource damage, the Forest Service can close the area to parking off designated routes.

2.4.9. Dispersed Camping

Dispersed camping would continue to be allowed within 150 feet along designated open routes, as currently allowed by Forest Special Order #0407-04-03 (USDA 2004e). However, some specific areas have already been restricted to designated campsites only. More dispersed

campsites and dispersed camping areas may be designated in the future if physical and social conditions reach a level where it is deemed necessary.

This limited use of motor vehicles off designated routes within 150 feet of roads and motorized trails would be allowed solely for the purposes of dispersed camping in areas determined through this analysis. This access would not authorize the creation of new campsites or travelways. Motorized travel between multiple dispersed campsites would be prohibited.

2.4.10. Firewood Gathering

Off-road travel for the purpose of firewood gathering would be allowed only as specified under the terms of the firewood gathering permit. Access to administrative use routes will be controlled as part of permit issuance.

2.4.11. Non-motorized Travel

All travel routes and areas are open to non-motorized and non-mechanized modes of travel such as hiking, horse riding, skiing, or snowshoeing, unless specifically closed to such uses. At this time, these modes of travel are not restricted to designated travel routes.

Mechanized modes of travel, including the use of mountain bikes, are not currently restricted to designated routes. Except in areas specifically closed to mechanized uses (such as designated wilderness areas and non-mechanized trails), all travel routes and areas would be open to mechanized modes of travel. The decision to designate a non-mechanized system of routes may be made over time with other project decisions.

2.4.12. Previous and Pending Decisions

Pursuant to 36 CFR 212.50 of the Travel Rule, 25 previous and pending decisions that allow, restrict, or prohibit motor vehicle use on National Forest System roads, trails or areas have been incorporated as previously designated into this travel planning project. See the following table for a list of these decisions.

Table 2-6. Previous and Pending Decisions

Name	District	NFS Roads Open to Public	NFS Road Open Only for Admin Use	NFS Roads Closed[1]	NFS Roads with Seasonal Restrictions	Unauthorized Closed	ATV Trails	Non-motorized Trails
South Fork Pinto Creek Rd	Pine Valley	5.25	0.46	3.13	0	0	0	0
Upper Santa Clara	Pine Valley	7.35	0.36	0	0	0.26	0	7.39
Duck Creek Swains	Cedar City	202.63	28.22	130.74	0	177.30	35.70	8.13
Long Deer	Cedar City	24.80	48.69	0.49	0	2.71	0	1.74
Pretty Tree Bench	Escalante	47.34	19.76	5.44	21.54	13.03	2.3	4.33
Black Forest	Escalante	1.73	4.87	0	0	0.65	0	0
Velvet Lake/ Coyote Hollow	Escalante	0.19	0.09	0	0.13	0.03	0	0
Velvet Lake	Escalante	4.94	14.01	0.04	0.12	0.13	0	0
Roundy	Escalante	3.65	16.71	0	0.44	0	0	1.07
Coyote Hollow	Escalante	0.05	11.89	0.28	2.98	0.58	0	0
Griffin Springs	Escalante	26.54	17.85	5.58	0	9.58	2.31	4.56
Main Canyon	Escalante	4.49	18.74	0.79	4.11	0.07	0	0
Pockets[2]	Escalante	11.61	13.44	0	5.87	0	2.67	0
Pacer	Escalante	8.06	10.67	0	0	0.02	2.44	0
Mt. Dutton[3]	Powell	21.40	12.01	1.96	0	2.40	3.82	0
Puma	Powell	9.93	7.94	0	0	4.80	0	0
Boulder Top	Teasdale	49.25	3.21	83.40	0	1.39	0	27.15
Barney Top	Teasdale	11.93	1.34	0	0	1.44	0	0.9
Lower Bowns Rec.	Teasdale	19.04	1.62	1.34	0	4.06	8.21	15.90
South Creek	Teasdale	9.92	20.12	2.22	4.78	24.77	0	5.48
South Cr/Under Barney	Teasdale	3.66	13.26	0.64	7.39	11.20	0	1.11
Purple Lake	Teasdale	0	0	.07	0	0	0	0
Grand View Trail	Powell	0	0	0	0	0	0	73.2
Spruces Trail	Cedar City	0	0	0	0	0	0	6
Virgin River Rim Trail	Cedar City	0	0	0	0	0	0	31.5

[1] Decommissioned.
[2] The Pockets Resource Management Project is the only project in this list that is still pending.
[3] The Mt. Dutton decision was finalized after the publication of the DEIS.

2.4.13. Signing Protocol and Publication of the Motor Vehicle Use Map

Travel routes are closed unless designated open for motorized use. Routes that would be designated open for public motorized use would be shown on the Motor Vehicle Use Map (MVUM), which will be published as a result of this decision. The MVUM is a national

requirement that will become the legal document to illustrate route designations and will be reissued each year, much like hunting proclamations or regulations. It will be the user's responsibility to be familiar with the annual MVUM, which will be provided free of charge at local Forest Service offices and on the Internet.

Routes that are designated for motorized use would be signed with a route number, according to Forest Service signing and installation standards, at all appropriate junctions. Allowed uses would also be posted, according to Forest Service standards. In response to specific problems, a few closed routes may be signed accordingly; however, routes not designated as open for public use will not be shown on the MVUM and generally will not be signed as closed.

The Forest is committed to signing motorized and non-motorized routes to improve the recreation experience and to increase compliance. The Forest will begin signing priority routes the first field season after the decision on this plan is made. Due to the reality of missing or damaged signs, and the time and funding necessary to install numerous signs across the forest, not all designated routes can be expected to be signed immediately or all the time. It is the user's responsibility to know the routes that are open for public motorized use. Users are strongly advised to obtain a current MVUM to be sure of routes that are legally designated for public use.

2.4.14. Route Maintenance

Over time, the forest objective is that all system routes, motorized and non-motorized, will be maintained to Forest Service standards to provide for user enjoyment, safety, and resource protection. Standards vary depending on intended use, but allow for a range of route conditions from primitive native surface (designed for high-clearance vehicles) to paved surface routes (designed for low clearance vehicles and passenger comfort). Maintaining routes to standard requires routine maintenance, which would continue as funding allows.

Portions of some routes may require relocation or improvement to meet standards and have been identified through the route evaluation/analysis process. Authorization of some of the actual road or trail relocation work may require supplemental analysis and, in some cases, a subsequent NEPA decision. Road and trail maintenance standards are set by their maintenance level or trail class and are described in FSH 7709.56 and FSH 2309.18.

2.4.15. Information, Education, Enforcement, and Partnerships

Over the years, the Dixie National Forest has become a popular place for motorized recreation. The Forest has been working since the mid-1990s to improve motorized travel management, through smaller route designation projects and increased efforts toward visitor information and education. Non-motorized areas can be affected by motorized travel planning; therefore long-term impacts on non-motorized areas must be considered. Through increased coordination with the State of Utah and local counties, the Dixie National Forest is working to publish high quality maps of motorized and non-motorized recreation opportunities, install trailhead kiosks and trail signs, and outreach to visitors through the media. Substantial funding has been contributed by these partners to provide an enjoyable motorized recreation experience.

Partnership opportunities continue to emerge as state and local governments, organizations, and individuals offer volunteer labor, trail patrol, and grant funding. Coordination with other

governments continues in the areas of law enforcement. OHV manufacturers and motorized interest groups are also partnering with the Forest Service to improve protection of natural resources, improve user etiquette, and to protect the riding privilege.

2.5. Features Common to All Action Alternatives

2.5.1. Project Design Features

Forest Plan standards and guidelines apply to all alternatives. Best Management Practices (BMPs) addressing soil, water, and noxious weeds would be applied to the maintenance of travel routes and to route closures. BMPs would also be applied to any route construction (Alternatives D and E only). Following a decision, all areas proposed for ground-disturbing activities and all non-system routes proposed to become system routes will be surveyed for heritage resources with State Historical Preservation Office review.

2.5.1.1. Hydrology

Reconstruction and relocation of roads and motorized trails would meet the following project design features:

- Slope would be less than 8 percent.
- Trail drainage would be provided at the proper spacing according to trail slope and location.
- Running surface would be provided based on traffic volume, soils, and geology.
- Stream crossings would be provided that mitigate or eliminate the effects to the stream channel, the water in the channel, and the wetland associated with the channel.
- Highly erosive soils would be avoided.
- Routes would be located outside of the riparian influence zone.

  Riparian and wetland areas of concern for each activity or project should be identified using the following guidelines (Belt et al. 1992):

  1) Site-specific identification of riparian influence zones for fish-bearing streams should include the area from the edges of the active stream channel to whichever of the following widths is most appropriate:
     - To the top of the inner gorge,
     - To the outer edges of the 100-year floodplain,
     - To the outer edges of the riparian vegetation,
     - To a distance equal to the height of two site-potential trees, or
     - To a 300 foot slope distance (600 feet, including both sides of the stream channel).
  2) Site-specific identification of riparian influence zones for permanently flowing non-fish bearing streams should include the area from the edges of the active stream channel to whichever of the following widths is most appropriate:
     - To the top of the inner gorge,
     - To the outer edges of the 100-year floodplain,
     - To the outer edges of the riparian vegetation,
     - To a distance equal to the height of one site-potential tree, or

- To a 150 foot slope distance (300 feet, including both sides of the stream channel).

3) Site-specific identification of riparian influence zones for wetlands, ponds, lakes, reservoirs, and seasonally-flowing or intermittent streams should include the area from the edge of the waterbody to whichever of the following widths is most appropriate:
   - To the outer edges of the riparian vegetation,
   - To the extent of the seasonally-saturated soil,
   - To the extent of moderately and highly unstable areas,
   - To a distance equal to the height of one site-potential tree,
   - To a 150 foot slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs.

Seasonal restrictions may be used to protect the road, trail, or route during saturated or near saturated soil conditions. Natural processes of road closure, if ineffective, may be augmented with active obliteration.

2.5.1.2. Soil and Water Conservation

The Clean Water Act requires each state to implement its own water quality standards. The State of Utah's Water Quality Antidegradation Policy requires maintenance of water quality to protect existing instream Beneficial Uses on streams designated as Category 1 High Quality Waters. All surface waters geographically located within the outer boundaries of the Dixie National Forest, whether on private or public lands, are designated as High Quality Waters (Category 1). This means they are to be maintained at existing high quality. New point sources are not to be allowed, and non-point sources will be controlled to the extent feasible through implementation of BMPs or regulatory programs (UAC 2008b).

The State of Utah and the Forest Service have agreed through a 1991 Memorandum of Understanding to use Forest Plan standards and guidelines and the Forest Service Handbook (FSH) 2509.22 Soil and Water Conservation Practices (SWCPs) as the BMPs. The use of SWCPs as the BMPs meets the water quality protection elements of the Utah Nonpoint Source Management Plan.

The soil and water conservation practices associated with this Motorized Travel Plan project would be modified with additional site-specific direction that would directly or indirectly improve water quality, protect beneficial uses, reduce losses in soil erosion and productivity, and abate or mitigate management effects, while meeting other resource goals and objectives.

The following SWCPs apply to this travel plan project. They serve as checkpoints in designing a project. The site-specific direction for each of the SWCPs listed below is taken from FSH 2509.22 Soil and Water Conservation Practices Handbook, R1/R4 Amendment No. 1, effective May 1988.

15.01 General Guidelines for Transportation Planning
15.02 General Guidelines for the Location and Design of Roads and Trails
15.03 Road and Trail Erosion Control Plan
15.04 Timing of Construction Activities
15.05 Slope Stabilization and Prevention of Mass Failures
15.06 Mitigation of Surface Erosion and Stabilization of Slopes
15.07 Control of Permanent Road Drainage

15.09 Timely Erosion Control Measures on Incomplete Roads and Streamcrossing Projects
15.10 Control of Road Construction Excavation and Sidecast Material
15.11 Servicing and Refueling of Equipment
15.12 Control of Construction in Riparian Areas
15.16 Bridge and Culvert Installation (Disposition of Surplus Material and Protection of Fisheries)
15.17 Regulation of Borrow Pits, Gravel Sources and Quarries
15.18 Disposal of Right-of-Way and Roadside Debris
15.21 Maintenance of Roads
15.22 Road Surface Treatment to Prevent Loss of Materials
15.23 Traffic Control During Wet periods

2.5.1.3. Rare Plants

The five project design features below will help reduce the risk to Threatened, Endangered, Proposed, and Sensitive plant populations and their habitat from the invasion and expansion of noxious weeds and invasive species.

1. During motorized trail construction and road obliteration activities, all off-road and maintenance equipment is required to be free of noxious weed seeds when moving equipment into a new area and/or moving between areas that are known to contain noxious weeds. Use federal form B6.35 – Equipment Cleaning.
2. Use certified weed-free straw and mulch for all projects conducted or authorized by the Forest Service on National Forest System lands. If state-certified straw and/or mulch is not available, the Forests should require sources certified to be weed free using the North American Weed Free Forage Program standards or a similar certification process.
3. Certified “weed-free” seed mix is required for areas that are seeded.
4. Avoid weed-infested areas for use as staging or parking areas.
5. Complete post-project surveys to document infestations and to allow treatment of noxious weeds in areas of disturbance.

Firewood collection areas would not be designated where any population of a Threatened, Endangered, Proposed, or Sensitive plant species is known to occur.

2.5.1.4. Wildlife

Given the potential for short-term disturbance due to ground-disturbing decommissioning activities, suitable habitat validation within Critical Habitat and/or site-specific surveys for species presence or absence would be completed prior to implementation for the following species:

- California condor,
- Mexican spotted owl,
- Utah prairie dog,
- American peregrine falcon (known eyries),
- Northern goshawk (known nest areas),
- Greater sage-grouse (known leks), and
- Pygmy rabbit.

Appropriate limited operating seasons will be applied to decommissioning activities if a given species is present. Limited operating seasons will also be in effect for mule deer and elk crucial fawning and summer habitat, and known migratory bird nest locations (see letter regarding the Biological Assessment at USDA 2009b).

2.5.1.5. Recreation

A public education program should be implemented in conjunction with the Travel Plan. An implementation plan should also be developed, to include a schedule of closures to assist in public education. To accomplish the project objectives, a signing plan should be developed. Due to the cost and extent of needed signing, cost of road closures, cost of public education, and cost of law enforcement, a project financial work plan should also be developed.

Common to Alternatives D and E

Table 2-7. Project Design Features for Motorized Trail Construction

	Easiest	More Difficult	Most Difficult
Grade			
Max. sustained	15%	25%	35%
Length	200’	300’	500’
Max. pitch	20%	30%	50%
Clearing (wooded)			
Downhill side	2’	1.5’	1’
Uphill side	3’	3’	3’
Level	3.1’ each side	2.6’ each side	2.5’ each side
Clearing (open)			
Downhill side	2’	1.5’	1’
Uphill side	3’	3’	3’
Level	3.1’ each side	2.6’ each side	2.4’ each side
Height			
	6’	6’	5’
Tread (width)			
Minimum	6.2’	5.2’	4.8’
Maximum	7.2’	6.2’	5.8’
Surface			
	Relatively smooth	Sections of relatively rough	Relatively rough with very rough sections

Source: Forest Service Handbook, Section 2309.18-Trails Management Handbook: ATV Trail (three-wheel/four-wheel vehicle) Guide.

2.5.1.6. Scenery

Common to Alternatives D and E
Project design features include professional trail design, construction in sustainable locations, and proper signage and enforcement.

2.5.1.7. Transportation

Some routes proposed for closure would be decommissioned (ripped and seeded) and others would be allowed to revegetate naturally. Some routes proposed for closure are already brushed in (revegetating naturally), a process that would be left alone to continue. For roads that are proposed for decommissioning, there would be a one-time cost to accomplish those activities. Decommissioning activities would follow the methods described in *Road Closure and Obliteration in the Forest Service* (USDA 1996).

The Forest Service Manual (FSM 7712.1) allows for a spectrum of treatments for roads to be decommissioned depending on the most appropriate action for a given road segment. It would be the responsibility of the project engineer and hydrologist to determine which decommissioned roads would be best served by obliteration and to determine which type of closure would be the most effective.

Portions of some routes may require relocation or improvement to meet Forest Service standards; these route sections have been identified through the route evaluation and analysis process. Authorization of some of the actual road relocation work may require supplemental analysis and, in some cases, a subsequent decision made according to NEPA provisions.

No new road construction or reconstruction is proposed in this project. The only proposed trail construction is under Alternatives D and E.

2.5.1.8. Cultural Resources

Areas with high probability of having cultural resources within areas proposed for ground disturbance and/or reclassification of routes that have not been surveyed would be surveyed and evaluated by an archaeologist in an effort to locate and record any archaeological, historical, or Traditional Cultural Properties. Survey methods would include pedestrian transects and visual assessments of the project *Area of Potential Effects* for all site-specific undertakings.

Each site identified would be evaluated for inclusion on the National Register of Historic Places. Those sites found to exhibit the characteristics for inclusion on the Register would be identified as Historic Properties and actions undertaken near or adjacent to them must identify what effect they would have.

Measures must be undertaken for those actions that would pose an adverse effect. Measures could include fencing, rerouting, burying the site, and/or full scale excavation. Measures are identified on a site-by-site basis. A Programmatic Agreement between the Advisory Council on Historic Preservation, the Utah State Historical Preservation Office, and the Dixie National Forest will outline how the surveys, evaluations, and measures will be implemented.

2.5.2. Forest Plan Amendment

Under the action alternatives, the Forest Plan would be amended to reflect the prohibition on cross-country motorized travel. The MVUM published after release of the decision will function as the new Travel Map for the Dixie National Forest. As noted on page IV-3 of the Forest Plan, “Review the travel map annually and revise as necessary. The most current revisions will become a part of the management direction for the Forest Plan” (USDA 1986). The MVUM meets this requirement and will become part of the management direction of the Forest Plan.

2.5.3. Designation of Non-system Routes

There are a large number of unauthorized routes (routes not currently part of the National Forest System of roads and trails) currently on the Forest. While some of these unauthorized routes were user-created, the majority were created to facilitate range, timber, and special use activities over the course of decades. In some cases, these routes have acquired recreational value. Through careful route evaluation, this travel plan considers the uses and impacts of unauthorized routes, and proposes to add some of them to the system. The number and mileage of non-system routes proposed for addition to the system varies by alternative (see *Table 2-5. Disposition of Unauthorized Routes by Alternative* on page 2-7).

2.5.4. Travel Route Restrictions and Closures

Routes that are not designated for public or administrative access in this decision would be closed and decommissioned from the National Forest System. A variety of closure methods are considered in this decision (see the *Transportation* section under *Project Design Features* on page 2-26). If a route is proposed to be closed, the method would be the same for all alternatives that recommend a closure.

2.6. Alternatives Considered But Eliminated From Detailed Study

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Public comments received in response to the proposed action provided suggestions for alternative methods for achieving the purpose and need. Some of these alternatives may have been outside the scope of designating a system of authorized roads, trails, or areas for motor vehicle use; duplicative of the alternatives considered in detail; unlikely to meet the purposes the agency has selected for the project; or determined to contain components that would cause unnecessary environmental harm. Therefore, a number of alternatives were considered, but dismissed from detailed consideration for reasons summarized below.

2.6.1. Sustainable Multiple Use Alternative

This alternative was submitted by Grand Canyon Trust on behalf of the following organizations:

- Center for Biological Diversity,
- Center for Water Advocacy,
- Grand Canyon Trust,
- Great Old Broads for Wilderness,
- Red Rock Forests,
- Sierra Club, Utah Chapter,
- Southern Utah Wilderness Alliance,
- Utah Environmental Congress,
- Wild Utah Project, and
- Wildlands CPR (Grand Canyon Trust 2007).

The Sustainable Multiple Use Alternative (SMUA) submitted by these groups was not studied in detail in its entirety because:

- Many of the proposed standards, conditions, and guidelines were outside the scope of designating a system of authorized roads, trails, or areas for motor vehicle use. For example:
    - It assigned designations to routes that were addressed in previous decision areas. Under 36 CFR 212.50(b), the responsible official may limit the scope of the designation process by incorporating previous decisions.
    - It did not allow for forest-wide dispersed camping but proposed designation of dispersed campsites. A decision regarding designation of sites would have far reaching implications and would require a separate analysis process.

  - It proposed Dixie National Forest registration and licensure of OHVs, as well as regulation of OHV engine noise levels. Ordinances regulating the ownership and manufacture of OHVs are not included in the agency's regulations for motorized route designation.
  - It required the Dixie National Forest to conduct a landscape level non-motorized trail system analysis. All travel routes and areas are currently open to non-motorized and non-mechanized modes of travel.
- It did not meet the agency's purpose in providing legal access. Under the most environmentally protective alternative studied by the Forest Service (Alternative B), the Dixie National Forest identified a need for 959 miles of routes which, although closed to the general motorized public, were deemed necessary for legal access (i.e., designated as Administrative/Permittee/Private Property Owner), whereas the SMUA only recognized 296 miles of routes of the same designation. Many of the routes suggested for closure under the SMUA are required for access to private land, privately owned facilities authorized by special use permit, or range improvements (USDA 2008c).
- It was duplicative of Alternative B, which was studied in detail. We developed Alternative B using information provided in the SMUA. Alternative B focuses on resource protection. Since Alternative B closes 232 more miles to the public than does the SMUA, we analyzed Alternative B to ensure we had sufficiently considered a reasonable range of alternatives (USDA 2008c).

2.6.2. Non-motorized Trails Opened to Motorized Vehicles

Some individuals and groups requested that existing non-motorized trails be converted to motorized trails. As allowed by the Travel Rule, all previous and pending decisions that allow, restrict, or prohibit motor vehicle use on NFS roads, trails, or areas have been incorporated into this project and will not be revisited. There are previous decisions in place for the non-motorized trails that were proposed for conversion to motorized trails (e.g., Grand View, Virgin River Rim, and Spruce trails).

2.6.3. Off-road Motorized Use for Game Retrieval or Antler Gathering

Game may be retrieved off of designated routes using non-motorized means only. Antlers may also be retrieved off of designated routes using non-motorized means only. This direction provides consistency among the national forests in Utah, none of which allow off-road motorized use for either game retrieval or antler gathering. This direction is also consistent with travel restrictions on State of Utah Wildlife Management Areas (UDWR 2008, p. 42).

2.7. Alternative Maps

Maps of each alternative, organized by ranger district, are located on the following 20 pages. The Escalante Ranger District and the Teasdale portion of the Fremont River Ranger District are included on the same maps.

Map name: Cedar City Ranger District – Alternative A
File name: ch2_map03_d2_alta.pdf
File size: 1,229 KB

Map name: Cedar City Ranger District – Alternative B
File name: ch2_map04_d2_altb.pdf
File size: 1,249 KB

Map name: Cedar City Ranger District – Alternative C
File name: ch2_map05_d2_altc.pdf
File size: 1,254 KB

Map name: Cedar City Ranger District – Alternative D
File name: ch2_map06_d2_altd.pdf
File size: 1,244 KB

Map name: Cedar City Ranger District – Alternative E
File name: ch2_map07_d2_alte.pdf
File size: 1,227 KB

Map name: Escalante and Teasdale Ranger Districts – Alternative A
File name: ch2_map08_d4d5_alta.pdf
File size: 1,057 KB

Map name: Escalante and Teasdale Ranger Districts – Alternative B
File name: ch2_map09_d4d5_altb.pdf
File size: 1,088 KB

Map name: Escalante and Teasdale Ranger Districts – Alternative C
File name: ch2_map10_d4d5_altc.pdf
File size: 1,101 KB

Map name: Escalante and Teasdale Ranger Districts – Alternative D
File name: ch2_map11_d4d5_altd.pdf
File size: 1,091 KB

Map name: Escalante and Teasdale Ranger Districts – Alternative E
File name: ch2_map12_d4d5_alte.pdf
File size: 1,058 KB

Map name: Pine Valley Ranger District – Alternative A
File name: ch2_map13_d1_alta.pdf
File size: 694 KB

Map name: Pine Valley Ranger District – Alternative B
File name: ch2_map14_d1_altb.pdf
File size: 710 KB

Map name: Pine Valley Ranger District – Alternative C
File name: ch2_map15_d1_altc.pdf
File size: 732 KB

Map name: Pine Valley Ranger District – Alternative D
File name: ch2_map16_d1_altd.pdf
File size: 711 KB

Map name: Pine Valley Ranger District – Alternative E
File name: ch2_map17_d1_alte.pdf
File size: 682 KB

Map name: Powell Ranger District – Alternative A
File name: ch2_map18_d3_alta.pdf
File size: 1,368 KB

Map name: Powell Ranger District – Alternative B
File name: ch2_map19_d3_altb.pdf
File size: 1,392 KB

Map name: Powell Ranger District – Alternative C
File name: ch2_map20_d3_altc.pdf
File size: 1,421 KB

Map name: Powell Ranger District – Alternative D
File name: ch2_map21_d3_altd.pdf
File size: 1,396 KB

Map name: Powell Ranger District – Alternative E
File name: ch2_map22_d3_alte.pdf
File size: 1,354 KB

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Chapter 3: Affected Environment and Effects Analysis

This chapter summarizes the physical, biological, and social and economic environments of the project area and the effects of implementing each alternative on that environment. It also presents the scientific and analytical basis for the comparison of alternatives presented in Chapter 2.

The information in this chapter is derived from the specialist reports prepared for this motorized travel plan. For more information on any of the sections in this chapter, please refer to the corresponding specialist report available on the Motorized Travel Plan website at http://www.fs.fed.us/r4/dixie/projects/MTP.

3.1. Soils

The information in this section is summarized from the *Soils Specialist Report* prepared for this motorized travel plan (USDA 2009n). Please see that report for more detail on the affected environment and effects analysis.

3.1.1. Affected Environment

Motorized vehicle use off roads and trails can degrade soil productivity. Direct mechanical impacts have several components: abrasion, compaction, shearing, and displacement. Indirect impacts include hydraulic modification (such as the disruption of surface water flow), reduction in infiltration and percolation, surface ponding, and the loss of water-holding capacity. Unauthorized roads and trails have the potential to accelerate erosion and sediment delivered to streams due to lack of design and poor location (Luce and Black 2001).

Disturbances from roads and trails can increase erosion and sediment delivery. Existing roads and trails are a primary source of long-term management-related sediment. The type, extent, and location of a designated motorized system of roads, trails, and areas will contribute to the amount of accelerated erosion. Accelerated erosion and sediment delivery have been identified as a primary source of water quality pollution in many Dixie National Forest watersheds.

Soil productivity on the Dixie National Forest has been directly impacted by the type, extent, and location of designated roads, motorized trails, and cross-country motor vehicle use. These impacts have affected the existing condition of all the ranger districts to varying degrees.

There are no known locations of asbestos influenced soils on the Dixie National Forest (Van Gosen 2008).

The following five indicators are used to evaluate effects on the soil resource.

1. **Percent of Forest open to cross-country travel.** This percentage is used as a general measure of potential effects to soil productivity. Motorized cross-country travel can result in new trails being pioneered across sensitive areas. Degraded areas can become a major environmental problem because of their direct effects on vegetation, soils, and site hydrology.

2. **Miles of road that intercept slopes of 35 percent or more.** Accelerated erosion and sediment from roads continue over the long-term as a result of traffic use, compaction, high runoff, and concentrated water on the road surface, ditch lines, and from relief culverts.
3. **Miles of roads on high erosion potential soils.** Erosion potential ratings characterize the natural inherent sensitivity of soil types to detach and erode. In high potential areas, disturbance poses a higher risk of accelerated erosion and sediment delivery (Switalski et al. 2004). Soils with low or moderate erosion potential were not considered as an issue due to low risk of accelerated erosion.
4. **Miles of road surface.** Roads represent a long-term commitment of the soil to a non-productive condition. This is a total resource commitment of the soil resource.
5. **Miles of designated ATV trails.** ATV trails can have similar effects to soil productivity as can roads, but the effects differ based on the width of the travelway. As with single track motorized trails, ATV trails create additional problems due to steep grades, lack of designed stream crossings, and difficulty of maintaining water management features. In addition, cross-country motorized vehicle use can cause additional damage to the soil resource.

3.1.2. Effects Analysis

3.1.2.1. Direct and Indirect Effects

The table below summarizes the soil indicators by alternative. Effects were determined to be an improvement, no change, or degradation as compared to Alternative A. A negative change indicates an improvement to soil productivity, a positive number indicates degradation, and a zero indicates no change. The larger the negative number, the greater relative improvement to the soil resources; the larger the positive number, the greater relative degradation to the soil resources. For a breakdown of indicators and percent change by ranger district, see the *Soils Specialist Report* (USDA 2009n).

The size of the increase or decrease was qualitatively described for each indicator. For the indicators, a rating of “major” was given when the difference was 20 percent or more. A rating of “moderate” was given when the change was 10-19 percent. A rating of “minor” was given to changes of 1-9 percent. If the change was less than 1 percent, a “no change” rating was applied.

Table 3-1. Soil Indicators and Percent Change from Existing Condition by Alternative

Soil Indicator	Alternative									
	A		B		C		D		E	
	Measure	% Change	Measure	% Change	Measure	% Change	Measure	% Change	Measure	% Change
1. Percent of Forest open to cross-country travel	61%	0	0%	-100	0%	-100	0%	-100	0%	-100
2. Miles of road that intercept slopes of 35% or more	108	0	73	-32	84	-22	95	-12	112	4
3. Miles of road on high erosion potential soils	64	0	39	-39	47	-27	54	-16	72	12
4. Miles of road surface	4,604	0	2,755	-40	3,062	-33	3,545	-23	4,875	6
5. Miles of designated ATV trail	94	0	154	64	165	76	151	61	98	4

3.1.2.1.1. Soil Indicator #1: Percent of Forest Open to Cross-country Travel

All action alternatives would have a major reduction in negative effects to soils by eliminating cross-country travel.

Under Alternative A, motorized cross-country travel could result in new trails being pioneered across alpine areas, wetlands, steep slopes, and other areas with sensitive soils. Degraded areas become a major environmental problem because of their direct effects on vegetation, soils, and site hydrology.

Soil quality is expected to improve with the elimination of cross-country travel in the action alternatives. There would also be an improvement due to the elimination of motorized use on and adjacent to unauthorized roads. However, accelerated erosion and sediment delivery would continue from unauthorized roads until such time as restoration plans are made and implemented.

Under the action alternatives, limited access for dispersed camping and parking would generally be allowed within 150 feet of a designated road or motorized trail (there are currently three areas on the Forest that have been restricted to designated campsites only as described on page 3-73 in the *Recreation* section). Adverse affects to soil quality are expected to continue on those areas open to limited motorized access within that 150 feet along designated roads and motorized trails.

3.1.2.1.2. Soil Indicator #2: Miles of Road That Intercept Slopes of 35 Percent or More

Alternatives B and C would have major improvements in the miles of road that intercept slopes of 35 percent or more, and Alternative D would have a moderate improvement. Alternative E would have a minor degradation due to an increase in miles of road on steep slopes.

The miles of roads that intercept slopes of 35 percent or more are used as a relative measure of detrimental soil disturbance in areas that are highly susceptible to accelerated erosion, and where sediment from roads continues over the long-term as a result of traffic use, compaction, high runoff, and concentrated water on the road surface, ditch lines, and from relief culverts. Cut and fill slopes can also be a chronic source of surface erosion and mass failures (Satterlund 1972).

3.1.2.1.3. Soil Indicator #3: Miles of Road on High Erosion Potential Soils

Alternatives B and C would have major improvements in the miles of road on high erosion potential soils, and Alternative D would have a moderate improvement. Alternative E would have a moderate degradation due to an increase in miles of road on highly erodible soils.

The miles of roads that are on high erosion potential soils is used as a relative measure of detrimental soil disturbance for soil that can be easily detached and eroded. In high potential areas, disturbance poses a higher risk of accelerated erosion and sediment delivery. Soils with low or moderate erosion potential were not considered as an issue due to low risk of accelerated erosion.

3.1.2.1.4. Soil Indicator #4: Miles of Road Surface

Alternatives B, C, and D would have major improvements due to decreases in the miles of road. Alternative E would have a minor degradation due to an increase in miles of road.

The miles of designated roads are used as a relative measure of total soil resource commitment and detrimental soil disturbance. Accelerated erosion and sediment from roads continue over the long-term as a result of traffic use, compaction, high runoff, concentrated water on the road surface, ditch lines, and from relief culverts. Cut and fill slopes can also be a chronic source of surface erosion and mass failures (Satterlund 1972). Total soil resource commitment can affect water quality because it often creates the greatest extent of accelerated erosion and sediment delivery. Detrimental soil disturbance can result from off-route motorized activities and can produce unacceptable levels of soil degradation by compacting, moving, eroding, or puddling the soil.

3.1.2.1.5. Soil Indicator #5: Miles of Designated ATV Trails

The miles of designated ATV trails would be a major degradation for Alternatives B, C, and D, and a minor degradation for Alternative E.

The miles of designated ATV trails are used as a relative measure of total soil resource commitment and detrimental soil disturbance. ATV trails can have effects to soil productivity similar to those of roads, but the effects differ based on the width of the travelway. ATV trails create additional problems due to steep grades, lack of designed stream crossings, and difficulty of maintaining water management features.

3.1.2.1.6. New Motorized Trail Construction

Two new motorized ATV trails totaling 1.26 miles are proposed for construction in Alternatives D and E on the Cedar City Ranger District. More information on these routes can be found in the *Recreation* section beginning on page 3-72 and the *Scenery* section beginning on page 3-85. A map of the two trail locations is on page 3-87.

New motorized trails represent a total soil resource commitment and detrimental soil disturbance. ATV trails can have effects to soil productivity similar to those of roads, but the effects differ based on the width of the travelway. The proposed routes would likely be 60 inches wide, and would require the removal of all vegetation. Motorized trails can create additional problems due to steep grades, lack of designed stream crossings, and difficulty of maintaining water management features, such as rolling dips that are used to limit water/sediment movement. In addition, motorized vehicle use off the trail can occur, resulting in additional damage to the soil resource.

Both proposed motorized trail segments represent a total resource commitment; the total commitment (applicable to both alternatives) is 0.8 acres. The soils where route T34070 would be located are not suited for new motorized trails. The soils where route U24028A would be located are suitable for new construction with proper project design features to minimize effects to the soil resource. Specific effects from each new route are disclosed in the table below.

Table 3-2. New Motorized Trails Proposed for Construction in Alternatives D and E

Proposed Route #	Mileage	Soil Types and Characteristics*	Existing Condition of Area Proposed for New Motorized Trail	Effects to Soil Resources from the Proposed New Motorized Trail
T34070	0.65	Four soil types (223, 237, 242A, and 242) would be affected from this proposed route. These soil types are found on slump-land topography to the south of Brian Head Peak. These soils are located at very high elevation (10,000 feet or higher) and are formed from tertiary volcanic rocks of the Brianhead Formation. They are well-drained.	Active gully erosion is occurring down slope of the proposed motorized trail. The vegetation in the area is a sparse cover of low shrubs and forbs. The proposed new route traverses slopes that are 10-45 percent.	By constructing a motorized trail mid-slope across this soil, additional gullies would likely develop from the interruption of the natural surface flow, causing the runoff to be accumulated and released along varying sections of this trail and increasing the water erosion potential on these high elevation sideslopes with little vegetative cover.
U24028A	0.61	Soil Type 239 is located at very high elevation (10,000 feet or higher) and on mountain sideslopes with soils that are shallow (less than 20 inches) to bedrock.	Slopes affected by the proposed route construction are less than 15 percent with sparse Engelmann spruce and subalpine fir.	The soils are suitable for motorized trail development. Additional design practices would need to be utilized to prevent water erosion.

* Source: Soil Survey of the Dixie National Forest (USDA 1999).

3.1.2.1.7. Indirect Effects Common to Alternative B, C, and D

Motorized users may be displaced to other areas within Utah, Arizona, and Nevada with implementation of Alternative B, C, or D. This may increase motorized vehicle use in these areas and could cause additional effects to the soils off of the Dixie National Forest..

3.1.2.2. Cumulative Effects

3.1.2.2.1. Cumulative Effects Common to All Alternatives

The cumulative effects analysis is grouped into the following eight categories (details of projects associated with these groups can be found in the project record [USDA 2008b]).

1. **Utilities.** Proposals for new power lines, telecommunication facilities, and water lines and tanks to be located on the Forest are received annually. All these projects result in additional disturbance to the soil resource through the removal of vegetation and long-term commitments for access to these improvements. Detrimental cumulative effects to the soil resource from future utility developments would increase at the Forest level in all alternatives.
2. **Oil and Gas.** Analysis for new oil and gas exploration and development on both the Dixie National Forest and the Fishlake National Forest is currently ongoing. Oil and gas exploration and development cause additional disturbance to the soil resource with new roads and drill pad development, and through the long-term commitments for access to these improvements. Detrimental cumulative effects to the soil resource from future oil and gas development would increase at the forest level in all alternatives.
3. **Transportation**.
    a. **Level 1 Maintenance Roads.** Level 1 roads are roads on the designated National Forest System (NFS) that have been closed to use but that may actually be operationally open. In recent years these roads have been physically closed, waterbars have been installed, and roadbeds and cut and fill slopes have been scarified and seeded. However, many of these roads still need to be physically closed and stabilized to keep them from contributing sediment.
    b. **Unauthorized Motor Vehicle Use and Unauthorized Roads.** Unauthorized motorized use would continue to be a problem that adversely affects soil productivity. The major problems occur on unauthorized roads and in meadows adjacent to roads and motorized trails. Unauthorized roads may or may not be open or drivable. Access may be physically blocked by down or live trees. These roads receive no maintenance so drainage and erosion problems do occur in areas. Drainage structures such as ditches, crossdrains, waterbars, or dips may never have been constructed or are no longer functioning. The majority of routes that are being considered for designation across the alternatives of this project currently exist and are receiving some amount of use. If Alternative B, C, or D is selected, detrimental effects to the soil resource from the motorized route network would be reduced from the current condition.
    c. **Cross-country Travel.** All action alternatives would eliminate cross-country travel. This action would reduce current and potential future interaction between cross-country travel and other forest actions, thereby reducing the threat of detrimental effects to the soil resource. Alternative A has the highest potential to result in adverse cumulative impacts to aquatic resources. This is primarily related to the continuation of cross-country travel on the 61 percent of the Forest where it is currently allowed, including sensitive riparian areas, stream corridors, and lake basins.
4. **Recreation.** Dispersed camping and ATV use are activities that are widespread across the Forest. ATV use and cross-country travel are commonly related activities that occur within and near popular dispersed camping areas. Selection of Alternative A would result in cumulative detrimental impacts associated with dispersed camping and ATV use on the soil resource within areas open to cross-country travel. Additionally, routes included within all action alternatives that increase the designated ATV system would

present the potential for adverse cumulative effects associated with dispersed camping. These effects may produce unacceptable levels of soil degradation by compacting, moving, eroding, or puddling the soil.

5. **Vegetation Treatments.** Proposals for new timber sales are an annual occurrence on the Forest. These projects typically result in 2 to 5 percent of each activity area resulting in detrimental soil disturbance (Jaros 2005, 2007a, 2007b). Detrimental cumulative effects to the soil resource from timber sale activity would remain at current levels in the future at the forest level in all alternatives.
6. **Land Exchange and Easements.** Proposals for land exchanges do not directly affect detrimental soil disturbance.
7. **Special Use Permits.** Proposals for special use permits do not directly affect detrimental soil disturbance.
8. **Grazing.** Livestock grazing is a use that is managed under proper use guidelines. The actions proposed in this EIS would not alter the grazing pattern or management of livestock.

Alternatives B, C, and D (in the same order of preference) would result in beneficial cumulative effects to soil resource in response to past, present, and future implementation of travel management actions on the Forest. Some of these actions are included in signed decisions that have yet to be implemented on the ground. All of these projects either reduced total motorized route mileage or reduced route encroachment on steep soils or highly erodible areas. These actions have been initiated primarily to improve watershed function and aquatic and terrestrial habitat conditions. Alternative A would have a continuance of negative cumulative effects as it would allow continued cross-country travel on 61 percent of the Forest. Alternative E would increase the number and miles of road on the Forest and would also increase negative cumulative effects.

3.2. Hydrology

The information in this section is summarized from the *Hydrology Specialist Report* prepared for this motorized travel plan (USDA 2009g). Please see that report for more detail on the affected environment and effects analysis.

3.2.1. Affected Environment

The major watersheds associated with the Dixie National Forest are the Virgin River, Colorado River, and Great Basin watersheds. Each of these larger watersheds are further sub-divided into 5th Hydrologic Unit Code (HUC) watersheds and numerous smaller 6th HUC watersheds of about 20,000 acres in size (31 square miles). These HUCs are the basis for this analysis. There are 39 5th HUC watersheds and 179 6th HUC watersheds, which include areas on and off National Forest System (NFS) lands. Water quality impairments are associated with 40 of these 6th HUC watersheds (USDA 2009g).

Existing impacts to soil and water resources from past and present activities include livestock grazing of upland and riparian areas, timber harvest, mining, oil and gas activities, stream augmentations and impoundments, developed ski areas, developed and dispersed recreation, OHV and ATV use, wildland fires, wildland fire use fires (WFUs), prescribed fires, and road and trail construction, and well as maintenance associated with many of these activities

Most of the waters within the Forest boundary are considered High Quality Waters (Category I). The exceptions to this may be found in the Standards of Quality for the Waters of the State (UAC 2008b).

The existing condition with regard to roads on each of the 179 watersheds on the Forest is reflected in Alternative A, the No Action Alternative, as shown in detail in the *Hydrology Specialist Report* (USDA 2009g).

3.2.2. Effects Analysis

3.2.2.1. Direct and Indirect Effects

In general, access management that increases accessibility also increases the risk of impacting the soil and water resources. The potential impacts include soil disturbance in the form of soil displacement and compaction in the uplands as well as stream management zones including wetlands, streambanks, meadows, and riparian areas. This soil displacement leads to sediment inputs into the streams in addition to any other pollutant inputs that may be associated with vehicular traffic.

Geomorphic effects of roads range from chronic and long-term contributions of fine sediment into streams to catastrophic mass failures of road cuts and fills during large storms. Roads may alter channel morphology directly or may modify channel flow and extend the drainage network into previously unchanneled portions of the hillslope. The magnitude of road-related geomorphic effects differs with climate, geology, road age, construction practices, and storm

history. Improvements in designing, constructing, and maintaining roads can reduce road-related erosion at the scale of individual road segments (Gucinski et al. 2001).

Roads have three primary effects on hydrologic processes:

1. They intercept rainfall directly on the road surface and road cutbanks and affect subsurface water moving down the hillslope,
2. They concentrate flow, either on the surface or in an adjacent ditch or channel, and
3. They divert or reroute water from paths it otherwise would take were the road not present.

Problems of road drainage and transport of water and debris – especially during floods – are primary reasons roads fail, often with major structural, ecologic, economic, or other social consequences. The effect of roads on peak streamflow depends strongly on the size of the watershed. For example, capture and rerouting of water can remove water from one small stream while causing major channel adjustments in another stream receiving the additional water. In large watersheds, roads constitute a small proportion of the land surface and have relatively insignificant effects on peak flow (Gucinski et al. 2001).

Roads can impact streams and aquatic systems in many ways. Roads with inadequate buffers can have higher sediment loads. Road obliteration can eliminate these impacts. User-created roads often are close to streams and have poor if any drainage features to prohibit sediment from entering the stream. ATVs can travel many trails or roads or off-road, resulting in the same impacts as from roads designed for full-size vehicles. Road systems can change watershed hydrology and increase peak flows while reducing late summer base flows. Roads can be a conduit for moving chemicals and sediment into streams.

The choice of analysis for this project was to equate all past, present, and proposed road disturbances to a “detrimentally disturbed soil,” which is a soil that has been displaced, compacted, or severely burned such that its hydrologic properties are impaired (Forest Service Handbook for Soil Management [FSH] 2509.18). Literature review indicates that the area of detrimentally disturbed soils should not exceed 5 percent within the 300 foot riparian influence zone adjacent to both sides of the stream and in the stream (McGurk and Fong 1995). Our assumption is that all road acreages constituted a detrimentally disturbed soil as they perform like a compacted soil and are hydrologically impaired.

The logic behind the analysis is that once a riparian influence zone exceeds the 5 percent threshold of detrimentally disturbed soils, effects to water quality will occur, as will changes to the sponge filter system. This may then cause a malfunction of the sponge filter system which may lead to detrimental changes in vegetation health, stream channel integrity, suspended sediment loads, and bedload.

To simplify analysis, the approximate 5 percent threshold used in this approach would be a 1:1 ratio of stream miles and road miles within the riparian influence zone. Use of this ratio assumes a median compacted width of 30 feet. Road density by 6th HUC watershed will also be used as a comparison parameter to track the miles of road/square mile of watershed. The logic behind using this parameter is that an increase in the miles can be considered a relative detrimental affect to the watershed and its function.

Assumptions used in this effects analysis:

- Roads considered in the effect analysis include all unauthorized routes (U and G routes) and all classified roads as of 2005,

- Roads located on private land or under the jurisdiction of local counties, the State of Utah, National Park Service, and Bureau of Land Management that were located within any of the cumulative effects watersheds were considered in the analysis,
- The two motorized trails proposed for construction (comprising 1.26 miles) are included in the analysis of Alternatives D and E,
- The cross-country travel allowance in Alternative A will lead to an increased density of roads within each watershed and in each riparian influence zone, and
- Naturally closed roads will continue to influence surface and subsurface hydrology for up to 30 years. Any reduction of road miles within a watershed from road closures will take time before negative effects are no longer realized.

3.2.2.1.1. Alternative A

Compared to Alternatives B, C, and D, there is a projected increase in the road density within most of the 179 watersheds in Alternative A. Road mileage within the riparian influence zone is either greater than or equal to that in Alternatives B, C, and D. Compared to Alternative E, road density within the 179 watersheds is either greater than or equal to Alternative A. Road mileage within the riparian influence zone is either less than or equal to that in Alternative E.

Cross-country motorized travel would have a negative impact on watershed function as route proliferation is expected to increase over time in those watersheds where cross-country travel is allowed. An increase in road mileage would contribute to the area compacted within a watershed and would ultimately lead to increases in erosion and runoff rates and interruption of surface and subsurface water flow. Increases in road mileage within the riparian influence zone would affect water quality, stream stability, and wetland and floodplain health.

3.2.2.1.2. Alternatives B and C

Compared to Alternative A, there is a projected reduction in road density in 149 of the 179 watersheds and a reduction in road mileage within the riparian influence zone in 108 of the 179 watersheds in both Alternatives B and C. There may be some isolated and/or localized areas where roads within the riparian influence zone would have a negative influence and/or impact to the stream channel, wetlands, floodplains, and water quality.

The elimination of cross-country motorized travel would lead to fewer user-created roads, which impact wetlands, floodplains, stream channel health, and water quality. Concentrating vehicular travel to a designated route designed for motorized travel would reduce and localize impacts to a more manageable level.

3.2.2.1.3. Alternative D

Compared to Alternative A, there is a projected reduction in road density in 143 of the 179 watersheds and a reduction in road mileage within the riparian influence zone in 91 of the 179 watersheds. There may be some isolated and/or localized areas where roads within the riparian influence zone would have a negative influence and/or impact to the stream channel, wetlands, floodplains, and water quality.

The elimination of unrestricted cross-country travel would lead to fewer user-created roads, which impact wetlands, floodplains, stream channel health, and water quality. Concentrating vehicular travel to a designated route designed for motorized travel would reduce and localize impacts to a more manageable level.

3.2.2.1.4. Alternative E

Compared to Alternative A, there is a projected increase in road density within 97 of the 179 watersheds and an increase in road mileage within the riparian influence zone in 53 of the 179 watersheds.

There may be some isolated and/or localized areas where roads within the riparian influence zone would have a negative influence and/or impact to the stream channel, wetlands, floodplains, and water quality.

The elimination of unrestricted cross-country travel would lead to fewer user-created roads, which impact wetlands, floodplains, stream channel health, and water quality. Concentrating vehicular travel to a designated route designed for motorized travel would reduce and localize impacts to a more manageable level.

3.2.2.2. Cumulative Effects

Effects other than roads considered in the cumulative effects analysis:

1. **Utilities.** Includes power lines, water lines/tanks, fiber optic and other telecom lines, and communication sites.
2. **Oil and Gas.** Also includes other minerals and mineral materials (e.g., gravel, perlite, cinders). These activities would continue to occur with a possible increase in oil and gas activity in the near future.
3. **Transportation.** Motorized route designation, construction, and decommissioning. The is what is addressed in this plan.
4. **Recreation.** Includes general activities not under special use permit (sightseeing, hiking, camping) and developed recreation maintenance. Levels of use would stay the same or increase over time.
5. **Vegetation Treatments.** Includes timber harvest, chaining, fuel reductions, prescribed fire, firewood collection, and Christmas tree collection. Vegetation treatments would continue to occur with an estimated increase in chaining maintenance and prescribed fire.
6. **Land Exchange and Easements.** Includes property disposal, highway easements, water diversions, and water augmentation. Over time these adjustment would occur at a reduced rate.
7. **Special Use Permits.** Includes one time events (e.g., horse races, trekking) and outfitter guide activities. These would continue to occur with some increases in use.
8. **Grazing.** Grazing would continue to occur at the present level.

3.2.2.2.1. Alternative A

Since detrimental disturbance to soils from proposed road mileage does not exceed the 5 percent threshold in any of the riparian influence zones, none of the watersheds are expected to display cumulative impacts initially. In time this would change as the proliferation of user-created routes within the riparian influence zone, coupled with effects from other forest uses as listed above, would exceed the 5 percent threshold and lead to detrimental changes in vegetation health, stream channel integrity, water quality, and bedload.

Although the detrimental disturbance within riparian influence zones does not exceed the 5 percent threshold, with time the damage from unrestricted cross-country travel and user-created routes would surpass the threshold and cumulative effects would become evident at the confluence of each watershed. These effects would likely contribute pollutants to 303d listed waters and would likely exceed Total Maximum Daily Loads mandated by the State of Utah.

3.2.2.2.2. Alternatives B, C, and D

Since detrimental disturbance to soils from proposed road mileage does not exceed the 5 percent threshold in any of the riparian influence zones, none of the streams are expected to display any cumulative impacts initially or over time. In fact, if disturbance from other past, present, and future uses were doubled, the impacts to the riparian influence zone in all 179 watersheds would still not exceed the 5 percent threshold.

Since cumulative effects are not expected to be evident initially or over time, changes to water quality down stream of each of the 6th HUC watersheds is not expected to further impair any 303d listed water or add to any mandated Total Maximum Daily Load.

3.2.2.2.3. Alternative E

Since detrimental disturbance to soils from proposed road mileage does not exceed the 5 percent threshold in any of the riparian influence zones, none of the streams are expected to display any cumulative impacts initially or over time. With the exception of one watershed, if disturbance from other past, present, and future uses (section the list under *Cumulative Effects* on page 3-13) were doubled, the impacts to the riparian influence zone in all 179 watersheds would still not exceed the 5 percent threshold. The single watershed where the threshold would be exceeded if disturbance were doubled is Cottonwood Creek (160300020406) on the Powell Ranger District.

Since cumulative effects are not expected to be evident initially or over time, changes to water quality down stream of each of the 6th HUC watershed is not expected to further impair any 303d listed water or add to any mandated Total Maximum Daily Load.

3.3. Rare Plants

The information in this section is summarized from the *Rare Plants Specialist Report* prepared for this motorized travel plan (USDA 2008j). Please see that report for more detail on the affected environment and effects analysis.

3.3.1. Affected Environment

Plant species selected for this analysis are composed of species that are listed as Threatened, Endangered, or Proposed under the Endangered Species Act (USDI 2005), and Sensitive Species listed on the Intermountain Region Proposed, Endangered, Threatened, and Sensitive Species list (USDA 2003a) that have habitat within areas open to cross-country travel (Table 3-3 on page 3-16). *Townsendia aprica* (Last Chance townsendia) is the only Threatened species located within the project area. This Threatened species has habitat in areas open to cross-country travel. *T. aprica* and the 18 sensitive species with known populations within the project area will be analyzed in detail. There are no Endangered species on the Forest (Rodriguez 2008).

The recovery plan for *Townsendia aprica* does not designate any critical habitat; however, threats to this species include road development and road building (USDI 1993). The recovery plan states:

> At present, off-road vehicle use on *T. aprica* habitat is light. However, with possible human population increases in the region in which *T. aprica* occurs, and with increasing popularity and availability of improved off-road vehicles, off-road vehicle use is expected to increase. This can be expected to result in an increase in damage to the habitat of *T. aprica*. The Bureau of Land Management, Forest Service, and National Park Service should develop off-road vehicle use plans that prohibit off-road vehicle use on *T. aprica* habitat.

The following table lists those Sensitive plants that were analyzed. A complete list of all Sensitive species, including those that do have suitable habitat on the Dixie but were not analyzed, is included in the *Rare Plants Specialist Report* (USDA 2008j).

Table 3-3. Rare Plant Species Analyzed

Scientific Name (Common Name)	Status	Presence and Location
Townsendia aprica (Last Chance townsendia)	T	Known on Teasdale
Astragalus limnocharis var. *tabulaeus* (Table Cliff milkvetch)	S	Known on Escalante; suspected on Powell
Botrychium paradoxum (paradox moonwort)	S	Known on Escalante
Castilleja aquariensis (Aquarius paintbrush)	S	Known on Escalante and Teasdale
Castilleja parvula var. *revealii* (Reveal paintbrush)	S	Known on Cedar City, Escalante, and Powell
Cryptantha ochroleuca (yellow-white catseye)	S	Known on Escalante and Powell
Cymopterus beckii (pinnate spring-parsley)	S	Known on Teasdale
Cymopterus minimus (Cedar Breaks biscuitroot)	S	Known on Cedar City, Escalante, and Powell
Eriogonum aretiodes (Widtsoe buckwheat)	S	Known on Escalante and Powell
Gilia caespitosa (Rabbit Valley gilia)	S	Known on Teasdale
Heterotheca jonesii (Jones goldenaster)	S	Known on Escalante
Penstemon bracteatus (Red Canyon beardtongue)	S	Known on Powell
Penstemon parvus (little penstemon)	S	Known on Escalante and Teasdale
Penstemon pinorum (pinyon penstemon)	S	Known on Pine Valley
Salix arizonica (Arizona willow)	S	Known on Cedar City, Powell, and Teasdale
Senecio malmstenii (podunk groundsel)	S	Known on Cedar City, Escalante, and Powell
Silene petersonii (Maguire campion)	S	Known on Cedar City and Powell
Sphaeromeria capitata (rock tansy)	S	Known on Powell
Thelesperma subnuda var. *alpina* (Bicknell thelesperma)	S	Known on Teasdale

Source: Madsen 2004.
T = Threatened; S = Sensitive.
There are additional Sensitive species on the Forest; however, only these 18 species listed in the table have been analyzed for this motorized travel plan.

3.3.2. Effects Analysis

3.3.2.1. Direct and Indirect Effects

3.3.2.1.1. Alternative A

Effects Common to All Rare Plants

This alternative allows cross-country travel on 61 percent of the Forest. The areas open to cross-country travel encompass habitat and known populations of 18 Sensitive species and 1 Threatened species (*T. aprica*). These 19 species and their habitat located in areas open to cross-country travel are at risk of habitat degradation and destruction of plants from OHVs crushing the plants, disturbing the habitat, and by potentially introducing invasive species to the area. Cross-country travel can contribute to noxious weed and invasive species introduction into uninfested areas and can aid in expanding existing populations. Noxious weeds and invasive species are aggressive plants that can take over an area choking out the native species (Gelbard and Belnap 2003).

Effects to T. aprica

There are known locations of the federally-listed species *T. aprica* that occur in areas open to cross-country travel. These populations are located adjacent to 7.11 miles of roads on the Teasdale portion of the Fremont River Ranger District. Currently 5.61 miles of these roads are open to all motorized travel and 1.5 miles are open to full-size vehicles for administrative motorized use and to OHVs for public use. Due to the existing locations of *T. aprica* within areas open to cross-country travel and along routes that have motorized vehicle use, there is a risk of degradation and decline of these populations.

Increased interest in public lands coupled with the increasing numbers of the new side-by-side ATVs would result in an increase in motorized activity (A & A Research 1994). This increased activity would likely increase the disturbance to populations of *T. aprica*. Examples were documented from one trail where allowable motorized activity was moving into areas occupied by *T. aprica*. Over time, the habitat for this species may begin to erode and compromise the unique nature of these ecosystems (Campbell 2006).

Alternative A poses the greatest potential risk to *T. aprica* populations and habitat due to the potential degradation to *T. aprica* habitat and potential adverse effect on the populations.

Determinations – Sensitive Species

The 18 sensitive species located in areas open to cross-country travel would have some impacts, increasing with escalating motorized use on public lands (A & A Research 1994) under Alternative A because of their vulnerability to cross-country OHV activities.

Alternative A would have no additional affect on the remaining six Sensitive species not analyzed as part of this travel plan due to the fact that known populations are found only in areas already closed to cross-country travel. This determination is based on life histories, field surveys, and habitat assessments for the Sensitive plant species on the Dixie National Forest (Rodriguez 2008).

Determinations – Threatened Species

Alternative A would have the potential to impact populations of the federally-listed *T. aprica*. This determination is based on the fact that suitable habitat and a few individuals in some populations may continue to be affected due to the open OHV areas with *T. aprica* populations, while other populations would not be affected. In all cases, where suitable habitat and a few individual plants of *T. aprica* may be affected, the determination is that the population as a whole would not be at risk.

3.3.2.1.2. Alternatives B, C, D, and E

Effects Common to Sensitive Species

The impact to sensitive plants would increase in proportion to the increase in number of miles of designated routes within each Sensitive plant colony. None of the action alternatives allow cross-country travel, thereby reducing the impact that cross-country travel can have on plant populations and their habitat. Additionally, the risk of exposing these colonies and unadulterated acres of the Forest to invasive species would decrease in proportion to the reduction of miles of designated routes.

Effects Common to Threatened Species

The action alternatives address existing routes adjacent to *T. aprica* populations on the Teasdale portion of the Fremont River Ranger District differently. Under Alternatives B and C, 5.58 miles of routes would remain open only to administrative motorized use. Under Alternative D, those same 5.58 miles of routes would remain open to all uses with proposed project design features (see Chapter 2). Also under Alternative D, 1.5 miles would remain open to both administrative use and OHV use by the public. Under Alternative E, 7.11 miles would remain open to all motorized use.

Due to the motorized use on these routes near populations and habitat, there is a risk to the known populations. An invasion of noxious and invasive species could degrade the habitat compromising *T. aprica* populations. Of the action alternatives, Alternative E poses the greatest risk to this Threatened plant. Alternatives B and C pose the least risk, and Alternative D falls in the middle for risk. The following table compares the miles of routes associated with known *T. aprica* populations by action alternative.

Table 3-4. Miles of Routes by Designation and Alternative Adjacent to *Townsendia aprica* Populations

Alternative	Miles Open to Administrative Use	Miles Open to Administrative Use and Public OHV Use	Miles Open to All Uses
B	5.58	0	0
C	5.58	0	0
D	0	1.5	5.58
E	0	0	7.11

Determinations – Sensitive Species

The action alternatives (Alternatives B, C, D, and E), all of which close the Forest to cross-country travel and restrict travel to designated routes, would have little to no affect on any populations of the 18 analyzed Sensitive plant species with known populations on the Dixie National Forest. This determination is based on life histories, field surveys, and habitat assessments for the Sensitive plant species on the Dixie National Forest as described in Rodriguez 2004.

Determinations – Threatened Species

Alternatives B and C would have no detrimental effect to *T. aprica*. Under these alternatives cross-country travel is closed and travel routes are limited; these alternatives have deterred possible future damage. This determination is based on life histories, field surveys, and habitat assessments for this Threatened plant species on the Dixie National Forest as described in Rodriguez 2004.

Alternatives D and E would have a may affect, not likely to adversely affect determination for populations of *T. aprica*. This determination is based on the fact that suitable habitat and a few individuals in some populations may continue to be affected, while other populations would not be affected. In all cases, where suitable habitat and a few individual plants of *T. aprica* may be affected, the population as a whole would not be at risk.

Any of the action alternatives would be more restrictive than Alternative A. Populations of *T. aprica* would be benefited by any action alternative over time due to the substantial reduction of the area where motorized activity would be allowed.

Effects Common to Rare Plant Species from Proposed Motorized Trail Construction in Alternatives D and E

Alternatives D and E both propose the construction of 2 segments of motorized trail comprising 1.26 miles on the Cedar City Ranger District (see map on page 3-87). Neither of the motorized trails proposed for construction are located within habitat for any Sensitive species or within habitat for the Threatened *T. aprica*. There would be no effect to rare plants from construction of either motorized trail.

3.3.2.2. Cumulative Effects

- **Utilities.** Proposals for new power lines, telecommunication facilities, and water lines and tanks to be located on the Forest are received annually. All these projects result in additional disturbance opening sites to noxious weeds. Routes used for utilities are closed to the public and therefore there would be no additional effect to rare plants. Special use permittees would follow guidelines to prevent spread of noxious weeds.
- **Oil and gas.** Site-specific analysis would be conducted when specific oil and gas projects are proposed and specific locations are known. Disturbance and heavy equipment creates exposure and opportunity for noxious weed seeds and plant parts to become established. However, there would be no greater threat when combined with the implementation of any alternatives. Effects to rare plants would remain unchanged.
- **Transportation.** All action alternatives would result in the elimination of cross-country travel. This action would reduce current and potential future interaction between cross-country travel and other forest actions, thereby reducing the threat to sensitive plant populations. Alternative A has the highest potential to result in adverse cumulative impacts to sensitive plant populations, primarily related to the continuation of cross-country travel on the 61 percent of the Forest where it is currently allowed.
- **Recreation.** Dispersed camping and ATV use are widespread across the Forest. ATV use and cross-country travel are commonly related activities that occur within and near popular dispersed camping areas. Selection of Alternative A would result in cumulative detrimental impacts associated with dispersed camping and ATV use on the sensitive plant populations within areas open to cross-country travel. Additionally, routes included within all action alternatives that increase the designated ATV system would present the potential for adverse cumulative effects associated with dispersed camping. This would result in minimal additional impacts to sensitive plants.
- **Vegetation treatments.** Proposals for new timber sales and other vegetation treatments are an annual occurrence on the Forest. Alternative A would continue current impacts with no changes to sensitive species impacts. All action alternatives actually decrease impacts to sensitive plants. These reductions are proportional to miles of roads closed.
- **Land exchanges and easements.** Land exchanges and easements may require new travel routes, increasing miles of roads when combined with Alternative A, resulting in a net increase in road impacts. The action alternatives would curtail this affect, minimizing impacts to noxious weed spread and sensitive species degradation.

- **Special uses.** Each special use permit increases use of public lands when combined with Alternative A more overall area is open to degradation and therefore increases opportunity for noxious weed seeds to be introduced in remote areas as well as degradation to sensitive species populations. The action alternatives concentrate these uses onto designated routes, reducing the potential impact.
- **Livestock grazing.** Alternative A would have no more cumulative effects than at present for noxious weeds and sensitive plants. The action alternatives would improve our ability to monitor travel routes for noxious weeds and reduce cross-country impacts on sensitive species cumulatively as well as reducing the stresses on plant communities giving vegetative resources the advantage.

3.4. Vegetation and Fire and Fuels

The information in this section is summarized from the *Vegetation and Fire and Fuels Specialist Report* prepared for this motorized travel plan (Jump 2008). Please see that report for more detail on the affected environment and effects analysis.

3.4.1. Affected Environment

Vegetation on the Dixie National Forest consists of trees, shrubs, grasses, and forbs. Some of the most common uses of Forest vegetation include:

- Conifers and aspen: saw timber, mine timbers and props, fence material (poles and posts), house logs, firewood, Christmas trees, and cones and seeds,
- Shrubs: deer and elk forage, limited livestock forage, ornamentals, berries for wildlife and humans, and
- Grass and forbs: elk and livestock grazing, seeds (wildlife food source).

Use and administration of vegetation require an appropriate motorized travel network to access areas. Firewood collection availability is an important consideration as wood is a common heating source for homes located in rural areas in and near the Dixie National Forest.

The vegetation on the Forest has been affected by change elements including wildfire, drought, and insect infestations. Thinning, salvaging dead trees, and treating accumulations of dead wood to reduce fuels require a reasonable level of motorized access. Decades of wildfire suppression has kept fire out of aspen groves. Low or absent demand for aspen wood products has resulted in minimal acres of aspen managed for regeneration. The Forest has recently begun aspen restoration projects to regenerate decadent stands; motorized access will be required in these areas for project completion and monitoring.

Suitable timber land is forest land suitable for management of commercial timber species (conifers and aspen) (USDA 2007b). Areas excluded from the suitable timber land base include areas of non-Forest Service ownership, designated wilderness areas, administratively withdrawn lands, economically and technologically infeasible lands, and lands where adequate reforestation is not assured. Timber suitability assumes that motorized travel access exists adequate to perform all aspects of timber management such as timber harvest and administration, reforestation and associated site preparation, pre-commercial thinning, stand examination, and fuel reduction projects. Most roads in suitable timber areas were constructed in conjunction with timber harvest. This has resulted in relatively high road densities where timber has been harvested. The Forest Service system road network is adequate in most areas to serve the needs of currently appropriate vegetation management intensity. For more detail, see the *Vegetation and Fire and Fuels Specialist Report* (Jump 2008).

The current forest products program on the Forest averages timber harvest on 1,500 to 2,000 acres annually. Commercial products harvested include saw logs and house logs, each accounting for about half of the annual 13 MMBF (million board feet) harvest. Tree seedlings are planted on about 500 acres annually across the Forest to replenish stands killed by bark beetles or fire, and a few stands receiving regeneration harvest (Jump 2008).

3.4.2. Effects Analysis

3.4.2.1. Direct and Indirect Effects

Motorized travel route designation does not directly affect forested vegetation, but it does affect access to vegetation for resource uses and management, primarily timber harvest and salvage and Forest Service access for vegetation management project work. Effects indicators for vegetation are the change in:

1. Opportunity for management of forested vegetation on suitable timber lands, and
2. Public opportunity to collect firewood and other forest products.

There are 467,870 acres of lands suitable for timber management on the Forest. For this analysis, only those suitable lands within one-half mile of roads designated as open in each alternative were considered. There are scattered areas of suitable timber beyond one-half mile of the existing road system; however, these areas would not likely need to be accessed for management within the foreseeable future so will not be considered in this analysis. The following table displays the suitable timber within one-half mile of open roads by alternative.

Table 3-5. Acres Suitable for Timber Production within a Half-Mile Buffer by Alternative

Area	Total Suitable Acres	Alternative									
		A		B		C		D		E	
		Acres Within Buffer	% Within Buffer	Acres Within Buffer	% Within Buffer	Acres Within Buffer	% Within Buffer	Acres Within Buffer	% Within Buffer	Acres Within Buffer	% Within Buffer
Cedar City	167,430	144,690	86%	127,960	76%	135,770	81%	143,460	86%	147,930	88%
Escalante	136,460	126,960	93%	100,750	74%	107,530	79%	124,480	91%	127,790	94%
Pine Valley	1,510	1,220	81%	1,220	81%	1,220	81%	1,220	81%	1,220	81%
Powell	66,830	64,290	96%	56,040	84%	60,460	90%	63,030	94%	64,580	97%
Teasdale	95,640	69,230	72%	57,730	60%	59,250	62%	66,020	69%	69,710	73%
Forest-wide	467,870	406,390	87%	343,700	73%	364,230	78%	398,210	85%	411,230	88%

All acres are rounded to the nearest 10 acres.

3.4.2.1.1. Effects Common to All Alternatives

Vegetation

Vegetation Management. Additional temporary roads and reconstruction of existing roads may be needed to facilitate vegetation management activities as needs and opportunities are identified. Individual project analysis conducted according to the National Environmental Policy Act (NEPA) would evaluate needs for existing road reconstruction and construction of temporary roads.

Opportunities to access major portions of the Forest, including suitable timber base lands, would continue under all alternatives. None of the alternatives are limiting to forested vegetation management projects planned for the next five years. All planned projects would remain reasonably accessible under all alternatives.

Unforeseen needs for future motorized access for forested vegetation management, including rehabilitation of stands burned by wildfire or damaged by insect or disease outbreaks, would be assessed by NEPA analysis of each individual project.

Ongoing monitoring must be conducted across the Forest to assess the condition and health of forested vegetation. Existing motorized travel routes contribute to access for monitoring and management of forest stands.

Effects on vegetation below the commercial conifer zone (pinyon and juniper, shrub lands, and grasslands) can only be considered in a relative sense. Alternatives offering greater motorized access may increase chances of damage to vegetation near roads and trails.

Firewood Collection. Collection of dead and down wood through use of personal use firewood permits would continue under all alternatives. Firewood can be found most anywhere from the pinyon/juniper vegetation type to the high elevation spruce-fir stands. Trees die somewhat randomly, so it is impossible to predict where firewood would be located. Firewood located near roads is preferred because it is most easily accessible. Some alternatives would provide greater opportunities to collect firewood than others. Relative opportunity to collect firewood is discussed in the individual alternative sections below. Firewood permits would specify any associated motorized travel rules specific to the permit.

Fire and Fuels

Most fire suppression relies on motorized access for engines and crews. Alternatives with fewer miles of open road could cause longer travel times and possibly larger fires due to the increased travel time for crews and equipment. However, fewer miles of road open for public access could offer less chance of human-caused fires to occur. These effects cannot be quantified due to the fact that wildfires are more or less random events, so analysis of them can only be relative in terms of motorized access.

Any effects of lack of open roads on wildfire suppression are expected to be minimal since the roads in critical strategic locations for wildfire suppression within the Dixie National Forest remain open in all alternatives. Fuels management projects, including prescribed burning, require individual NEPA analyses where motorized access needs would be evaluated for each planned project.

Planned fuel management projects would continue as usual as all planned fuels management projects remain reasonably accessible under all alternatives.

3.4.2.1.2. Comparison of Effects

Vegetation

Vegetation Management. All alternatives would provide reasonable motorized access to all of the vegetation management projects planned on the Dixie National Forest for the next five years. All alternatives would also provide motorized access to major portions of suitable timber lands. Alternative E provides the greatest number of miles of open roads for these purposes and for general public access. Alternatives A and D also provide open public roads to most forested areas. Alternatives B and C offer the least amounts of motorized access, and some roads closed in these alternatives might need to be reopened in the future to manage vegetation

resources. However, as noted above, these needs would be analyzed in each project's NEPA. While Alternatives B and C offer the least amount of access to suitable timber lands, future timber harvests would probably not need to be significantly reduced from the current level of 13 MMBF, although the possibility does exist depending upon future forest product types and project economics.

Firewood Collection. Alternative A offers the greatest potential area for firewood collection as cross-country travel is allowed on 61 percent of the Forest. Alternative E has the next greatest potential for firewood collection areas, followed by Alternatives D, C, and B, in that order.

Fire and Fuels

Effects of the motorized transportation system on wildfire suppression cannot be quantified as fires begin in somewhat random locations. Where motorized access exists, it is logical to assume that fire crews and equipment can get to fires faster so fires would have less time to burn before initial attack begins. This should result in generally smaller fires where they are accessible by motorized travel. Alternatives A and E would therefore offer a somewhat lower risk of larger fires. Alternative B would offer the highest risk of larger fires since fewer miles of roads are open. Alternatives with more roads, however, offer additional areas accessible to people in vehicles and a corresponding higher risk of human-caused fires. Alternative B has the fewest miles of open road so would offer a somewhat lower risk of human-caused fires. Alternatives A and E have the most miles of open roads so would offer higher risks of human-caused fires.

None of the alternatives restrict motorized access to fuels management projects planned for the next five years.

The Motorized Travel Plan alternatives do not propose to construct or reconstruct any new roads. Decisions regarding access for fire suppression and fuels management projects are deliberately deferred to appropriate project analysis. Therefore, there would be no conflicts in any of the alternatives with current laws, regulations, policy, or land use plans.

3.4.2.2. Cumulative Effects

There are no cumulative effects to forested vegetation or forested vegetation management from any of the alternatives.

3.5. Aquatic Biota

The information in this section is summarized from the *Aquatic Biota Specialist Report* prepared for this motorized travel plan (USDA 2008a). Please see that report for more detail on the affected environment and effects analysis.

3.5.1. Affected Environment

Aquatic biota on the Forest can be broken into four broad categories: sport fish, non-game fish, amphibians, and aquatic macroinvertebrates. The more inconspicuous forms of aquatic biota such as aquatic mollusks and aquatic plants have not generally been studied across the Forest, and there is little trend data on macroinvertebrates.

The Forest contains portions of 39 5th field Hydrologic Unit Code (HUC) watersheds. Only those 22 watersheds within the Forest boundary that support self-sustaining fisheries have been analyzed. See the *Aquatic Biota Specialist Report* for descriptions of the condition of each of these 22 watersheds (USDA 2008a).

3.5.2. Effects Analysis

3.5.2.1. Direct and Indirect Effects

3.5.2.1.1. Effects Common to All Alternatives

Roads, particularly those located in close proximity to riparian areas, pose a distinct threat to aquatic biota habitat quality and population structure (Gucinski et al. 2001, Furniss et al. 1991). Roads can route sediment into water bodies, fragment aquatic habitat (i.e., migration barriers), and provide a vector for introduction of aquatic nuisance species and hazardous materials (Trombulak and Frissell 2000). Additionally, roads provide access to and concentrate human and livestock use within riparian areas. This can lead to widespread degradation of stream banks, in-channel aquatic habitat, and riparian vegetation.

Under any of the alternatives, there are roads and motorized trails within watersheds that support fish populations and other aquatic biota. Some of these routes are located within riparian influence zones (RIZs), and thus can negatively impact both aquatic biota populations and habitat. For this analysis, a RIZ is defined as any area falling within 300 feet of fish-bearing streams and high value lakes.

None of the alternatives would increase road- and motorized trail-related impacts to aquatic biota beyond what is currently occurring. Selection of any of the action alternatives would result in a decrease in detrimental effects to aquatic biota from roads and motorized trails due to the elimination of cross-country travel and some road decommissioning.

A major effect to aquatic biota on the Dixie National Forest are system roads, non-system roads, and motorized trails, all of which generally run alongside streams and riparian zones and in canyon bottoms in areas where locations for routes are constrained. Routes often run near

water even in unconstrained upper mountain headwaters and plateaus. The effects of motorized routes include increased stream channel confinement, reduced stream sinuosity, increased gradient, increased sedimentation, reduced riparian shading, and decreased amounts of large woody debris. Easy access also generally increases the degree of land management activities in an area such as grazing or timber harvest, and increases human activity such as recreation. All of these aspects can increase effects to aquatic habitat that in turn affect aquatic biota. Examples of potential effects are reduced carrying capacity, increased water temperature, degradation of water quality, introduction of non-native organisms, or aquatic nuisance species.

3.5.2.1.2. Alternative A

Under Alternative A, 61 percent of the Forest would remain open to cross-country travel, including approximately 14,823 acres within fish-bearing stream RIZs and approximately 2,843 acres within high value lake RIZs. Alternative A would permit further development of increasing networks of user-created routes in these areas, resulting in persistent and expanding (as new routes are created) degradation of aquatic habitats.

Depending on slope, terrain, and vegetation, the actual amount of these open travel areas that may receive motorized use varies. In some sub-watersheds with gentle terrain and open vegetation, motorized vehicles (primarily OHVs) may be able to travel across a large percentage of the area. This can lead to higher rates of erosion across broad areas, but may also diffuse impacts. In other sub-watersheds with steep terrain and dense vegetation, OHV use is often physically restricted to major ridgetops and drainage bottoms. Ridgetop use would generally be far enough away from streams to reduce sedimentation, but drainage bottom use can affect aquatic biota due to the direct proximity to streams and lakes, with damage including sedimentation, stream bank damage, and damage to vegetation. Additionally, these drainage bottoms are often important passageways for amphibians.

3.5.2.1.3. Alternatives B, C, D, and E

The key benefit to aquatic biota and habitat under the action alternatives is the elimination of motorized cross-country travel on the Forest. This action should limit current and future expansion and creation of unauthorized routes, thus limiting potential degradation of high value aquatic habitats.

Alternatives B, C, and D are relatively similar in terms of effects to aquatic biota and habitat. Any one of these three alternatives would decrease road density within the RIZ of fish-bearing streams and high value lakes as compared to Alternative A. The variation in RIZ road mileage between these alternatives is spread out across the Forest and does not represent a significant difference within any one drainage.

Alternative E would designate more miles of motorized routes within RIZs than any other alternative, including Alternative A. However, Alternative E would prohibit cross-country travel; thus, potential future degradation to aquatic biota habitats and populations would be reduced when compared to Alternative A. Of the four action alternatives, Alternative E provides the least amount of benefit to aquatic biota resources on the Forest.

Road mileage within the RIZ of lakes is fairly low in all alternatives. Access to lakes on the Forest is generally via a single route that dead ends at the lake in question. The majority of

these routes have been maintained within all alternatives as they serve specific destinations and provide necessary access for special uses or recreation.

3.5.2.1.4. Proposed Motorized Trail Construction – Alternatives D and E

Alternatives D and E both include the construction of two segments of motorized trail comprising 1.26 miles. Construction of both of these new trails would occur outside of the RIZs of fish-bearing streams and high value lakes. No effects to aquatic biota resources or habitat would occur as a result of this new trail construction in either alternative.

3.5.2.1.5. Effects to Threatened, Endangered, and Sensitive Species

Virgin River Chub and Woundfin
There are only two federally listed aquatic species: the Virgin River chub and woundfin, both listed as Endangered. These two fish species occur downstream of National Forest System lands within the Virgin River system. Implementation of any alternative being considered within this process would not affect fisheries habitat within the Virgin River mainstem where these species are known to occur.

The remaining species in this section are listed on either the Intermountain Region's Sensitive Species List (USDA 2003a) or on the State of Utah Sensitive Species List (UDWR 2006).

Bonneville Cutthroat Trout
Bonneville cutthroat trout (BCT) occupies streams and lakes on the Pine Valley, Cedar City, Powell, and Escalante Ranger Districts. Across the Forest, all action alternatives would provide similar or identical protection for BCT and its occupied habitat. However, Alternatives B and C could provide better protection for the species within the Threemile Creek watershed. These two alternatives have reduced RIZ road densities within the upper Delong Creek area and along lower Threemile Creek when compared to Alternatives A, D, and E. Given the other current land uses (e.g., livestock grazing, dispersed recreation) within the watershed, however, it is unlikely that the reduced road densities within Alternatives B and C alone would result in significant increases in habitat quality or population structure.

Colorado River Cutthroat Trout
Colorado River cutthroat trout (CRCT) occupies streams and lakes on the Escalante Ranger District and on the Teasdale portion of the Fremont River Ranger District. All action alternatives would provide similar or identical protection for CRCT and its occupied habitat. There is some potential that proposed road closures within the West Branch Pine Creek drainage, which are included in Alternatives B and C, could help facilitate future work to biologically connect West Branch CRCT with mainstem Pine Creek and Right Fork Pine Creek CRCT through the elimination of culverts along roads 30729 and 30652.

Southern Leatherside
On the Dixie National Forest, distribution of southern leatherside (formerly leatherside chub) is limited to a few small drainages on the Cedar City and Escalante Ranger Districts. All action alternatives provide similar or identical protection for this species.

Virgin Spinedace
Virgin spinedace distribution on the Forest is limited to the Moody Wash drainage on the Pine Valley Ranger District. However, this species is somewhat widespread within the Virgin River headwaters downstream of the Pine Valley and Cedar City Ranger Districts. Road closures

included within Alternatives B and C would reduce threats to Virgin spinedace habitat within Moody Wash. Alternatives D and E would provide only limited benefits to Virgin spinedace when compared to Alternative A, primarily a result of eliminating motorized cross-country travel.

Arizona Toad
Arizona toad is known to occur in several drainages in the southwest portion of the Pine Valley Ranger District. Road closures included within Alternatives B and C would reduce threats to Arizona toad habitat within Moody Wash. Alternatives D and E would provide only limited benefits to Arizona toad when compared to Alternative A, primarily a result of eliminating motorized cross-country travel. In other occupied drainages, including the Pine Park area, all action alternatives would provide similar or identical protection for Arizona toad populations and habitat.

Boreal Toad
Boreal toad occupies habitat on the Paunsaugunt Plateau on the Powell Ranger District and on Boulder Mountain on the Teasdale portion of the Fremont River Ranger District. All known occupied habitat and populations on the Forest would be equally protected under all action alternatives. The Paunsaugunt Plateau is heavily roaded and would remain so regardless of which alternative is selected. Aside from roads, livestock grazing and chytrid fungus are currently limiting boreal toad habitat and populations in this area. Conversely, boreal toad occupied habitat on Boulder Mountain is sparsely roaded and would remain so regardless of which alternative is selected. On Boulder Mountain the primary threats to boreal toad habitat include livestock grazing, water impoundments, diversions, and conveyance structures.

3.5.2.2. Cumulative Effects

The cumulative effects area for the aquatic biota resource is all lands within the Dixie National Forest boundary. Known aquatic biota population distribution and the limited connectivity (current and potential) of aquatic habitats on the Dixie National Forest with adjacent non-Forest Service lands support the relevance of this effects area.

1. **Utilities.** Utility corridors are common features on the Forest. In general, currently existing corridors are causing very limited impacts to the aquatic biota resource. What impacts there are, are associated with utility corridor stream crossings and do not tend to be related to the motorized travel system. The greatest potential for detrimental effects to aquatic biota occurs during utility corridor construction. During these periods, ground disturbance is common and the potential for erosion and sediment deposition within aquatic habitats is high. Following construction, disturbed ground tends to recover quickly as vegetation and ground cover is reestablished. Selection and implementation of any of the alternatives is not expected to result in long-term cumulative impacts to the aquatic biota resource from utility corridor interactions.
2. **Oil and gas.** Oil, gas, and other mineral use on the Forest is currently fairly limited. The most common mineral use is from gravel and cinder pits located across the Forest, and a small number of gas wells on the Escalante Ranger District. Impacts to the aquatic biota resource from oil, gas, and other mineral activities are extremely limited due to the upland location of most of the gravel pits and gas wells. Selection and implementation of any of the alternatives is not expected to result in cumulative impacts to the aquatic biota resource from oil, gas, or other mineral activities.
3. **Transportation**.
    - All routes considered for designation within the alternatives currently exist and are receiving some amount of use. The only exception to this is the small

amount of new motorized trail construction (1.26 miles) proposed in Alternatives D and E (discussed on page 3-27). Because of this existing use, regardless of which alternative is selected, detrimental effects to aquatic biota habitat and populations from the motorized route network would either be reduced or maintained when compared to the current condition.

- All action alternatives would result in the elimination of cross-country travel. This action would reduce current and potential future interaction between cross-country travel and other Forest actions, thereby reducing the threat of detrimental effects to aquatic biota populations and habitat.
- Alternative A has the highest potential to result in adverse cumulative impacts to aquatic resources. This is primarily related to the continuation of cross-country travel on portions of the Forest, including sensitive riparian areas, stream corridors, and lake basins. This issue is further exacerbated due to the current travel system providing limited protection of aquatic resources as described in the *Aquatic Biota Specialist Report* (USDA 2008a) and the expected increase in motorized use of the Dixie National Forest (USDA 2009m).
- All of the action alternatives would result in beneficial cumulative effects to aquatic biota in response to past and present implementation of travel management actions on the Forest. All of these projects either reduced total motorized route mileage within specific watersheds or reduced route encroachment on sensitive aquatic habitats.

4. **Recreation.** Dispersed camping within riparian areas is widespread across the Forest. OHV use and cross-country travel are common related activities that occur within and near popular dispersed camping areas. Selection of Alternative A would result in cumulative detrimental impacts associated with dispersed camping and OHV use within the RIZ of drainages within areas open to cross-country travel. Additionally, routes included within all alternatives that encroach upon RIZs would present the potential for adverse cumulative effects associated with dispersed camping. These effects may include increased sediment influx into waterbodies from bank damage and user-created crossings, reduced riparian plant composition and structure, and increased risk of aquatic nuisance species transfer and introduction. Each of these effects has the potential to reduce aquatic biota habitat condition and population structure.
5. **Vegetation treatments.** Road construction, maintenance, closure, and obliteration are common components to many vegetation projects. Selection of any of the action alternatives would result in beneficial cumulative effects to the aquatic biota resource through the reduction of total motorized route mileage and open motorized cross-country areas. These beneficial effects would be most evident within Alternatives B, C, and D.
6. **Land exchanges and easements.** Existing road easements on the Forest are included within the motorized route network that has been analyzed as part of this process. There are no foreseeable future land exchanges or easements that would result in cumulative effects to the aquatic biota resource in conjunction with this project. Current easements and recent past land exchanges are not appreciably affecting the quality of the aquatic biota resource on the Forest.
7. **Special use permits.** The Forest issues many special use permits for various activities. The effects to the aquatic biota resource from these activities are highly variable, but tend to be innocuous and site-specific. Since selection and implementation of any of the action alternatives would result in beneficial effects to the aquatic biota resource, no detrimental cumulative effects to the aquatic biota resource in conjunction with the various special uses is expected or likely.
8. **Livestock grazing.** Livestock grazing is common and widespread on the Dixie National Forest. Since selection and implementation of any of the action alternatives would result

in beneficial effects to the aquatic biota resource, no detrimental cumulative effects to the aquatic biota resource in conjunction with livestock grazing is expected or likely.

Regardless of the alternative selected, forest-wide improvement or degradation within aquatic biota populations and habitats is likely to be slight. Additionally, the magnitude of these responses is expected to fall within the normal variation and would be difficult to tie directly to this project. However, certain elements contained within the action alternatives of this project have the capability of improving the aquatic biota resource at specific locations.

Selection of any of the action alternatives would result in slight beneficial effects to aquatic biota populations and habitat on the Forest. This is primarily a response to the elimination of cross-country travel. Additionally, Alternatives B, C, and D would reduce total motorized route mileage across the Forest and within certain watersheds. However, these effects are not likely to result in marked improvement in fish biomass production or a wholesale improvement in aquatic habitats on the Forest.

Selection of Alternative A would result in a continuation of current deleterious effects to aquatic biota populations and habitat associated with the motorized travel system. The primary causative factor behind these effects is the continuation of cross-country travel and the persistence of specific routes within RIZs and key watersheds.

3.6. Terrestrial Wildlife

The information in this section is summarized from the *Wildlife Specialist Report* prepared for this motorized travel plan (USDA 2009p). Please see that report for more detail on the affected environment and effects analysis.

3.6.1. Affected Environment

This analysis focuses on quantifying the effects of roads on occupied or potentially suitable habitats. The table on the following page lists those species and habitats potentially affected by the alternatives and analyzed in the effects analysis.

On August 1, 2007, the National Forests in Utah formalized an updated state-wide strategy for addressing migratory birds in Forest Service planning and project documents (USDA 2007a). Species selected for this Motorized Travel Plan analysis were chosen based on the process identified in this strategy. Six species were included in the DEIS analysis; this analysis has been refined down to three species. For this analysis, the black-throated gray warbler, Brewer's sparrow, and broad-tailed hummingbird were selected as representative species to analyze the effects of motorized impacts on potentially suitable habitats. Additional migratory bird species were not selected because effects to all other habitat types were analyzed for other species.

Table 3-6. Wildlife Species – Existing Condition

Species	(Status)[1]	Habitat	Project Area Habitat Distribution[2]					Total Habitat Available within Project Area (Acres)	Acres currently open to cross-country motorized travel	% open to cross-country travel	Miles of Open Route
			D1	D2	D3	D4	D5				
California condor	(E)	Potential	X	X	X	X	X	616,825	330,658	54%	919
Mexican spotted owl	(T)	Critical				X	X	35,797	23,490	66%	27
		PAC				X	X	2,398	1,666	69%	0
		Potential	X	X	X	X	X	22,014	2,934	13%	2
Utah prairie dog	(T)	Paunsaugunt RU		X	X	X		15,027	9,589	64%	80
		Awapa Plateau RU				X	X	17,474	15,228	87%	69
American peregrine falcon	(S)	Known Nesting		X	X	X	X	28,057	12,981	46%	58
		Potential Nesting	X	X	X	X	X	443,010	237,168	54%	591
Bald eagle	(S)	Winter Roosting	X	X	X	X	X	14,554	5,595	38%	78
Flammulated owl	(S)	Potential	X	X	X	X	X	472,635	233,584	49%	1,258
Sage-grouse	(S)	Known Lek		X	X	X	X	2,659	1,405	53%	17
		Potential		X	X	X	X	211,753	155,669	74%	854
Northern goshawk	(S)	Known Nesting	X	X	X	X	X	41,607	22,033	53%	124
		Potential	X	X	X	X	X	804,170	399,495	50%	1,644
Pygmy rabbit	(S)	Occupied			X			30	30	100%	0
		Potential	X	X	X	X	X	57,836	31,944	55%	328
Spotted bat	(S)	Roosting	X	X	X	X	X	443,010	237,168	54%	591
		Foraging	X	X	X	X	X	230,994	111,516	48%	808
Townsend's big-eared bat	(S)	Foraging	X	X	X	X	X	230,994	111,516	48%	808
		Hibernacula		X				250	0	0%	0
Three-toed Woodpecker	(S)	Potential	X	X	X	X	X	248,873	125,106	50%	773
Mule deer	(MIS)	All seasons	X	X	X	X	X	1,968,480	1,148,031	58%	5,377
Rocky Mountain elk	(MIS)	All seasons	X	X	X	X	X	1,312,076	738,677	56%	3,978

Species	(Status)[1]	Habitat	Project Area Habitat Distribution[2]					Total Habitat Available within Project Area (Acres)	Acres currently open to cross-country motorized travel	% open to cross-country travel	Miles of Open Route
			D1	D2	D3	D4	D5				
Northern flicker	(MIS)	Potential	X	X	X	X	X	1,192,638	721,864	61%	2,179
Wild turkey	(MIS)	Potential	X	X	X	X	X	712,234	362,851	51%	1,521
Black-throated gray warbler	(O)	Potential Breeding	X	X	X	X	X	618,722	466,744	75%	857
Brewer's sparrow	(O)	Potential Breeding	X	X	X	X	X	113,765	50,626	45%	530
Broad-tailed hummingbird	(O)	Potential Breeding	X	X	X	X	X	230,994	111,516	48%	808

[1] Status: E=Endangered, T=Threatened, S=Sensitive, MIS=Management Indicator Species, O=Other species of concern.
[2] D1 = Pine Valley Ranger District; D2 = Cedar City Ranger District; D3 = Powell Ranger District; D4 = Escalante Ranger District; D5 = Teasdale Ranger District.

3.6.2. Effects Analysis

As noted above, the information included here is a summary from the *Wildlife Specialist Report* (USDA 2009p). For detailed information such as miles of route with specific habitat types by alternative, please see the specialist report.

3.6.2.1. Direct and Indirect Effects

3.6.2.1.1. California Condor

Alternative A

Continued motorized travel from existing routes and cross-country travel may affect condors that occur within the project area. Although suitable cliff nesting and roosting sites are not directly accessible, open routes at cliff bases and tops could increase the chance for disturbance, harassment, or mortality from shooting to condors that may be present. Foraging condors would also be at risk for disturbance and harassment facilitated by access. Because condors forage on carrion, they are at risk for lead poisoning if they ingest lead from ammunition in animal carcasses or gut piles left behind by hunters. This risk is increased with open roads, as hunting is generally facilitated by motorized access. Although hunting may also provide viable carrion for condors, this benefit does not compensate for the risk of disturbance and mortality to condors. Motorized travel may also displace big game, providing inadequate carcasses within some habitats. The continuation of cross-country travel would potentially increase such disturbance and adverse effects within 54 percent (330,658 acres) of potential condor cliff habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within the 54 percent of potential habitat that is currently open to such travel. Open motorized route miles would be reduced by 60 percent, 56 percent, and 40 percent for Alternatives B, C, and D, respectively. Reducing access near cliffs would decrease the potential for disturbance and harassment to roosting or nesting condors. Because condors forage over a wide range of habitats for carrion, an overall decrease in motorized access would reduce the risk of disturbance, harassment, and mortality to foraging condors. Displacement of potential prey animals would be less likely to occur. With a reduction in overall access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order.

Alternative E

Cross-country travel would be prohibited within 54 percent of potential habitat, but open motorized route miles would increase by 13 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for adverse affects facilitated by access, and offset the potential adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.2. Mexican Spotted Owl

Alternative A

Continued motorized travel from existing routes and cross-country travel may affect owls that occur within the project area. Motorized routes in suitable habitat increase the risk of adverse effects directly related to motorized access (noise, dust, exhaust) and facilitated by access (disturbance, harassment, or mortality associated with hiking, camping, and shooting) if owls do occupy these sites. Routes would fragment habitat and may displace prey, further decreasing owl habitat effectiveness. Approximately 23,490 acres (66 percent) of Critical Habitat, 1,666 acres (69 percent) of PAC habitat, and 2,934 acres (13 percent) of potentially suitable habitat would remain open to cross-country travel under Alternative A. The continuation of cross-country travel would potentially increase disturbance and adverse effects. The risk of disturbance from recreational disturbance and/or mortality (from collection, harassment, or poaching) would remain at current levels or increase. Within foraging habitat, fragmentation would continue or increase. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited within the 66 percent of Critical Habitat, 69 percent of PAC habitat, and 13 percent of potentially suitable habitat currently open. Open motorized route miles within Critical Habitat would be reduced by 79 percent, 79 percent, and 68 percent for Alternatives B, C, and D, respectively. Reducing access within Critical Habitat would reduce the potential for adverse effects associated with access as detailed above under Alternative A. Within foraging habitat, a reduction in open route miles would decrease fragmentation and disturbance, thereby increasing habitat effectiveness. Owls that are present within Critical Habitat would be impacted by continued use, and possible increased use, of routes that remain open; however, given the amount of Critical Habitat and relatively low miles of open route, adverse effects are not expected to occur.

Although there are no routes currently within PAC habitat, eliminating cross-country travel would limit the opportunity for recreational disturbance in canyon bottoms and along mesa tops that owls most likely inhabit. Closing cross-country travel within designated Critical and potential habitat would further reduce the risk of habitat fragmentation and prey disturbance. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order.

Alternative E

Cross-country travel would be prohibited within 66 percent of Critical Habitat, 69 percent of PAC habitat, and 13 percent of potentially suitable habitat. Open motorized route miles would increase by 16 percent within Critical Habitat. A reduction in access due to the closure of cross-country travel would reduce the potential for adverse affects facilitated by access, and offset the potential adverse effects of increasing open route miles over that in Alternative A. Not all Critical Habitat contains the primary constituent elements necessary for suitable habitat; it is unlikely that motorized routes would be within suitable habitat due to the inaccessible nature of most suitable canyons. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.3. Mojave Desert Tortoise

Upon research and field verification in 2008, neither Critical Habitat nor potentially suitable habitat for this species exists within the project area (USDA 2008f). Critical Habitat boundaries can be found in the *Desert Tortoise (Mojave Population) Recovery Plan* (USDI 1994); no Critical Habitat was designated within the Dixie National Forest boundary. Effects to this species will not be analyzed further.

3.6.2.1.4. Utah Prairie Dog

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect Utah prairie dogs that occur within the project area. 102 buffered-colony areas are currently impacted by roads; 76 of these by unauthorized routes. Approximately 64 percent (9,589 acres) of Paunsaugunt RU habitat and 87 percent (15,228 acres) of Awapa Plateau RU habitat would remain open to cross-country travel, increasing the risk of direct habitat loss and the resulting habitat fragmentation if new routes are created. Motorized disturbance (noise, dust, exhaust) would continue or increase. Access would also facilitate mortality of prairie dogs from recreational shooting and road kill. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 64 percent and 87 percent of Paunsaugunt and Awapa Plateau RU habitat, respectively. Open motorized route miles within Paunsaugunt RU habitat would be reduced by 58 percent, 55 percent, and 37 percent for B, C, and D, respectively. Open motorized route miles within Awapa Plateau RU habitat would be reduced by 56 percent, 50 percent, and 32 percent for Alternative B, C, and D, respectively.

Under Alternative B, a total of 0.47 miles of unauthorized route would be opened within four buffered-colony areas. Under C, a total of 0.78 miles would be opened within four areas. Under D, 2.34 miles would be opened within 12 areas. Authorizing these routes as open would increase access and potentially adverse effects. Adverse effects of opening routes would be offset by the overall reduction in access that would occur under these Alternatives. This reduction would eliminate routes within 32, 25, and 13 buffered-colony areas for Alternative B, C, and D, respectively.

Reducing access would impede habitat loss and fragmentation. The potential for harassment and mortality from shooting would likewise be reduced. Closing routes and cross-country travel would further reduce adverse affects from motorized disturbance, including road kills. These effects would result in an increase in habitat effectiveness. With a reduction in overall access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order.

Alternative E

Cross-country travel would be prohibited within 64 percent and 87 percent of Paunsaugunt and Awapa Plateau RU habitat, respectively. Open motorized route miles would increase by 3

percent within the Paunsaugunt RU, and 4 percent within the Awapa Plateau RU. A total of 46.1 miles of unauthorized route would be opened within 75 buffered-colony areas. Authorizing these routes as open would increase access, thereby increasing potentially adverse effects. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat loss and fragmentation, disturbance, harassment, and shooting; these beneficial effects would offset the potentially adverse effects of opening 46.1 miles of route in this alternative. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.5. American Peregrine Falcon

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect peregrine falcons that occur within the project area. Because cliff nesting locations are inaccessible to motorized vehicles, direct access to nest sites from motorized activity would not occur; however, motorized routes may facilitate access for disturbance in nest areas. This disturbance may come directly from motorized travel (noise, dust, exhaust) or from recreational climbing and hiking. Motorized access also facilitates peregrine falcon mortality from shooting. Foraging falcons would continue to be affected by disturbance, and prey base may be altered as habitat is impacted by access. The continuation of cross-country travel would potentially increase disturbance and adverse effects to 46 percent (12,981 acres) of known nesting habitat and 54 percent (237,168 acres) of potential nesting habitat if new routes are created. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 46 percent of known nesting and 54 percent of potential nesting habitat. Open motorized route miles within known nesting habitat would be reduced by 52 percent, 49 percent, and 40 percent for Alternative B, C, and D, respectively. Open motorized route miles within potential nesting habitat would be reduced by 61 percent, 57 percent, and 41 percent for Alternative B, C, and D, respectively.

Limiting motorized access would decrease the likelihood of nest disturbance from recreational activities. Peregrine falcons forage wide (10 miles) over a range of habitats. Reducing access within foraging habitat would decrease adverse effects to prey and their habitat, thus increasing falcon habitat effectiveness. With a reduction in overall access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Of the known 17 eyries, none would be adversely affected by the opening of routes in Alternative B, C, or D. The proximity and extent of the routes being opened within nest areas are such that neither direct nor facilitated disturbance would increase with implementation. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order.

Alternative E

Cross-country travel would be prohibited within 46 percent of known nesting and 54 percent of potential nesting habitat. Open motorized route miles within known nest habitat would increase by 2 percent and within potential habitat by 12 percent. A reduction in access due to the closure of cross-country travel would reduce the potential for adverse affects facilitated by access, and

offset the potential adverse effects of increasing open route miles over that in Alternative A. Three eyries would be at risk of increased disturbance from the opening of routes. The routes to be opened are located at the top of the affected cliffs, near their edges. This conversion increases the risk of disturbance from noise or harassment. Overall habitat effectiveness would increase under Alternative E, but least among the action alternatives.

3.6.2.1.6. Bald Eagle

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect bald eagles that occur within the project area. Bald eagles are typically present in the project area during the winter, when motorized access is limited by snow; however, motorized access when routes are open may cause habitat fragmentation. Though eagles are mainly found within the project area in the winter, two areas have recorded occupancy year-round. One nesting pair has been documented on private land near the Teasdale Ranger District Office. Another pair has been observed near Panguitch Lake, within the Cedar City Ranger District. Disturbance from motorized travel (noise, exhaust, dust) may affect eagles that are in these areas. Access would also facilitate the potential for disturbance, harassment, and mortality from shooting. Bald eagles eat carrion, increasing the risk of mortality from vehicle strike while feeding on road kill. Suitable roost trees would remain accessible for firewood cutting. The continuation of cross-country travel would potentially increase disturbance and adverse effects to 38 percent (5,595 acres) of potential winter habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited within 38 percent of potential winter habitat. Open motorized route miles within potential habitat would increase by 4 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat loss and fragmentation, disturbance, harassment, and shooting; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

Alternative E

Cross-country travel would be prohibited within 38 percent of potential winter habitat. Open motorized route miles within potential habitat would increase by 4 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat loss and fragmentation, disturbance, harassment, and shooting; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.7. Flammulated Owl

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect flammulated owls that occur within the project area. Motorized travel would continue to alter and fragment foraging habitat. Access increases the potential for motorized disturbance (noise, dust, exhaust), harassment, and displacement. Flammulated owls are secondary cavity-nesters, and rely on previously excavated cavities in large trees for nesting. Firewood cutting in

areas used by owls is facilitated by motorized access. The continuation of cross-country travel would potentially increase disturbance and adverse effects to 49 percent (233,584 acres) of potential habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 49 percent of potential habitat. Open motorized route miles within potential habitat would be reduced by 66 percent, 61 percent, and 48 percent for Alternative B, C, and D, respectively. Eliminating cross-country travel and closing routes would reduce and prevent habitat fragmentation. A reduction in access would lead to a reduction in noise, dust, and harassment. Firewood cutting of suitable nest trees would diminish with a decrease in access. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order.

Alternative E

Cross-country travel would be prohibited within 49 percent of potential habitat. Open motorized route miles within potential habitat would increase by 10 percent. An overall reduction in access due to the closure of cross-country travel would reduce the potential for habitat loss and fragmentation, disturbance, and harassment; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Overall access for firewood cutting would be reduced. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.8. Greater Sage-grouse

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect sage-grouse that occur within the project area. Sage-grouse typically breed in areas that are open with low vegetation, areas that are easily accessible to motorized travel. Of the ten known leks, nine of these are impacted by currently existing routes. These routes fragment important habitat. There is an increased risk of disturbance (dust, noise, exhaust) and mortality (road kill) from motorized travel on these routes. Further disturbance from bird-watching, harassment, and shooting is facilitated by access. The continuation of cross-country travel would potentially increase disturbance and adverse effects to 53 percent (1,405 acres) of known lek habitat, and 75 percent (175,305 acres) of potential habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 53 percent of known lek habitat and 75 percent of potential habitat. Open motorized route miles within known lek habitat would be reduced by 65 percent, 61 percent, and 44 percent for Alternative B, C, and D, respectively. Open motorized route miles within potential habitat would be reduced by 71 percent, 66 percent, and 50 percent for Alternative B, C, and D, respectively. Under Alternative D, less than 1 mile of unauthorized route would be opened within 1 buffered lek; however, nearly 2 miles of route within the same lek would be closed. A reduction in access would

reduce current and limit future habitat fragmentation. This would be accompanied by a decreased risk of disturbance, harassment, and mortality. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access. Habitat effectiveness would increase the most under Alternative B, followed by C and D, in that order.

Alternative E

Cross-country travel would be prohibited within 53 percent of known lek habitat and 75 percent of potential habitat. Unauthorized routes would be designated open within eight of the ten buffered leks. Open motorized route miles within potential habitat would increase by 5 percent. Authorizing these routes as open would increase access and potentially adverse effects. Adverse effects of increasing open route miles over that in Alternative A would be offset by the overall reduction in access. Current fragmentation would continue, but would not increase. A reduction in access due to closure of cross-country travel would reduce the potential for disturbance and habitat fragmentation, and would offset adverse effects from an increase in open route miles. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.9. Northern Goshawk

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect northern goshawks that occur within the project area. There are currently 131 buffered territories impacted by open routes, 85 of these by unauthorized routes. Habitat within 98 buffered territories would remain open to cross-country travel. These territories would be at continued or increased risk of disturbance, harassment, or mortality. Habitat fragmentation would remain or increase, potentially displacing prey species from the area. Access for firewood collecting would continue, potentially reducing snags and downed wood that prey species rely upon. Although goshawks select nest sites in areas not typically suitable for cross-country travel, continued cross-country travel could have adverse effects on necessary Post-Fledging Area (PFA) and foraging habitat by increasing habitat fragmentation, disturbance, and displacement of prey species. Within potential habitat, 50 percent (399,495 acres) would remain open to cross-country travel. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Implementation of Alternative B, C, or D would expose four, seven, or five buffered territories, respectively, to a potential increase in access. In most cases, disturbance to the nests would be minimized by vegetation and/or topography that impede access. In the event that the affected nests were abandoned, it is unlikely that the total impact would be enough to affect the persistence of the goshawk for any ranger district or the Dixie National Forest as a whole, due to the wide distribution of this species across the Forest and their relative abundance in the project area. In addition, implementation would eliminate open routes within 37, 30, and 18 buffered territories for Alternative B, C, and D, respectively.

Most buffered territories would see no change or a decrease in motorized access. A decrease in access would reduce disturbance and habitat fragmentation, improving habitat effectiveness and offsetting the adverse effects of increasing open route miles over that in Alternative A. In addition, closing cross-country travel could further decrease the risk of disturbance and habitat

alteration from the creation of new routes for the 98 buffered territories that are currently in open areas. Overall habitat effectiveness would increase with a decrease in disturbance and alteration.

Cross-country travel would also be prohibited within 50 percent of potential habitat. Open motorized route miles within potential habitat would be reduced by 64 percent, 59 percent, and 45 percent for Alternative B, C, and D, respectively. Potential habitat may be suitable for nesting or foraging. Within foraging habitat, a reduction in access would reduce disturbance to prey and their habitat, thereby improving foraging habitat for the goshawk. Reducing access may also increase the suitability of potential nest sites that have not been used previously due to motorized disturbance.

With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order.

Alternative E

Implementation would expose 62 buffered territories to a potential increase in access, including three buffered territories that currently have no motorized access. The other 59 are currently impacted by some amount of access. Routes would be eliminated within two buffered territories. Authorizing routes as open would increase access and the potential for adverse effects; however, prohibiting cross-country travel could decrease the risk of disturbance and habitat alteration from the creation of new routes for the 98 buffered territories that are currently in open areas. Furthermore, open motorized route increases by 11 percent within potential habitat, but is offset by closing 50 percent of potential habitat to cross-country travel. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.10. Pygmy Rabbit

Alternative A

Continued motorized travel from existing routes and cross-country travel may affect pygmy rabbits that occur within the project area. Habitat fragmentation would continue and may increase with cross-country travel. The known habitat is currently in an area open to cross-country travel, and 55 percent (31,944 acres) of potential habitat is open to cross-country travel. Access facilitates disturbance from motorized travel (noise, dust, exhaust), and increases the risk of harassment and mortality from shooting and road kill. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 55 percent of potential habitat and all known habitat. Open motorized route miles within potential habitat would be reduced by 56 percent, 47 percent, and 31 percent for Alternative B, C, and D, respectively. A reduction in access would increase habitat effectiveness by reducing fragmentation and the potential for disturbance, harassment, and mortality. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall

access. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order.

Alternative E

Cross-country travel would be prohibited within 55 percent of potential habitat and all known habitat. Open motorized route miles within potential habitat would increase by 2 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for disturbance, mortality, and habitat fragmentation, and would offset the adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.11. Spotted Bat

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect spotted bats that occur within the project area. 54 percent (237,168 acres) of potential roost habitat would remain open to cross-country travel. Because cliff roosting locations are inaccessible to motorized vehicles, direct impacts to roost sites from motorized activity would not occur; however, access may facilitate disturbance in these areas. This disturbance may come directly from motorized travel (noise, dust, exhaust), or from recreational climbing. Riparian foraging habitat would continue to be fragmented by motorized travel. Access in riparian areas facilitates disturbance from camping, fishing, and other recreational activities. Continued cross-country travel would potentially increase disturbance and adverse effects to 48 percent (111,516 acres) of potential riparian foraging habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 54 percent of potential roosting habitat and 48 percent of potential foraging habitat. Open motorized route miles within potential roosting habitat would be reduced by 61 percent, 57 percent, and 41 percent for Alternative B, C, and D, respectively. Open motorized route miles within potential foraging habitat would be reduced by 45 percent, 40 percent, and 27 percent for Alternative B, C, and D, respectively.

A reduction in access to cliff areas would decrease the chance for disturbance to roost sites from motorized travel and recreation. Foraging habitat would also benefit from closure, as these riparian areas would be exposed to less risk of fragmentation and disturbance from recreation such as camping and fishing. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 54 percent of potential roosting habitat and 48 percent of potential foraging habitat. Open motorized route miles within potential roosting habitat would increase by 12 percent and within potential foraging habitat by 6 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for

disturbance and habitat fragmentation, and would offset the adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.12. Townsend's Big-eared Bat

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect Townsend's big-eared bats that occur within the project area. Riparian foraging habitat would continue to be fragmented by motorized travel. Access in riparian areas facilitates disturbance from camping and other recreational activities. Continued cross-country travel would potentially increase disturbance and adverse effects to 48 percent (111,516 acres) of potential riparian foraging habitat. Townsend's bats may also use hollow trees for roost sites. Access facilitates the loss of suitable trees from firewood cutting, and would continue at current levels or increase with further cross-country travel. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 48 percent of potential foraging habitat. Open motorized route miles within potential foraging habitat would be reduced by 45 percent, 40 percent, and 27 percent for Alternative B, C, and D, respectively. Foraging habitat would also benefit from closure, as these riparian areas would be exposed to less risk of fragmentation and disturbance from recreational activities such as camping and fishing. A reduction in access would also reduce the potential for loss of suitable roost trees from firewood cutting. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 48 percent of potential foraging habitat. Open motorized route miles within potential foraging habitat would be increased by 6 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for disturbance and habitat fragmentation, and would offset the adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.13. Three-toed Woodpecker

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect three-toed woodpeckers that occur within the project area. Motorized travel would continue to fragment habitat and create disturbance (dust, noise, exhaust). Access also facilitates disturbance, harassment, and displacement from human activities. Three-toed woodpeckers require snags for feeding, perching, nesting, and roosting; loss of suitable trees from firewood cutting would continue to be facilitated at current levels or increase with further cross-country travel. Continued cross-country travel would potentially increase disturbance and adverse effects to 50

percent (125,106 acres) of potential habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 50 percent of potential habitat. Open motorized route miles within potential habitat would be reduced by 69 percent, 64 percent, and 51 percent for Alternative B, C, and D, respectively. Potential habitat would benefit from closure, as these areas would be exposed to less risk of fragmentation and disturbance. Firewood cutting of suitable nest trees would diminish with a decrease in access. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 50 percent of potential habitat. Open motorized route miles within potential habitat would increase by 11 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat fragmentation, disturbance, and harassment; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Overall access for firewood cutting would be reduced. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.14. Mule Deer

Open Motorized Road Density (OMRD) is used to measure effects on both mule deer and Rocky Mountain elk (beginning on page 3-47), as it ties to the Forest Plan guideline on road density (USDA 1986, page IV-50). For this analysis, Total Motorized Road Density (TMRD) was used in determining habitat effectiveness for mule deer and Rocky Mountain elk. This TMRD includes Maintenance Level 1 roads and unauthorized routes in areas closed to cross-country travel, which, by definition, would be closed to public motorized use. In this case, TMRD was used due to the forest-wide scale of this project and variation of road closure conditions. Implementation at the forest-wide scale may take several years to fully initiate closure activities; therefore, the disclosure of effects on all roads allows for a more accurate description of effects over this time period. At the conclusion of the implementation activities, OMRDs would be substantially reduced because the implementation plan includes effective closure of all Level 1 and unauthorized roads closed to public motorized travel. The *Wildlife Specialist Report* includes specific detail on TMRD by WMU. Tables showing the TMRD and OMRD by alternative by WMU are found on page 3-46.

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect mule deer that occur within the project area throughout all seasonal ranges (summer, fawning, winter, and year-round). Three WMUs would continue to have TMRDs above the OMRD guideline of two miles/square mile: Panguitch Lake, Paunsaugunt, and Zion WMUs. Motorized travel fragments habitat, effectively reducing secure habitat, particularly within crucial fawning habitat. Motorized disturbance (dust, noise, exhaust) would continue or increase with cross-country travel. Access facilitates disturbance, harassment, and mortality from hunting, poaching, and collision. During

periods of increased stress (e.g., winter and drought), avoidance of motorized travel could result in fatal energy expenditures. Mule deer may be displaced to less-disturbed but less-suitable habitats. Continued cross-country travel would potentially increase disturbance and adverse effects to 58 percent (1,148,031 acres) of useable habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 58 percent of useable habitat. Implementation of any of these alternatives would result in a decrease in TMRDs for every WMU within the project area. Under Alternatives B, C, and D, the Zion WMU would continue to have road densities above the recommended OMRD guideline. In Alternative D, the Paunsaugunt WMU would also have higher TMRDs. Both of these WMUs have limited habitat within the project area (Paunsaugunt 15 percent, Zion 9 percent), so while these areas may have higher road densities, they make up a relatively small part of the entire WMU. In addition, any of these three alternatives move the TMRD closer to the desired OMRD guideline, in a direction that would result in improved habitat effectiveness (USDA 1998).

A decrease in motorized access would reduce disturbance, harassment, and mortality. Mule deer would expend less energy for avoidance of disturbance. Less fragmentation would create more suitable, secure habitat, and prevent displacement of mule deer into less-suitable areas. Habitat connectivity would improve. Habitat effectiveness would increase within all seasonal ranges most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 58 percent of useable habitat. Implementation would result in a slight increase in TMRDs within the Mount Dutton and Panguitch Lake WMUs, and a very slight reduction in the Pine Valley and Zion WMUs. The Panguitch Lake, Paunsaugunt, and Zion WMUs would continue to have TMRDs above the recommended two miles/square mile. These changes from the existing condition are very small, and would not have a noticeable impact on mule deer or their habitat. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat fragmentation, disturbance, harassment, and mortality; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

Table 3-7. Total Motorized Road Density within Mule Deer Habitat in the Project Area

Wildlife Management Unit	TMRD (miles of open route/sq. mile habitat) by Alternative					% of Usable Acres within Project Area
	A	B	C	D	E	
Boulder Plateau	1.56	0.91	1.00	1.24	1.56	50%
Kaiparowits	1.86	1.11	1.20	1.40	1.86	3%
Mount Dutton	1.39	0.66	0.74	0.85	1.42	62%
Panguitch Lake	2.34	1.57	1.70	1.85	2.38	61%
Paunsaugunt	3.11	1.30	1.70	2.14	3.11	15%
Pine Valley	1.07	0.67	0.78	0.83	1.06	55%
Zion	3.86	3.69	3.69	3.75	3.84	9%

Table 3-8. Open Motorized Road Density within Mule Deer Habitat in the Project Area

Wildlife Management Unit	OMRD (miles of open route/sq. mile habitat) by Alternative					% of Usable Acres within Project Area
	A	B	C	D	E	
Boulder Plateau	1.24	0.63	0.67	0.83	1.39	50%
Kaiparowits	1.66	0.51	0.53	0.66	1.85	3%
Mount Dutton	1.32	0.42	0.51	0.73	1.39	62%
Panguitch Lake	2.15	1.19	1.35	1.55	2.23	61%
Paunsaugunt	3.01	1.10	1.22	1.58	3.07	15%
Pine Valley	1.05	0.43	0.56	0.76	1.05	55%
Zion	2.67	2.44	2.46	2.57	2.68	9%

3.6.2.1.15. Northern Flicker

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect northern flickers that occur within the project area. Motorized travel would continue to fragment habitat and create disturbance (dust, noise, exhaust). Access also facilitates disturbance, harassment, and displacement from human activities. Northern flickers require snags for feeding, perching, nesting, and roosting; loss of suitable trees from firewood cutting would continue to be facilitated at current levels or increase with further cross-country travel. Continued cross-country travel would potentially increase disturbance and adverse effects to 61 percent (721,864 acres) of potential habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 61 percent of potential habitat. Open motorized route miles within potential habitat would be reduced by 65 percent, 60 percent, and 42 percent for Alternative B, C, and D, respectively. Potential habitat would benefit from closure, as these areas would be exposed to less risk of fragmentation and disturbance. Firewood cutting of suitable nest trees would diminish with a decrease in access. Habitat

effectiveness would increase most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 61 percent of potential habitat. Open motorized route miles within potential habitat would increase by 9 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat fragmentation, disturbance, and harassment; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Overall access for firewood cutting would be reduced. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.16. Rocky Mountain Elk

Open Motorized Road Density (OMRD) is used to measure effects on both Rocky Mountain elk and mule deer (beginning on page 3-44), as it ties to the Forest Plan guideline on road density (USDA 1986, page IV-50). For this analysis, Total Motorized Road Density (TMRD) was used in determining habitat effectiveness for mule deer and Rocky Mountain elk. This TMRD includes Maintenance Level 1 roads and unauthorized routes in areas closed to cross-country travel, which, by definition, would be closed to public motorized use. In this case, TMRD was used due to the forest-wide scale of this project and variation of road closure conditions. Implementation at the forest-wide scale may take several years to fully initiate closure activities; therefore, the disclosure of effects on all roads allows for a more accurate description of effects over this time period. At the conclusion of the implementation activities, OMRDs would be substantially reduced because the implementation plan includes effective closure of all Level 1 and unauthorized roads closed to public motorized travel. The *Wildlife Specialist Report* includes specific detail on TMRD by WMU. Two tables showing the TMRD and OMRD by alternative by WMU are found on page 3-48.

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect elk that occur within the project area throughout all seasonal ranges (summer, calving, winter, and year-round). Three WMUs would continue to have TMRDs above the Forest Plan OMRD guideline of two miles/square mile: Panguitch Lake, Paunsaugunt, and Zion. Motorized travel fragments habitat, effectively reducing secure habitat, particularly within crucial calving habitat. Motorized disturbance (dust, noise, exhaust) would continue or increase with cross-country travel. Access facilitates disturbance, harassment, and mortality from hunting, poaching, and collision. During periods of increased stress (e.g., winter and drought), avoidance of motorized travel could result in fatal energy expenditures. Elk may be displaced to less-disturbed but less-suitable habitats. Continued cross-country travel would potentially increase disturbance and adverse effects to 56 percent (738,677 acres) of useable habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 56 percent of useable habitat. Implementation of any of these three alternatives would result in a decrease in TMRD

for every WMU within the project area. For all alternatives, the Zion WMU would have TMRDs above the recommended OMRD guideline. In Alternative D, the Paunsaugunt WMU would also have higher-than-desired TMRDs. Both of these WMUs have limited habitat within the project area (Paunsaugunt 33 percent, Zion 5 percent), so while these areas may have higher road densities, they make up a relatively small part of the entire WMU. In addition, any of these three alternatives move the TMRD closer to the desired guideline, in a direction that would result in improved habitat effectiveness (USDA 1998).

A decrease in access would reduce disturbance, harassment, and mortality. Elk would expend less energy for avoidance of disturbance. Less fragmentation would create more suitable, secure habitat, and prevent displacement of elk into less-suitable areas. Habitat connectivity would improve. Habitat effectiveness would increase within all seasonal ranges most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 56 percent of useable habitat. Implementation would result in a slight increase in TMRDs within the Mount Dutton and Panguitch Lake WMUs, and a very slight reduction in the Boulder Plateau WMU. The Panguitch Lake, Paunsaugunt, and Zion WMUs would continue to have TMRDs above the recommended two miles/square mile. These changes from the existing condition are very small, and would not have a noticeable impact on elk or their habitat. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat fragmentation, disturbance, harassment, and mortality; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

Table 3-9. Total Motorized Road Density within Rocky Mountain Elk Habitat in the Project Area

Wildlife Management Unit	TMRD (miles of open route/sq. mile habitat) by Alternative					% of Usable Acres within Project Area
	A	B	C	D	E	
Boulder Plateau	1.65	0.97	1.06	1.32	1.64	58%
Kaiparowits	1.87	1.14	1.23	1.44	1.87	51%
Mount Dutton	1.44	0.68	0.76	0.88	1.47	77%
Panguitch Lake	2.23	1.44	1.57	1.73	2.27	75%
Paunsaugunt	3.49	1.44	1.90	2.42	3.49	33%
Zion	3.30	3.10	2.97	3.27	3.30	5%

Table 3-10. Open Motorized Road Density within Rocky Mountain Elk Habitat in the Project Area

Wildlife Management Unit	OMRD (miles of open route/sq. mile habitat) by Alternative					% of Usable Acres within Project Area
	A	B	C	D	E	
Boulder Plateau	1.31	0.67	0.72	0.89	1.46	58%
Kaiparowits	1.67	0.52	0.54	0.67	1.87	51%
Mount Dutton	1.37	0.43	0.53	0.75	1.44	77%
Panguitch Lake	2.07	1.10	1.25	1.45	2.16	75%
Paunsaugunt	3.38	1.22	1.36	1.76	3.45	33%
Zion	1.61	1.18	1.24	1.66	1.72	5%

3.6.2.1.17. Wild Turkey

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect wild turkeys that occur within the project area. Motorized travel would continue or increase fragmentation of potential habitat. Disturbance from motorized travel (noise, dust, exhaust) would continue or increase. Access facilitates disturbance from hiking, harassment, and mortality from hunting, poaching, and collision. Turkeys use snags for roosting; motorized access increases the risk of firewood cutting of suitable roost trees. Continued cross-country travel would potentially increase disturbance and adverse effects to 51 percent (362,851 acres) of potential habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 51 percent of potential habitat. Open motorized route miles within potential habitat would be reduced by 64 percent, 60 percent, and 45 percent for Alternative B, C, and D, respectively. Potential habitat would benefit from closure, as these areas would be exposed to less risk of fragmentation. Reducing access in potential habitat would reduce the potential for disturbance, harassment, and mortality. Firewood cutting of suitable roost trees would diminish. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 51 percent of potential habitat. Open motorized route miles within potential habitat would increase by 12 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat fragmentation, firewood cutting, disturbance, harassment, and shooting; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.18. Black-throated Gray Warbler

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect black-throated gray warblers that occur within the project area. Motorized travel would continue or increase fragmentation of potential habitat. Disturbance from motorized travel (noise, dust, exhaust) would continue or increase. Access may also facilitate mortality from collision. Continued cross-country travel would potentially increase disturbance and adverse effects to 75 percent (466,744 acres) of potential habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 75 percent of potential habitat. Open motorized route miles within potential habitat would be reduced by 66 percent, 61 percent, and 35 percent for Alternative B, C, and D, respectively. Potential habitat would benefit from closure, as these areas would be exposed to less risk of fragmentation. Reducing access in potential habitat would reduce the potential for disturbance and mortality. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 75 percent of potential habitat. Open motorized route miles within potential habitat would increase by 3 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat fragmentation, disturbance, and mortality; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.19. Brewer's Sparrow

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect Brewer's sparrows that occur within the project area. Motorized travel would continue or increase fragmentation of potential habitat. Disturbance from motorized travel (noise, dust, exhaust) would continue or increase. Motorized access may also facilitate mortality from collision. Continued cross-country travel would potentially increase disturbance and adverse effects to 45 percent (50,626 acres) of potential habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 45 percent of potential habitat. Open motorized route miles within potential habitat would be reduced by 57 percent, 49 percent, and 34 percent for Alternative B, C, and D, respectively. Potential habitat would benefit from closure, as these areas would be at less risk of fragmentation. Reducing access in

potential habitat would reduce the potential for disturbance and mortality. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 45 percent of potential habitat. Open motorized route miles within potential habitat would increase by 3 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for habitat fragmentation, disturbance, and mortality; these beneficial effects would offset the potentially adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.20. Broad-tailed Hummingbird

Alternative A

Continued motorized travel from existing routes and cross-country travel would affect broad-tailed hummingbirds that occur within the project area. Potential riparian habitat would continue to be fragmented by motorized travel. Access in riparian areas facilitates disturbance from camping, fishing, and other recreational activities. Continued cross-country travel would potentially increase disturbance and adverse effects to 48 percent (111,516 acres) of potential riparian habitat. Habitat effectiveness would not increase, and may decrease.

Alternatives B, C, and D

Cross-country travel would be prohibited forest-wide, including within 48 percent of potential habitat. Open motorized route miles within potential habitat would be reduced by 45 percent, 40 percent, and 27 percent for Alternative B, C, and D, respectively. Potential habitat would also benefit from closure, as these riparian areas would be exposed to less risk of fragmentation and disturbance from recreational activities such as camping and fishing. Habitat effectiveness would increase most under Alternative B, followed by C and D, in that order. With a reduction in access, there may be additional, concentrated use on routes that remain open; however, adverse effects from increased use of open routes would be offset by the beneficial effects of reducing overall access.

Alternative E

Cross-country travel would be prohibited within 48 percent of potential habitat. Open motorized route miles within potential habitat would be increased by 6 percent. An overall reduction in access due to closure of cross-country travel would reduce the potential for disturbance and habitat fragmentation, and would offset the adverse effects of increasing open route miles over that in Alternative A. Habitat effectiveness would increase, but least among the action alternatives.

3.6.2.1.21. Proposed Motorized Trail Construction

Two new motorized routes (0.61 miles and 0.65 miles) would be proposed for construction under Alternatives D and E. These routes comprise a total of 1.26 miles. Portions of or all of

the proposed trails occur within potential habitat for the California condor, peregrine falcon, northern goshawk, spotted bat, Townsend's big-eared bat, northern flicker, and wild turkey, and useable habitat for mule deer and Rocky Mountain elk. The effects of increased access to each species would be the same as have been described above. This increase of 1.26 miles would not measurably decrease habitat effectiveness for these species over the extent of their potential habitat within the project area.

3.6.2.2. Cumulative Effects

Through the analysis disclosed above, we determined that the direct and indirect effects of the action alternatives (Alternatives B, C, D, and E) were the same for all species; it was the magnitude of the effects that differed. Therefore, cumulative effects are grouped by their impacts to either the No Action Alternative or the Action Alternatives.

3.6.2.2.1. Utilities

Utility corridors and sites are common features within the landscape occupied by many wildlife species. Corridors and sites include power lines, water lines and tanks, and communication sites. These projects result in disturbance to the soil, removal of vegetation, and long-term commitments for access (as defined in the Forest Plan [USDA 1986, pages II-54 and IV-22]). These corridors may fragment habitat, increase disturbance, and create barriers to movement, leading to a decrease in habitat effectiveness. Power lines may also increase mortality from electrocution, especially for raptors. Sage-grouse and prairie dogs would face an increased risk of mortality from predation, as power line poles facilitate hunting by raptors. Adverse effects of potentially increased access under the No Action Alternative would add cumulatively to adverse effects of utility uses. Because there are no direct or indirect adverse effects, implementation of any of the Action Alternatives would not result in cumulative adverse impacts to wildlife.

3.6.2.2.2. Oil, Gas, and Other Minerals

Oil, gas, and other mineral use on the Forest is currently limited, but is also found on lands within the cumulative effects area for many species. There is currently ongoing analysis being conducted for Oil and Gas development across the Forest, which is expected to be completed in FY2009. This analysis is being conducted at a programmatic level, and site-specific analyses would be conducted at the permit application phase. Oil and gas exploration and development may cause disturbance to habitat from new roads and drill pad development, and includes long-term commitments for access to these sites (as defined in the Forest Plan [USDA 1986, pages II-54 and IV-22]), decreasing habitat effectiveness. Adverse effects of potentially increased access under the No Action Alternative would add cumulatively to adverse effects of oil, gas, and other mineral use. Because there are no direct or indirect adverse effects, implementation of any of the Action Alternatives would not result in cumulative adverse impacts to wildlife.

3.6.2.2.3. Transportation

With the exception of the two motorized trails proposed for construction in Alternatives D and E and comprising 1.26 miles, all routes that are being considered for designation within this project current exist and have or are receiving some amount of use. Continuing motorized travel on designated routes and cross-country would continue to reduce habitat effectiveness both on the Forest and off. Implementation of any of the Action Alternatives would maintain or reduce effects to wildlife, increasing habitat effectiveness. Adverse effects of potentially

increased access under the No Action Alternative would add cumulatively to adverse effects of continued and cross-country travel. Because there are no direct or indirect adverse effects, implementation of any of the Action Alternatives would not result in cumulative adverse impacts to wildlife.

3.6.2.2.4. Recreation

Dispersed camping, particularly within riparian areas, is widespread across the cumulative effects area. OHV use, hunting, fishing, and hiking would also continue to impact habitat for many species. These activities facilitate the potential for disturbance, harassment, mortality, and habitat loss, all causing a reduction in habitat effectiveness. Adverse effects of potentially increased access under the No Action Alternative would add cumulatively to adverse effects of recreation. Because there are no direct or indirect adverse effects, implementation of any of the Action Alternatives would not result in cumulative adverse impacts to wildlife.

3.6.2.2.5. Vegetation Treatments

Vegetation treatments include timber harvest, thinning, prescribed burning, harrowing, and fuel reductions. Two Forest Service documents provide greater detail concerning the effects of timber harvest and prescribed burning on wildlife resources (Summers 1998a, Summers 1998b). In general, vegetation treatments can alter stand structure, Vegetative Structural Stage (VSS) class, canopy closure, and snag densities. A shift in VSS class to grasses and forbs would increase forage for wildlife such as deer, but a loss of snags would decrease habitat for wildlife such as woodpeckers. There is a potential for disturbance and mortality to many wildlife species from such activities. Overall, adverse effects of potentially increased access under the No Action Alternative would add cumulatively to adverse effects of vegetation treatments. Implementation of any of the Action Alternatives would not result in cumulative adverse impacts to wildlife, but could add cumulatively to the effects of treatment that increase habitat effectiveness.

3.6.2.2.6. Land Exchanges and Easements

Existing road easements on the Forest are included within the motorized route network that has been analyzed as part of this process. There are no foreseeable future land exchanges or easements that would result in cumulative adverse effects to wildlife within the cumulative effects area.

3.6.2.2.7. Special Use Permits

The Forest issues special use permits for various activities, including outfitting, guiding, and special events. The effects to wildlife from these activities are variable, but typically increase disturbance and reduce habitat effectiveness. Adverse effects of potentially increased access under the No Action Alternative would add cumulatively to adverse effects of special uses. Because there are no direct or indirect adverse effects, implementation of any of the Action Alternatives would not result in cumulative adverse impacts to wildlife.

3.6.2.2.8. Grazing

Livestock grazing is common and widespread on the Dixie National Forest. Effects on wildlife from grazing are disclosed in a Dixie National Forest 1995 review (USDA 1995a). In general, grazing reduces vegetation and increases disturbance for wildlife, especially within riparian

areas. Grazing has little impact on cavity-nesters such as flickers. Adverse effects of potentially increased access under the No Action Alternative would add cumulatively to adverse effects of grazing. Because there are no direct or indirect adverse effects, implementation of any of the Action Alternatives would not result in cumulative adverse impacts to wildlife.

3.6.2.3. Determination

Alternative A

Given the continued open route mileage and opportunity for cross-country travel, implementation would increase the potential for disturbance and increase habitat degradation and fragmentation for all species analyzed. Habitat effectiveness would not increase, and may decrease for all species.

Alternative B

Given the net reduction of open motorized route miles and prohibition of cross-country travel, implementation would lead to the greatest increase in habitat effectiveness for all species analyzed.

Alternative C

Given the net reduction of open motorized route miles and prohibition of cross-country travel, implementation would lead to an increase in habitat effectiveness for all species analyzed, though less of an increase than under Alternative B.

Alternative D

Given the net reduction of open motorized route miles and prohibition of cross-country travel, implementation would lead to an increase in habitat effectiveness for all species analyzed, though less of an increase than under Alternative B or C.

Alternative E

Given the increase in open motorized route miles, but prohibition of cross-country travel, implementation would likely decrease the potential for disturbance to all species. Elimination of cross-country travel would lead to an increase in habitat effectiveness, though least among the action alternatives.

3.7. Social and Economic Resources

The information in this section is summarized from the *Social and Economic Specialist Report* prepared for this motorized travel plan (USDA 2009m). Please see that report for more detail on the affected environment and effects analysis.

3.7.1. Affected Environment

The Dixie National Forest is associated with quality of life values for a variety of people. Among other contributions that the Forest provides, and for which roads and trails are used:

- Homeowners and visitors value the scenery and nearby recreation opportunities the Forest provides,
- Permitted ranchers utilize the Forest to provide grazing for sheep and cattle,
- Vegetation is managed through a variety of projects that include commercial logging,
- Communities and private landowners benefit from a number of special use authorizations that facilitate including water improvements, roads, and utilities,
- Game species populations are largely managed through seasonal hunting by the public, and
- Commercial recreation opportunities are permitted to occur on the Forest, such as skiing, resorts, and guided recreation.

The landownership patterns in Garfield, Iron, Kane, Piute, Washington, and Wayne counties are dominated by federal land. Less of the area's economic base is now reliant on resource extraction and gathering of forest products than it once was. Recreation and tourism are becoming the major industry in some counties, with federal land providing much of the opportunity.

Table 3-11. Landownership Patterns

County	Total County Acres	All Federal Land		Dixie National Forest	
		Acres	% of County	Acres	% of County
Garfield	3,311,360	2,947,110	89%	1,059,635	32%
Iron	2,110,720	1,203,110	57%	253,286	12%
Kane	2,554,880	2,120,550	83%	127,744	5%
Piute	485,120	358,989	74%	2,765	<1%
Washington	1,553,280	1,164,960	75%	403,853	26%
Wayne	1,574,400	1,338,240	85%	78,720	5%

Recreation and tourism levels on the Forest have shown a dramatic increase since the Forest Plan was released in 1986, paralleling or exceeding statewide trends during this same period. The Dixie National Forest's proximity to several state and national parks, its location near Interstates 15 and 70 between major western population centers, and a growing resident and transient population are contributing to increases in Forest visitation.

The areas around the Forest have become attractive to second home buyers. Out-of-county and out-of-state landowners make up a large percentage of county property taxpayers, a trend that is expected to continue.

Utah is the fifth fastest-growing state in the nation (State of Utah 2006), and Washington and Iron counties were two of the fastest growing counties in the country (U.S. Census Bureau 2005a). Salt Lake City and Las Vegas, Nevada, where many Forest users live, continue to see explosive growth (State of Utah 2006, U.S. Census Bureau 2005a). According to recent population projections, Utah will have a population of over four million by 2030 (State of Utah 2005).

Many traditional sources of economic income such as natural resources and mining are projected to lose their share of the state economic output. These shifts are largely due to growth in the economy, not necessarily a decrease in outputs in these sectors. Professional business, education, and health services are projected to grow.

Most of the project area has historically been rural in character. Many local people are concerned about the loss of agricultural lands and associated traditional livelihoods such as ranching, farming, and other natural resource-based economic endeavors. Forest lands would continue to provide opportunities for rural communities to have a “working” connection with the land through the continuation of traditional livelihoods, but larger, global trends may nonetheless make traditional lifestyles and occupations increasingly difficult to maintain. Based on the experience of other western states, this is a trend that extends beyond Utah (Rasker and Holmes 2003).

Because of variation between the economic bases of the area communities, the *Social and Economic Specialist Report* includes an economic analysis by county (USDA 2009m).

3.7.2. Effects Analysis

None of the alternatives are likely to have much impact to the social and economic resources of the counties in the project area. All impacts described below are relative within the greater context of the overall relatively minimal impact.

Among the six counties, Garfield County would likely see the most impacts, relatively speaking, because of the high acreage of National Forest System lands in the county, the focus of the economy (on the *Hospitality and Leisure* sector), planned events, and some small businesses that cater to motorized recreation use.

Kane County would likely see the second-most impacts for similar reasons, but of a lesser impact as it doesn’t have the same Forest acreage as does Garfield County. Wayne County could see the third-most impacts largely due to the county’s reliance upon tourism. Groups and organized events in Iron and Washington counties could be impacted, but the overall impact on social or economic resources in these counties would be minimal regardless of the alternative. There are potential impacts on non-motorized uses and businesses that cater to these users across all alternatives.

Alternatives B and E would have a greater potential to impact social and economic resources because they would provide a mix of motorized and non-motorized uses on trails and roads that would be most weighted towards motorized or non-motorized use at the expense of other users. For example, Garfield County may experience impacts from reduced motorized opportunities under Alternative B because of planned events that focus on motorized recreation use and some small businesses that cater to that use. Under Alternative E, however, Garfield County could experience impacts on other recreation uses such as non-motorized uses.

3.7.2.1. Effects Common to All Counties

There would be no impact to the current social and economic conditions of any of the six counties under Alternative A as there would be no change from the existing condition.

3.7.2.2. Direct and Indirect Effects

As noted above, all impacts described below are relative within the greater context of the overall relatively minimal impact under all alternatives. Additionally, alternatives that have the potential to affect current social and economic conditions also have the potential to provide opportunities for expansion in other sectors catering to other recreation uses.

3.7.2.2.1. Garfield County

Under Alternative B there would be greater pressure on the county's economy to change and provide services to non-motorized visitors. As motorized recreation opportunities would be reduced from those available in Alternative A, more effort would be necessary to resolve the conflicting interests of trails users across the county. Alternative B would have the highest chance of creating a disruption to the existing social and economic conditions in Garfield County.

Under Alternative C there would be more motorized opportunities available than in Alternative B, but not as many as in Alternatives A, D, and E. This alternative would have the second highest potential disruption to social and economic conditions in the county. There would not likely be much impact upon the economic and social resources in Garfield County under Alternative D. There would, however, be some possible impact on those businesses that depend upon visitors interested in non-motorized recreation.

Under Alternative E, a very large number of motorized roads and trails would be open to the public. This could create some positive impacts to businesses that deal directly with recreation vehicle sales, rental, and repair. Motorized opportunities at this scale could, however, create a disincentive for other visitors (e.g., those pursuing non-motorized opportunities) to visit the county. This could have negative economic implications for many county businesses.

3.7.2.2.2. Iron County

Under Alternative B, the reduction of roads and trails open to the public could impact the organized groups and ATV events in Iron County. This alternative would have the largest impact on those activities. The impacts under Alternative C would be slightly less than Alternative B, but otherwise similar. Alternative D would not negatively impact ATV clubs or events, but non-motorized users and businesses that depend upon their patronage could be impacted. Under Alternative E, the provision of a large amount of motorized roads and trails could impact the sectors of the economy that depend upon other types of trail users (e.g., hiking and mountain biking).

The differences between alternatives are not great as far as their impacts on the county as a whole. Overall, social and economic resources in Iron County are not likely to be impacted under any alternative.

3.7.2.2.3. Kane County

Under Alternative B there would be greater pressure on the county's economy to change and provide services to non-motorized visitors. As motorized recreation opportunities would be reduced from those available under Alternative A, more effort would be necessary to resolve the conflicting interests of trails users across the county. Alternative B would have the highest chance of creating a disruption to the social and economic conditions in Kane County.

Under Alternative C, there would be more motorized opportunities available than in Alternative B, but not as many as in Alternatives A, D, and E. This alternative would have the second highest potential disruption to social and economic conditions in the county. There would not likely be much impact upon the social and economic resources in Kane County under Alternative D. There would, however, be some possible impact on those businesses that depend upon visitors interested in non-motorized recreation.

Under Alternative E a very large number of motorized roads and trails would be open to the public. This could create some positive impacts to businesses that deal directly with recreation vehicle sales, rental, and repair. Motorized opportunities at this scale could, however, create a disincentive for other visitors (e.g., those pursuing non-motorized opportunities) to come to the county. This could have negative economic implications for many county businesses.

3.7.2.2.4. Piute County

Dixie National Forest lands make up only about one-half of one percent of Piute County's land base, and there are no identified roads or trails on the Forest in the county. No further social and economic analysis, other than that included in the summary above, will be conducted as there would be no social or economic impacts in any alternative.

3.7.2.2.5. Washington County

Under Alternative B the reduction in the mileage of roads and trails open to the public could impact organized groups and ATV events in Washington County. This alternative would have the largest impact on those activities. The impacts under Alternative C would be slightly less than Alternative B, but otherwise similar. Alternative D would not negatively impact ATV clubs or events, but non-motorized users and businesses that depend upon their patronage could be impacted. Under Alternative E, the provision of a large amount of motorized roads and trails could impact the sectors of the economy that depend upon other types of trail users (e.g., hiking and mountain biking).

The differences between alternatives are not great as far as their impacts on the county as a whole. Overall, social and economic resources in Washington County are not likely to be impacted under any alternative.

3.7.2.2.6. Wayne County

Alternative B would represent the biggest change from the current use patterns in Wayne County. Since the county's economy is very specialized and vulnerable to disruptions, Alternative B would have the greatest potential impact on the county's social and economic resources. Impacts would be less than in Garfield and Kane County, however, because there are no clubs or events that depend upon motorized recreation, and only a few businesses that do.

Under Alternative C there would be more motorized opportunities available than under Alternative B, but not as many as in Alternatives A, D, and E. Alternative C would have the second highest potential disruption to social and economic conditions in Wayne County. There would not likely be much impact upon the aspects of the social and economic resources in Wayne County under Alternative D. There would, however, be some possible impact on those businesses that depend upon visitors interested in non-motorized recreation.

There would be a very large number of motorized roads and trails open to the public in Alternative E. Motorized opportunities at this scale could, however, create a disincentive for other visitors (e.g., those pursuing non-motorized opportunities) to come to the county. This could have negative economic implications for many county businesses.

3.7.2.3. Cumulative Effects

The cumulative effects area for the social and economic resource is the same as the cumulative effects area for the Recreation analysis: the southern half of the State of Utah (the six counties analyzed in the direct and indirect effects and Beaver, Millard, and Sevier counties), the two nearest contiguous counties in Arizona (Coconino and Mohave), and the two nearest contiguous counties in Nevada (Clark and Lincoln).

The eight categories below were considered in the cumulative effects analysis.

1. **Utilities.** Requests to construct new utility corridors or conduct activities within existing corridors to respond to increasing growth and demand would continue. One example is the Dixie National Forest's recent Notice of Intent to prepare an EIS to analyze the construction, operation, and maintenance of a new transmission line from Tropic to Hatch (USDA 2008m). The electric transmission line is proposed to provide energy to Garfield and Kane counties to meet current and projected demand. Because future utility-related actions would be addressed through site-specific NEPA analysis (which would assess the need for temporary and long-term motorized access for construction, operation, and maintenance), there would be no cumulative effects on the social and economic resources from utility operations under any alternative.
2. **Oil and Gas.** Current oil, gas, and other mineral activity on the Forest is mostly limited to mineral materials (gravel and cinder pits) and a small number of gas wells on the Escalante Ranger District. Demand for mineral materials is generally limited to Utah Department of Transportation for winter road maintenance, some personal use, and some administrative use. None of the alternatives would affect the availability of mineral materials to the public, other governments or agencies, or the Forest Service itself. Both the Dixie and Fishlake National Forests are preparing oil and gas leasing EISs, with a potential increase in that activity once decisions have been made (the Dixie decision will apply to the Cedar City, Escalante, Pine Valley, and Powell ranger districts, and the Fishlake decision will apply to the entire Fremont River Ranger District). Both EISs address reasonable foreseeable development scenarios that include new road construction and reconstruction for exploration, development, and production. None of the alternatives in this motorized travel plan would affect the decisions made in either EIS.
3. **Transportation**. All action alternatives would add varying mileages of unauthorized routes to the system to provide private property and permittee access, although motorized access can continue to be authorized through permit for all permitted uses on the Forest. As all alternatives provide an adequate transportation system for Forest

Service administrative uses and permitted uses, there would be no cumulative effects on the social and economic resources of the area from any alternative.

4. **Recreation.** As discussed above under *Direct and Indirect Effects*, negative impacts to the current social and economic conditions of Garfield, Kane, and Wayne counties are greatest under Alternative B and, to a lesser extent, Alternative C. However, there are no impacts to the greater social and economic cumulative effects area under any alternative as the impacts to Garfield, Kane, and Wayne counties are absorbed by the other counties' more diversified economies, broader economy foci, and land ownership patterns (U.S. Census Bureau 2005b, 2005c, 2005d, 2005e, 2005f, 2005g, 2005h).
5. **Vegetation Treatments.** All alternatives would provide adequate access for all future planned vegetation treatments. Access to timber sales and stewardship contracts would not be affected by any of the alternatives, and the site-specific analysis conducted prior to any treatments would identify if any additional roads or trails were needed as part of the project.
6. **Land Exchanges and Easements.** There are no foreseeable land exchanges or easements that would result in cumulative effects to the social and economic resources in the cumulative effects area.
7. **Special Use Permits.** The minor differences between alternatives regarding firewood collection is discussed in *Direct and Indirect Effects* section in the *Vegetation and Fire and Fuels* section beginning on page 3-22. As this use would continue to be administered through special use permit, there is no appreciable difference between alternatives given the availability of firewood. Most who collect firewood on the Forest are residents of the counties in which the Dixie National Forest is located. The same is true for other personal use collections like Christmas tree permits and post and pole permits. Commercial special use permits would continue to be analyzed on a case-by-case basis; there would be no change for these activities between alternatives in the cumulative effects area.
8. **Grazing.** Livestock grazing is expected to continue at current at the present level under all alternatives. Any motorized access needed above that provided by the travel system under any alternative can be authorized through the permit process. No effect on the social and economic resource in conjunction with grazing is expected or likely.

3.8. Livestock Grazing

The information in this section is summarized from the *Livestock Grazing Specialist Report* prepared for this motorized travel plan (USDA 2009h). Please see that report for more detail on the affected environment and effects analysis.

3.8.1. Affected Environment

Livestock grazing has been an historic and traditional use of the Dixie National Forest for over 100 years. Grazing on the National Forest is authorized by Congress and is a significant use on the Dixie National Forest. Livestock forage is an important Forest product and many permittees use this forage to meet at least part of their year-round grazing needs.

Motorized access is often needed by permittees holding grazing permits to access range improvements within their allotments such as fences, troughs, and corrals, access to locations for sheep herder camps, and access for livestock management. Motorized access for grazing permittees is authorized by provisions incorporated into each grazing permit. This authorization process would not be changed with this decision.

There are 104 grazing allotments on the Dixie National Forest (81 cattle and 23 sheep allotments). Approximately 18,000 head of cattle and their calves, and 11,000 head of sheep and their lambs are permitted on the Forest (USDA 2006a). Presently about 263 grazing permittees are authorized to graze their livestock on 104 grazing allotments. About 769,000 acres (41 percent) of the Dixie National Forest are suitable for grazing cattle and sheep.

To facilitate livestock management on the allotments, structural range improvements have been constructed and are assigned for maintenance by the permittees.

Table 3-12. Range Improvements on the Dixie National Forest

Improvement Type	Number of Existing Improvements
Miles of fence	895
Number of corrals	49
Miles of water pipeline	205
Water developments	267
Water storage units	1,208

Livestock grazing permittees are required to maintain all existing structural range improvements and to manage their allotments in accordance with the terms and conditions of their grazing permits. Administrative roads (Operational Maintenance Level 1 roads) within allotments can be authorized for permittee use by local District Rangers through each Term Grazing Permit. This use is only for administrative purposes directly associated with the management of the grazing permit.

Livestock harassment and vandalism have been a concern to the Forest Service and its grazing permittees. There have been multiple incidents reported to employees in 2008 alone, including

fences cut, gates left down, and livestock being chased by ATV across country. This has happened in areas open to cross-country travel and in areas already closed to cross-country travel by previous decisions. Tickets have been written to violators for vandalism of federal property related to grazing permit administration. This is an issue regarding enforcement of laws and regulation that already exist.

3.8.2. Effects Analysis

3.8.2.1. Direct and Indirect Effects

Livestock grazing activities, whether affecting the livestock themselves or the permittee, are not expected to be affected by implementing any of the travel management alternatives. As mentioned above, permittees may be allowed motorized access to maintain or develop range improvements assigned in their grazing permits or for other authorized administrative activities. No direct or indirect effects are anticipated under any of the alternatives as motorized access is and can be authorized through the grazing permit regardless of the configuration of the Forest's motorized travel system.

3.8.2.2. Cumulative Effects

This travel plan would not contribute to the cumulative effects on the range resources on the Dixie National Forest. Livestock grazing would not be adversely or positively affected by this project.

3.9. Noxious Weeds

The information in this section is summarized from the *Noxious Weeds Specialist Report* prepared for this motorized travel plan (USDA 2008h). Please see that report for more detail on the affected environment and effects analysis. The *Rare Plants* section beginning on page 3-15 and the *Rare Plants Specialist Report* (USDA 2008j) also contain information related to noxious weeds.

3.9.1. Affected Environment

The Forest Service defines noxious weeds as ". . . plants designated as noxious weeds by the Secretary of Agriculture or by the responsible State official. Noxious weeds generally possess one or more of the following characteristics: aggressive and difficult to manage, poisonous, toxic, parasitic, a carrier or host of serious insects or disease and being native or new to or not common the United States or parts thereof" (FSM 2080.5).

Currently, there are 53 species identified on the Regional Designated Noxious Weed and Undesirable Plant List. Twenty-one of these species occur in Utah and nine occur on the Dixie National Forest. Two additional weeds have been proclaimed noxious by Iron County and Garfield County: bull thistle and field bindweed, respectively. Noxious weed species on the Dixie National Forest:

1. Bull thistle (*Cirsium vulgare*),[1]
2. Canada thistle (*Cirsium arvense*),
3. Dalmatian toadflax (*Linaria genistifolia* spp. *dalmatica*),
4. Field bindweed (*Convolvulus arvensis*),[2]
5. Musk thistle (*Carduus nutans*),
6. Perennial pepperweed (*Lepidium latifolium*),
7. Russian knapweed (*Acroptilon repens*),
8. Scotch thistle (*Onopordum acanthium*),
9. Spotted knapweed (*Centaurea maculosa*),
10. Whitetop (*Cardaria draba*), and
11. Yellow star-thistle (*Centaurea solstitialis*).

The Forest Plan was amended in 2000 to address noxious weed management. The following "Noxious Weeds and Invasive Plant Species Goal" applies forest-wide:

1. Noxious weeds and undesirable invasive plants are managed and controlled to prevent new infestations, control existing populations and eradicate invasions where possible and practical so that ecological biodiversity, ecosystem stability and function, and native plant composition, structure, and successional patterns are maintained or improved (USDA 2000b, Appendix F, Attachment 1, p. 1).

Noxious weed prevention methods are routinely incorporated into resource management activities such as grazing permits and annual operating instructions, and timber sale contracts. A voluntary Regional Forage Certification Program was initiated in Utah in 1991, and in 1992 a

[1] Noxious weed in Garfield County.
[2] Noxious weed in Iron County.

Closure Order was issued limiting livestock feed used on National Forest System lands in Utah to that which has been certified weed-free. The Weed-Free Hay Program was initiated to reduce the spreading of noxious weeds by stock eating weed-contaminated feed and then distributing weed seeds in fecal matter.

The source of many weed infestations and other introduced plant species has been traced to disturbed sites such as travel corridors (roads, trails, skid trails, etc.), trailheads, parking areas, campsites, fire suppression activities, harvest units, and landings. Unwanted plants can be spread by vehicles, material from gravel pits, livestock, wildlife and birds, camping/fishing gear and clothing, straw and mulch, and livestock feed (hay and grain). Noxious weed seed is also transported by motorized vehicle tires (including OHVs). Noxious weed infested acres continue to increase due to a variety of factors including continuing drought conditions and the ability of noxious weeds to out-compete native plants for space, nutrients, water, and sunlight.

Cross-country travel off of designated routes contributes to distribution of weed seed through the transport of seed on stock, people and vehicles. Cross-country motorized travel contributes to this trend through loss of native vegetation and soil disturbance.

The following table displays acres infested by noxious weeds within each ranger district boundary. These numbers include noxious weed infestations on other land ownership within the district boundaries (inholdings).

Table 3-13. Acres of Noxious Weeds

Area	Acres within Ranger District Boundary	Infested Acres	% of Ranger District Infested
Cedar City	404,265	257	0.06
Escalante	436,586	5	0.001
Pine Valley	481,218	1,679	0.35
Powell	388,597	32	0.008
Teasdale	253,707	1	0.0004
Forest-wide	1,964,373	1,974	0.1

Acres include non-Forest Service acres within the proclaimed Forest boundary.

Infestations of weeds would continue to exist under all alternatives. Access is the biggest threat to spread existing infestations and to introduce new infestations of noxious and invasive weed species.

3.9.2. Effects Analysis

Designated travel routes and acres open to cross-country motorized travel can contribute to the spread of noxious weeds. The indicator to measure the effects on this issue will be acres open to cross-country motorized travel and miles of routes open to motorized travel. Comparing miles of designated motorized routes by alternative will indicate the relative risk of each alternative contributing to the spread and intensity of noxious weed infestations.

3.9.2.1. Direct and Indirect Effects

3.9.2.1.1. Common to All Alternatives

Designated motorized travel routes, especially roads receiving high levels of use, are monitored and treated for noxious weed infestations. All alternatives would maintain these monitoring and treatment activities. Continuing use of designated travel routes through both motorized and non-motorized means has the potential to spread noxious weeds and other invasive species.

Routes that are to be decommissioned naturally, the number of which varies by alternative, are expected to return naturally to vegetative production unless there is a localized need to vegetate some areas to prevent erosion, noxious weed invasion, or for other purposes. Some routes are proposed to be decommissioned by obliteration. These routes would be seeded using weed seed free seed as designated by Dixie National Forest direction (USDA 2000a, 2000b). Routes proposed for decommissioning would be surveyed to determine whether or not any noxious weed infestations exist, existing infestations would be monitored, and control measures would be taken to eliminate or minimize any infestation.

3.9.2.1.2. Alternative A

Managing 61 percent of the Forest as open to cross-country motorized travel increases the risk of the spread of noxious weeds into adjacent areas, and increases the risk of noxious weeds being continually spread within the areas already infested. Under this alternative, the spread of noxious weeds to areas physically accessible to rubber-tired vehicles of all kinds would be accelerated. The use of OHVs in areas never before accessed by tired vehicles can import weed seed, which may eventually establish noxious weed populations in other areas of the Forest.

The motorized network of unauthorized routes would continue to grow given the acreage open to cross-country travel. This alternative has the second highest number of designated motorized routes among all the alternatives (Alternative D would designate more); however, it is the only alternative that maintains cross-country travel. This alternative has the highest risk to increase the spread of noxious weeds forest-wide.

3.9.2.1.3. Alternative B

In Alternative B, cross-country travel would be prohibited forest-wide. This alternative has the least number of miles open to the public. Compared to the existing condition, Alternative B reduces the miles of open motorized routes by 2,408 miles (a 56 percent reduction) (see Table 2-3. Summary of Routes Open and Closed to the Public in Chapter 2). A reduction in the miles of open motorized routes has the potential to reduce the risk of noxious weeds being introduced or transported into uninfested areas, and reduce the risk of noxious weeds being continually spread within the area already infested.

3.9.2.1.4. Alternative C

Alternative C allows for a higher level of motorized access than Alternative B. Under this alternative, cross-country travel would be prohibited forest-wide. This alternative has fewer open miles of designated motorized routes than do Alternatives A, D, and E. Compared to the existing condition, Alternative C reduces the miles of open motorized routes by 2,102 miles (a 49 percent reduction). A reduction in the miles of open motorized routes has the potential to

reduce the risk of noxious weeds being introduced or transported into uninfested areas, and reduce the risk of noxious weeds being continually spread within the area already infested.

3.9.2.1.5. Alternative D

This alternative allows for a higher level of motorized access than does Alternative C, including the proposed the construction of two new motorized trail segments with a combined length of 1.26 miles. Under Alternative D, cross-country travel would be prohibited forest-wide. Compared to the existing condition, Alternative D reduces the miles of open motorized routes by 1,533 miles (a 36 percent reduction). This alternative has a lower risk of the spread of noxious weeds than does Alternatives A or E.

3.9.2.1.6. Alternative E

Alternative E prohibits cross-country travel. As under Alternative D, two new motorized trail segments would be constructed with a combined length of 1.26 miles. Compared to Alternative A, Alternative D increases the miles of open motorized routes by 288 miles (a 7 percent increase). This alternative has the second highest risk to increase noxious weeds and invasive species because it has the greatest number of miles of motorized routes open to the public (Alternative A has the highest risk).

Alternative E would have the second highest potential to facilitate noxious weed and invasive species expansion and introduction because of the high mileage of open routes combined with the proposed construction of 1.26 miles of motorized trails. Alternative D also proposes to construct 1.26 miles of motorized trails, which would increase the chance of weed establishment and expansion; however, the risk associated with this new trail mileage would not significantly increase this risk. Overall, Alternative B would have the least risk of spreading noxious weeds, followed next by Alternative C, then Alternative D, with Alternative A having the highest risk.

3.9.2.2. Cumulative Effects

The cumulative effects analysis area is southwestern Utah because noxious weeds are a regional issue and weed infestations occur on adjacent lands. Increases in noxious weed invasion and spread can occur as a result of increased miles of road, ground disturbance, or fire. It is anticipated that new weeds would continue to invade public lands and other lands from various sources. Existing infestations would continue to be treated aggressively until they are controlled, contained, and/or eradicated. Project design features would be used with any new federal projects, which would aid in decreasing the introduction and spread of noxious weeds and invasive species. None of the alternatives would appreciable accelerate the spread of noxious weeds over the existing trend.

3.10. Special Uses

The information in this section is summarized from the *Special Uses Specialist Report* prepared for this motorized travel plan (USDA 2008l). Please see that report for more detail on the affected environment and effects analysis.

3.10.1. Affected Environment

There are currently over 400 issued special use permits within the boundaries of the Dixie National Forest's Motorized Travel Plan project area. Permitted uses include, but are not limited to, fixed improvements, easements, and recreational activities. Special use authorizations can vary greatly in length of time. Some term permits are only authorized for a few months, while others, such as those for winter resorts, may be authorized for 40 years. Special uses also vary greatly in requirements, with some such as short-term recreation events only using a few trails during the summer months, while an oil and gas pipeline may require a 30-year permit and the use of large areas of land. The following table lists those special use permits currently issued on the Dixie National Forest.

Table 3-14. Currently Authorized Special Use Permits

Permit Designation	Number of Permits
Recreation Special Uses	118
Agriculture	7
Community and Public Information	13
Feasibility, Research, Training, Cultural Resources, and Historical	18
Industry	5
Energy Generation and Transmission	38
Transportation	55
Communication	48
Water (Non-power Generating)	127
Total	481

3.10.2. Effects Analysis

3.10.2.1. Direct and Indirect Effects

Direct effects include decreased motorized access to the project area. Indirect effects may include crowding, increased conflict levels, and increased use in adjacent or similar areas (displacement). Direct effects to outfitter and guide permit holders may include a displacement of permitted use outside of the project area. This potential displacement could adversely affect the viability of some permittees whose operations are based near their homes.

In general, the alternatives were developed to continue to provide authorized access to known roads and trails used by special use permit holders. Fixed improvement special use permits or Federal Land Policy and Management Act (FLPMA) easements would not be affected because the alternatives were designed to maintain known accesses.

The action alternatives would not jeopardize occupancy or re-issuance of any special use permits. However, under Alternative A, non-system routes identified as necessary for private property, permittee, or administrative access within the 39 percent of the Forest closed to cross-country travel areas would not be open to motorized travel, thus potentially jeopardizing occupancy or re-issuance of special use permits.

3.10.2.1.1. Alternative A

Under this alternative, non-system routes identified as necessary for special use permittee access (as well as private property, other permittee, or administrative access) within the 39 percent of the Forest closed to cross-country travel would not be open to motorized travel. Some permitted special use holders may see an impact under Alternative A due to the fact that some routes deemed important to certain special uses may be unauthorized routes within the 39 percent of the Forest where cross-country travel is not allowed. However, substitute legal routes may avoid this impact.

In addition to the 61 percent of the Forest open to cross-country travel, Alternative A would allow for the second highest amount of motorized access from a designated route among the alternatives. Under Alternative A, 70 percent of the Forest is within one-half mile of a motorized route, and 100 percent of the Forest is within 3 miles of a motorized route. See Table 3-19. Percent of Forest Within a Specified Distance of a Motorized Route, on page 3-80.

Alternative A may have an impact on special use permittees whose permits depend on larger areas being closed to motorized travel, such as big game outfitter and guides or backpacking and hiking groups. In contrast, Alternatives A and E may be the preferred alternatives for those seeking vast amounts of motorized routes. Alternative A would be the preferred alternative for permit holders seeking cross-country travel for multiple reasons, including game retrieval, on the 61 percent of the Forest open to that use.

3.10.2.1.2. Alternative B

Alternative B is unlikely to have an impact on non-recreation associated activities. Recreation-related special use permit holder who seek vast motorized opportunities may see the greatest amount of impacts due to the amount of motorized routes decommissioned and decreased amounts of access as the Forest would be closed to cross-country travel.

Alternative B offers the least amount of motorized route miles among alternatives. Alternative B also has the greatest amount of buffer area between motorized routes, with 41 percent of the Forest greater than one-half mile from a motorized route. Conversely, only 1 percent of the Forest is greater than 3 miles from a motorized route (see Table 3-19. Percent of Forest Within a Specified Distance of a Motorized Route, on page 3-80). Thus, for permit holders who specialize in motorized recreation, impacts such as displacement, conflict, and lower satisfaction levels may be greatest in Alternative B.

Conversely, recreation-related permit holders seeking non-motorized experiences, larger forested areas, and opportunities for solitude may benefit most from Alternative B. Alternative B

would likely be the preferred alternative for permit holders specializing in non-motorized experiences, or permit holders who depend on greater areas with fewer roads, and the least preferred alternative for those desiring vast motorized access.

3.10.2.1.3. Alternative C

Alternative C is unlikely to have an impact on non-recreation associated activities. Recreation-related special use permit holders who seek vast motorized opportunities may see impacts due to the amount of motorized routes decommissioned, and decreased amounts of access as the Forest would be closed to cross-country travel. However, impacts would be lower than those under Alternative B.

Alternative C has the second largest amount of buffer area between motorized routes, with 38 percent of the Forest greater than one-half mile from a motorized route. Conversely, only 1 percent of the Forest is greater than 3 miles from a motorized route (see Table 3-19. Percent of Forest Within a Specified Distance of a Motorized Route, on page 3-80). Thus, when associated with motorized travel, impacts such as displacement, conflict, and lower satisfaction levels may be significant when compared to Alternatives A and E. However, these impacts should decrease when compared to Alternative B.

Conversely, recreation-related permit holders seeking non-motorized experiences, larger forested areas, and solitude opportunities may benefit from Alternative C when compared to Alternatives A, D, and E. Alternative C may be an adequate alternative for permit holders specializing in non-motorized experiences or those who depend on larger areas without roads; Alternative C may potentially be the least attractive alternative for those desiring vast motorized access, preferred only above Alternative B.

3.10.2.1.4. Alternative D

Alternative D is unlikely to have an impact on non-recreation associated activities. Recreation-related special use permit holders who seek vast motorized opportunities may see impacts due to the amount of motorized routes decommissioned, and decreased amounts of access as the Forest would be closed to cross-country travel; however, impacts would be less than those associated with Alternatives B and C.

Alternative D is mid-range among the alternatives regarding amount of buffer area between motorized routes, with 34 percent of the Forest greater than one-half mile from a motorized route, and less than 1 percent (0.43 percent) of the Forest greater than 3 miles from a motorized route (see Table 3-19. Percent of Forest Within a Specified Distance of a Motorized Route, on page 3-80). Thus, when associated with motorized travel, impacts such as displacement, conflict, and lower satisfaction levels may be greater when compared to Alternatives A and E, but less than those associated with Alternatives B and C.

Conversely, recreation-related permit holders seeking non-motorized experiences, larger forested areas, and opportunities for solitude may benefit from Alternative D when compared to Alternatives A and E. Alternative D is the mid-range alternative for permit holders specializing in both non-motorized and motorized activities.

3.10.2.1.5. Alternative E

This alternative provides the most motorized access on designated routes by designating all routes as open to public motorized travel, with the exception of routes already designated through a specific previous decision. All non-system or unauthorized routes would also be designated as open to public motorized travel, many of which provide access for permitted uses.

Alternative E is unlikely to have a impact on non-recreation associated activities. When compared to all other alternatives, recreation-related special use permit holders who seek vast motorized opportunities may see the least amount of impact with Alternative E. Alternative E allows for the least amount of buffer area from motorized routes, with only 29 percent of the Forest greater than one-half mile from a motorized route, and less than 1 percent (0.22 percent) of the Forest greater than 3 miles from a motorized route (see Table 3-19. Percent of Forest Within a Specified Distance of a Motorized Route, on page 3-80).

When associated with motorized users, recreation-related impacts such as displacement, conflict, and lower satisfaction levels may be least among all alternatives, with the possible exception of Alternative A, where cross-country travel is allowed on 61 percent of the Forest. Conversely, recreation-related permit holders seeking non-motorized experiences, larger forested areas, and opportunities for solitude may experience the greatest negative impact from Alternative E.

Alternative E would be the least preferred alternative, with the possible exception of Alternative A, among permit holders specializing in non-motorized experiences or those who depend on greater areas without roads. It would be the most attractive alternative for those desiring vast motorized access.

3.10.2.2. Cumulative Effects

The southwest section of Utah is the cumulative effects area for special uses for this project. This area includes the following counties south of I-70: Sevier, Wayne, Garfield, Kane, Washington, Iron, Beaver, and Piute. When dealing with recreation-related permits, areas immediately adjacent to the project area or areas further away that provide similar experiences are likely to experience the most direct impacts from this project.

Non-recreation special uses are usually very site-specific and few authorizations can be easily replaced on other NFS lands. The fixed improvements and FLPMA authorizations are related to specific lands that provide a route for power, phone, or fiber-optic cable lines. Weather stations are also located according to conducive conditions for collecting data. Water lines and service buildings are generally authorized in areas most conducive to their purpose, such as areas adjacent to private lands or located in conjunction with another authorization

All alternatives could cause some displacement of recreation-related permitted operations within the cumulative effects area. Displacement of permitted activities could be further impacted if locations adjacent to the project area implement land management actions that severely reduce motorized route mileage. Adjacent areas would generally fall under authorization of the BLM (Richfield, Kanab, St. George, and Cedar City field offices) and the Forest Service (Fishlake National Forest). Recreation-related permitted holders seeking a non-motorized or primitive experience would see a positive cumulative effect across all action alternatives.

Currently, the Richfield, Kanab, and St. George field offices are in the process of updating their Resource Management Plans (RMPs), the equivalent of the Forest Service's Forest Plans. The Fishlake National Forest completed its Motorized Travel Plan in late 2006. The Cedar City Field Office is scheduled to begin updating their RMP within the next few years. All these recently completed, ongoing, and planned projects would establish motorized route guidelines for the foreseeable future (USDA 2009k).

The proposed actions and management plans for management of adjacent areas should not significantly add to the impact of displacement of recreation-related permit holders currently operating on the Dixie National Forest unless the permit holder is dependent on cross-country travel. If cross-country travel is a necessity to permit operations, then displacement impacts would be extreme.

Non-recreation special uses are not anticipated to experience any cumulative effects from the action alternatives because the alternatives were designed to maintain known access. However, as noted under Alternative A, non-system routes identified as necessary for private property, permittee, or administrative access within areas closed to cross-country travel areas would not be open to motorized travel, thus potentially jeopardizing occupancy or re-issuance of special use permits.

3.11. Recreation

The information in this section is summarized from the *Recreation and Scenery Specialist Report* prepared for this motorized travel plan (USDA 2009k). Please see that report for more detail on the affected environment and effects analysis.

3.11.1. Affected Environment

Recreation is a primary use of the Dixie National Forest. Visitors come to the Forest for a wide variety of activities and experiences ranging from primitive wilderness settings to developed campgrounds to permitted resorts and a downhill ski area. There are 42 recreation residences on the Forest. Thirty-nine outfitter-guides are authorized to operate on the Forest, providing guided hunting, fishing, OHV and mountain bike touring, and horse riding trips. Dispersed camping, including dispersed use for large family reunions and hunting camps, is popular.

The Forest provides habitat and non-motorized and motorized access for small and big game hunting, a highly-valued activity in southern Utah. Several streams and lakes provide fishing opportunities; some lakes accommodate boats while others require hiking-in. Non-motorized and motorized trails are available for hiking, mountain biking, OHV use, and horse riding.

Since the publication of the Forest Plan in 1986, recreation and tourism levels on the Forest have shown a dramatic increase, paralleling or exceeding statewide trends during this same period. According to the National Visitor Use Monitoring results for the Dixie National Forest, the Forest received 773,789 visits in 2003 (USDA 2004c, p. 6). Visits to the Dixie National Forest are often associated with visits to surrounding national and state parks and other recreation and travel opportunities. The Dixie National Forest's proximity to several parks, its location near Interstates 15 and 70 between major western population centers, and a growing resident and transient population are contributing to swelling trends in Forest visitation.

According to the National Visitor Use Monitoring results, approximately 20.7 percent of visits to the Dixie National Forest in 2003 were by people from Washington County, Utah. Approximately 7.4 percent were from Iron County, Utah, and approximately 8.6 percent were by people from Clark County, Nevada. Two percent were from Garfield County and approximately 1.4 percent were from Kane County. Approximately 0.8 percent were from Salt Lake City (ibid).

The Forest Service uses the Recreation Opportunity System (ROS) to match visitor's desires, abilities, and expectations to a particular activity and setting (PLAE, Inc. 1993, pp. 25-27). ROS provides a framework for stratifying and defining classes of outdoor recreation environments, and considers social factors such as remoteness, size of the space, evidence of human activity, social encounters, and managerial presence. ROS is based upon the following philosophical premises:

- People purposefully choose settings for their recreation activities,
- Choices are made with the expectation of achieving particular recreation experiences, and
- It is desirable to present a diverse spectrum of activity and recreation setting opportunities, ranging from highly developed to primitive, from which people may choose.

There are five different ROS classes on the Forest: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, and Roaded Natural.

Table 3-15. Forest-wide ROS Acres

Measure	ROS Class			
	Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural
Acres	103,960	805,500	687,610	284,000

All acres rounded to the nearest 10 acres. There are no Rural or Urban classes on the Forest.

The Forest Plan predicted substantial growth in demand for opportunities for driving for pleasure and dispersed recreation. Although demand for dispersed recreation was not expected to exceed supply, competition for sites was expected to create social conflict. The growing popularity of ATV use was also described as a growing concern, and a plan to regulate use was recognized as necessary to prevent damage to critical areas (pp. II-8 through II-10). Conflict between recreation user groups would be minimized because of sufficient areas of each experience type to accommodate the expected increase in user groups (pp. III-2 through III-3).

Some of the more popular recreation uses of the Forest include camping, trail use (both motorized and non-motorized), and hunting and fishing.

Developed Camping: Camping at developed recreation sites is a popular recreation activity, with 26 campgrounds and 5 picnic sites on the Forest. A number of these sites accommodate large groups. Several campgrounds are located near lakes and reservoirs and have boating and fishing opportunities.

Dispersed Camping: Dispersed camping, or camping in non-developed areas, is a common recreation activity on the Dixie National Forest, occurring primarily during the summer and the fall hunting season. Dispersed camping is allowed on most areas of the Forest except within the vicinity of developed recreation sites such as trailheads, picnic areas, or campgrounds. Additionally, there are three specific areas on the Forest that have been restricted to designated campsites only: East Fork of the Sevier River south of Tropic Reservoir, Mammoth Creek near Mammoth Spring, and Yankee Meadows. There are currently 1,624 inventoried dispersed campsites on the Forest.

Motorized Trail Use: There are 1,500 miles of trails on 266 designated trails providing recreation opportunities including hiking, biking, horseback riding, and OHV riding.

Non-motorized Trail Use: There are 1,087 miles of designated non-motorized trail on the Forest, 155 miles of which are located in federally-designated wilderness areas. Uses consist mainly of hiking, biking, and horseback riding. Hiking is common on most all non-motorized trails, but is most common on trails that are too steep or narrow for equestrian or mountain bike use. Although horseback riding occurs on many trails across the Forest, it is most common on trails that access the Pine Valley Mountain Wilderness Area. Due to terrain constraints, equestrian use is limited on trails that access the Ashdown Gorge and Box-Death Hollow wilderness areas. The Dixie National Forest issues special use permits for a number of

mountain bike races, including the National Off-Road Bicycling Association (NORBA) national series race.

Great Western Trail: The Great Western Trail (GWT) is a long distance trail that traverses approximately 4,455 miles across five states; 226 of these miles are on the Dixie National Forest. The GWT was designated a Utah Centennial Trail in 1996 and a National Millennium Trail in 2000. The GWT is somewhat unique in that it is a popular route for both motorized and non-motorized users, and for the fact that portions of it follow roads and other named trails. On the Dixie National Forest, the GWT travels through the Powell and Escalante Ranger Districts and the Teasdale portion of the Fremont River Ranger District. Across these three districts the GWT provides for approximately 139 miles of motorized opportunities and 87 miles of non-motorized opportunities. In some instances, use is separated by different routes, and in some cases, mixed use does occur. Past experience and research shows that mixing motorized and non-motorized use can create conflicts, and in general this conflict is greatest felt by non-motorized users (Ramthun 1995, Hendee and Dawson 2002, Hammitt and Cole 1998, Manning 1999, Gibbons and Ruddell 1995). In addition, the complications of properly managing a popular, long distance trail such as the GWT are increased when accommodating both motorized and non-motorized use. This is especially true if enforcement is lacking, signing is poor or dated, and/or users do not follow regulations.

Motorized Use: There are a total of 3,475 miles of roads and trails open to OHV/ATV recreation: 413 miles of designated motorized trails, 2,580 miles of level 2 roads, and 482 miles of level 3 roads. Dispersed motorized recreation use has grown and developed considerably on the Forest, with many motorized users coming from Las Vegas, the Salt Lake area, and local communities. Growth in demand for OHV use and other dispersed motorized recreation opportunities has increased on the Dixie, reflective of similar demand in other areas of the U.S, particularly the West.

The Dixie National Forest has several designated OHV/ATV trail systems. The Markagunt ATV/OHV trail system located on the Cedar City Ranger District is comprised of 408 miles of well-marked trail riding opportunities. The Fremont and Paunsaugunt ATV/OHV trail system located on the Powell Ranger District provides 147 miles of riding opportunities. The Great Western ATV/OHV trail system on the Powell and Escalante ranger districts provides approximately 65 miles of riding opportunities. Many of the miles of these ATV/OHV trail systems are located on level 2 and level 3 roads.

The Forest also has several OHV loading and unloading areas across the Forest:

- Pine Valley Ranger District
    - Upper Enterprise Reservoir
- Cedar City Ranger District
    - Duck Creek Campground Corral
    - Aspen Mirror Lake
    - Parking areas at Strawberry and Swains
    - Hwy 14/Mammoth Creek Road pull-out
    - Hwy 14/Stout Canyon Parking area
    - Red Creek Reservoir
    - Yankee Meadows Campground
    - North Red Creek Reservoir
    - Pole Hollow road pull-out just past private land on Markagunt trail system #25
    - Road # 30074 old gravel pit pull-out, provides access to Markagunt trail system #3

- Powell Ranger District
    - Great Western Trailhead
    - Casto Canyon Trailhead
- Escalante Ranger District
    - Pine Lake
    - Clayton Guard Station area
    - Antimony area
- Teasdale portion of Fremont River Ranger District
    - Fish Creek Trailhead
    - Rosebud Trailhead

Hunting and Fishing: There is extensive hunting use on the Dixie National Forest during the general season deer and elk hunts. Limited Entry elk hunts occur in the Panguitch Lake area north of Highway 14 on the Cedar City Ranger District, the Mount Dutton area north of Highway 12 on the Powell Ranger District, and the Thousand Lake area on the Teasdale portion of the Fremont River Ranger District. The Paunsaugunt Limited Entry Deer hunt occurs south of Highway 12 on the Powell Ranger District. A Limited Entry antelope hunt occurs in the Panguitch Lake, Paunsaugunt, Mount Dutton, and Pine Valley areas as well. Black bears, mountain lions, turkeys, waterfowl, and upland game birds are hunted across the Forest. Ruffed grouse are generally hunted along the rim areas.

Popular fishing sites are numerous and include opportunities for anglers to catch various trout and smallmouth bass. Three are many popular lakes and streams across the Forest.

Recreation Residences and Private Subdivisions: There are 42 recreation residences under Forest Service permit. Private residences, both primary and secondary homes, are located in numerous subdivisions within the Forest boundary at Duck Creek Village, Strawberry Valley, Swains Creek, Mammoth Creek, and Zion View. Duck Creek Village, within the boundaries of the Cedar City Ranger District, offers all amenities, including several retail stores, gasoline, lodging, restaurants, and ATV purchase and rentals.

3.11.1.1. Trail Maintenance

The Forest objective is that all system trails, motorized and non-motorized, will be maintained to Forest Service standards to provide for user enjoyment, safety, and resource protection. These Forest Service standards vary depending on the intended use of the trail, and allow for a range of trail conditions from primitive native surfaced routes to higher-level improved surfaced routes. Much of the improvement associated with bringing individual trails up to standard falls within the category of routine maintenance and would proceed as funding is secured. Portions of some trails may require relocation to meet standards. Authorization of any trail relocation work may require supplemental analysis and in some cases a subsequent NEPA decision. Trail maintenance standards are set by the trail's maintenance level or trail class. Standards are described in FSH 2309.18.

The following tables represent the Dixie National Forest accomplishment reports for Miles of Trail Maintained to Standard and Miles of Trail Improved to Standard.

Table 3-16. Trail Accomplishment Reports, Fiscal Year 2006-2007

Accomplishment Description	Target Miles	Actual Miles	% of Target Accomplished
Fiscal Year 2006			
Miles of Trail Maintained to Standard	179	284	159%
Miles of Trail Improved to Standard	9	3	(67%)
Fiscal Year 2007			
Miles of Trail Maintained to Standard	N/A	642	N/A
Miles of Trail Improved to Standard	4	13	325%

Trails include motorized and non-motorized trails.
Miles of Trail Maintained to Standard = miles of trails receiving maintenance. This is the annual amount of maintenance done with the annual appropriations.
Miles of Trail Improved to Standard = miles of trails improved to standard as identified in the Meaningful Measures trails component. This is the annual amount of improvement (construction) done with the annual appropriations.
N/A = not applicable; new report format introduced in 2007 does not contain targets.

3.11.2. Effects Analysis

When discussing effects to those who desire a non-motorized or a motorized experience, it should be noted that Forest users are very diverse, and attributes required for goal attainment may in fact contradict common theory. For example, motorized users may seek large tracks of undeveloped land, and non-motorized users may seek large amount of motorized access in certain locations.

3.11.2.1. Direct and Indirect Effects

3.11.2.1.1. Effects Common to All Alternatives

Implementation of any alternative could result in the displacement of some Forest visitors. A travel plan that does not offer the particular desired setting or desired mode of transportation on a preferred road, trail, or area could displace some people to other areas or they may choose to engage in other activities. In addition, adjacent areas may see an increase in impacts associated with increased use with the implementation of the Dixie National Forest Motorized Travel Plan. This could be especially true with Alternatives B, C, and D due to the fact that these alternatives reduce motorized route mileages as compared with Alternative A.

Non-motorized travel is generally allowed across most of the Forest and on most travel routes. With the exception of designated wilderness (no mechanized travel allowed) and some research natural areas, cross-country travel on foot, stock, snowshoe, skis, and bicycle is allowed on most of the Forest.

Travel routes are closed unless designated open for motorized use. Routes designated open for public motorized use will be shown on the Motor Vehicle Use Map (MVUM), which will be published after the motorized travel plan is signed. The MVUM is a national requirement that will be the legal document to illustrate route designations. It will be the user's responsibility to

be familiar with the MVUM, which will be provided free of charge at local Forest Service offices and on the Internet.

Routes designated open for public motorized use will be signed with a route number at all appropriate junctions according to Forest Service signing and installation standards. Allowed uses will also be posted according to Forest Service standards. Routes not designated as open for public motorized use will not be shown on the MVUM.

3.11.2.1.2. Alternative A

There are 828 miles of non-motorized trails under Alternative A (the fewest outside of Alternative E), and more miles of motorized routes than under Alternative B, C, or D. This alternative allows for motorized cross-country travel on 61 percent of the Forest. By allowing this use, this alternative is likely to match, and possibly increase, the current level of Forest user conflict between non-motorized and motorized users. With the total amount of motorized travel offered by this alternative combined with cross-country travel, the Dixie National Forest is likely to see similar or increased levels of resource impacts, including creation of illegal routes, thus potentially displacing a greater number of Forest users. Alternative A would be the least attractive to those seeking a non-motorized setting.

Table 3-17. Miles of Available Roads and Trails by Alternative

Measure	Miles by Alternative				
	A	B	C	D	E
Miles of motorized routes[1]	4,136	1,802	2,017	2,617	4,428
Miles of motorized trails[2]	103	190	292	194	101
Miles of non-motorized trails	828	960	969	915	812

[1] To accurately display recreational opportunities, highway and administrative route mileages are not included. Mileages of motorized trails, as shown in the following row, are included.
[2] Does not include miles of motorized roads where OHV use is also allowed.

3.11.2.1.3. Alternative B

Alternative B offers 960 miles of non-motorized trails (the most outside of Alternative C), and provides the least amount of miles for motorized travel (215 miles fewer than Alternative C). This alternative does not allow cross-country travel. Alternative B would provide the greatest amount of non-motorized opportunity. Furthermore, this alternative is likely to have the greatest effect on decreasing conflict, maintaining or increasing satisfaction levels, and mitigating displacement among non-motorized users.

3.11.2.1.4. Alternative C

Alternative C offers 969 miles of non-motorized trails (the highest among alternatives), and provides the second least amount of miles for motorized travel, 215 miles more than Alternative B. Motorized cross-country travel is prohibited. Alternative C would provide a similar setting for non-motorized opportunities as would Alternative B. However, due to the fact that Alternative C has more motorized route mileage, non-motorized opportunities may be slightly less than those available in Alternative B.

3.11.2.1.5. Alternative D

Alternative D offers 915 miles of non-motorized trails (mid-range among alternatives for non-motorized opportunities), and is mid-range among motorized travel, allowing 815 more miles than Alternative B, and 1,811 fewer miles than Alternative E. Motorized cross-country travel is prohibited. Alternative D would provide a similar setting for non-motorized opportunities as would Alternative C, but as a whole, may be the compromise alternative if associated with motorized use. As Alternative D has more motorized route mileage, non-motorized opportunities may be slightly less than those available in Alternatives B and C.

3.11.2.1.6. Alternative E

Alternative E offers 812 miles of non-motorized trails (the fewest among alternatives), and provides the greatest amount of miles for motorized travel, 2,626 more miles than Alternative B. Motorized cross-country travel would be prohibited. Alternative E would be likely to have a positive effect on decreasing conflict between non-motorized and motorized Forest users when compared to Alternative A, but a potential negative impact (greater user conflict) when compared to Alternatives B, C, and D. Alternative E would provide the least amount of setting for non-motorized opportunities as related to all other alternatives, with the potential exception of Alternative A.

3.11.2.1.7. ROS

As discussed on page 3-72, there are five ROS classes on the Forest. The information in the following table portrays the miles of motorized routes and miles of non-motorized routes in each ROS class by alternative.

Note that under Alternative A there are motorized routes in both Primitive and Semi-Primitive Non-Motorized ROS classes. The inclusion of motorized routes in non-motorized ROS classes is a reflection of an anomaly in the ROS mapping. When a final decision is made on this motorized travel plan for the Dixie National Forest, the ROS classes for the Forest will be updated to match the selected Forest Service system of routes. For purposes of this EIS, however, all mileages are presented to show the differences between alternatives to allow comparison.

Table 3-18. Motorized and Non-motorized Routes by ROS Class

ROS Class	Measure	Alternative				
		A	B	C	D	E
Primitive	Miles of motorized routes	5	0	0	4	5
	Miles of non-motorized routes	106	107	110	106	106
Semi-Primitive Non-Motorized	Miles of motorized routes	199	49	56	88	233
	Miles of non-motorized routes	464	479	484	478	462
Semi-Primitive Motorized	Miles of motorized routes	3,222	1,487	1,709	2,027	2,761
	Miles of non-motorized routes	179	275	275	235	172
Roaded Natural	Miles of motorized routes	1,966	1,280	1,406	1,564	1,936
	Miles of non-motorized routes	78	98	100	96	75

All mileages rounded to the nearest 1 mile. Motorized routes include all roads and motorized trails.

Non-motorized Opportunities

Conflict is a key issue when dealing with motorized and non-motorized uses (Ramthun 1995, Hendee and Dawson 2002, Hammitt and Cole 1998, Manning 1999, Gibbons and Ruddell 1995). Conflict among user groups is generally asymmetrical, with one group perceiving a greater amount of conflict than the other (Ramthun 1995). In the field of outdoor recreation, non-mechanized users have generally perceived higher levels of conflict. This seems especially true when associated with mechanized users (Ramthun 1995; Adelman et al. 1982, Jackson and Wong 1982).

Conflict frequently stems from goal interference (Gibbons and Ruddell 1995). For example, forest visitors expecting solitude in a certain location may experience conflict if this goal is interfered with by coming across other forest visitors in the same location. Or, if a hiker is expecting a non-motorized experience, conflict may be perceived if OHV users are encountered or heard. Conflict may even simply stem from the evidence of past OHV use in a non-motorized area.

With this in mind, for those seeking non-motorized opportunities, Alternative E allows for the most motorized use within Semi-Primitive Non-Motorized areas. This is followed by Alternatives A, D, C, and B, in that order. Within Primitive areas, Alternatives A and E each offer the same number of motorized route miles, followed by Alternative D with 4 miles, and then Alternatives B and C, both of which have 0.01 miles.

Motorized Opportunities

Motorized users seeking a Semi-Primitive Motorized or Roaded Natural experience may prefer Alternative A, followed closely by Alternative E, then D, C, and B, in that order. Those seeking a Primitive experience may prefer Alternatives A and E, followed by D, and, lastly, B and C. However, motorized routes within the Primitive ROS class are minimal and do not change much across alternatives. Motorized users purely seeking the maximum route mileage may prefer Alternative A, followed by Alternatives E, D, C, and B, in that order.

3.11.2.1.8. Distance From Motorized Routes

Table 3-19. Percent of Forest Within a Specified Distance of a Motorized Route

Distance to a Motorized Route	Percent of Forest Within Specified Distance by Alternative				
	A	B	C	D	E
0 to 0.5 miles	70%	59%	62%	66%	71%
0 to 1 mile	88%	81%	83%	86%	89%
0 to 2 miles	98%	96%	96%	97%	98%
0 to 3 miles	100%	99%	99%	100%	100%

Includes highways and roads on private land (including Cedar Breaks National Monument) within the Forest boundary.

The table above shows the percent of the Forest within varying distances from motorized routes. Paralleling previous analysis, Alternative B generally offers the greatest percentage of acres away from motorized routes. After Alternative B, Alternatives C, D, A, and E, in that order, present decreasing acres away from motorized routes. Alternative E allows the least amount of buffer area, or acres, away from motorized routes.

Given these figures, non-motorized users may prefer Alternative B, followed by Alternatives C, D, A, and E, in that order. Motorized users may prefer Alternative E, followed by Alternatives A, D, C, and B, in that order. However, as noted above, Forest users are very diverse, and attributes required for goal attainment may in fact contradict common theory.

In addition to illustrating the percentage of the Forest within varying distances from motorized routes, this table also illustrates the percentage of motorized access provided across the Forest by alternative.

3.11.2.1.9. Dispersed Camping

Dispersed camping would be allowed within 150 feet along designated routes except in areas in the vicinity of developed recreation sites and in the three areas on the Forest where camping has been restricted to designated campsites only (see the *Dispersed Camping* description on page 3-73). More dispersed campsites and dispersed camping areas may be designated in the future if physical and social conditions reach a level where it is deemed necessary. This motorized travel plan would directly affect dispersed camping across the Forest for those who access these sites through motorized means. Impacts to dispersed camping vary by alternative: with the exception of Alternative A and its areas open to cross-country travel, the greater the number of miles of motorized routes, the greater the number of available dispersed sites.

Table 3-20. Number of Legally Accessible Inventoried Dispersed Campsites

Measure	Alternative				
	A	B	C	D	E
Number of dispersed campsites accessible by motorized vehicle	1,409	725	817	1,052	1,315
Percent change from Alternative A	N/A	51%	58%	75%	93%

Note: There are a total of 1,624 inventoried dispersed campsites across the Forest, 215 of which are in areas closed to cross-country travel and not legally accessible via motorized vehicles.
Alternative A: 1,227 campsites are within 150' of a designated route. There are an additional 182 campsites further than 150' from a designated route but within the 61 percent of the Forest open to cross-country travel; these sites are therefore legally accessible by motorized vehicles.
Alternatives B, C, D, and E: These are the number of campsites within 150' of a designated route.

As illustrated in the previous table, Alternative A provides motorized access to the greatest number of dispersed campsites across alternatives, with 1,409 legally accessible inventoried sites. This figure decreases by 94 sites when compared to the next highest amount in Alternative E. Compared to Alternative A, the numbers decline further with a decrease of 357 sites accessible in Alternative D, by 592 sites accessible in Alternative C, and by 684 sites accessible in Alternative B. Given these figures, impacts to use associated with dispersed camping are greatest with Alternative B, and least with Alternative A. Paralleling this is the fact that displacement associated with dispersed camping would be greatest with Alternative B, and the least with Alternative A. However, a decrease in dispersed campsites may actually increase users' experiences if solitude is a main objective.

3.11.2.2. Cumulative Effects

The cumulative effects area for recreation is the southern section of Utah (Millard, Sevier, Wayne, Garfield, Kane, Washington, Iron, Beaver, and Piute counties), portions of eastern Nevada (Clark and Lincoln counties), and the northern section of Arizona (Coconino and Mohave counties).

The biggest increment for potential cumulative impacts to motorized and non-motorized recreation uses comes directly from the Dixie National Forest's Motorized Travel Plan rather than from past or foreseeable actions (as detailed in USDA 2008b). Most ongoing and future Forest Service actions have little long-term or cumulative effect on outdoor recreation opportunities.

Travel Management Decisions on BLM and other Forest Service Lands

All alternatives would cause some displacement of both non-motorized and motorized users. Displacement of forest users could be further impacted if locations adjacent to the project area implement land management actions that severely reduce motorized route mileage. Adjacent areas may see an increase in impacts associated with increased use with the implementation of the Dixie National Forest Motorized Travel Plan. This could be especially true with Alternatives B, C, and D due to the fact that these alternatives reduce motorized route mileages as compared to Alternative A.

The Fishlake National Forest completed its Motorized Travel Plan in late 2006. The Arizona Strip, Richfield, Ely, and Kanab BLM field offices completed their respective Resource Management Plans (RMPs) in 2008. The Fillmore RMP is about 20 years old, the Las Vegas RMP is about 9 years old, and the St. George RMP is about 10 years old; no revisions are currently scheduled for these three RMPs. Lastly, the Cedar City BLM Field Office is slated to begin their RMP update within the next several years. These processes will establish motorized route guidelines for the foreseeable future.

The Fishlake National Forest designated 2,742 miles of motorized routes open to the public, a reduction from their existing condition of approximately 16 percent. The Fishlake decision closed the Forest to cross-country travel, with the exception of two play areas comprising 879 acres.

The Richfield BLM Field Office RMP designated 1,908,210 acres as limited (OHV travel on designated routes), 9,890 acres as open (allowing OHV cross-country travel), and 209,000 acres as closed to OHV use. When associate with their No Action Alternative or pre-2008 management practices, the Richfield preferred alternative essentially eliminated cross-country travel. Prior to the 2008 RMP, 1,636,400 acres of this area was designated as open. The Kanab BLM Field Office RMP designated 528,000 acres as limited, 1,000 acres as open, and 25,000 acres as closed to OHV use. When associate with their No Action Alternative or pre-2008 management practices, the Kanab preferred alternative essentially eliminated cross-country travel. Prior to the 2008 RMP, 466,600 acres within the Kanab Field Office was designated as open.

The Arizona Strip BLM Field Office RMP designated 1,899,260 acres as limited, 80,829 acres as closed, and 976 acres as open to OHV use. When compared with their 1992 RMP, the Arizona Strip 2008 RMP essentially changed directions from “limited to existing roads and trails” to “limited to designated roads.” Prior to the 2008 RMP, 1,764,000 acres within the Arizona Strip Field Office was limited to existing roads and trails, 690,400 acres was limited to designated roads and trails, 358,600 acres was closed, and 1,400 acres was designated open.

The Ely BLM Field Office 2008 RMP designated 10,306,500 acres as limited to designated roads and trails, and closed (through designated wilderness and wilderness study areas) 1,153,500 acres to OHV traffic. The Ely BLM Field Office may review specific route designations further in the future. Prior to the 2008 RMP, a large percentage of the Ely Field Office was essentially open (allowing cross-country travel) to OHV travel.

The Las Vegas BLM Field Office RMP essentially eliminated cross-country travel by decreasing Open areas by over 2.8 million acres. As with other RMPs, the Las Vegas RMP dramatically increased OHV travel regulations to “Limited to existing roads trails and washes” and “Limited to designated roads, trails, and washes.” Areas completely closed to OHV use essentially did not change.

The St. George BLM Field Office 1999 RMP allows for 89,235 acres as open, 335,780 acres as “open for use on existing roads and trails,” 112,286 acres as “open for use on designated roads and trails,” and 91,704 acres as “closed.”

For Forest users seeking motorized use on designated travel routes, management actions within the cumulative effects area should not significantly add to the impact of displacement associated with the Dixie National Forest Motorized Travel Plan. However, Forest users seeking motorized cross-country travel may see a significant impact associated with

displacement when combined with other management actions within the cumulative effects area and the Dixie National Forest Motorized Travel Plan. As previously stated, adjacent areas may see an increase in impacts associated with increased use with the implementation of the Dixie National Forest Motorized Travel Plan. This could be especially true with Alternatives B, C, and D due to the fact that these alternatives reduce motorized route mileages as compared with Alternative A.

Oil and Gas

The cumulative effect of past, present, and future oil and gas exploration and development activities is displacement of forest visitors from areas directly adjacent to or part of the activities. Scenic integrity is also affected by oil and gas development. Some oil and gas impacts are long-term, so localized displacement and scenic integrity impacts can also be long-term depending on reclamation practices. Oil and gas leasing on the Forest can affect recreation use patterns. Associated with oil and gas leasing is construction and reconstruction of roads. This could assist in mitigating impacts to motorized users and/or increase displacement of non-motorized users, or those seeking a primitive experience.

In some cases, oil and gas activities are short-term and cause very little ground disturbance. In these cases, impacts associated to recreation and scenic integrity would be minimal and generally brief in nature. Impacts associated to recreation may be short-term displacement of non-motorized users or those seeking a primitive experience. Due to the scale of acres affected, the displacement is not significant for the cumulative effects area. Effects would be the same for all alternatives.

Vegetation Treatments

The cumulative effects of past, present, and proposed vegetation and fuel reduction treatments could be temporary displacement of Forest users and a change in the visual quality of the area. Results would be similar with wildfire. However, displacement and change in visual qualities may be prolonged when associated with wildfire. These effects would be the same under all alternatives.

Vegetation treatments on the Dixie National Forest can affect recreation use patterns. The cumulative effects of past, present, and proposed vegetation treatments could be temporary displacement of Forest users from areas directly adjacent to or part of the treatment activities, and a change in the visual quality of the area. Associated with vegetation treatments may be the construction and reconstruction of roads. This could assist in mitigating impacts to motorized users and/or increase displacement of non-motorized users, or those seeking a primitive experience. Due to the scale of acres affected, the displacement is not significant for the cumulative effects area; effects would be the same for all alternatives.

Wildlife and Fisheries

The cumulative effects of past, present, and future wildlife and fisheries management and watershed restoration projects would have a positive long-term effect on Forest visitors who view wildlife, hunt, or fish in the area. However, past restoration projects have displaced dispersed users from streamside campsites. This displacement could occur with future projects. Restoration projects generally improve the visual quality of riparian areas within three to five years. These effects would be the same with all alternatives.

Noxious Weeds

Noxious weed control could have a minor but cumulative effect on forest road and trail use. Noxious weed control activities include spraying from ATVs. These activities leave a noticeable track in some areas, which could encourage illegal off-route travel by members of the public. On-site signing could mitigate the situation. It is likely that these treatments would continue throughout the cumulative effects area. In the long-term, successful weed control would improve landscape conditions for all forest visitors.

Motorized travel is known to encourage the spread of noxious weeds. Thus, a reduction in route mileage may assist in mitigating the spread of noxious weeds. When compared to the other alternatives, Alternatives B and C would do the most in mitigating off-route travel associated with weed control and the spread of noxious weeds associated with travel routes.

Land Exchanges and Easements

Includes property disposal, highway easements, water diversions, and water augmentation. Over time these adjustments would occur at a reduced rate.

Special Uses

Includes one time events (e.g., horse races, trekking) and outfitter and guide activities. These would continue to occur with some increases in use.

Livestock Grazing

Livestock grazing in some areas has caused conflicts with recreation use. If livestock is allowed to congregate in developed sites, at trailheads, or along popular travel routes, resulting conditions can reduce the recreation experience for forest visitors. Recent and future grazing management changes would reduce this conflict through improved riparian protection measures and adjusting the timing and duration of grazing in high-use recreation areas. Due to the scale of acres affected, the displacement is not significant for the cumulative effects area. The effect may be greatest among alternatives that offer the most designated route mileage (Alternatives A and E).

3.12. Scenery

The information in this section is summarized from the *Recreation and Scenery Specialist Report* prepared for this motorized travel plan (USDA 2009k). Please see that report for more detail on the affected environment and effects analysis. Additionally, the *Recreation* section beginning on page 3-72 contains information applicable to Scenery Management.

3.12.1. Affected Environment

The National Forest Scenery Management System is the process used for planning and design of the visual elements of multiple use land management. There are 11 fundamental principles to the Scenery Management System.

1. Biological, physical and social factors create and influence scenery and interact to determine landscape character.
2. Landscape character varies greatly with the interaction of environmental factors.
3. People have the ability to perceive landscape character and develop expected images.
4. Through various activities, people have the ability to modify landscape character and scenic conditions and have often done so.
5. Such changes in landscape character and scenic condition often modify, suppress, or replace the original landscape character.
6. People value most highly the more scenic landscapes.
7. Generally, natural-appearing landscapes are the most valued.
8. Resource managers can design their activities to reduce adverse impacts on landscape character and scenic integrity.
9. People have the ability to establish goals to maintain or create desired landscape character.
10. People have the ability to apply ecological, technical, and design knowledge to meet scenery management goals and objectives.
11. In some situations, resource managers perpetuate or create desired scenic environments to provide an improved quality of life (USDA 1995b).

Concern Levels represent a method of categorizing the importance of scenic resources to Forest visitors. Concern Level 1 travel routes are those that are nationally or regionally important locations associated with recreation and tourism use, where there is a high interest in scenic resources (USDA 1995b). Examples of travel routes that would fall into this rating would include designated scenic byways, national parks, and areas such as Red Canyon, Panguitch Lake, and Navajo Lake. An example of a trail that would fall into this rating is the Virgin River Rim Trail and areas seen from it as it would be of high scenic concern because of its popularity for mountain biking and other uses. Concern Level 2 routes would be those that are locally important and are associated with recreation, and where there is a high to moderate interest in scenic resources. All remaining roads and unnamed trails would be Concern Level 3 travel routes, which are routes that receive low use and where users have a moderate to low interest in scenic resources.

In 2000 the Forest Plan was amended to update from the Visual Management System to the Scenery Management System. The amendment specified Scenery Integrity Objectives (SIOs)

for each management area. Scenic integrity is defined as "a measure of the degree to which a landscape is visually perceived to be 'complete.' The highest scenic integrity ratings are given to those landscapes that have little or no deviation from the character valued by constituents for its aesthetic appeal" (USDA 1995b). **Concern Levels** describe the current condition of the scenic resource, while **Scenic Integrity Objectives** describe the objectives for management, or the desired future conditions.

The Scenic Integrity Objectives and percentages of each on the Dixie National Forest are displayed in the following table. The Management Areas listed in the table are defined in the 2000 amendment (USDA 2000d).

Table 3-21. Scenic Integrity Objectives for the Dixie National Forest

Scenic Integrity Objectives	Notes
Very High (5%)	Wilderness Areas (8A), Research Natural Areas (10A), and Antone Bench and Box Death Hollow (8A1/8A2 adjacent to designated wilderness)
High (27%)	Management Areas 1A, 1B, 2A, 4A, 4A*, 9B and the foreground of Concern Level 1 travelways and use areas in other management areas.
Moderate (30%)	Management Areas 2B, 5A, 5B, 6A, 9A and foreground of Concern Level 2 travelways and use areas in other management areas.
Low (18%)	Management Areas 4B, 4C, 4D, 7A, and 10B.
Unclassified (16%)	Management Area 1, except within the foreground of Concern Level 1 and 2 travelways and use areas. These areas can range from low to high scenic integrity objectives.

* Private land makes up the remaining 4 percent.

3.12.2. Effects Analysis

Two motorized trails are proposed for construction in Alternatives D and E. This scenery analysis is focused solely on the effects of this construction in these two alternatives. All effects associated with route construction would be with the same for Alternatives D and E. Alternatives A, B, and C would have no effects associated with trail construction.

Table 3-22. Proposed Motorized Trail Construction – Alternatives D and E

Route #	Length in Miles	District	Scenic Integrity Objective Class
T34070	0.65	Cedar City	High
U24028A	0.61	Cedar City	High

Map name: Alternatives D and E – Proposed Motorized Trail Construction
File name: ch3_map23_proposed_moto_trail_construction.pdf
File size: 357 KB

3.12.2.1. Direct and Indirect Effects

In general, the vast majority of the Forest would meet or exceed Scenic Integrity Objectives across all alternatives. However, within Alternatives D and E, construction of routes T34070 and U24028A may result in impacts that reduce scenic integrity from high to moderate. Construction of the routes would not result in a change in scenery integrity guidelines as described in the 2000 amendment. Scenic Integrity Objectives provide a standard for management or a desired future condition; Concern Levels examine the significance of scenic quality and aesthetic experience to people. Project design features, such as sustainable trail design and seeding, could limit the reduction in scenic integrity to less than 5 years.

3.12.2.1.1. Route T34070

Description

This route's location is approximately 1.5 miles southwest of Brian Head Peak in Iron County. This 0.65 mile route, in conjunction with U24028A, would assist in the connection of Brian Head to the Markagunt OHV Trail System. Specifically, this route would allow legal access from Brian Head Resort to Forest Service Road 30047.

OHVs are currently accessing Road 30047 by traveling cross-country. Construction of this route would eliminate the need for cross-country travel through the construction of a sustainable trail. Construction of this route would meet Forest Service ATV standards of "more difficult," and construction operations would be accomplished with a trail dozer. BMPs would be used during construction. Signing, enforcement, sustainable trail building techniques, and volunteers would be used to reduce user conflicts and resource damage.

Development of this route would assist in reducing cross-country travel and the proliferation of user-created routes, thus helping to reduce further resource damage. However, due to the fact that T34070 would directly cross the non-motorized Marathon Trail (#32024), this route would likely increase conflict levels between non-motorized and motorized users, thus potentially reducing user satisfaction and increasing displacement.

Variety

In general, the terrain is flat to rolling, with a mix of grass, sub-alpine fir, aspen, and spruce. In this location, a large amount of the spruce is dead standing due to bug kill. As seen from the actual route, open fields of grass provide an experience of vastness and great visual variety. The forest offers a variety of colors, shapes, and textures in all season. While some views from this route may be limited to foreground because of the screening effect of adjacent forest cover or topography, most of this route allows views into Cedar Break National Monument, Ashdown Gorge Wilderness Area, and other areas of scenic interest.

Visibility

Large portions of this route could be seen as immediate foreground (from zero feet to 300 feet) and foreground views (from 300 feet to one-half mile) from Highway 14 and Forest Service Road 30047, both Concern Level 1 routes. In addition, this route would directly cross over the non-motorized Marathon Trail (#32024), a Concern Level 2 trail. Furthermore, this route, and

associated users, may be visible from Cedar Breaks National Monument overlooks and Ashdown George Wilderness trailheads.

T34070 may increase use of this specific area, thus increasing the chance that OHV and associated impacts, such as dust plumes, would be within the immediate foreground and foreground views more consistently. Other impacts to visibility may include scarring as a result of trail construction and OHV use. Scarring impacts should decrease within a 5-year period. In order to mitigate impacts, BMPs would be implemented. Currently, this area is used during the winter season by snowmobiles, thus impacts to immediate foreground and foreground views do currently exist, although temporarily.

Scenic Integrity and Scenic Integrity Objectives

Portions of this route would be constructed in an area classified as having a high scenic integrity objective. High SIO is defined as, “Appears unaltered. Landscapes where the valued landscape character ‘appears’ intact. Deviations may be present but must repeat the form, line color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident” (USDA 1995b).

Construction of this route may alter intact landscapes. This is due to a combination of potential construction results, such as the unearthing of a large quantity of soils that may not blend with the surrounding landscape, and newly constructed routes that run perpendicular to Concern Level 1 roads. Project design features, such as seeding and the use of unobtrusive gravel and trail design, may decrease the level of visual impacts. However, implementation of this route could reduce scenic integrity objectives from high to moderate.

3.12.2.1.2. Route U24028A

Description

This route’s location is approximately 1 mile southeast of Brian Head Peak in Iron County. This 0.61 mile route would assist in the connection of existing routes U24028 and Forest Service Road 32310. In addition, this route, in conjunction with T34070, would allow legal access from Brian Head Resort to the Markagunt OHV Trail System.

Construction of this route would meet Forest Service ATV standards of “more difficult,” and construction operations would be accomplished with a trail dozer. The trail would be located in a sustainable location and BMPs would be used during construction. Signing, enforcement, sustainable trail building techniques, and volunteers would be used to reduce user conflicts and resource damage.

Development of this route would assist in reducing cross-country travel and the proliferation of user-created routes, thus helping to reduce further resource damage. However, due to the fact that U24028A would be within view and within the soundscape of the non-motorized Marathon Trail (#32024) and Sydney Peak Trail (#32010), it is likely that conflict levels between non-motorized and motorized users would increase, thus potentially reducing user satisfaction and increasing displacement.

Variety

In general, the terrain is flat to rolling, with a mix of grass, sub-alpine fir, aspen, and spruce. In this location, a large amount of the spruce is dead standing due to bug kill. As seen from the actual route location, open fields of grass provide an experience of vastness and great visual variety. The forest offers a variety of colors, shapes, and textures in all season. While views from this route may be limited to foreground (from 300 feet to one-half mile) because of the screening effect of adjacent forest cover or topography, some of this route would allow middleground (from one-half mile to four miles) views into Cedar Break National Monument, Brian Head Peak, and other areas of scenic interest.

Visibility

Some portions of this route may be seen as foreground views (from 300 feet to one-half mile) from Forest Service Road 30047, a Concern Level 1 road. In addition, this route would be seen as immediate foreground (from zero feet to 300 feet) and foreground views (from 300 feet to one-half mile) from the non-motorized Marathon Trail (#32024) and Sydney Peak Trail (#32010), both Concern Level 2 trails. Further, this route, and associated users, may be visible from Cedar Breaks National Monument and Brian Head Peak.

U24028A may increase use of this specific area, thus increasing the chance that OHV and associated impacts, such as dust plumes, would be within the immediate foreground and foreground views more consistently. Impacts to visibility may also include scarring resulting from trail construction. Scarring impacts should decrease within a 5-year period. In order to mitigate impacts, BMPs would be use during construction.

Scenic Integrity and Scenic Integrity Objectives

Portions of this route would be constructed in an area classified as having a high scenic integrity objective. High SIO is defined as, “Appears unaltered. Landscapes where the valued landscape character ‘appears’ intact. Deviations may be present but must repeat the form, line color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident” (USDA 1995b).

Construction of this route may alter intact landscape. This is due to a combination of potential construction results, such as the unearthing of a large quantity of soils that may not blend with the surrounding landscape, and newly constructed routes that run perpendicular to Concern Level 1 roads. Project design features, such as seeding, the use of unobtrusive gravel, and trail design, may decrease the level of visual impacts. However, implementation of this route could reduce scenic integrity objectives from high to moderate.

3.12.2.2. Cumulative Effects

The cumulative effects area for scenery management is the viewsheds surrounding the area of the proposed trail construction. Areas immediately adjacent to the constructed routes are likely to experience the most direct impacts.

The major influences on scenery within and adjacent to the project area have been timber harvest, insect infestations, fuel treatment, fire, roads, trails, and recreation development, all of

which have the potential to change the vegetative cover and landform being viewed on the Forest.

Cumulative effects on scenery are predictable within the provisions of the guidelines in the amendment. This is also the case with all routes proposed for construction. However, routes U24028A and T34070 may provide two circumstances where scenic integrity objective levels would be modified from high to moderate, although those modifications would still be within the parameters of the guidelines.

Both of the routes proposed for construction in Alternatives D and E may diminish the views that Forest users' would experience. This may be particularly true for those seeking a more primitive experience or those whose expectations are altered or are not met due to the presence of motorized routes and associated impacts. Additionally, the effects of proposed routes U24028A and T34070 may have some cumulative effect with the visual effects of the dead and dying spruce component of the adjacent Forest and project area, which would remain after route implementation. However, due to the scale of acres affected, impacts are not significant for the cumulative effects area.

Further impacts associated with route construction may be displacement of other forest users in conflict with motorized use or those seeking higher levels of solitude. This action has the potential to increase use and conflict levels in other nearby areas or areas with similar settings. Also, route construction would add to soil compaction, thus potentially creating instances of soil erosion. Further, route construction may increase cross-country travel due to the fact that some route placement occurs in areas with no formidable obstacles to mitigate off-road travel. Combined, these items may lead to further impacts to the scenic resource. However, due to the scale of acres affected, impacts are not significant for the cumulative effects area.

Past, present, and future environmental conditions within the cumulative effects area include drought cycles, accumulation of forest fuels, and the increasing threat of invasive species. These conditions, alone or in combination with one another, have the potential to change the scenery and settings of the Forest. However, national responses have been put in place to mitigate impacts. The alternatives considered would have no impact associated with drought, though Alternatives D and E, which include motorized route construction, may slightly increase the spread of invasive species and increase human-caused fires within the cumulative effects area (see the *Vegetation and Fire and Fuels* section beginning on page 3-21, the *Noxious Weeds* section beginning on page 3-63, and the *Rare Plants* section beginning on page 3-15).

Past and foreseeable future actions within the cumulative effects area include vegetative treatments, oil and gas activities, utilities, and grazing. These conditions, alone or in combination, have the potential to change the scenery and settings of the Forest. However, due to the scale of acres affected, they would not create a cumulative effect when considered together with any of the proposed trail construction.

3.13. Roadless and Unroaded and Undeveloped Areas

The information in this section is summarized from the *Roadless and Unroaded and Undeveloped Areas Specialist Report* prepared for this motorized travel plan (USDA 2009l). Please see that report for more detail on the affected environment and effects analysis.

3.13.1. Affected Environment

For purposes of this report, two categories of areas will be discussed. Inventoried Roadless Areas (IRAs) refer to those specific areas identified in the Roadless Area Conservation Final FEIS (USDA 2000c); Unroaded and Undeveloped Areas refer to an inventory conducted for plan revision of areas with unroaded and undeveloped characteristics. Although IRAs and unroaded areas may have some overlap, the map layers were developed independently of each other and were therefore analyzed separately.

3.13.1.1. Inventoried Roadless Areas

IRAs are those areas identified in a set of inventoried roadless area maps contained in the Forest Service Roadless Area Conservation, FEIS, Volume 2, dated November 2000, and any subsequent update or revision of those maps through the land management planning process (36 CFR 294.11).

In an increasingly developed and fragmented landscape, IRAs represent some of the largest and most extensive tracts of undeveloped land. To be classified as an IRA, areas should not contain constructed roads and generally must be at least 5,000 acres. Areas containing less than 5,000 acres can also be classified as IRAs if they do not contain constructed roads and meet one of the following criteria: (1) areas can be preserved due to physical terrain and natural conditions, (2) they are self-contained ecosystems, such as islands, that can be managed as an individual unit of wilderness, and; (3) they are contiguous to existing wilderness, primitive areas, recommended wilderness, or potential wilderness in other federal ownership. The definition for a constructed road is a road where there has been mechanical surface grading and cut and fill slopes are present along with drainage structures. Two-track roads are permissible within an IRA if there is no evidence of mechanical construction. However, on the Dixie, due to the manner in which the protocol was applied, IRAs contain both constructed and two track roads since the inventory datasets only included known system roads at that time.

There are 42 IRAs covering a total of approximately 771,960 acres, which represents approximately 43 percent of the analysis area for this EIS. Several of the IRAs are smaller than 5,000 acres, but are adjacent to larger tracts of wilderness, within other IRAs, or adjacent to potential wilderness on land administered by the BLM. The following table lists the IRAs on the Dixie National Forest by ranger district and the total acreage associated with each.

In addition to the absence of constructed roads, IRAs contain other important environmental values that warrant protection. These values include nine values or features identified in the Roadless Area Conservation Rule (RACR) that characterize IRAs, as well as six attributes that characterize wilderness potential. Detailed information on the characteristics and attributes of

each individual IRA will not be presented here. Rather, the characteristics and attributes are described in general in this section and any unique characteristics known to be present within a specific IRA are discussed within the individual ranger district sections. Since IRAs cover such a large percentage of the land, it is assumed that they contain a full range of the physical and biological characteristics found on each ranger district.

Table 3-23. Inventoried Roadless Areas on the Dixie National Forest by Ranger District

IRA Name	Acres
Pine Valley Ranger District	
Atchinson	17,663
Bull Valley	10,919
Cave Canyon	5,661
Cedar Bench	8,919
Cottonwood	6,757
Cove Mountain	16,639
Dixie	109
Gum Hill	3,182
Headwaters/Pine Park Bench/Pine Park	10,952
Kane Mountain	8,016
Lost Peak	4,144
Mogotsu	16,771
Moody Wash	31,857
North Hills	24,499
Pine Valley Mountains	56,330
Rock Canyon	16,471
Stoddard Mountain	13,168
Pine Valley Total	252,057
Cedar City Ranger District	
Bear Valley Peak	7,436
Bunker Creek	7,473
Hancock	9,806
Lava Beds	14,940
Mineral Canyon	8,400
Cedar City Total	48,055
Powell Ranger District	
Casto Bluff	87,419
Deer Creek	39,795
Fishhook	12,954
Horse Valley	13,618
Red Canyon North	9,438
Red Canyon South	3,734
Powell Total	166,958
Escalante Ranger District	
Boulder Mtn/Boulder Top/Deer Lake	14,894
Box-Death Hollow	3,171
Hog Ranch	17,118
Jake Hollow	15,135
Long Neck Mesa/Steep Creek/Oak Creek – Steep Creek/Oak Creek	11,141
McGath Lake – Auger Hole	8,328
New Home Bench	10,505
Shakespeare Point	752

IRA Name	Acres
South Rim	1,371
Table Cliffs – Henderson Canyon	17,668
Escalante Total	100,083
Teasdale Portion of Fremont River Ranger District	
Capital Reef [sic]	763
Dark Valley	27,460
Happy Valley	14,447
Hay Lakes	22,126
Long Neck Mesa/Steep Creek/Oak Creek-Steep Creek/Oak Creek	44,305
Boulder Mtn/Boulder Top/Deer Lake	95,704
Teasdale Total	204,805
Forest-wide Total	771,958

The next four pages contain maps of the IRAs on each ranger district.

Map name: 1999 Inventoried Roadless Areas: Pine Valley Ranger District
File name: ch3_map24_d1_ira.pdf
File size: 473 KB

Map name: 1999 Inventoried Roadless Areas: Cedar City Ranger District
File name: ch3_map25_d2_ira.pdf
File size: 256 KB

Map name: 1999 Inventoried Roadless Areas: Powell Ranger District
File name: ch3_map26_d3_ira.pdf
File size: 246 KB

Map name: 1999 Inventoried Roadless Areas: Escalante and Teasdale Ranger Districts
File name: ch3_map27_d1_ira.pdf
File size: 471 KB

3.13.1.2. Unroaded and Undeveloped Areas

Beginning in 2000, the Dixie and Fishlake National Forests began a joint effort to revise their Forest Plans. Part of this revision included consideration of areas for wilderness potential, which was conducted according to the direction in the *Intermountain Region Planning Desk Guide: A Protocol for Identifying and Evaluating Areas for Potential Wilderness* (USDA 2004b). This inventory only included known classified system roads, with the exception of administrative only roads, and thus identified areas as unroaded/undeveloped that currently contain numerous constructed roads and trails, as well as timbered areas, powerlines, and other infrastructure.

The Forest Plan Revision Team involved the public in the development of the Unroaded and Undeveloped Inventory. One of the Topical Working Groups formed for the revision effort was focused specifically on the Undeveloped Area Inventory and Evaluation. This Working Group met from 2003 through 2005, and formally presented the results of their meetings to both the Dixie and Fishlake Forest Supervisors. In order to gain additional public input on undeveloped areas, the Forest Supervisors hosted four public workshops in 2004 to gather input on the inventory and evaluation. Additional informational and working sessions were also held with county commissioners on the topic from 2004 through 2006 (USDA 2008d).

After the update to the Draft Dixie Undeveloped Area Evaluation was released in 2004, the Forests began an evaluation of the suitability of the areas for wilderness recommendation. This evaluation considered capability, availability, and need. Wilderness attributes were evaluated as part of capability (USDA 2004b). These attributes include natural integrity (naturalness), natural appearance (untrammeled and undeveloped), opportunities for solitude and primitive recreation, special features, and manageability, and were rated as low, medium, or high. These ratings were utilized in this analysis to determine the effects of changes within these areas due to access (these ratings are provided in Appendix D of the *Roadless and Unroaded and Undeveloped Areas Specialist Report* [USDA 2009l]). The base map for this Motorized Travel Plan analysis is the 2005 Draft Unroaded and Undeveloped Areas Map (see pages 3-102 through 3-105 for a district-by-district display of this data). Between 2004 and 2006, further updates were made to the inventory and evaluation, most specifically regarding area acreages. A new inventory and reevaluation using current road inventory, timbered area, and infrastructure data will be necessary to fully understand the character of these areas.

There is no policy, law, or directive guiding the management of unroaded/undeveloped areas that lie outside of IRAs or wilderness. Currently, the only guidance for these areas is general forest or management area direction. It is the intent of the Dixie National Forest to manage these unroaded/undeveloped areas for multiple resource benefits while maintaining their undeveloped character to the extent possible.

On the Dixie National Forest, there were 50 areas identified as unroaded and undeveloped that were evaluated for wilderness potential. Of the 1,056,221 acres in that inventory, only about 29 percent fall outside an IRA or designated wilderness area. Table 3-24 below shows the size of the unroaded areas identified on the Dixie National Forest.

Table 3-24. Unroaded and Undeveloped Areas on the Dixie National Forest by Ranger District

Unroaded Area Number	Unroaded Area Name	Acres
Pine Valley Ranger District		
0407101	North Hills	24,864
0407102	Pine Park	31,550
0407103	Lost Peak	6,053
0407104	Cave Canyon	8,136
0407105	Bull Valley	13,372
0407106	Moody Wash/Mogotsu	58,994
0407107	Cove Mountain	15,678
0407108	Atchinson	24,309
0407109	Cedar Bench	10,004
0407110	Kane Mountain	9,635
0407111	Pine Valley Mountain	154,519
0407112	Cottonwood	8,850
0407113	Stoddard Mount	14,215
Pine Valley Total		380,180
Cedar City Ranger District		
0407201	Ashdown Gorge	12,150
0407202	Hancock	10,140
0407203	Lava Beds #1	7,058
0407204	Lava Beds #2	8,643
0407205	Bunker Creek	12,346
0407206	Wagon Box	5,769
0407207	Little Creek Peak	19,348
0407208	Mineral Canyon	13,410
0407209	Bear Valley Peak	11,385
Cedar City Total		100,249
Powell Ranger District		
0407301	Fishhook	11,442
0407302	Big Hollow	7,793
0407304	Red Canyon South	5,597
0407305	Red Canyon North	15,131
0407306	Blind Springs	9,917
0407307	Horse Valley	14,588
0407308	Casto Bluff	86,409
0407309	Deep Creek	41,984
0407310	Lower Hoodle	10,254
Powell Total		203,114
Escalante Ranger District		
0407401	Canaan Mountain	7,683
0407402	Henderson Canyon	23,113
0407403	Heaps Canyon	6,629
0407404	Birch Creek	6,106
0407405	Pacer Lake	16,328
0407406	Antimony	20,605
0407407	Dry Lake	9,268
0407408	Jake Hollow	11,820
0407409	Hog Ranch	5,924
0407410	Box-Death Hollow	32,996
0407411	Pretty Tree Bench	12,025

Unroaded Area Number	Unroaded Area Name	Acres
0407412	Shakespeare Point	1,109
0407413	Barker	16,337
Escalante Total		169,943
Teasdale Portion of the Fremont River Ranger District		
0407502	North Boulder	53,506
0407503	West Boulder	17,186
0407504	Boulder Top	69,202
0407505	Long Neck	33,124
0407506	Oak Creek	18,474
0407507	Happy Valley	11,245
Teasdale Total		202,735
Forest-wide Total of 2005 Unroaded and Undeveloped Acres		1,056,221

The next four pages contain maps of the unroaded and undeveloped areas. It should be noted that the inventory and evaluation tables represent the draft evaluation from approximately December 2004. The inventory and evaluation is not final and improved information or changed conditions may lead to some adjustments. However, the most current updates to the 2004 unroaded and undeveloped inventory, which were made in 2005, were used for this analysis and are represented in these maps.

Map name: 2005 Draft Unroaded/Undeveloped Areas: Pine Valley Ranger District
File name: ch3_map28_d1_uua.pdf
File size: 580 KB

Map name: 2005 Draft Unroaded/Undeveloped Areas: Cedar City Ranger District
File name: ch3_map29_d2_uua.pdf
File size: 292 KB

Map name: 2005 Draft Unroaded/Undeveloped Areas: Powell Ranger District
File name: ch3_map30_d3_uua.pdf
File size: 326 KB

Map name: 2005 Draft Unroaded/Undeveloped Areas: Escalante and Teasdale Ranger Districts
File name: ch3_map31_d4d5_uua.pdf
File size: 572 KB

3.13.1.3. Descriptions by Ranger District

3.13.1.3.1. Pine Valley Ranger District

There are 17 IRAs on the Pine Valley Ranger District covering a total of 251,911 acres. Several of the IRAs listed are less than 5,000 acres, but are included due to proximity with other potential wilderness areas. Lost Peak IRA is adjacent to BLM land that could be potential wilderness. The Dixie IRA, a small, isolated remnant area of just over 100 acres, is included in these totals but did not contain any road designations and thus does not affect any other calculations.

The Pine Valley Ranger District contains the largest amount of biological crusts and gypsiferous soils and these resources would be expected to occur on IRAs. Eight municipal watersheds covering 14,688 acres are partially located on the Pine Valley Mountains IRA. The watersheds are Central, Enterprise, Leeds, New Harmony, Pine Valley, Pintura, Sawyer Spring, and St. George.

In general, IRAs provide approximately 18,650 acres of habitat for threatened and endangered species including California condor (*Gymnogyps californianus*) and Mexican spotted owl (*Strix occidentalis*). The IRAs also provide approximately 24,618 acres of habitat for sensitive species including Bonneville cutthroat trout (*Onchorhynchus clarki utah*), bald eagle (*Haliaeetus leucocephalus*), flammulated owl (*Otus flammeolus*), peregrine falcon (*Falco peregrinus*), northern goshawk (*Accipiter gentilis*), three-toed woodpecker (*Picoides tridactylus*), pygmy rabbit (*Brachylagus idahoensis*), and sensitive bats.

There are 13 unroaded and undeveloped areas on the Pine Valley Ranger District, totaling 380,180 acres. None of these areas are less than 5,000 acres in size.

3.13.1.3.2. Cedar City Ranger District

There are five IRAs on the Cedar City Ranger District covering a total of 48,847 acres. The Bunker Creek IRA includes 1,190 acres of the Parowan municipal watershed. IRAs on the Cedar City Ranger District provide approximately 1,620 acres of habitat for threatened and endangered species including California condor, Mexican spotted owl, and Utah prairie dog. IRAs on the Ranger District also provide around 25,300 acres of habitat for sensitive species including bald eagle, flammulated owl, greater sage-grouse (*Centrocercus urophasianus*), peregrine falcon, northern goshawk, three-toed woodpecker, pygmy rabbit, and sensitive bats.

There are nine unroaded and undeveloped areas on the Cedar City Ranger District, totaling 100,249 acres. None of these areas are less than 5,000 acres in size.

3.13.1.3.3. Powell Ranger District

There are six IRAs on the Powell Ranger District covering a total of 166,925 acres. The Red Canyon South IRA is less than 5,000 acres, but is included due to proximity with adjacent BLM land that could be potential wilderness. The Deer Creek IRA overlaps 5,303 acres of the Antimony municipal watershed. Generally, IRAs on the ranger district provide 41,500 acres of known habitat for threatened and endangered species including California condor, Mexican

spotted owl, and Utah prairie dog. IRAs also provide 104,000 acres of habitat for sensitive species including Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*), flammulated owl, greater sage-grouse, peregrine falcon, northern goshawk, three-toed woodpecker, pygmy rabbit, and sensitive bats.

There are nine unroaded and undeveloped areas on the Powell Ranger District, totaling 203,114 acres. None of these areas are less than 5,000 acres in size.

3.13.1.3.4. Escalante Ranger District

There are 10 IRAs on the Escalante Ranger District covering a total of 100,651 acres. As with the other Ranger Districts, several of the IRAs listed are less than 5,000 acres, but are included due to proximity with other IRAs and wilderness areas. The Box-Death Hollow IRA surrounds and is adjacent to the Box-Death Hollow Wilderness Area and the Shakespeare Point and South Rim IRAs are adjacent to the Table Cliffs-Henderson Canyon IRA. The Hog Ranch and McGath Lake-Auger Hole IRAs overlap with 1,006 acres of the Escalante municipal watershed and the New Home Bench IRA overlaps with 426 acres of the Boulder Town municipal watershed.

The Side Hollow Ponderosa Pine Provenance Study Area covers 4.5 acres within the New Home Bench IRA. The study area contains ponderosa pine (*Pinus ponderosa*) from various origins that are being used for genetic studies. IRAs on the ranger district provide about 71,600 acres of habitat for threatened and endangered species including California condor, Mexican spotted owl, and Utah prairie dog. IRAs also provide 78,335 acres of habitat for sensitive species including Colorado River cutthroat trout, flammulated owl, peregrine falcon, northern goshawk, three-toed woodpeckers, pygmy rabbit, and sensitive bats.

There are 13 unroaded and undeveloped areas on the Escalante Ranger District, totaling 169,943 acres. Only the Shakespeare Point area is less than 5,000 acres in size.

3.13.1.3.5. Teasdale Portion of the Fremont River Ranger District

There are six IRAs on the Teasdale portion of the Fremont River Ranger District totaling approximately 204,805 acres. Inventoried Roadless Areas make up 81 percent of National Forest Lands on this unit. The IRAs on this district provide approximately 135,600 acres of habitat for threatened and endangered species including California condor, Mexican spotted owl, and Utah prairie dog. The IRAs also provide approximately 171,900 acres of habitat for sensitive species including Colorado River cutthroat trout, bald eagle, flammulated owl, peregrine falcon, northern goshawk, three-toed woodpecker, pygmy rabbit, and sensitive bats.

There are six unroaded and undeveloped areas on the Teasdale portion of the Fremont River Ranger District, totaling 202,735 acres. None of these areas are less than 5,000 acres in size.

3.13.2. Effects Analysis

This section describes the effects of alternatives relative to motorized road and trail access on the wilderness attributes and the roadless characteristics identified above. Roadless areas can be affected by the construction or reconstruction of roads or motorized trails within the roadless areas. However, identification as an inventoried roadless area in and of itself does not prohibit

motorized uses or construction of non-motorized trails or motorized trails. Wilderness character would be affected by construction of roads or trails, since wilderness is in part defined by its roadless and non-motorized character.

In addition to some restrictions on timber harvest and road construction activities identified in the RACR, there is a lack of perceived need to expand roads and motorized trails into IRAs and a public sensitivity to impacting roadless areas with new roads or motorized trails. See the *Roadless Specialist Report* for tables comparing motorized access by IRA and unroaded and undeveloped area (USDA 2009l). All 42 IRAs and all 50 areas identified as unroaded and undeveloped were considered in this analysis. Each area was reviewed using GIS in relation to changes in both motorized and non-motorized access by alternative. Impacts from motorized access to roadless characteristics and wilderness attributes are presented below.

Under Alternatives B, C and D, no roads within IRAs are proposed to be added to the system with the exception of those routes needed for public water access and that fit the criteria in RACR. These routes may, however, be added as motorized trails.

The cumulative effects area for this analysis is the IRAs themselves and areas identified during the Forest Plan Revision in the 2004 unroaded and undeveloped inventory. The GIS dataset used for this analysis includes updates to the size of some unroaded and undeveloped areas in 2005.

The locations of impacts (e.g., dispersed camping) may shift within alternatives due to changes in available motorized access. Areas inside IRAs, as well as those outside IRAs that were identified as unroaded during the 2004 inventory, will continue to be considered for future projects. In many cases, these projects will occur in areas that already contain previous timber harvest and constructed roads and thus would not significantly change their existing character. Changes in motorized access affect mainly roadless characteristics, naturalness, and opportunities for solitude and primitive recreation. Changes to special features or manageability are not expected.

3.13.2.1. Alternative A

3.13.2.1.1. Direct and Indirect Effects

With the exception of Long Neck, Henderson Canyon, and Lava Beds, most IRAs did not rate high for wilderness potential due to the presence of historic roads, evidence of past human disturbance, and lack of screening from lower valleys. The IRAs' wilderness potential would not be altered by changing the amount of designated roads or trails within them. These areas would still rate medium to low due to other factors such as previous timber harvest and infrastructure.

Implementation of Alternative A would retain 404.8 miles of road and trails open to the public for motorized access within IRAs. Use of remote areas is likely to increase as visitors increase and users become more familiar with undiscovered areas noted as open on the MVUM.

Implementation of Alternative A would retain 439.32 miles of roads and trails open to the public for motorized access within areas identified as unroaded and undeveloped. Access-oriented recreation would continue to impact remote areas through cross-country travel. Opportunities for solitude and primitive recreation would continue to decline.

3.13.2.1.2. Cumulative Effects

Alternative A would not change the number of roads or motorized trails already present. However, the ability to continue cross-country travel in some areas would likely result in additional user-created routes. Activities associated with motorized access would continue with increase uses in some areas over the long-term. An increase in motorized use has the potential to reduce the “apparent naturalness” of these areas.

There are over 450,000 acres open to cross-country travel within IRAs. The impact of this would vary by IRA since the percent available within an IRA ranges from less than 1 percent to 100 percent (USDA 2009l, Appendix C).

Cumulative effects to wilderness attributes within the areas identified as unroaded and undeveloped would result in continued loss of areas for solitude or primitive recreation. The areas that fall outside IRAs and designated wilderness areas are more likely to receive increased user-created impacts. As user-created routes continue to develop, there would also be a loss in naturalness or untrammeled character.

3.13.2.2. Alternative B

3.13.2.2.1. Direct and Indirect Effects

Implementation of this alternative would retain 71.4 miles of roads and trails open to public motorized access within IRAs. Due to the persistence of roads and trails in this environment, visitors would see little change in the short-term in roadless characteristics. This alternative would result in a reduction of motorized access and thus would reduce the potential for impacts to wilderness characteristics.

The prohibition on cross-country travel would likely provide the greatest potential for reducing the risk of new unauthorized routes within IRAs and unroaded and undeveloped areas.

Alternative B does the most to reduce the number of miles available for motorized access within unroaded and undeveloped areas with 74.7 miles of roads and trails open to the public. The short-term effects would be the same as for IRAs with existing roads and trails remaining visible for some time.

3.13.2.2.2. Cumulative Effects

The demand for semi-primitive motorized and non-motorized opportunities would continue to grow. This alternative offers the greatest reduction in motorized access and thus would tend to provide an increase in areas available for non-motorized opportunities.

As areas recover under this alternative, future inventories for areas with wilderness potential may identify additional acres that contain wilderness attributes.

3.13.2.3. Alternative C

3.13.2.3.1. Direct and Indirect Effects

This alternative would retain 99.3 miles of motorized access open to the public within IRAs. Cross-country travel would be prohibited in both IRAs and unroaded and undeveloped areas. This alternative would not adversely affect the existing roadless values or wilderness potential. Effects would be similar to those in Alternative B.

This alternative would retain 86.52 miles of motorized access open to the public within areas identified as unroaded and undeveloped during the 2004 inventory. The difference in available miles between IRAs and unroaded areas is due to the fact that the Dixie has IRAs that were not identified as unroaded and undeveloped that contain numerous roads and motorized trails. Direct and indirect effects would be similar to those in Alternative B.

3.13.2.3.2. Cumulative Effects

The demand for semi-primitive motorized and non-motorized opportunities would continue to grow. Although not to the extent as Alternative B, this alternative offers a reduction in motorized access over Alternative A, and thus would tend to provide an increase in areas available for non-motorized opportunities.

Cumulative impacts to unroaded areas would be similar to those for IRAs. With the closure to cross-country travel and the reduction in available motorized recreation access to remote areas, loss of naturalness due to motorized recreation should reduce over time. Opportunities for solitude and primitive recreation would increase.

3.13.2.4. Alternative D

3.13.2.4.1. Direct and Indirect Effects

Implementation of this alternative would retain 204.2 miles of public access within IRAs. Cross-country travel would be prohibited. This alternative is more selective within IRAs and would show a greater decrease in available routes in some IRAs than in others. The existing roadless values or wilderness potential would not be adversely affected.

Alternative D would retain 171.48 miles of public access within areas identified as unroaded during the 2004 inventory with updates. Thirty-two of the 50 areas would show some improvement in wilderness attributes over Alternative A. Twelve additional areas would likely have little change in wilderness attributes. Seventeen of the 32 areas mentioned above would show some improvement, but would be less than that expected due to access either bisecting the area or remaining within the edges; these areas are Atchison, Blind Springs, Boulder Top, Bull Valley, Cave Canyon, Cedar Bench, Cove Mountain, Dry Lake, Henderson Canyon, Jake Hollow, Little Creek Peak, Moody Wash/Mogotsu, North Boulder, North Hills, Pine Park, Shakespeare Point, and Stoddard Mountain. These areas would likely remain larger than 5,000 acres in size and thus may still be considered in future unroaded inventories, but they may continue to have encroachment from the edges. Blind Spring, Bull Valley, Jake Hollow, North Boulder, North Hills, and Pine Park may receive the greatest impacts due to roads that bisect some of their area.

3.13.2.4.2. Cumulative Effects

Wilderness characteristics would benefit more in some IRAs in the long-term than in others. Roadless characteristics would improve but not to the extent as in Alternative B or C.

Naturalness and opportunities for solitude or primitive recreation would improve for most of the unroaded areas, but not to the extent that it would improve under Alternative B or C.

3.13.2.5. Alternative E

3.13.2.5.1. Direct and Indirect Effects

Implementation of this alternative would retain almost 490 miles of public access within IRAs. This alternative would have similar affects as Alternative A, with the exception of some benefit with the prohibition of cross-country travel. The existing roadless values and wilderness potential would not be adversely impacted.

Implementation of Alternative E would retain over 455 miles of motorized access within areas identified in 2004 as unroaded and undeveloped. As with IRAs, the main benefit to unroaded areas would be due to closure of cross-country travel. For most areas, existing wilderness attributes would remain medium to low. With the exception of the Boulder Top and North Boulder areas, there would be very few miles closed or decommissioned. This alternative would make several administrative roads open for public access, thus increasing the chance for future encroachment into remote areas.

3.13.2.5.2. Cumulative Effects

The designation of non-system routes, and the subsequent inclusion of those routes on the MVUM, could increase the use of some areas. Thus this alternative has the potential to impact the apparent naturalness of areas not currently known to most visitors. The increased use of little known motorized trails could result in these routes becoming more visually apparent, taking on the appearance of roads and thus negatively impacting an area's roadless character. In the long-term, Alternative E would reduce opportunities for solitude and primitive recreation to levels similar to Alternative A.

3.13.2.6. Cumulative Effects Common to All Alternatives

Alternative B, C, or D would not add cumulatively to impacts on roadless characteristics or wilderness values. Alternative E may provide the potential for increased use within some areas. Foreseeable activities that would impact roadless characteristics or wilderness potential of IRAs or unroaded areas include oil and gas development and utility construction. There are existing utility corridors within or adjacent to IRAs and unroaded areas that were established prior to RACR or the unroaded inventory. Future development will likely occur throughout these corridors and will impact both the roadless character and wilderness potential along these areas. In the event that oil or gas production is initiated, the roads and associated infrastructure are not likely to occur within an IRA so long as RACR is in place. However, with so much of the Forest falling within IRAs, a development could potentially occur adjacent to an IRA and within an existing unroaded area. The apparent naturalness of the area adjacent to the development would be impacted.

With the population growth and development increasing on private inholdings and around the Forest, there is a potential for continued utility construction that may cross IRAs and unroaded areas and could potentially impact wilderness capability for a limited area.

Activities like grazing, wildfire and suppression activities, prescribed fire, and non-motorized recreation may occur within or adjacent to IRAs or unroaded areas, but would not adversely impact the roadless character or wilderness potential.

The following tables display the miles of motorized routes within each IRA (Table 3-25), and each unroaded and undeveloped area (Table 3-26). Much more detailed information on motorized routes, including a breakdown of each route type by alternative, is located in the appendices in the *Roadless and Unroaded and Undeveloped Areas Specialist Report* (USDA 2009l).

Table 3-25. Miles of Motorized Routes by Inventoried Roadless Area

IRA	Alternative				
	A	B	C	D	E
Atchison	4	<1	2	2	4
Bear Valley Peak	5	4	4	4	5
Boulder Mtn/Boulder Top/Deer Lake	48	25	26	35	48
Box-Death Hollow	1	0	1	1	1
Bull Valley	17	4	4	11	18
Bunker Creek	3	2	2	2	3
Capital Reef*	1	<1	<1	<1	1
Casto Bluff	63	12	17	18	66
Cave Canyon	3	<1	1	1	3
Cedar Bench	6	0	0	1	6
Cottonwood	3	<1	<1	2	3
Cove Mountain	17	2	3	3	17
Dark Valley	44	11	14	20	44
Deer Creek	10	1	1	6	16
Fishhook	10	2	2	2	10
Gum Hill	1	<1	<1	<1	1
Hancock	0	0	0	0	0
Happy Valley	14	8	8	8	14
Hay Lakes	46	12	12	24	46
Headwaters/Pine Park Bench/Pine Park	2	0	1	<1	2
Hog Ranch	12	3	5	9	12
Horse Valley	12	1	2	9	12
Jake Hollow	14	1	5	6	14
Kane Mountain	5	<1	<1	1	5
Lava Beds	1	1	1	1	1
Long Neck Mesa/Steep Creek/Oak Creek-Steep Creek/Oak Creek	31	16	18	19	32
Lost Peak	<1	<1	<1	<1	<1
McGath Lake-Auger Hole	1	<1	<1	1	1
Mineral Canyon	3	<1	<1	<1	3
Mogotsu	6	3	4	4	6
Moody Wash	18	11	11	13	18
New Home Bench	24	21	21	22	24
North Hills	25	7	8	8	25
Pine Valley Mountains	3	<1	2	1	3
Red Canyon North	12	5	6	6	12
Red Canyon South	4	1	1	4	4
Rock Canyon	8	5	4	5	8
Shakespeare Point	<1	0	0	0	<1
South Rim	1	<1	1	1	1
Stoddard Mountain	7	2	2	2	7
Table Cliffs-Henderson Canyon	5	2	2	3	5

All miles rounded to the nearest 1 mile. Miles composed of Maintenance Level 1, 2, 3, 4, 5, and unauthorized roads, and seasonal Maintenance Level 2 roads, and motorized trails. For a more detailed breakdown by IRA, including totals by maintenance level, totals of motorized trails, totals of non-motorized trails, and unauthorized routes, see the Appendix A of the *Roadless and Unroaded and Undeveloped Specialist Report* (USDA 2009l).

Table 3-26. Miles of Motorized Routes by Unroaded and Undeveloped Area

Unroaded and Undeveloped Area	Alternative				
	A	B	C	D	E
Antimony	33	9	7	11	34
Ashdown	2	2	2	2	2
Atchison	16	6	<1	11	17
Barker	8	<1	<1	2	8
Bear Valley Peak	4	2	2	2	4
Big Hollow	<1	0	0	0	<1
Birch Creek	1	1	1	1	1
Blind Springs	6	<1	<1	1	1
Boulder Creek	14	10	9	11	13
Box-Death Hollow	3	<1	<1	<1	3
Bull Valley	15	1	1	9	17
Bunker Creek	7	3	3	3	7
Canaan Mountain	3	2	2	2	3
Casto Bluff	26	4	7	6	29
Cave Canyon	5	0	1	2	5
Cedar Bench	8	0	0	2	8
Cottonwood	8	<1	<1	5	8
Cove Mountain	14	2	5	5	14
Deep Creek	10	2	2	7	15
Dry Lake	15	10	11	14	15
Fishhook	5	0	<1	0	5
Hancock	<1	<1	<1	<1	<1
Happy Valley	7	4	4	4	7
Heaps Canyon	5	2	2	2	5
Henderson Canyon	1	0	0	0	1
Hog Ranch	1	0	1	0	1
Horse Valley	8	<1	1	1	8
Jake Hollow	12	3	7	7	12
Kane Mountain	6	1	1	1	6
Lava Beds #1	<1	<1	<1	<1	<1
Lava Beds #2	1	0	0	0	1
Little Creek Peak	11	5	6	6	11
Long Neck	11	5	5	7	11
Lost Peak	<1	0	<1	<1	<1
Lower Hoodle	20	0	<1	3	20
Mineral Canyon	3	<1	1	<1	3
Moody Wash/Mogotsu	36	18	19	21	36
North Boulder	34	16	16	22	34
North Hills	25	7	8	9	25
Oak Creek	6	1	1	1	6
Pacer Lake	26	19	22	22	26
Pine Park	12	6	3	6	12
Pine Valley Mountain	33	12	19	10	32
Pretty Tree Bench	2	2	2	2	2
Red Canyon North	12	5	5	5	12
Red Canyon South	<1	0	0	0	<1
Shakespeare Point	<1	0	0	0	<1
Stoddard Mount	7	2	2	2	7

Unroaded and Undeveloped Area	Alternative				
	A	B	C	D	E
Wagon Box	7	0	1	1	7
West Boulder	5	3	3	3	7

All miles rounded to the nearest 1 mile. Miles composed of Maintenance Level 1, 2, 3, 4, 5, and unauthorized roads, and seasonal Maintenance Level 2 roads, and motorized trails. For a more detailed breakdown by unroaded and undeveloped area, including totals by maintenance level, totals of motorized trails, totals of non-motorized trails, and unauthorized routes, see the Appendix B of the *Roadless and Unroaded and Undeveloped Specialist Report* (USDA 2009l).

3.14. Cultural Resources

The information in this section is summarized from the *Cultural Resources Specialist Report* prepared for this motorized travel plan (USDA 2009f). Please see that report for more detail on the affected environment and effects analysis.

3.14.1. Affected Environment

The cultural resources of the Dixie National Forest represents a wide diversity of site types, cultural groups, time periods, and even resources (including paleontological resources). A limited number of sites have been identified for public use, though they are currently in various stages of formal designation. These include the Spanish Trail designated by Congress as a National Historic Trail in 2002, and the Hell's Backbone Bridge. Several administrative sites, including the Podunk, Cowpuncher, and Aquarius guard stations, have been designated for use under the Forest Service Rustic Cabin Rental program. Lower and Upper Enterprise Reservoir Dams, Leeds Creek Kiln, and several other sites are in the process of being designated.

Two sites on the Forest and one adjacent with features on the Forest have been listed on the National Register of Historic Places: Long Flat Archaeological Site, designated in 1978; the Mountain Meadows Massacre District, designated in 1975; and Historic Iron Town, designated in 1978. Many other sites on the Forest are potentially eligible for nomination to the National Register.

By 2006, less than 8 percent of the Forest had been inventoried for cultural resources. Approximately 2,000 cultural resource sites have been recorded and evaluated. Only a very few of these have been investigated scientifically. Because most of the cultural resources on the Dixie National Forest have not been inventoried or evaluated and very few have been scientifically investigated, the knowledge of past cultures occupations is inferred from other better-studied regions adjacent to the Forest. A majority of the sites are in fair to good condition because of their current isolation, but this isolation is becoming reduced as increased access to these isolated areas grows.

Archaeological resources, historical sites, and paleontological resources are valuable for scientific, public interpretive, and educational uses. American Indian groups consider sites and areas to be sacred and important to the ongoing existence of their culture. Cultural resource site locations are not disclosed in this document. In order to protect and preserve cultural resources, detailed descriptions and locations are exempt from disclosure under the Freedom of Information Act as stated in Forest Service Policy (FSH 6209.13, section 11.12) in accordance with the Archaeological Resource Protection Act of 1979 (16 USC 170hh) and the National Historic Preservation Act of 1966 (16 USC 470w-3). Identification and records are supplied to the Utah State Historic Preservation Officer to concur with the Forest Service's Determination of Eligibility and Effects.

Cultural resources, including paleontological resources, are non-renewable resources. As such, federal regulations have been passed which prohibit destruction of these resources and obligate the federal land managing agencies to protect and manage these resources. The Antiquities Act of 1906, the Historic Sites Act of 1935, the National Historic Preservation Act of 1966 (amended in 1992), the Archaeological Resource Protection Act of 1979, and the Native

American Graves Protection and Repatriation Act of 1990 are the most important regulations concerning the protection of the cultural resources on federal land.

The primary threats to cultural resources on the Forest are vandalism, collection of surface artifacts and fossils, OHV use, erosion, and livestock use. Intentional vandalism occurring on the Forest includes sites damaged or destroyed by illegal excavations, collection of artifacts and fossils off the surface, destruction of sites by people using metal detectors (followed by digging to remove artifacts), and destruction or removal of rock art. Unintentional vandalism to the resources occurs from driving off-road across sites; touching, chalking, paint balling, or marking rock art sites; creating trails, both non- motorized and motorized, across or near sites with fragile features, removal of features or objects that are part of sites, and dispersed camping on sites. The Dixie National Forest will continue to aggressively investigate and prosecute all intentional vandalism and continue to provide education to the public about the protection and preservation of heritage resources on the Forest.

3.14.1.1. Resources of Traditional Importance to American Indians

American Indian groups have either currently or historically lived in or adjacent to the Dixie National Forest and have cultural ties to the area. American Indians consider Traditional Cultural Properties (TCPs), power places, sacred sites, and many natural resources to be linked to parts of an ecosystem. If a site is within a group's traditional territory, the members of the group often assume it as part of their heritage.

Individuals from adjacent American Indian tribes continue to utilize areas within the Dixie National Forest visiting sites and gathering and using resources from the area. Some have ties to natural features, ancient villages, campsites, rock art, and burial sites that they consider sacred. There are no Treaty Rights within the boundaries of the Forest with any of the Tribal groups adjacent to the Forest.

Tribal groups who have interest and have identified traditional lands and ties within the Forest have been contacted and initial consultation has resulted in identification of some resource areas, spiritual locations, and sites important to their cultures. The Utah State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation have been consulted on this project.

3.14.2. Effects Analysis

Considering cultural resources in comprehensive travel management planning is an interdisciplinary process. Cultural resource information from the Forest's inventory maps and reports, the professional judgment of the Forest's Heritage Staff, and other existing cultural resources information were all considered when analyzing the range of possibilities in proposed route designation. This information was included in the interdisciplinary identification effort during the initial route designation process, and is documented in the Route Reports.

During the analysis of the routes and of the potential for effects to unknown sites on the Forest, it was determined that there would be a need for a complete inventory of all new designated routes identified on the Forest, regardless of which alternative or combination of alternatives was selected. These "new designated routes" include routes that are both user-created and

routes that were never made part of the forest road system; in either case, these routes were not inventoried for effects to any resources even though all these routes currently exist on the ground and are receiving use. It will take approximately five years to inventory these routes.

As the inventory proceeds, we will consult with the Utah SHPO on sites found and recorded. The associated routes will be evaluated, after which the measures identified in the Programmatic Agreement may need to be conducted. Measures could include monitoring, fencing, rerouting, closure, excavation, or burial of the site. Areas and routes open to OHV use are to be monitored for impacts to resources, especially routes in areas of known Historic Properties. These areas are known from previous inventories conducted during development activities conducted on the Forest.

3.14.2.1. Direct and Indirect Effects

3.14.2.1.1. Effects Common to All Alternatives

All OHV use is subject to prohibitions against operation of vehicles on federal lands in a reckless, careless, or negligent manner, and operation in excess of established speeds or in a manner causing or likely to cause undue damage to cultural and other resources. Where an authorized officer determines that OHV use is causing or is likely to cause adverse effects to cultural resources, federal law allows for the immediate closure to the type or types of vehicles causing the adverse effect until those adverse effects are eliminated and measures are implemented to prevent recurrence.

Under Section 106 of the National Historic Preservation Act of 1966, federal agencies must take into account the affect their actions would have on cultural resources and TCPs. As part of the stipulation outlined in the Programmatic Agreement with the Utah SHPO, before implementing this travel plan, areas of high probability within areas proposed for ground disturbance and/or reclassification of routes never surveyed will be surveyed and evaluated by an archaeologist in an effort to locate and record any archaeological or historical sites or TCPs. Survey methods will include pedestrian transects and visual assessments of the project Area of Potential Effects for all site-specific undertakings.

Each site identified is evaluated for inclusion on the National Register of Historic Places. Those sites found to exhibit the characteristics for inclusion on the Register are identified as Historic Properties and actions undertaken near or adjacent to them must identify what affect they will have. These effects are identified as “no effect,” “no adverse effect,” or “adverse effect.” Project design features must be undertaken for those actions that will pose a no adverse effect or adverse effect. These measures can range from fencing, rerouting, burying the site, and full scale excavation, and are identified on a site-by-site basis. A Programmatic Agreement between the Advisory Council on Historic Preservation, the Utah SHPO, and the Dixie National Forest will outline how the surveys, evaluations, and measures will be implemented.

The following assumptions are made for cultural resources within the Forest under all alternatives:

1. All laws for the management and protection of cultural resources will be followed,
2. Section 106 inventories and measures will be conducted for all proposed projects, as required by the National Historic Preservation Act, under those alternatives that involve ground disturbing activities,

3. The cultural resources on the Forest will continue to be monitored for vandalism and protected or stabilized, as necessary, and
4. All surface disturbing activities include measures to reduce impacts to cultural resources.

3.14.2.1.2. Alternative A

Use of motorized routes and areas open to cross-country travel in this alternative would result in continued and increasing impacts to cultural resources. Sites and paleontological resources would continue to be impacted intentionally or unintentionally by visitors and natural processes. TCPs would still be accessible by Tribal members and groups, but this alternative would also allow for continued access damage and vandalism to these TCPs by other visitors using motorized and mechanized vehicles. Access for research would be easier and more cost-effective under this alternative.

3.14.2.1.3. Alternative B

Under Alternative B fewer roads would be open for use as this alternative emphasizes protection for natural, paleontological, and cultural resources. Cross-country travel would be prohibited forest-wide. Sites would continue to be impacted intentionally or unintentionally by visitors and natural processes. Most TCPs would still be accessible by Tribal members and groups, though this alternative would also allow for continued access damage and vandalism to these TCPs and sites by other visitors using motorized and mechanized vehicles using existing roads.

3.14.2.1.4. Alternative C

The types of impacts under Alternative C would be the same as those described under Alternative A. Impacts would be more intense than under Alternatives B due to the increase of miles of roads that would be open to motorized public travel. Impacts would be less intense than under Alternatives A, D, and E due to fewer miles of roads that would be open. Cross-country travel would be prohibited forest-wide.

More unauthorized routes, including routes that must remain open for access to private property, permitted use, and administrative access, would be added to the system. Sites and paleontological resources would continue to be impacted intentionally or unintentionally by visitors and natural processes. Most TCPs would still be accessible by Tribal members and groups, but this alternative would also allow for continued access damage and vandalism to these TCPs by other visitors using motorized and mechanized vehicles on existing routes.

3.14.2.1.5. Alternative D

With the exception of Alternatives A and E, the greatest access for all motorized and mechanized vehicles users, including the OHV community, would be provided under Alternative D. Sites would continue to be impacted intentionally or unintentionally by all ranges of visitors and natural processes. TCPs would still be accessible by Tribal members and groups, but this alternative would also allow for continued access damage and vandalism to these TCPs by other visitors using motorized and mechanized vehicles. Access for research would be easier and more cost-effective under this alternative. Cross-country travel would be eliminated across the entire Forest, which would provide more protection than under Alternative A.

Two proposed motorized trails comprising 1.26 miles would be developed and built under this alternative. The locations of both of the proposed motorized trails have been surveyed. There would be no adverse effects to historic properties. Review and concurrence from the Utah SHPO would be conducted on these routes prior to construction.

3.14.2.1.6. Alternative E

This alternative provides for the most motorized access on designated routes. Under this alternative all non-system or unauthorized routes would be added to the system unless addressed otherwise through previous and pending decisions. These additions would be designated as open to public motorized travel. Cross-country travel would be prohibited forest-wide. Sites and paleontological resources would continue to be impacted intentionally or unintentionally by visitors and natural processes. TCPs would still be accessible by Tribal members and groups, but this alternative would also allow for continued access damage and vandalism to these TCPs by other visitors using motorized and mechanized vehicles. Access for research would be easier and more cost-effective under this alternative.

Two proposed motorized trails comprising 1.26 miles would be developed and built under this alternative. The locations of both of the proposed motorized trails have been surveyed. There would be no adverse effects to historic properties. Review and concurrence from the Utah SHPO would be conducted on these routes prior to construction

3.14.2.2. Cumulative Effects

The increase in regional population and popularity of the Dixie National Forest is correlated to an increase in damage to archaeological and historical resources from visitation, including that caused by vandalism. As the popularity of OHVs and recreation activities increases, the increase of impacts to all cultural resources on the Forest is now at a critical stage. As cultural resources are nonrenewable, it is critical that we preserve and protect those remaining resources. Public education and information is vital in efforts to preserving the past. Education must be expanded beyond the local level to reach those who visit the Forest from regional urban areas.

Archaeological resources, historical sites, and paleontological resources within the Forest would continue to be impacted by natural process. The agency and other development projects conducted by non-agency groups would continue to be conducted in the foreseeable future. Prior to any activities either conducted by the Forest Service or outside groups under special use permits, all ground-disturbing activities would have cultural resource surveys conducted prior to their implementation as outlined in law governing the protection of these resources.

3.15. Transportation

The information in this section is summarized from the *Transportation Specialist Report* prepared for this motorized travel plan (USDA 2009o). Please see that report for more detail on the affected environment and effects analysis.

3.15.1. Affected Environment

Transportation facilities provide important access to the Forest for a variety of uses including timber harvest, livestock grazing, mining, and recreation. The Dixie National Forest Motorized Travel Plan will affect future access for forest management and public activities.

In 1996 the Dixie National Forest began inventorying all motorized routes on the Forest. This effort resulted in a Global Positioning System (GPS) motorized route inventory that was completed in summer 2005. This inventory provides the base data layer for this travel planning project. This section addresses roads and the road system. Motorized trails are not addressed in this analysis or in any of the mileages portrayed in any of the tables in this section.

Table 3-27. Total Miles of Road on the Forest

Area	Current System Miles	Current Non-System Miles	Total
Cedar City	1,011	393	1,404
Escalante	794	333	1127
Pine Valley	468	198	666
Powell	805	455	1260
Teasdale	348	104	452
Forest-wide	3,426	1483	4,909

Includes miles from previous and pending decisions.

3.15.1.1. Road Operation and Maintenance

There are five maintenance categories of Forest Service System roads. The following descriptions are from FSH 7709.58, 10.

Level 1

Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed one year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate."

Roads receiving Level 1 maintenance may be of any type, class, or construction standard, and may be managed at any other maintenance level during the time they are open for

traffic. However, while being maintained at Level 1, they are closed to vehicular traffic, but may be open and suitable for non-motorized uses.

Level 2
Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to (1) discourage or prohibit passenger cars or (2) accept or discourage high clearance vehicles.

Level 3
Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities.

Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

Level 4
Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.

Level 5
Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. The appropriate traffic management strategy is "encourage."

The maintenance categories vary the frequency and intensity of all maintenance activities. Road maintenance standards are set by the road's maintenance level and are described in the Forest Service's Road Preconstruction Handbook (FSH 7709.58,10). The following table summarizes the maintenance levels of the current system.

Table 3-28. Miles of Road by Operational Maintenance Level

Area	Miles by Operational Maintenance Level					Total
	1	2	3	4	5	
Cedar City	84	753	140	19	15	1,011
Escalante	226	423	145	0	0	794
Pine Valley	9	364	87	8	0	468
Powell	27	694	75	9	0	805
Teasdale	27	291	29	1	0	348
Forest-wide	373	2,525	476	37	15	3,426

The Forest performs road maintenance on the Forest road system as funding allows. On the Dixie National Forest it is estimated that approximately 25 percent of the road system miles

receives some annual maintenance, including maintenance done by the counties. Higher standard "passenger car" roads (Levels 3, 4, and 5) receive more maintenance than lower standard roads (Levels 1 and 2) due to the differences in the amount of use. Priorities are based on environmental concerns and the need to implement Forest projects. The Forest also cooperates with local counties to perform maintenance or improvements on primary Forest access roads. Forest maintenance prescription guidelines are found in the Transportation System Maintenance Handbook, FSH 7709.58, 12.6, Exhibit 01 (Appendix C in the *Transportation Specialist Report* [USDA 2009o]).

Maintenance figures for years 2004 through 2007 are displayed in the following tables. All figures include county maintenance.

Table 3-29. Maintenance Figures for Fiscal Year 2004

Dixie National Forest FY 2004 1	Total System Miles (End of FY) 2	Roads Receiving Maintenance (Miles) 3
Maintenance Level 1	377.05	10.00
Maintenance Level 2	2,385.48	315.00
Maintenance Level 3	595.90	405.00
Maintenance Level 4	94.46	40.00
Maintenance Level 5	16.46	16.00
Total Miles	**3,469.35**	**786.00**
% of Road Miles Receiving Maintenance		**23%**
Approximate Annual Cost Per Mile		**$256.00**
Total Cost		**$201,216.00**

Table 3-30. Maintenance Figures for Fiscal Year 2005

Dixie National Forest FY 2005 1	Total System Miles (End of FY) 2	Roads Receiving Maintenance (Miles) 3
Maintenance Level 1	359.13	0.00
Maintenance Level 2	2355.64	220.00
Maintenance Level 3	593.63	403.00
Maintenance Level 4	87.17	60.00
Maintenance Level 5	16.46	16.00
Total Miles	**3,412.03**	**699.00**
% of Road Miles Receiving Maintenance		**20%**
Approximate Annual Cost Per Mile		**$267.00**
Total Cost		**$186,633.00**

Table 3-31. Maintenance Figures for Fiscal Year 2006

Dixie National Forest FY 2006 1	Total System Miles (End of FY) 2	Roads Receiving Maintenance (Miles) 3
Maintenance Level 1	362.00	0.00
Maintenance Level 2	2334.52	398
Maintenance Level 3	593.63	474
Maintenance Level 4	87.17	87
Maintenance Level 5	16.46	15
Total Miles	**3,393.78**	**974**
% of Road Miles Receiving Maintenance		**28%**
Approximate Annual Cost Per Mile		**$300.00**
Total Cost		**$292,200.00**

Table 3-32. Maintenance Figures for Fiscal Year 2007

Dixie National Forest FY 2007 1	Total System Miles (End of FY) 2	Roads Receiving Maintenance (Miles) 3
Maintenance Level 1	370.50	0
Maintenance Level 2	2522.60	447.00
Maintenance Level 3	474.70	295
Maintenance Level 4	37.20	37
Maintenance Level 5	14.80	15
Total Miles	**3,421.80**	**794**
% of Road Miles Receiving Maintenance		**23%**
Approximate Annual Cost Per Mile		**$350.00**
Total Cost		**$277,900.00**

For a discussion of trail maintenance, see the *Trail Maintenance* section within the *Recreation* section on page 3-75.

3.15.2. Effects Analysis

3.15.2.1. Direct and Indirect Effects

3.15.2.1.1. Effects Common to All Alternatives

All alternatives maintain primary access to major sites and facilities. Alternatives B, C, and D reduce the miles of designated roads, which reduces overall motorized access to the Forest. However, even under Alternative B, which has the lowest miles of designated roads, access to private property, most permitted activities, and forest administrative uses should remain intact.

1. All Operational Maintenance Level 3, 4, and 5 roads (all of which are addressed in the *Roads Analysis Report for the Dixie and Fishlake National Forests* [USDA 2003b]) would

remain open as recommended in the *Roads Analysis Report*. These roads provide important access for Forest management activities and form the backbone of the Forest Transportation System.

2. The existing public access to and through the Forest provided by county and state roads would remain the same for all alternatives. The Forest would continue to work with adjacent counties and private landowners to maintain and improve public access to the Forest as opportunity allows; this coordination would not be dependent on which alternative is selected.
3. Private land access would be provided within National Forest boundaries as required by Section 1323(a) of the Alaska National Interest Lands Conservation Act of 1980. Routes on private land within NFS lands are not the jurisdiction of the Forest Service and would remain open to the public through rights-of-way or easements obtained for purposes of public access. Routes without rights-of-way or easements may not be open to public access, depending on landowner permission.
4. The travel plan does not restrict responses to emergency events to protect human life, property values, structures, or forest resources. These activities would be coordinated through an authorized official.
5. Permitted activities, such as livestock operations, mineral development, and access to special use developments, are authorized through the permit process and operation plan. Some routes are not designated for public use and are depicted as administrative use on the maps of the alternative. In all cases, these permitted uses are non-recreational, intended to allow maintenance of utilities, water improvements, etc., and/or to haul materials needed for the permitted operations. Permit holders and agency officials are allowed motorized access only for official purposes.
6. Pursuant to 36 CFR 212.50 of the final Travel Rule, a number of previous and pending administrative decisions that allow, restrict, or prohibit motor vehicle use on National Forest System roads, trails, or areas have been incorporated as previously designated into this travel planning project.

3.15.2.1.2. Alternative A

Approximately 61 percent (1,150,113 acres) of the Forest currently open seasonally or year-long to motorized cross-country travel would remain open. Cross-country travel would remain prohibited on 39 percent, or 735,943 acres, of the Forest. Site-specific planning and enforcement of OHV regulations would occur at current levels. The motorized network of unauthorized routes would continue to grow (USDA 2009o).

This alternative consists of management and restrictions for travel routes and areas as depicted on the 2005 Dixie National Forest Travel Map (USDA 2005a). The Travel Map uses the following designations:

- **L1 and L2 Limited Areas.** Areas available for motorized use subject to certain user restrictions. L1 Use is limited to routes of travel shown on the map. L2 Opportunities and restrictions vary in these areas. Cross-country travel is limited to snowmobile use with 12 inches of snow.
    - **Area Described.** All National Forest System lands located within the boundaries of the Dixie National Forest as it relates to open, restricted, or closed areas, roads, trails as designated on the ground and/or shown on the Dixie National Forest Travel Map.
- **L3 (Duck/Swains Area).** L3 – Special closure area. See attached closure order pertaining to this area.

- **Closure Described.** Any road or trail not designated as open to motorized travel in Area L3 on the Dixie National Forest Travel Map (Open Roads and ATV Trails).
- **Closed Area.** Areas closed to all motorized use. Trails shown in closed areas are for non-motorized use only.
- **Exemptions.** Pursuant to 36 CFR 261.50(e), the following persons are exempt from this Order:
    1. Persons with a permit specifically exempting them from the effect of this Order.
    2. Any Federal, State, or local officer or member or an organized rescue or firefighting force in the performance of an official duty.
- **Other National Forest Lands.** These areas are open to cross-country travel on the current Dixie Travel Map.

3.15.2.1.3. Effects Common to All Action Alternatives (Alternatives B, C, D, and E)

1. Closing the Forest to motorized cross-country travel would reduce the potential for direct and indirect off-route interactions and impacts with other land uses. This would have the effect of reducing actual and potential cumulative impacts to nearly all other resource values and uses on the Forest.
2. The installation of barriers as part of road closure efforts is not expected to generate enough site disturbance to adversely affect biological or physical resource values. In fact, physical barriers are expected to reduce resource impacts and use conflicts by improving compliance with the travel plan.
3. The existing condition of the Forest illustrates the existence of a large number of unauthorized roads (roads not currently part of the National Forest System of roads). While some of these unauthorized routes were user-created through public recreational use, the majority were created over the course of decades by the Forest Service to facilitate range, timber, and special use activities. In some cases these routes have acquired recreational value. This travel plan considers the uses and impacts of unauthorized routes and proposes to add some of them to the system. The miles of route proposed for addition to the system varies by action alternative.
4. Road operation and maintenance activities are not anticipate to change much between the alternatives. Currently, approximately 25 percent of the road system receives annual maintenance. Generally the roads that are receiving this limited annual maintenance would remain open and would continue to receive annual maintenance as funding allows. Many of these roads are the Level 3, 4, and 5 roads noted above on page 3-124 under *Effects Common to All Alternatives*. The lower standard, Level 2, lesser-used roads only receive maintenance to reduce environmental effects and to provide for safety. Currently less than 20 percent of Maintenance Level 2 roads are maintained forest-wide. This number is not expected to increase dramatically unless National direction changes.
5. Routes that are not designated for public or administrative use in this decision would be closed and decommissioned from the National Forest System. If a route is proposed to be closed, the closure method would be the same for all alternatives that recommend that particular closure (USDA 2009o, Appendix A). Some routes proposed for closure would be decommissioned (ripped and seeded) and others would be allowed to revegetate naturally. Some routes proposed for closure are already brushed in (re-vegetating naturally), a process that would be left alone to continue. For roads that are proposed for decommissioning, there would be a one-time cost to accomplish those activities, as detailed in the following tables. Additionally, portions of some routes may require relocation or improvement to meet Forest Service standards; these route sections have been identified through the route evaluation and analysis process.

Authorization of some of the actual road relocation work may require supplemental analysis and, in some cases, a subsequent decision made according to National Environmental Policy Act provisions.

6. There would be impacts in the administration of adding unauthorized routes to the system in that system route numbers and linear events[3] would need to be assigned to each unauthorized route in the Forest's Infra Database. The number of routes in the current 2 percent random sample of Level 2 routes requiring Condition Surveys each year would increase slightly. Signing requirements would increase by adding these unauthorized routes to the Forest Transportation System.

Table 3-33. Decommissioning Costs

Equipment Costs					
Quantity	**Equipment**	**Equipment Rate**	**Labor Rate**	**Total Rate**	**Total Hourly Rate**
1	D-7 Dozer	$133.40	$36.19	$169.59	$169.59

Scarifying Costs			
Equipment	**Estimated Time per Mile**	**Costs**	
	Hours	**Hourly Cost**	**Cost per Mile**
Dozer	16.00	$169.59	$2,713.44

Earthen Barrier			
Equipment	**Estimated Time per Barrier**	**Costs**	
	Hours	**Hourly Cost**	**Cost per Mile**
Dozer	1.00	$169.59	$169.59

Table 3-34. Miles Proposed for Decommissioning by Alternative

Type	Alternative				
	A	B	C	D	E
System Miles	0	62	48	31	5
Unauthorized Miles	0	39	32	12	7
Total Miles	0	101	80	43	12

6. Motorized Mixed Use Analysis. NFS roads are designed primarily for use by highway-legal vehicles (motor vehicles that are licensed or certified for general operation on public roads within the State) such as a passenger car or log truck. Some NFS roads also provide recreational access for ATVs and other non-highway-legal OHVs. For the purpose of this document, motorized mixed use is defined as designation of a NFS road for use by both highway-legal and non-highway-legal motor vehicles. Designating NFS roads for motorized mixed use involves safety and engineering considerations.

   The Dixie National Forest's *Engineering Analysis of Motorized Mixed-use on Forest System Roads* demonstrates consideration of the effects on public safety and conflicts

[3] Linear events describe attributes for a road. Linear events include surface type, jurisdiction, and primary maintainer.

among different classes of motor vehicle uses on National Forest system lands and/or neighboring federal lands (USDA 2008e). The Forest is not proposing to authorize motorized mixed use where it is not currently authorized. The analysis includes Mixed Use Analysis Reports and Judgments. The Forest used the direction found in national guidelines and handbooks in preparing the analysis (USDA 2004a, 2005b).

3.15.2.1.4. Alternative B

Under Alternative B, 34 miles of unauthorized routes would be added to the Forest Transportation System, to include routes that must remain open for private property, permitted uses, or administrative access. The remaining 1,424 miles of unauthorized roads would be closed. In this alternative 1,501 miles of motorized system routes would remain open for public access and 1,913 miles of motorized system routes would be closed to the public and removed from the Forest Transportation System. Alternative B retains the fewest miles of motorized routes of all of the action alternatives.

3.15.2.1.5. Alternative C

Under this alternative, 55 miles of unauthorized routes would be added to the system, to include routes that must remain open for private property, permitted uses, or administrative access. The remaining 1,390 miles of unauthorized roads would be closed. In Alternative C 1,670 miles of motorized system routes would remain open for public access and 1,650 miles of motorized system routes would be closed to the public and removed from the Forest Transportation System. Motorized access for recreation and administrative and permitted uses is allowed to a higher degree than under Alternative B.

3.15.2.1.6. Alternative D

This alternative generally allows for a higher level of motorized access than does Alternative C. Under Alternative D, 151 miles of unauthorized routes would be added to the system (1,301 unauthorized miles would be closed), including routes that must remain open for private property, permitted uses, or administrative access. In this alternative 2,290 miles of motorized system routes would be open for public access and 1,195 miles of motorized system routes would be closed to the public and removed from the Forest Transportation System. Motorized access for recreation and administrative and permitted uses is allowed to a higher degree than under Alternatives B and C. This alternative generally allows for a higher level of motorized access than does Alternative C.

3.15.2.1.7. Alternative E

This alternative provides the most motorized access by designating all system routes as open to public motorized use, with the exception of routes already designated through a specific previous decision. All non-system or unauthorized routes would also be designated as open to public motorized travel and therefore added to the Forest Transportation System. Trails that are currently designated as non-motorized would not be designated for motorized travel under this alternative.

Alternative E designates 1,253 miles of unauthorized routes to the system of routes for motorized travel (those remaining unauthorized routes were identified for closure through previous decisions, which are excluded from analysis as described earlier in this report), and includes routes that must remain open for private property, permitted uses, or administrative

access. Under Alternative E, 3,074 miles of motorized system routes would be left open for public access and 557 miles of motorized system routes would be closed to the public and removed from the Forest Transportation System.

Table 3-35. Road Mileage Comparison by Alternative

Category	Alternative				
	A	B	C	D	E
System Open	2,922	1,501	1,670	2,290	3,074
System Closed	691	1,913	1,650	1,195	557
Current Decommissioned	(154)	(154)	(154)	(154)	(154)
Current Converted to Trails	(37)	(37)	(37)	(37)	(37)
Total System	3,422	3,223	3,129	3,294	3,440
Difference from Current Condition	0	(199)	(293)	(128)	18
Unauthorized Open	1,111	34	55	151	1,253
Unauthorized Closed	372	1,424	1,390	1,301	233
Total Unauthorized	1,483	1,458	1,445	1,452	1,486
Difference from Current Condition	0	(25)	(38)	(31)	3
Total Miles (Total System + Total Unauthorized)	4,905	4,681	4,574	4,746	4,926
Difference from Current Condition	0	(224)	(331)	(177)	21

3.15.2.1.8. Administrative Routes

Administrative routes are routes that are (or were) typically built by the Forest to remove timber from various areas. Once the timber has been removed and other administrative activities completed, the routes are closed. When closed, these roads must be physically closed with barricades, berms, gates, or other closure devices. Closures of these roads must exceed one year. When opened, these roads may be maintained at any other maintenance level. Maintenance on these roads is only performed for the purposes of drainage control and minimizing erosion.

Table 3-36. Administrative Miles Summary by Alternative

Measure	Alternative				
	A	B	C	D	E
Miles of Administrative Roads (Maintenance Level 1)	631	959	1,037	962	399

3.15.2.1.9. Seasonal Closures

Some roads on the Escalante Ranger District are currently closed seasonally. These seasonally-designated roads are closed to minimize wildlife disturbance or to protect the road surface from motorized vehicles when conditions are wet and muddy. There are additional routes in each alternative recommended for seasonal closure. These closures would continue to affect fall and spring motorized access for activities like hunting and gathering of forest products.

Table 3-37. Miles of Road with Seasonal Closures by Alternative

Area	Miles by Alternative				
	A	B	C	D	E
Cedar City	0	0	4	9	0
Escalante	87	36	44	64	36
Pine Valley	0	0	1	0	0
Powell	0	0	0	2	0
Teasdale	0	2	4	0	0
Forest-wide	87	38	53	75	36

3.15.2.2. Cumulative Effects

- **Utilities.** Current and historic access for utilities considered as part of the existing condition is ongoing and would continue under all alternatives. Maintenance and access to utilities would continue to require a special use permit with Forest Supervisor approval. There would be no effects to transportation from reasonably foreseeable utility projects.
- **Oil and gas.** Current and historic access for oil and gas considered as part of the existing condition is ongoing and would continue under all alternatives. The Reasonably Foreseeable Development Scenarios (RFDSs) for future oil and gas exploration and development on both the Dixie and Fishlake National Forests predict miles of new road construction and road maintenance, which could impact the Forest Transportation System. These impacts would be the same under all alternatives.
- **Minerals.** Current and historic access for locatable mineral-related exploration and development considered as part of the existing condition is ongoing and would continue under all alternatives. Work associated with locatable minerals (e.g., cinders, sand, and gravel) would continue to require a permit with District Ranger approval. There would be no effects to transportation from reasonably foreseeable mineral projects.
- **Recreation.** Current and historic access for developed recreation considered as part of the existing condition is ongoing and would continue under all alternatives. There are no effects to transportation from reasonably foreseeable developed recreation projects.
- **Vegetation treatments.** Current access for vegetation treatments considered as part of the existing condition is ongoing and would continue under all alternatives. The collection of forest products, such as firewood and Christmas tree removal, would continue to require a permit with District Ranger approval. Effects to transportation from reasonably foreseeable vegetation treatment might occur if permanent routes need to be constructed or if temporary roads are not closed. However, this would be covered under separate NEPA evaluation.
- **Land exchanges.** Current and historic access for land exchanges considered as part of the existing condition is ongoing and would continue under all alternatives. There would be no effects to transportation from reasonably foreseeable land exchanges.
- **Easements.** Current and historic easements considered as part of the existing condition are ongoing and would continue under all alternatives. There may be an effect to transportation from reasonably foreseeable easements because the Forest would be required to administer the terms and conditions of each easement for compliance; these would be the same across all alternatives.
- **Special uses.** Current and historic access for special uses considered as part of the existing condition is ongoing and would continue under all alternatives. Special uses

would continue to require a permit with Forest Supervisor approval. There would be no effects to transportation from reasonably foreseeable special uses.

- **Livestock grazing.** Current and historic access for livestock grazing considered as part of the existing condition is ongoing and would continue under all alternatives. Livestock grazing would continue to require a permit with District Ranger approval. There would be no effects to transportation from reasonably foreseeable livestock grazing.

3.16. Short-term Uses and Long-term Productivity

NEPA requires consideration of "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity" (40 CFR 1502.16). As declared by Congress, this includes using all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (NEPA Section 101).

This chapter and the specialist reports prepared for this project provide the required disclosure of effects from anticipated use associated with the current travel plan (Alternative A) and the travel plans proposed in Alternatives B, C, D, and E.

As detailed in this chapter, Alternative A allows the most short-term use of Forest resources, but it would also result in the greatest impact to long-term productivity. The action alternatives provide varying amounts of motorized opportunities, and they have varying impacts to the short-term uses of the Forest. All action alternatives reduce the existing and potential impacts to long-term productive from those of the existing condition.

3.17. Unavoidable Adverse Effects

Effects on the environment that might result from implementation of any of the alternatives are analyzed in this chapter. Impacts from roads and trails cannot be eliminated, though they can be minimized. Under any alternative, unavoidable adverse effects could include:

- Temporary disturbance to wildlife from human activity on designated routes or areas,
- Adverse effects to water quality and associated biota from existence of and travel on designated routes or areas in riparian influence zones, and
- Impacts to soil productivity, including accelerated erosion and sediment delivery, from existence of and travel on designated routes or areas.

3.18. Irreversible and Irretrievable Commitments of Resources

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irretrievable commitments are those that are lost for a period of time, such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line right-of-way or a road.

With the exception of the two motorized trails proposed for construction in Alternatives D and E, all routes analyzed in this project currently exist on the ground. Road and trail corridors are irretrievable commitments of resources as they can be closed or decommissioned in the future, and the roadbed can be allowed to reclaim naturally or be obliterated and actively reclaimed through management actions.

Soils. All proposed motorized trails represent a total resource commitment; the total commitment for Alternatives D and E is 0.8 acres. Route T34070 is not suited for new motorized trails. Route U24028A is suitable for new construction with proper design features to minimize effects to the soil resource.

Noxious Weeds. Areas of the Forest that contain infestations of noxious weeds would be irretrievably lost to other uses until noxious weed abatement is successful. In some cases, these infestations, if left uncontrolled, could reduce biodiversity. No irretrievable effects have been identified for noxious weeds.

Cultural Resources. Irreversible commitment of resources refers to the loss of future options and applies primarily to the effects of the use of nonrenewable resources such as cultural, paleontological, and traditional ceremonial areas. An irretrievable commitment of resources involves the loss of use of these resources over a period of time due to actions in the areas of these resources such as in the case of traditional ceremonial sites used by the Native Americans. As the population gets older, access to an area where they currently are or have in the past gathered resources for traditional use or access to ceremonial areas is important to them and total closure of roads accessing these resources would constitute an irreversible commitment. Traditional access has changed over the years as the people began to have access to motorized vehicles. Loss of access to these areas of traditional gathering of natural resources is irretrievable but the locations of new natural resources would make it reversible. As ceremonial locations are tired to specific sites and actions associated with these ceremonies can not for the most part be moved to a new location so loss of access to these locations would make it irreversible.

Authorized mitigation of cultural sites prior to disturbance and unauthorized collecting and vandalism would result in an irreversible commitment of the resource. Authorized and unauthorized collection of fossils would result in an irreversible commitment of the resource. Erosion of the soil in the immediate area of these resources caused by unauthorized OHV use would cause irretrievable commitment of the resources. Restoration of unauthorized OHV use near these resources would reverse the commitment to these resources.

3.19. Other Required Disclosures

3.19.1. Forest Plan Consistency

The Motor Vehicle Use Map (MVUM) published after release of the decision will function as the new Travel Map for the Dixie National Forest. As noted on page IV-3 of the Forest Plan, "Review the travel map annually and revise as necessary. The most current revisions will become a part of the management direction for the Forest Plan." The MVUM meets this requirement and will become part of the management direction of the Forest Plan.

In general, all alternatives are compliant with the Forest Plan with the exception of the areas noted below. More detail on each resource area's review of Forest Plan consistency can be found in the specialist reports.

3.19.1.1. Road Density

Guideline 1 in the Forest Plan under Transportation System Management states, "Road densities should not exceed 2 miles per square mile of wildlife habitat. The higher the road density, the more wildlife habitat effectiveness is decreased" (USDA 1986, p IV-50). In 1998, the Dixie Forest Supervisor provided direction on interpreting and using the two miles per square mile open road density guideline on the Forest. The following question and answer are taken from his memo.

> **Question #5:** How do we apply the guideline to areas currently having more than two miles/square mile?
>
> **Answer:** Where there is an existing condition of open, motorized travelway density greater than the two miles/square mile guideline, the new project should strive to reduce or achieve this guideline. Compliance with the Forest Plan is assumed if habitat effectiveness on the project area remains constant or is increased, even if open, motorized travel density exceeds two miles/square mile (USDA 1998, p. 2).

Useable habitat for mule deer and Rocky Mountain elk were analyzed for habitat effectiveness. The *Wildlife Specialist Report* calculated road densities within individual Wildlife Management Units (WMUs) (USDA 2009p). Habitat effectiveness would remain constant or increase within all WMUs under all of the alternatives, even though some WMUs would continue to have an Open Motorized Road Density (OMRD) exceeding two miles/square mile. The bulleted list below identifies those WMUs that exceed two miles/square mile by alternative.

- **Alternative A:** Panguitch Lake, Paunsaugunt, and Zion WMUs
- **Alternatives B, C, and D:** Zion WMU
- **Alternative E:** Panguitch Lake, Paunsaugunt, and Zion WMUs

3.19.1.2. Cross-country Travel

Cross-country travel is currently allowed on 61 percent of the Forest (USDA 2005a). All of the action alternatives would require an amendment to the Forest Plan in order to comply with the

Travel Rule, which prohibits motor vehicle use off designated roads, trails, and areas (36 CFR 212.50 (a)). The amendment would revise all references to cross-country travel to reflect the prohibition on cross-country motorized travel.

3.19.1.3. Scenery Integrity

In 2000 the Forest Plan was amended to move from the Visual Management System to the Scenery Management System. As part of the amendment, the Forest was mapped for **Concern Levels**, which describe the current condition of the scenic resources, and **Scenic Integrity Objectives**, which describe the objectives for management or desired future conditions.

Two motorized trails comprising 1.26 miles are proposed for construction in the Brian Head area on the Cedar City Ranger District in Alternatives D and E. Both of these trails would reduce the Scenic Integrity Objectives of their surrounding areas from High to Moderate, but would still meet the identified Concern Levels as identified in the Forest Plan. As such, the resulting drop in Scenic Integrity Objectives in these two alternatives would be within the parameters of the Forest Plan amendment and no further amendment would be needed. See the *Scenery* section beginning on page 3-85 for more information on the effects of the two trails on scenery and on the 2000 amendment.

3.19.1.4. Inventoried Roadless Areas

Implementation of any of the alternatives would be consistent with the Dixie National Forest's Forest Plan. Every alternative except Alternative A, the No Action Alternative, where cross-county travel is allowed, would reduce the risk of additional impacts to roadless and unroaded and undeveloped characteristics. Alternative E would require approval from the Regional Forester to designate additional system routes within IRAs while the RACR is in place, but no Forest Plan amendment would be required.

3.19.2. Compliance with Laws and Other Direction

3.19.2.1. Endangered Species Act

The Endangered Species Act of 1973 requires that actions of federal agencies do not jeopardize or adversely modify critical habitat of federally-listed species. No critical habitat for any listed aquatic species would be adversely impacted with implementation of any of the alternatives. No critical habitat for any listed terrestrial species would be impacted with implementation of any of the action alternatives (Alternatives B, C, D, and E).

3.19.2.2. Clean Water Act

The Clean Water Act requires each state to implement its own water quality standards. The State of Utah's Water Quality Antidegradation Policy requires maintenance of water quality to protect existing instream Beneficial Uses on streams designated as Category 1 High Quality Waters. All surface waters geographically located within the outer boundaries of the Dixie National Forest, whether on private or public lands, are designated as High Quality Waters

(Category 1). This means they will be maintained at existing high quality. New point sources will not be allowed, and non-point sources will be controlled to the extent feasible through implementation of Best Management Practices (BMPs) or regulatory programs (UAC 2008b).

The State of Utah and the Forest Service have agreed through a 1993 Memorandum of Understanding to use the standards and guidelines in the Dixie National Forest's Forest Plan and FSH 2509.22 Soil and Water Conservation Practices (SWCPs) as the BMPs (USDA 1993). The use of SWCPs as the BMPs meets the water quality protection elements of the Utah Nonpoint Source Management Plan.

Increased contributions to any 303d listed stream is not anticipated in any alternative except Alternative A, where cross-country travel would allow additional impacts to wetlands, floodplains, and stream channels. The Beneficial Uses and High Quality of water in the streams draining the analysis area would be maintained to the extent feasible during and following project implementation through the proper implementation of Best Management Practices (the Soil and Water Conservation Practices) as described within the project-specific design features.

3.19.2.3. Executive Order 11644 of February 8, 1972

Use of Off-road Vehicles on the Public Lands
As amended by Executive Order 11989 of May 24, 1977.

Executive Order (EO) 11644, as amended, provides direction for federal agencies to establish policies and procedures to control and direct the use of OHVs on public lands to: 1) protect the resource of those lands; 2) promote the safety of all users of those lands; and 3) minimize conflicts among various users of those lands. In response, the Forest Service developed regulations at 36 CFR 216, 219, and 295. Under these regulations OHV use can be restricted or prohibited to minimize: 1) damage to soil, watershed, vegetation, or other resources of the public lands; 2) harm to wildlife or wildlife habitats; or 3) conflicts between the use of OHVs and other types of recreation.

Travel planning is an allocation process based on social and resource concerns. The Dixie National Forest has restricted motorized travel to designated routes in some areas of the Forest since the late 1970s. Additionally, the Forest issues a Travel Map that defines travel opportunities and restrictions on Forest roads and trails. The Dixie Travel Map is reissued whenever substantial changes have been made, with the most recent version dated 2005 (USDA 2005a).

Each of the action alternatives analyzed in this EIS makes substantial improvements in reducing redundant routes and minimizing resource impacts and use conflicts as required by 36 CFR 212.55 and EO 11644.

3.19.2.4. Executive Order 11988 of May 24, 1977

Floodplain Management

This order requires the Forest Service to provide leadership and to take action to (1) minimize adverse impacts associated with occupancy and modification of floodplains and reduce risks of

flood loss, (2) minimize impacts of floods on human safety, health, and welfare, and (3) restore and preserve the natural and beneficial values served by floodplains.

Hydrology: The Forest Service is proposing to reduce or maintain the number of roads within the riparian influence zone in every alternative except Alternative A, where cross-county travel would allow for additional impacts to floodplains.

Aquatic Biota: None of the alternatives would result in an increase in impacts within floodplain areas. Alternative A would result in a continuation of the current motorized travel management strategy across the Forest. All action alternatives would result in a decrease of impacts within floodplain areas, primarily through the elimination of open cross-country travel on the Forest. Thus, all alternatives ultimately comply with the intent of Executive Order 11988.

3.19.2.5. Executive Order 11990 of May 24, 1977

Protection of Wetlands

This order requires the Forest Service to take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

Hydrology: The Forest Service is proposing to reduce or maintain the number of roads within the riparian influence zone in Alternatives B, C, and D. In Alternatives A and E, road density in the riparian influence zones would either increase or remain the same. In Alternative A, cross-country travel would allow for additional impacts to wetlands, while in Alternative E, road density in riparian influence zones would increase.

Aquatic Biota: None of the alternatives would result in an increase in impacts within wetland and riparian areas. Alternative A would result in a continuation of the current motorized travel management strategy. All action alternatives would result in a decrease of impacts within wetland and riparian areas, primarily through the elimination of open cross-country travel on the Forest. Thus, all alternatives ultimately comply with the intent of Executive Order 11990.

3.19.2.6. Executive Order 12898 of February 11, 1994

Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations

Executive Order 12898 directs the agency to identify and address, "...as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...." In its outreach and scoping (public involvement) processes, the forest did not identify any potentially disproportionately high and adverse human-health or environmental effects to minority or low-income populations.

The Dixie National Forest is located within six counties: Garfield, Iron, Kane, Piute, Washington, and Wayne. Within these counties, the largest minority groups are Native

Americans and Hispanics of any race. Their percentage of the total populations of these counties in 2000 is shown in the table below.

Table 3-38. Native American and Hispanic Populations by County

County	American Indian and Alaska Native Population (% of Total)	Hispanic (of any Race) Population (% of Total)
Garfield	1.8	2.9
Iron	2.2	4.1
Kane	1.6	2.3
Piute	1.2	4.5
Washington	1.5	5.2
Wayne	0.4	2.0

Source: Utah Governor's Office of Planning and Budget 2003.

The Native American Tribes bordering the Dixie are the Navajo, Hopi, Southern Utah Paiute, and Kaibab Paiute. The Forest consulted with the Tribes through letters during the scoping period. The alternatives have been analyzed for their effect on the human and natural environment, and specifically on their effect to cultural resources. See the *Cultural Resources* section of this chapter beginning on page 3-116 and the *Cultural Resources Specialist Report* (USDA 2009f) for more information.

Low-income populations are present in the six counties. The following information is from the Utah Governor's Office of Planning and Budget (GOPB 2003).

- As of 1999, 8.1 percent of Garfield County's population was in poverty (the federally established poverty threshold in 1999 for a family of four was $16,895). Garfield County's economy in the past was based on lumber, farming, and cattle. Now much of the economy is based on tourism, spurred in part by the establishment of Grand Staircase-Escalante National Monument. Slow job growth and relatively high unemployment are constant concerns.
- Iron County had a 19.2 percent poverty rate in 1999. It has a more balanced and broadly based economy than many other southern Utah counties. Cedar City, the largest community, is a regional trade center and supplier of services. It is also home to Southern Utah University, the Utah Shakespearean Festival, and other festivals. Proximity to national parks and monuments is also an important element in Cedar City's economy.
- Kane County had a 7.9 percent poverty rate in 1999. Recreation and tourism, based primarily on Lake Powell and national parks and monuments, have long been a substantial part of the county's economy.
- Piute County had a 16.2 percent poverty rate in 1999. Agriculture is the primary employer in the county, although government employment also plays an important role. Tourism has not played as large a role as in the surrounding counties, but many businesses rely on some tourist trade to remain viable.
- Washington County had a poverty rate of 11.2 percent in 1999. Washington is the most urbanized county in southern Utah. While it began as an agricultural area, tourism and winter residences began to change the region's character in the 1960s. As St. George grew into an urban area, trade, transportation, and utilities became the largest sectors of the county's economy.

- Wayne County had a 15.4 percent poverty rate in 1999. Agriculture was the dominant industry into the 1980s. Since then, agriculture's economic role has declined, and the tourism and education sectors (e.g., youth wilderness therapy programs) have grown significantly.

3.19.2.7. Executive Order 13186 of January 10, 2001, and the Migratory Bird Treaty Act

Responsibilities of Federal Agencies to Protect Migratory Birds

Executive Order 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practical, adverse impacts on migratory birds' resources when conducting agency actions. This order directs agencies to further comply with the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and other pertinent statutes. This analysis is compliant with the National Memorandum of Understanding between the USDA Forest Service and the U.S. FWS to promote the conservation of migratory birds (USDA 2008g). In addition, the Dixie National Forest is compliant with the letter of understanding to the U.S. FWS Utah Field Office (USDA 2007a) concerning compliance with the Migratory Bird Treaty Act and Executive Order 13186. This letter provides an updated state-wide strategy for addressing migratory birds in Forest Service planning and project documents.

Species selected for this analysis were chosen based on the process identified in this strategy. Bird species selected for this analysis were derived from a compilation of species included in the Utah Partners in Flight Conservation Strategy (Parrish et al. 2002), the Utah Comprehensive Wildlife Conservation Strategy (Gorrell et al. 2005), and the U.S. FWS Birds of Conservation Concern bird lists (USDI 2002). Birds included in these publications include those at higher risk due to habitat loss or degradation, with highest-risk species given priority status in the Utah Partners in Flight Conservation Strategy listing (Parrish et al. 2002).

For this analysis, the black-throated gray warbler, Brewer's sparrow, and broad-tailed hummingbird were selected as representative species to analyze the effects of motorized impacts on potentially suitable habitats. Additional migratory bird species were not selected because effects to all other habitat types were analyzed for other species in this analysis. The U.S. FWS was informed of the selection of these neotropical migratory species for the Motorized Travel Plan analysis in April 2009 (USDA 2009a).

3.19.2.8. Executive Order 13443 of August 16, 2007

Facilitation of Hunting Heritage and Wildlife Conservation

This order directs federal agencies that have programs and activities that have a measurable effect on public land management, outdoor recreation, and wildlife management to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat.

This DEIS and the associated specialist reports have considered the management of wildlife habitats (*Wildlife* and *Aquatic Biota* reports), trends in and effects on hunting opportunities, and

economic and recreational values of hunting (*Social and Economic* and *Recreation and Scenery* reports). Resource specialists have considered the programs and plans of other state and federal wildlife agencies, have worked collaboratively with them in their professional roles, and have coordinated with them in development of this travel management plan. These other agencies have been kept abreast of this travel management plan (see Chapter 4: Consultation and Coordination).

3.19.2.9. Roadless Area Conservation Rule

The Forest Service identified IRAs nationwide as part of its 1972-1985 Roadless Area Review and Evaluation process. The purpose of the process was to identify all lands exhibiting wilderness characteristics, which could be considered for inclusion in the National Wilderness Preservation System. All the IRAs in the nation were reviewed again by the Forest Service in 1999 under the Roadless Area Conservation Initiative. The initiative recognized the value of large tracts of land not yet fragmented by roads and sought to protect these areas from increasing development pressure. In November 2000, the Forest Service issued the Final EIS for the proposed Roadless Area Conservation Rule (RACR), which was published in the Federal Register on January 21, 2001 (66 FR 3244).

The RACR currently applies to Forest Service actions in all IRAs. RACR prohibits a Forest Service responsible official from approving road construction and reconstruction and the cutting, sale, or removal of timber in IRAs except when the responsible official determines certain circumstances apply. The rule also does not apply in the following circumstances:

1. A road is needed to protect public health and safety in cases of an imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property.
2. A road is needed to conduct a response action under the Comprehensive Environmental Response, Compensation, and Liability Act or to conduct a natural resource restoration action under the Act, Section 311 of the Clean Water Act, or the Oil Pollution Act.
3. A road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty.
4. Road realignment is needed to prevent irreparable resource damage that arises from the design, location, use, or deterioration of a classified road and that cannot be mitigated by road maintenance. Road realignment may occur under this paragraph only if the road is deemed essential for public or private access, natural resource management, or public health and safety.
5. Road reconstruction is needed to implement a road safety improvement project on a classified road determined to be hazardous on the basis of accident experience or accident potential on that road.
6. The Secretary of Agriculture determines that a Federal Aid Highway project, authorized pursuant to Title 23 of the United States Code, is in the public interest or is consistent with the purposes for which the land was reserved or acquired and no other reasonable and prudent alternative exists.
7. A road is needed in conjunction with the continuation, extension, or renewal of a mineral lease on lands that are under lease by the Secretary of the Interior as of January 12, 2001 or for a new lease issued immediately upon expiration of an existing lease. Such road construction or reconstruction must be conducted in a manner that minimizes effects on surface resources, prevents unnecessary or unreasonable surface disturbance, and complies with all applicable lease requirements, land and resource management plan direction, regulations, and laws. Roads constructed or reconstructed

pursuant to this paragraph must be obliterated when no longer needed for the purposes of the lease or upon termination or expiration of the lease, whichever is sooner.

Several groups and states have filed lawsuits challenging the 2001 RACR. As a result of ruling on February 6, 2007, the 2001 RACR currently governs the management of IRAs on NFS lands.

3.20. Resources Not Discussed in Detail

3.20.1. Air Quality

As required by the Clean Air Act, the Environmental Protection Agency (EPA) has established health-based National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. NAAQS have been set for the following six principal pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), particulate matter (PM), ozone (O_3), and sulfur dioxide (SO_2).

The State of Utah Department of Environmental Quality, Division of Air Quality, monitors the levels of these pollutants. When pollutants are above specified levels, an area is described as a non-attainment area; when below specified levels, an area is described as an attainment area. The Dixie National Forest is in attainment for all NAAQS pollutants (UDAQ 2006).

In addition to NAAQS, federal Prevention of Significant Deterioration regulations, added to the Clean Air Act by amendment in 1977, limit the degradation of air quality in any area that is in attainment. All areas are in one of three classes: Class I, II, or III. Class I areas include wilderness areas meeting specific criteria and all national parks over 6,000 acres in size. Class III designation is for industrial areas. All other areas are considered Class II. The Dixie National Forest is a Class II area for air quality, while neighboring Bryce Canyon, Capitol Reef, and Zion national parks are Class I areas (UAC 2008a).

Motorized vehicle use on the Forest can contribute to air pollution through particulate matter (fugitive dust from travel on unpaved surfaces) and emission of carbon monoxide. All action alternatives would reduce fugitive dust sources through a reduction in the miles and/or areas open to motorized travel (while Alternative E would increase the miles of designated routes, the elimination of cross-country travel on 61 percent of the Forest would still result in a decrease in potential fugitive dust sources). The amount of carbon monoxide emitted from recreational motorized vehicle use or administrative motorized vehicle use in implementing the travel plan is not expected to vary significantly between alternatives. Even under Alternative A there would be no increase in impacts to air quality over the existing condition where the Dixie National Forest is in attainment.

Attainment of air quality standards would likely continue under all alternatives. Implementation of any of the alternatives is not expected to negatively affect air quality or affect the Forest's Class II classification or the Class I designation of any of the national parks in southern Utah.

3.20.1.1. Climate Change

The information in this section is summarized from the *Climate Change Analysis* prepared for this motorized travel plan (USDA 2009c). Please see that report for more detail.

3.20.1.1.1. Background

The Forest Service is currently investing in considerable research and study of the potential effects of forest management on climate change.[4] Forest Service Chief Abigail Kimbell has organized an agency-wide response to climate change and has directed the agency to concentrate on 16 priorities for action. While many of these priorities and much of this information is generally not applicable at the project level, we have consulted much of this research (Loewen 2008).

On January 16, 2009, the Washington Office of the Forest Service released guidance to Forest Service units regarding the incorporation of climate change science into project-level NEPA documents (USDA 2009d). This guidance document provides that units should consider two kinds of climate change effects. First, units may, where appropriate, consider the effect of a project on climate change. Second, units may, where appropriate, consider the effect of climate change on a proposal. This latter category may include the effect of changed snowfall regimes on special use permit issuance for ski areas or the effect of rainfall changes on reforestation following a timber sale. Because potential changes in climate will have no effect on the designation of motorized routes, this second category of effects will not be considered further.

3.20.1.1.2. Effect of Motorized Route Designation on Climate Change

Agency direction defines the emission of greenhouse gases (GHG) as the direct climate change effect of a project. Further, the interaction of emissions with atmospheric concentrations of GHG such that they impact the climate is defined as the potential indirect climate change effect.

Under this definition, there is no direct effect associated with any of the motorized travel plan action alternatives. The action alternatives do not authorize the emission of GHG; the action alternatives do not limit the emission of GHG; the action alternatives are unlikely to change the emission of GHG as compared to the no action alternative. In short, GHG emissions from motorized travel on the Dixie National Forest are not directly affected by the designation of routes.

On the other hand, route designation may have a slight beneficial effect on climate change by restricting motorized vehicles to designated routes and protecting forest resources from damaging traffic. Forest Service direction on climate change consideration notes, “[i]t is possible, and in some projects likely, that proposals may meet the Agency’s mission while also enhancing the resilience or adaptive capacity of resources to the potential impacts of climate change. For example, projects designed to restore the health, resilience, and productivity of forested ecosystems may also improve the capability of the stands or landscape to withstand climate change stresses” (USDA 2009c). While this project is not specifically designed to reduce the emission of GHG, it may have a slight benefit associated with enhancing the resilience and productivity of forested ecosystems.

Regarding indirect effects, Agency direction states, “[b]ecause greenhouse gases mix readily into the global pool of greenhouse gases, it is not currently possible to ascertain the indirect effects of emissions from single or multiple sources (projects). Also, because the large majority of Forest Service projects are extremely small in the global atmospheric CO_2 context, it is not presently possible to conduct quantitative analysis of actual climate change effects based on individual projects” (USDA 2009c). Again, the designation of motorized routes on the Dixie

[4] See http://www.fs.fed.us/climatechange/.

National Forest does not have a measurable indirect effect as compared with the no action alternative.

Because the designation of motorized routes has no quantifiable direct or indirect effect on climate change, it cannot have a cumulative effect.

3.20.1.1.3. Summary

Understanding and documenting the effects of Forest Service decisions on climate change is an important priority for the agency under Chief Abigail Kimbell. The Washington Office has issued guidance to units outlining procedures for assessing the effect of proposals on the climate. Following that guidance, the Interdisciplinary Team considered the potential direct effect of route designation on the emission of GHG and determined that it would have no direct effect. The Interdisciplinary Team also considered the indirect effect of potential emissions causing changes in the climate due to increased atmospheric gases and concluded that there are no measurable indirect effects from route designation.

Chapter 4: Consultation and Coordination

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Chapter 4: Consultation and Coordination

4.1. Preparers and Contributors

Table 4-1. Interdisciplinary Team Members

Name and Unit	Qualifications	Team Role/Responsibility
Lydia Allen, Cedar City and Pine Valley RDs (now Idaho Panhandle NFs)	West Zone Wildlife Biologist	Route evaluation, Wildlife Specialist Report (through September 2008)
LeeAnn Beekman, Supervisor's Office	GIS Specialist	GIS data management, mapping
David Bolsover, Supervisor's Office (now Modoc NF)	Writer/Editor	Project Record, Environmental Justice (through May 2007)
Steven Brazier, Supervisor's Office (now Rogue River-Siskiyou NF)	Forest Fisheries Biologist	Route evaluation, Aquatic Biota Specialist Report
Chris Butler, Cedar City and Pine Valley RDs	West Zone Hydrologist	Route evaluation, Hydrology Specialist Report
Andi Falsetto, Supervisor's Office	Writer/Editor, Forest Plan Revision Team	Team Leader (July 2007-December 2008); Co-Team Leader (December 2008-present); Writer/Editor
Kirk Flannigan, Pine Valley RD	Recreation, Special Uses, and Wilderness	Recreation and Scenery Specialist Report, Special Uses Specialist Report (September 2007-present)
Bill Goodman, Escalante and Powell RDs	East Zone Hydrologist	Route evaluation, Hydrology Specialist Report
Keith Harris, Supervisor's Office	NEPA Coordinator	Roadless and Unroaded and Undeveloped Specialist Report, project oversight
Marian Jacklin, Supervisor's Office	Forest Archaeologist	Route evaluation, Cultural Resources Specialist Report
Rich Jaros, Supervisor's Office	Soil and Water Program Manager	Soils Specialist Report
Jenna Jorgensen, Supervisor's Office	Wildlife Biologist	Wildlife Specialist Report (September 2008-present)
Lew Jump, Contractor	Vegetation Specialist	Vegetation and Fire and Fuels Specialist Report
Matt Lee, Supervisor's Office	GIS Specialist	GIS data management, mapping
Susan Leslie, Supervisor's Office	Civil Engineering Technician	Route evaluation, Transportation Specialist Report, Data Management
Noelle Meier, Supervisor's Office (now Beaverhead-Deerlodge NF	Forest Landscape Architect/ Recreation Program Manager	Team Leader; route evaluation, Recreation and Scenery Specialist Report; Social and Economic Specialist Report (March 2004-June 2007)
Gretchen Merrill, Supervisor's Office	Public Service Staff Officer	Project oversight
Brian Monroe, Cedar City RD	Range Management Specialist	Rare Plants Specialist Report

Name and Unit	Qualifications	Team Role/Responsibility
Andrew Orlemann, T.E.A.M.S.	Environmental Coordinator	Team Leader (December 2008-present)
Laurie Parry, Supervisor's Office	GIS Specialist	GIS data management, mapping
Ron Riggs, Powell RD (retired)	Civil Engineering Technician	Route evaluation, Transportation Specialist Report (July 2004-July 2007)
Kathy Slack, Supervisor's Office	Forest Realty Specialist/ Special Uses	Route evaluation
Lucretia Smith, T.E.A.M.S.	GIS Group Leader, Range Specialist	Livestock Grazing Specialist Report, Noxious Weeds Specialist Report, Rare Plants Specialist Report, Data Management

Table 4-2. Forest Leadership Team Members

Name	Position and Unit
Joseph G. Black	Forest Engineer, Dixie NF (retired)
Kenton Call	Public Affairs Officer, Dixie NF
Davida Carnahan	Public Affairs Officer, Fishlake NF (transferred)
Mary Erickson	Forest Supervisor, Fishlake NF (transferred)
Dayle Flanigan	Cedar City District Ranger, Dixie NF
Diane Freeman	Ecosystem Group Leader, Fishlake NF
John Harris	Forest Engineer, Dixie NF
Glen Heaton	Administrative Officer, Dixie and Fishlake NFs
Bevan Killpack	Pine Valley District Ranger, Dixie NF
Gina Lampman	Escalante District Ranger, Dixie NF
Rob MacWhorter	Forest Supervisor, Dixie NF
Gretchen Merrill	Public Service Staff Officer, Dixie NF
Donna Owens	Powell District Ranger, Dixie NF (transferred)
Max Reid	Public Service Staff Officer, Fishlake NF (retired)
Fran Reynolds	Public Affairs Officer, Dixie NF (transferred)
Kurtis Robins	Fremont River District Ranger, Fishlake NF
Allen Rowley	Forest Supervisor, Fishlake NF
Bob Russell	Forest Supervisor, Dixie NF (retired)
Kevin Schulkoski	Ecosystem Staff Officer, Dixie NF
Lori Wood	Powell District Ranger, Dixie NF
John Zapell	Public Affairs Officer, Fishlake NF

Most all ranger district and Supervisor's Office employees assisted in the Roads Analysis process, district-level route evaluation, reviews of alternatives, review of specialist reports, and/or provided general support to the project.

Table 4-3. Employees Providing Project Support

Name and Unit	Position
Keith Adams, Escalante RD	Assistant Fire Management Officer
Dave Bell, Fremont River RD	Recreation Specialist
Evan Boshell, Powell RD	Range Management
Joni Brazier, Cedar City RD (transferred)	Hydrologist
Cindy Calbaum, Escalante RD	Recreation Specialist/Wilderness

Name and Unit	Position
Bryan Carter, Fishlake NF	Recreation Technician/OHV Manager
Alton Chappell, Fremont River RD	Recreation
Gregg Christensen, Powell RD	Zone Fuels Specialist
Daniel Condie, Cedar City RD	Range Management
Garry Domis, Cedar City RD (transferred)	Silviculturist
Dirk Durfey, Escalante RD (transferred)	Range
Phil Eisenhauer, Supervisor's Office (transferred)	Forest Silviculturist
Robert Fillmore, Fremont River RD (retired)	Timber Sale Administrator
Nick Glidden, Supervisor's Office	Forest Wilderness, Trails, and Dispersed Recreation Specialist
Kevin Greenhalgh, Supervisor's Office	Forest Fire Management Officer
Chett Hatch, Powell RD	Assistant Fire Management Officer
Pam Heavysege, Supervisor's Office	Water Rights Specialist, Ass't FOIA Coordinator
Bill Hipp, Pine Valley RD (retired)	Recreation Manager
Randy Houston, Cedar City RD (retired)	Recreation Technician
Frank Jones, Pine Valley RD	Range Management
Dave Keefe, Escalante RD	Supervisory Forester
Mark Loewen, Supervisor's Office (transferred)	Vegetation Specialist
Mark Madsen, Supervisor's Office	Forest Botanist
Amanda McAdams, Dixie and Fishlake NFs	Fire Ecologist
Dan Misciagna, Pine Valley RD	Recreation
Max Molyneux, Supervisor's Office (retired)	Forest Landscape Architect
Wayne Monger, Pine Valley RD	Fire Prevention Technician
Ron Mortensen, Escalante RD	Range Management
Andrew Orlemann, Escalante RD (transferred)	Lands/Special Uses, NEPA Coordinator
Colby Peterson, Cedar City RD	Forester
Justin Peterson, Powell RD	Range/Recreation
Joe Rechsteiner, Powell RD	Recreation Specialist
Steve Robinson, Cedar City RD	Recreation and Lands Staff Officer
Ron Rodriguez, Dixie and Fishlake NFs	Wildlife Biologist
Randy Russell, Pine Valley RD	Range Management
Pam Salmond, Supervisor's Office	Office Automation Assistant
Jake Schoppe, Powell RD	Wildlife Biologist
Cindy Sidles, Pine Valley RD (transferred)	Fuels Specialist
Boyd Smith, Powell RD	Resource Clerk
Bryant Sorensen, Supervisor's Office (retired)	Transportation Engineer
Joanne Stenten, Fremont River RD	Wildlife Biologist
David Tait, Fishlake National Forest	Forest Botanist
Kent Traveller, Cedar City RD (retired)	Recreation Manager
Vicki Tyler, Supervisor's Office (transferred)	Writer/Editor
Charlie Vaughn, Washington Office (retired)	Law Enforcement (Special Agent)
Christopher Wehrli, Fishlake NF	Environmental Coordinator
Kevin Wheeler, Cedar City RD	Forestry Technician
Nate Yorgason, Cedar City and Pine Valley RDs	West Zone Wildlife Biologist
Lisa Young, Escalante RD	Wildlife Biologist

Advanced Resource Solutions, Inc., was contracted to provide technical support for the route evaluation process. The individuals listed in the following table worked with the Interdisciplinary Team in the route evaluation process.

Table 4-4. ARS, Inc. Employees

Name	Position
Nate Holland	Planner
David Kiel	GIS/Software Specialist
Ren Scammon (transferred)	Planner/Software Specialist
Les Weeks	Land Use/Recreation Planner

4.2. Distribution of the Environmental Impact Statement

Hard copies of the FEIS are available for review at all Dixie National Forest offices and the Supervisor's Office and Fremont River Ranger District on the Fishlake National Forest.

Dixie National Forest
Supervisor's Office and
Cedar City Ranger District
1789 N Wedgewood Lane
Cedar City, Utah 84720

Escalante Ranger District
755 W Main Street
Escalante, Utah 84726

Pine Valley Ranger District
196 E Tabernacle Street, Suite 40
St. George, Utah 84770

Powell Ranger District
225 E Center Street
Panguitch, Utah 84759

Fishlake National Forest
Supervisor's Office
115 E 900 N
Richfield, Utah 84701

Fremont River Ranger District
138 S Main Street
Loa, Utah 84747

Copies are also available for review at the following libraries:

Boulder Community Library
Cedar City Public Library
Garfield County Bookmobile Library
Garfield County Bookmobile Library, Escalante Branch
Kanab City Library
Kane County Bookmobile Library
Panguitch City Library
Parowan Public Library
Piute County Bookmobile Library
Washington County Library
Washington County Library, Enterprise Branch
Washington County Library, Hurricane Valley Branch
Washington County Library, New Harmony Branch
Washington County Library, Santa Clara Branch
Washington County Library, Springdale Branch
Wayne County Bookmobile Library

This section lists those individuals and organizations who received hard copies or CDs of this FEIS. We will continue to provide hard copies and CDs to those who request them. This FEIS is also available online on the Dixie National Forest's website at http://www.fs.fed.us/r4/dixie/projects/MTP.

Federal Officials

Congressman Rob Bishop
Congressman Jason Chaffetz
Congressman Jim Matheson
Senator Bob Bennett
Senator Orrin G. Hatch

Tribes

Chemehuevi Tribe
Havasupai Tribe
Hopi Tribe
Hualapai Tribe
Indian Peak Band of Paiutes
Kaibab Paiute Tribe
Kanosh Band of Paiutes
Koosharem Band of Paiutes
Las Vegas Paiute Tribe
Moapa Band of Paiute
Moapa Tribe
Navajo Nation Forestry
Navajo Nation Traditional Cultural Program
Paiute Indian Tribe
San Juan Paiute
Shivwits Band of Paiutes

Federal Agencies

Bureau of Land Management
- Arizona Strip Field Office
- Cedar City Field Office
- Kanab Field Office
- Richfield Field Office
- St. George Field Office

Federal Aviation Administration, Northwest Mountain Region
Forest Service
- Fishlake National Forest
- Manti-La Sal National Forest
- Kaibab National Forest, North Kaibab Ranger District

National Park Service
- Capitol Reef National Park
- Cedar Breaks National Monument

Natural Resources Conservation Service, Loa Service Center
U.S. Army Engineer Division, South Pacific
U.S. Coast Guard, Environmental Management
U.S. Department of Energy, Office of NEPA Policy and Compliance

U.S. Department of the Interior, Office of Environmental Policy and Compliance
U.S. Environmental Protection Agency
- Office of Federal Activities, NEPA Compliance Division
- EIS Review Coordinator

U.S. Fish and Wildlife Service, Utah Field Office
USDA National Agricultural Library

Utah State Agencies

Governor's Office of Planning and Budget, Resource Development Coordinating Committee
Utah Department of Natural Resources
- Division of Parks and Recreation
- Division of Water Quality
- Division of Wildlife Resources

Utah Department of Transportation
Piute Soil Conservation District

County, City, and Other Local Agencies

Five County Association of Governments
Six County Association of Governments
Garfield County
Iron County
Kane County
Piute County
Washington County
Wayne County
Bicknell Town
Escalante City
Panguitch City

Organizations and Businesses

Back Country Horsemen of Utah, Southwest Chapter
Boulder Community Alliance
Brian Head OHV Association
Burton Livestock
Campfire Wood Products
Colorado State University Library
Deschutes National Forest
Eagle Mining Company
Evans Beefmasters
Forest Resource Management
Frontier Corp USA
Garkane Energy
Magotsu Water Company
Off-Road Business Association
Sand Rock Ridge Riders ATV Club
Slick Rock Ranch
Sunset Cliffs Inc.
The Wilderness Society
Utah Environmental Congress
Utah Snowmobile Association

Wasatch Mountain Club
White Sage Ranch

Individuals

Steve Albrecht
Mark Austin
Belles Family
Kay N. Benson
Tom Biller
Craig Booth
John Borg
Jeff Bulloch
Former Congressman Chris Cannon
Jim Case
Cabe and Charles Chappell
Danny and Barbara Cowan
Dustin and Harmony Cox
Mike and Kara Curtis
Barbara Fullman
David and Joyce Gardner
Max, Cody and Katie Gardner
Kevin Glassett
Walter Gove
Stan Grunewald
Brent and Julie Jackson
Helga Love
Todd R. Minchey
Ronald M. Roth
Mike Russell
Rex B. Smith
Scott E. Sojourner
Craig and Ramona Sorenson
Richard Spotts
Rita Martin Squillante
Brian Swanson
Roy P. Urie
Karen and Shirl Wade
William and Margaret Weppner
Robert Zur

Appendix A: Data Tables and Designation Key

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Disposition of Unauthorized Routes by Alternative A-6
Designation Key: Route Designation Descriptions and Crosswalks A-9

Appendix A: Data Tables and Designation Key

The tables in this appendix display route data broken out by ranger district. This is the same data displayed in the aggregated forest-wide tables in Chapter 2. All mileages are rounded to the nearest 1 mile. The designation key, including crosswalks to the open and closed summary and the Motor Vehicle Use Map (MVUM) designations, is located on page A-9.

Table A-1. Route Designation by Alternative – Cedar City Ranger District

Designation	Miles by Alternative				
	A	B	C	D	E
Administrative	231	331	317	287	202
Closed Classified	78	250	198	149	67
Closed Unauthorized	210	368	340	312	127
Existing Motorized Trail	46	46	46	46	46
Existing Non-motorized Trail	143	142	142	143	135
Existing Highway	67	67	67	67	67
Not Closed (Unauthorized)	182	0	0	0	0
Open – Street Legal	28	49	18	61	18
Open to All	724	414	511	606	1,046
Proposed Admin/Permittee ATV Only	0	0	0	0	0
Proposed Motorized Trail	1	32	46	13	1
Proposed Motorized Trail Construction	0	0	0	1	1
Proposed Non-motorized Trail	0	9	18	9	0
Seasonal	0	0	4	9	0
Total	**1,708**	**1,708**	**1,708**	**1,708**	**1,709**

Differences between totals by alternative due to minor mapping discrepancies in GIS.

Table A-2. Route Designation by Alternative – Escalante Ranger District

Designation	Miles by Alternative				
	A	B	C	D	E
Administrative	305	236	285	408	169
Closed Classified	19	256	196	65	17
Closed Unauthorized	62	266	249	213	72
Existing Motorized Trail	21	25	16	27	18
Existing Non-motorized Trail	134	132	132	133	133
Existing Highway	28	28	28	28	28
Not Closed (Unauthorized)	184	0	0	0	0
Open – Street Legal	1	1	2	1	0
Open to All	517	304	317	358	885
Proposed Admin/Permittee ATV Only	0	0	0	0	0
Proposed Motorized Trail	5	28	29	21	6
Proposed Motorized Trail Construction	0	0	0	0	0
Proposed Non-motorized Trail	1	53	66	47	1
Seasonal	87	36	44	64	36
Total	**1,364**	**1,364**	**1,364**	**1,364**	**1,364**

Table A-3. Route Designation by Alternative – Pine Valley Ranger District

Designation	Miles by Alternative				
	A	B	C	D	E
Administrative	15	183	160	55	5
Closed Classified	4	78	36	35	3
Closed Unauthorized	5	174	159	131	0
Existing Motorized Trail	0	0	0	0	0
Existing Non-motorized Trail	203	203	203	203	202
Existing Highway	18	18	18	18	18
Not Closed (Unauthorized)	193	0	0	0	0
Open – Street Legal	0	0	0	0	0
Open to All	482	215	254	456	692
Proposed Admin/Permittee ATV Only	0	0	0	0	0
Proposed Motorized Trail	0	10	69	12	0
Proposed Motorized Trail Construction	0	0	0	0	0
Proposed Non-motorized Trail	0	39	20	9	0
Seasonal	0	0	1	0	0
Total	**920**	**920**	**920**	**920**	**922**

Differences between totals by alternative due to minor mapping discrepancies in GIS.

Table A-4. Route Designation by Alternative – Powell Ranger District

Designation	Miles by Alternative				
	A	B	C	D	E
Administrative	50	137	196	171	22
Closed Classified	11	259	152	93	2
Closed Unauthorized	65	429	403	334	8
Existing Motorized Trail	9	9	9	9	9
Existing Non-motorized Trail	208	209	208	208	204
Existing Highway	8	8	8	8	8
Not Closed (Unauthorized)	377	0	0	0	0
Open – Street Legal	0	0	0	0	0
Open to All	693	339	372	563	1,169
Proposed Admin/Permittee ATV Only	0	0	0	0	0
Proposed Motorized Trail	0	13	42	15	0
Proposed Motorized Trail Construction	0	0	0	0	0
Proposed Non-motorized Trail	0	18	32	18	0
Seasonal	0	0	0	2	0
Total	**1,420**	**1,420**	**1,420**	**1,420**	**1,420**

Table A-5. Route Designation by Alternative – Teasdale Portion of the Fremont River Ranger District

Designation	Miles by Alternative				
	A	B	C	D	E
Administrative	30	72	79	41	2
Closed Classified	92	200	175	118	90
Closed Unauthorized	12	99	97	83	6
Existing Motorized Trail	21	21	18	21	17
Existing Non-motorized Trail	132	136	131	134	130
Existing Highway	18	18	18	18	18
Not Closed (Unauthorized)	87	0	0	0	0
Open – Street Legal	3	3	3	3	3
Open to All	352	172	194	301	479
Proposed Admin/Permittee ATV Only	0	0	0	0	0
Proposed Motorized Trail	0	9	17	23	2
Proposed Motorized Trail Construction	0	0	0	0	0
Proposed Non-motorized Trail	2	15	13	5	2
Seasonal	0	2	4	0	0
Total	**748**	**748**	**748**	**748**	**748**

Table A-6. Summary of Routes Open and Closed to the Public

Area	Designation	Alternative									
		A		B		C		D		E	
		Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Cedar City	Open to Public	1,171	75%	608	39%	710	45%	794	51%	1,178	75%
	Closed to Public	394	25%	948	61%	855	55%	749	49%	396	25%
	Total	1,565	100%	1,556	100%	1,565	100%	1,543	100%	1,574	100%
Escalante	Open to Public	844	69%	422	36%	437	37%	499	42%	969	79%
	Closed To Public	385	31%	758	64%	730	63%	685	58%	258	21%
	Total	1,229	100%	1,180	100%	1,167	100%	1,184	100%	1,227	100%
Pine Valley	Open to Public	693	97%	243	36%	342	49%	487	69%	712	99%
	Closed to Public	24	3%	435	64%	355	51%	221	31%	8	1%
	Total	717	100%	678	100%	697	100%	708	100%	720	100%
Powell	Open to Public	1,086	90%	368	31%	430	36%	596	50%	1,185	97%
	Closed to Public	126	10%	825	69%	750	64%	598	50%	31	3%
	Total	1,212	100%	1,193	100%	1,180	100%	1,194	100%	1,216	100%
Teasdale	Open to Public	481	78%	226	38%	254	42%	366	60%	519	84%
	Closed to Public	134	22%	371	62%	350	58%	243	40%	97	16%
	Total	615	100%	597	100%	604	100%	609	100%	616	100%
Forest-wide	**Open to Public**	**4,275**	**80%**	**1,867**	**36%**	**2,173**	**42%**	**2,742**	**52%**	**4,563**	**85%**
	Closed to Public	**1,063**	**20%**	**3,337**	**64%**	**3,040**	**58%**	**2,496**	**48%**	**790**	**15%**
	Total	**5,338**	**100%**	**5,204**	**100%**	**5,213**	**100%**	**5,238**	**100%**	**5,353**	**100%**

Differences between totals by alternative due to minor mapping discrepancies in GIS.

Table A-7. Disposition of Unauthorized Routes by Alternative – Cedar City Ranger District

Designation	Alternative									
	A		B		C		D		E	
	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Closed as "unauthorized"	210	53%	369	94%	341	87%	313	79%	128	32%
Added as "administrative"	<1	<1%	12	3%	26	7%	39	10%	<1	<1%
Added as "open to all"	2	0%	3	<1%	11	3%	25	6%	266	67%
Added as "open to full size vehicles only"	0	0%	4	1%	1	<1%	5	1%	0	0%
Added as "seasonal"	0	0%	0	0%	<1	<1%	1	<1%	0	0%
Added as "proposed motorized trail"	0	0%	3	<1%	11	3%	9	2%	1	<1%
Added as "proposed non-motorized trail"	1	<1%	4	1%	4	<1%	3	<1%	0	0%
Not closed (unauthorized)*	182	46%	0	0%	0	0%	0	0%	0	0%
Total	395	100%	394	100%	394	100%	395	100%	395	100%

Differences between totals by alternative due to minor mapping discrepancies in GIS.
* Only applicable to Alternative A. These are unauthorized routes in the 61% of Forest open to cross-country travel.

Table A-8. Disposition of Unauthorized Routes by Alternative – Escalante Ranger District

Designation	Alternative									
	A		B		C		D		E	
	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Closed as "unauthorized"	62	19%	265	80%	248	75%	212	64%	72	22%
Added as "administrative"	13	4%	34	10%	50	15%	78	24%	13	4%
Added as "open to all"	72	22%	6	2%	7	2%	11	3%	247	74%
Added as "open to full size vehicles only"	0	0%	<1	<1%	0	0%	0	0%	0	0%
Added as "seasonal"	0	0%	0	0%	0	0%	0	0%	0	0%
Added as "proposed motorized trail"	0	0%	6	2%	8	2%	11	3%	1	<1%
Added as "proposed non-motorized trail"	0	0%	19	6%	19	6%	18	6%	0	0%
Not closed (unauthorized)*	183	55%	0	0%	0	0%	0	0%	0	0%
Total	330	100%	330	100%	333	100%	330	100%	333	100%

Differences between totals by alternative due to minor mapping discrepancies in GIS.
* Only applicable to Alternative A. These are unauthorized routes in the 61% of Forest open to cross-country travel.

Table A-9. Disposition of Unauthorized Routes by Alternative – Pine Valley Ranger District

Designation	Alternative									
	A		B		C		D		E	
	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Closed as "unauthorized"	5	3%	174	88%	159	80%	131	66%	<1	<1%
Added as "administrative"	0	0%	17	9%	28	14%	19	10%	2	1%
Added as "open to all"	<1	<1%	5	2%	5	3%	37	19%	196	98%
Added as "open to full size vehicles only"	0	0%	0	0%	0	0%	0	0%	0	0%
Added as "seasonal"	0	0%	0	0%	1	0%	0	0%	0	0%
Added as "proposed motorized trail"	0	0%	0	0%	1	0%	6	3%	2	1%
Added as "proposed non-motorized trail"	0	0%	3	1%	5	3%	4	2%	0	0%
Not closed (unauthorized)*	193	97%	0	0%	0	0%	0	0%	0	0%
Total	198	100%	198	100%	198	100%	198	100%	200	100%

Differences between totals by alternative due to minor mapping discrepancies in GIS.
* Only applicable to Alternative A. These are unauthorized routes in the 61% of Forest open to cross-country travel.

Table A-10. Disposition of Unauthorized Routes by Alternative – Powell Ranger District

Designation	Alternative									
	A		B		C		D		E	
	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Closed as "unauthorized"	65	14%	429	94%	402	89%	334	74%	8	2%
Added as "administrative"	5	1%	18	4%	40	9%	84	18%	5	1%
Added as "open to all"	7	2%	3	1%	6	1%	25	6%	442	97%
Added as "open to full size vehicles only"	0	0%	0	0%	0	0%	0	0%	0	0%
Added as "seasonal"	0	0%	0	0%	0	0%	0	0%	0	0%
Added as "proposed motorized trail"	0	0%	0	0%	1	<1%	7	1%	0	0%
Added as "proposed non-motorized trail"	0	0%	5	1%	5	1%	5	1%	0	0%
Not closed (unauthorized)*	377	83%	0	0%	0	0%	0	0%	0	0%
Total	454	100%	454	100%	454	100%	454	100%	455	100%

Differences between totals by alternative due to minor mapping discrepancies in GIS.
* Only applicable to Alternative A. These are unauthorized routes in the 61% of Forest open to cross-country travel.

Table A-11. Disposition of Unauthorized Routes by Alternative – Teasdale Portion of the Fremont River Ranger District

Designation	Alternative									
	A		B		C		D		E	
	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Closed as "unauthorized"	12	11%	98	98%	94	94%	82	82%	6	6%
Added as "administrative"	0	0%	1	1%	3	3%	8	8%	0	0%
Added as "open to all"	5	5%	1	1%	1	1%	5	5%	98	94%
Added as "open to full size vehicles only"	0	0%	0	0%	0	0%	0	0%	0	0%
Added as "seasonal"	0	0%	<1	<1%	<1	<1%	0	0%	0	0%
Added as "proposed motorized trail"	0	0%	0	0%	1	1%	4	4%	0	0%
Added as "proposed non-motorized trail"	0	0%	<1	<1%	<1	<1%	<1	<1%	0	0%
Not closed (unauthorized)*	87	84%	0	0%	0	0%	0	0%	0	0%
Total	104	100%	100	100%	100	100%	100	100%	104	100%

Differences between totals by alternative due to minor mapping discrepancies in GIS.
* Only applicable to Alternative A. These are unauthorized routes in the 61% of Forest open to cross-country travel.

Table A-12. Designation Key: Route Designation Descriptions and Crosswalks

Designation	Description	Crosswalk to Open and Closed Summary	Crosswalk to MVUM Designations
Administrative	Maintenance Level 1 routes	Closed to the public	N/A
Closed Classified	Classified routes to be decommissioned from the system	Closed to the public	N/A
Closed Unauthorized	Unauthorized routes to be closed to the public (not added to the system)	Closed to the public	N/A
Existing Motorized Trail*	Motorized trails currently on the system	Open to the public	Trails Open to Vehicles 50" or Less in Width
Existing Non-motorized Trail*	Non-motorized trails currently on the system	Open to the public	N/A
Existing Highway*	Highways currently on the system	Open to the public	Other Public Roads
Not Closed (Unauthorized)	Unauthorized routes in the 61% of the Forest currently open to cross-country travel. Only applicable to Alternative A, the No Action Alternative.	Alt. A - Open to the public Alts. B-E - *Not included in either category*	N/A**
Open – Street Legal	Open to all street legal vehicles; no ATVs permitted	Open to the public	Roads Open to Highway Legal Vehicles Only
Open to All	Open to all motorized vehicles	Open to the public	Roads Open to All Vehicles
Proposed Admin/Permittee ATV Only	Proposed as admin ATV only and permittee ATV only	Closed to the public	N/A
Proposed Motorized Trail	Either a classified road or an unauthorized route proposed to be added to the system as a motorized trail	Open to the public	Trails Open to Vehicles 50" or Less in Width
Proposed Motorized Trail Construction	Proposed new motorized trail construction	Open to the public	Trails Open to Vehicles 50" or Less in Width
Proposed Non-motorized Trail	An unauthorized route proposed to be added to the system as a non-motorized trail	*Not included in either category*	N/A
Seasonal	Seasonal closures for wildlife concerns; open to the public after closure season. All are unique routes; no duplicates of previous categories	Open to the public	Seasonal Designation

* Miles are the same across all alternatives.

** Under Alternative A, those unauthorized routes in the 61% of the Forest currently open to cross-country travel would not be added to the Forest Transportation System and would therefore not appear on the MVUM as routes. However, but again only in Alternative A, those areas currently open to cross-country travel would be shown as "Open to Cross-country Travel" on the MVUM and unauthorized routes within those areas would be available for public use.

N/A: Not applicable as the MVUM only shows those routes open for public motorized use.

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Appendix B: Response to Comments

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B.1. Introduction

Approximately 175 letters, emails, and other documents were received during the 60-day public comment period on the DEIS. The original 45-day comment period was extended in response to public request from May 23 to July 22, 2008. All public comments were evaluated by a content analysis team comprised of Interdisciplinary Team members. This appendix constitutes a summary of all substantive comments as required by 40 CFR 1503.4(b). All comments themselves are available from the project record upon request. Comment text included here is included verbatim except for minor spelling and formatting standardization.

In accordance with 40 CFR 1503, the Agency has evaluated the comments that were received in response to the Draft Environmental Impact Statement. A number of comments were received that were general in nature and did not meet the criteria in 40 CFR 1503.4. These comments did not:

- Modify an alternative, including the proposed action,
- Develop and evaluate alternatives not previously given serious consideration by the Agency,
- Supplement, improve, or modify its analyses, or
- Make factual corrections.

The Forest Service has identified categories for those comments that were general in nature and did not warrant a detailed response. These were categorized under the following headings:

- Concern is outside the scope or irrelevant to the proposed action and decision (such as implementation),
- Means of addressing the concern are already decided by law, regulation, or policy,
- Concern can be better addressed through another decision process, and
- General comment, opinion, or position statement.

While some of the comments were general in nature, a reference to the analysis was provided in the response where applicable.

B.2. Concern Outside the Scope or Irrelevant to the Proposed Action

Letter-Comment	Comment	Response
18-2	…one of my dreams is to be able to watch my children "grow up" on the Boulder Mountain with my parents – their grandparents. I am excited to take them to the Boulder top to see the earth below them and gain some perspective about this great big world we all live in as my parents did with me many times over. It will be impossible for both my children and my parents to traverse to the mountain tops without road access in the future.	The Boulder Top management plan was a previous decision and is thus outside the scope of this document. Please see FEIS section 2.4.12 for further information.
100-1	we are in favor of more NON motorized areas to be set aside, we want to protect the fragile land down here, to have places for QUIET, and cleaner air.	Outside scope of this decision. Please refer to FEIS section 1.12.
50-2	The current travel plan fails the make any provision for "lay down areas or trail heads". These facilities are necessary for visitors from outside the Dixie national Forest that arrive with their ATV's on trailers or pickups. A "lay down area or trail head" should be defined as a parking area with basic restroom facilities and a kiosk containing a current trail map and trail information of the normal travel lanes to a supporting highway. 3. Several recommend "lay down areas or trail heads" are. A. Upper Bear Flat area just south of Brian Head no UT 143. B. Sidney Valley Road and Red Desert trail on UT 143 C. Deer Valley area no UT 14 west of Duck Creek(co-locate with proposed snowmobile parking area) D. Location to be determined off UT 20 convenient to motorized travel trails.	This topic is better addressed through other site-specific analysis based on current and anticipated conditions. Creation of new parking/unloading areas is outside the scope of this project. Please reference FEIS section 1.12. For a list of current loading/unloading areas, please refer to the *Recreation and Scenery Specialist Report*, section 3.3.3.1. Also see FEIS section 1.5.

B.3. Implementation

Letter-Comment	Comment	Response
95-3	I believe you need to add a fourth "E" to your planned strategy – evaluation. A monitoring plan which includes performance measures and ongoing evaluation should be developed and implemented to assess your success in implementing the Motorized Travel Plan.	Implementation of the Dixie National Forest Motorized Travel Plan is outside the scope of the MTP decision; however, the Forest will develop an implementation plan that will comply with guidance provided in the *Motor Vehicle Route and Area Designation Guide* (USDA 2005c, pages 34-36).
119-53	My comments on the DNF Motorized Travel Plan Alternative D are as follows: Every effort should be made to encourage and enhance multiple uses of this forest through an active motorized travel management plan. That plan should consist of proper signing, good maps, proper education in responsible use, and appropriate enforcement.	See response to comment 95-3 on page B-4.
125-22	Implement a timeline and priorities for route decommissioning…Each route, of course, has its own set of circumstances that require appropriate closure methods. In order to make the closure implementation process speedy and effective, we suggest that the Dixie NF make and implement a clear plan of priorities and methods for individual route closures. In addition to heightening the importance of physical closures, such a plan would be a valuable tool in securing additional funding for priority areas, working with volunteer groups to implement easier closures, and soliciting expertise on more complex topics such as recontouring. The Three Forests Coalition, particularly Wildlands CPR, would be happy to offer help with this part of travel plan implementation. We recommend that such a plan could include the following elements: • A complete list of all closed routes, with nearby or linked routes that can be served by the same closure project grouped together. For each route, the following variables should be determined: 1. A "damage occurring" level, 1-5 or similar rating, based on the amount of damage occurring or imminent to the route area (e.g. potential slope failure, stream sedimentation, intrusion into critical habitat, incursions onto nonmotorized trails) 2. A "recommended method of closure" category, based on the nature of	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
	the surrounding terrain and the current use situation (e.g., full road removal and slope recontour, blocking with logs, ripping the first hundred yards, lining a roadside with large rocks) 3. An "anticipated law enforcement presence" level, estimating the number of times per year (or month, or week) a law enforcement officer could visit the closed route 4. An "ease of physical closure" level, based on the recommended method of closure and the ease of implementing that method (e.g. accessibility of site for equipment) 5. Estimated cost of physical closure • Priority Schedule. Based on the above factors, a priority category for closure should be assigned to each route group. Each category should have a deadline for completion of closures. For example, a route group with a high damage level that could be fairly easily accessed, ripped and blocked might receive a Category One designation, with closure to be accomplished within one year. • Creative implementation suggestions (e.g., use of professional contractors, involvement of citizen volunteer groups, availability of funds from the Legacy Roads Remediation Initiative or other sources)	
125-139	Response to public assistance in monitoring, mapping, or evaluation. SMU Alternative: The Forest provides a response to individuals who submit independent monitoring, mapping or evaluation that meets the Forest's standards, indicating how the information has been or will be used by the Forest. If the Forest judges the mapping, monitoring, or evaluation to have not met its standards, the Forest explains this to those who have submitted the data. (p. 85)	See response to comment 95-3 on page B-4.
115-13	We appreciate the opportunity to be involved in the resources management planning of the Dixie National Forest and request cooperation on specific road closures (i.e., method and level of closure) that may affect our ability to patrol our border or respond to emergency situations.	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
115-9	We also recommend that the Dixie National Forest coordinate with park and monument staff to determine the most effective means of providing access to agency personnel and other appropriate individuals to the Dry Bench area.	See response to comment 95-3 on page B-4.
59-2	Monitoring: Please describe or reference the document that provides details regarding monitoring of resource impacts (improvement or decline). Will an adaptive management plan be used? Please describe how the Forest Service will conduct the essential monitoring to ensure that the project is meeting objectives and mitigating impacts as predicted. Please describe financial resource commitments to such activities.	See response to comment 95-3 on page B-4.
17-1	What will happen on the ground once the Plan is approved and filed? After a career working as a Ranger with the NPS and BLM, I saw over and over again plans developed, finalized, then filed, then forgotten. I hope we don't see the same here! Once the Plan is printed, how is it going to be implemented?	See response to comment 95-3 on page B-4.
108-14	Local stake holder community groups familiar with local issues could be formed to partner with DNF to assist with on-going implementation of the Plan, such as route signing, monitoring and maintenance issues. We support the idea of establishing a standing citizen Task Force. This could also promote local community 'buy-in' and education.	See response to comment 95-3 on page B-4.
121-2	As we understand it, it is very questionable whether the Forest Service has adequate resources to effectively implement a Motorized Travel Plan. We support the alternative that includes the fewest motorized road miles and places the most stringent restrictions on motorized travel. Failing the adoption of Alternative B, we would support Alternative D, if the Forest Service actually has the resources to implement the "Three E" Strategy.	See response to comment 95-3 on page B-4.
108-2	We recommend a continuing ground-truthing monitoring process will be needed to effectively implement the MTP and provide a realistic assessment of evolving conditions on the forest.	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
115-15	In order for this plan to be successful, however, adequate funding would need to be secured. The installation and maintenance of appropriate signing, adequate law enforcement, essential maintenance staff, and the production of user-friendly recreational maps will all be required for the Dixie NF MTP to achieve long-term success. A deficiency in any of these areas would likely result in the failure of this planning effort. Regardless of which alternative is chosen and future funding levels, implementation of the Dixie MTP will be a long and difficult process.	See response to comment 95-3 on page B-4.
33-1	No matter what alternative is chosen, I don't believe the Forest Service will enforce any new rules. Currently rules and regulations are routinely ignored and the Forest Service management is considered "loose" by the locals. Whether it is by will or just plain poor management, I am not sure. I truly believe this situation is out of control and the Forest Service is totally helpless to regain control of our national forest (at least by current managers). Again, whether it's by will, incompetence or lack of financial support, I don't know.	See response to comment 95-3 on page B-4.
95-1	I must support Alternative B found in the Motorized Travel Plan Draft Environmental Impact Statement (DEIS). I also strongly support limiting motorized cross country travel. My previous comments consistently ask whether the Forest Service has adequate resources to effectively implement a Motorized Travel Plan. Without this information, I can only support the alternative that includes the fewest motorized road miles and places the most stringent restrictions on motorized travel. I possibly could support Alternative D, but not without knowing whether the Forest Service actually has the resources to implement the “Three E” Strategy you presented at the open house.	See response to comment 95-3 on page B-4.
125-21	We urge the Dixie NF to establish a standing citizen Task Force that will review the reality of implementation, environmental impacts, and enforcement of the Record of Decision and Alternative adopted by the Forest following release of the Final EIS. This Task Force should be selected by the Forest Supervisor from among applicants who have demonstrated: 1. Active interest in sound implementation of the new Dixie Travel Plan 2. Ability to work in a collegial manner with people who may not agree with them	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
	3. Interest in examining on-ground outcomes of the Travel Plan 4. Interest in considering verifiable field and scientific data regarding efficacy of specific mitigation methods; and impacts of motorized use on ecosystems, communities, species sensitive to motorized use, and non-motorized forest users. The Task Force should include a balanced membership of those who have a track record of advocating for motorized use of the Forest and those who have a track record of advocating for effective limits on motorized uses of the Forest. All meetings should be open to the public and media. The Task Force should be able to select its own facilitator (e.g., each year a different member might be "chair" and facilitate the meetings) and should be small enough to work effectively as a standing, regular-attendance work group (e.g., three advocates of motorized use; three advocates of restraint on motorized use; plus a neutral 7th member selected by the six) While the Task Force should structure its own work plan, those who apply for the position should be aware that each member would be expected to: 1. Work as a Task Force within (1) the decisions made in the Final EIS and Record of Decision; and (2) the legal obligations within which the Forest, as a federal agency, must operate. 2. Provide evidence for claims made 3. Carry a fair share of the Task Force workload. 4. Consider objectively all concerns or ideas brought to the Task Force by the Forest or any members of the public, and offer suggestions to the Forest in response to such concerns or ideas. 5. Provide public documentation of all Task Force work and suggestions. 6. Support, and not undermine, the work of the Task Force as a whole. Such a Task Force would provide an essential forum to which citizens could bring documented evidence, concerns, and good ideas, knowing	

Letter-Comment	Comment	Response
	that they will be taken seriously. It would also provide the public with "eyes and ears" regarding motorized use on the Dixie NF.	
72-4	Lets find ways to work together if we make law breaker pay a fine and do service hour to repair the areas that they destroy there would be [much] less [impact] on our lands.	See response to comment 95-3 on page B-4.
72-4	I feel the your so call maintenance trial should be for public use or shut off, if I cannot ride on them why should you???. That goes back to the use of trails if its no motorized use that means you.	Administrative routes are Maintenance Level 1 roads that are closed to the public, but may be used for administrative or permitted purposes. This is in accordance with the OHV Rule 36 CFR 212.5 and 36 CFR 261.
82-3	I would like to see Dixie National Forest Service be able to employ 3-4 more officers to patrol our area. I'd like to see the fees raised fro a out-of –state ATV use permits. I would like to see people ticked and heavily fined for tearing thing up (like meadows), driving drunk, unsafe driving, speeding and to have a noise restriction put on.	See response to comment 95-3 on page B-4.
58-3	People who do not stay on the legal paths should be given a warning ticket the first time, and if there is a second time in the same trip, their vehicle should be taken away for a month and a fine should be paid. If they are caught on the same path, with a different trip, take vehicle for a month and a fine.	See response to comment 95-3 on page B-4.
58-3	It was said at the meeting people need to be educated. I agree!	See response to comment 95-3 on page B-4.
58-4	But people also need to be held accountable for their actions. The Helmet law for under aged children; the signs, do not ride in the meadow, Cross-Country riding; littering, leaving trash in a fire pit and at the camp site (if a camp site looks trashed, sure give them a warning, still the Forestry service person should take down the license plate #s of the people at the site, and if the site is still trashed when the people leave, the owners of the license plates should be tracked down and fined). My family; like most of the people at the meeting agree, that the Forestry service needs to start handing out more tickets with fines and less verbal warnings. With a verbal warning, people think they have gotten away with something and more than likely will do it again Give the violator an educational pamphlet with the ticket. I truly believe more people will learn the rules and respect the forest if they are made to pay a fine for breaking the rules.	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
58-7	I believe the Forestry is trying to close down to many of the main trails and if only they would slow down and take a few trails at a time and work on these problems, people could except the closures of some of the trails. Still I believe enforcement with education is most important.	See response to comment 95-3 on page B-4.
72-3	I think that if responsible riders are given the training and ability to enforce land policies it would minimize the impact on the government. The people that use our lands for travel and use on a daily basis such as all of the out of staters that live and ride on our forest needs to pay access fees to help maintain the existing approved trails.	See response to comment 95-3 on page B-4.
125-131	Route "permanence." SMU Alternative: Forest Travel Maps will include a clear warning that all ORV routes are provisionally open, dependent upon appropriate use, and can be closed without further public notice if unauthorized travel outward from the route occurs (p. 76) DEIS Alternatives: No indication the Forest would explicitly explain that each FEIS/ROD ORV route is provisionally open dependent upon appropriate use of the routes. Significance: No Dixie alternative mentions this powerful “Abuse It and Lose It” (i.e., ORV routes) approach to encouraging self-regulation	See response to comment 95-3 on page B-4.
134-2	30560A. Dayle Flanigan would spend a lot of time to try to keep it Admin.	See response to comment 95-3 on page B-4.
148-2	30092B. Motorized access, also a potential enforcement issue.	See response to comment 95-3 on page B-4.
124-16	The following are roads that we use that we DO NOT want closed or Atv access Denied. These are on the Map D option. We would like it modified to allow these…G2362 Limiting Atvs will only add to law enforcement problems and a decline in related uses and revenues.	See response to comment 95-3 on page B-4.
150-147	U31544…questionable whether you can keep people off.	See response to comment 95-3 on page B-4.
108-13	Adaptive management will be an essential component of a successful plan. It needs to be clearly stated up front that all route designations are provisional only and dependent on appropriate use; if a motorized route is abused then the management review team should have the option to remove it from the system temporarily or permanently as necessary.	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
170-39	All of the public meetings I've attended where the Forest has proposed closing roads have met overwhelming objections by the public. We have used these roads for years and they have become a big part of having an enjoyable forest experience. As Forest Service employees, you are public servants and as such you have an obligation to meet the public's needs as well as provide good stewardship over the Forest. Individual likes, dislikes and agendas have no place in public land management. It will be difficult, if not impossible, to implement policies that are contrary to the local publics desires.	See response to comment 95-3 on page B-4.
125-132	Trigger for halting use of motorized routes. SMU Alternative: Motorized use is changed from “suitable” to “unsuitable” in areas where irresponsible behavior or willful disobedience is not being successfully curtailed by the Forest or users within one year (p. 77) DEIS Alternatives: No clear consequences for failure to abide by route regulations. Significance: The DEIS fails to provide any meaningful incentives for ending user creation of routes.	See response to comment 95-3 on page B-4.
49-6	Maybe a stronger enforcement on ATV patrol, and less road closures would be a better solution.	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
125-136	Display of unique identification number. SMU Alternative: Off-road vehicles cannot operate on the Forest without registering (free) and displaying a photographable registration number with font at least 4" in height and visible from 150 feet (p. 83) DEIS Alternatives: The DEIS does not mention making unique identification numbers visible in the manner of automobile license plates. Significance: The ability of the public to assist with documenting/reporting illegal ORV use is severely compromised in the absence of identifiable numbers, just as it would be if automobiles and trucks did not have to display unique identifier numbers (i.e., large-font license plates). The Forest has claimed that since the state registers vehicles, they cannot implement this aid to reporting illegal motorized activity. However, the Forest could require display of Forest-specific registration numbers (even a self-registered number) while driving ORVs on the Forest. Council on Environmental Quality implementing regulations for NEPA note that an agency should "Include reasonable alternatives not within the jurisdiction of the lead agency" (CEQ regulation 1502.14(c))	See response to comment 95-3 on page B-4.
125-158	Since hiking and other nonmotorized trail use activities are more than ten times as popular as ORV use on the Dixie (according to the National Visitor Use Monitoring (NVUM), FS should take special care to ensure that:…2) Motorized incursions and user construction on nonmotorized trails is NOT rewarded with the designation of that trail for motorized use; 3) Any place where ORV use has spread onto a nonmotorized trail is effectively signed, physically blocked and enforced, and; 4) Repeated illegal incursions onto a nonmotorized trail will result in the closure (temporary or permanent as appropriate) of the motorized route linking to that trail (unless the route is necessary to reach a necessary destination such as private property—in which case FS should consider an "administrative use only" designation).	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
125-155	[I]nviting agile motorized vehicles far into remote areas that will see little or no law enforcement presence is inherently problematic. This is especially troubling since the preferred alternative allows 150 ft. dispersed camping off all motorized routes. The DEIS provided no information on how enforcement will be directed to ensure legal use of these routes. Given the staggering number of user-created routes in the inventory, this is a demonstrated existing problem that must be addressed route-specifically.	See response to comment 95-3 on page B-4.
89-9	The issue of enforcement needs more consideration. Since there is not a ranger for the Escalante district and one is not anticipated at this time, the Forest Service has said that it will rely on education first, engineering second and enforcement third to ensure compliance with the new motorized plan. Motorized users should be encouraged to provide self-policing and if abuses exist, DNF should close routes either temporarily or permanently. Local stakeholders could also partner with DNF to assist with monitoring and maintenance. Finally many conflicts can be avoided by careful planning and separation of user groups.	See response to comment 95-3 on page B-4.
18-4	The Boulder Mountain is remote and it should be left open to the public to enjoy its majestic beauty. I feel strongly that the time and money expended to ensure that new road closures are respected will be more costly than advantageous. The best way to save resources is to leave the mountain access as is and let responsible sportsmen and outdoor enthusiasts enjoy the Boulder Mountain as it has been enjoyed for the past hundred years.	The effects to the resources of having routes open has been disclosed in the FEIS, Chapter 3, under discussions of Alternatives A and E.

Letter-Comment	Comment	Response
33-3	The Forest Service personnel need to get out of their cubicles, turn off the coffee pot and computer, and get out into the forest and take control of our natural resources. (I know, I'm dreaming. Nethertheless, the Forest Service needs to establish a presence in our forest. Guard Stations need to be open and not boarded up. Employees should have ticket books and carry weapons, if necessary. Rules should be enforced and consequences should result for illegal behavior. They cannot depend on silly little signs that are easily shot up or removed or are knocked over by cows that seem to be everywhere because the fences are not maintained-but that's another story). Vandals have no respects for signs. Forest Service personnel cannot be intimidated by "good ol' boys" that attend the same church they attend. They need to quit wasting valuable time writing big plans that most likely won't be enforced. They need to work weekends, especially three day weekends when most vandalism takes place. Get out there and DO SOMETHING!!!!!	See response to comment 95-3 on page B-4.
108-12	We appreciate your long-term implementation policy of 'Education-Engineering-Enforcement'...larger identification plates would enable members of the public to safely report abuses; and stiffer penalties, such as confiscation of machines, would help to deter abuse of the privilege of using the Forest routes, while protecting continuing use by law-abiding riders.	See response to comment 95-3 on page B-4.
105-4	My wife and I spend countless hours in the Dixie National Forest and can not tell you the numerous times we have seen people disturb the beauty of our forest. Yet for the number of times we have seen this, we have rarely seen law enforcement patrolling the forest for such individuals that have placed us in the predicament we are in today.	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
17-2	Nowhere did I see any mention of expanding the LEO numbers on the district; a critical part of gaining compliance of a major undertaking like this one. Many "managers" see the job done once the plan is written and filed. They have no idea what it takes to gain compliance on the trails, campground, and in the meadows during busy weekends. If there are no LEO's out working with the public you will see little change in the type of abusive land uses which have developed over the last few decades of mis-management. So, please consider addressing the need to expand the LEO's on the Dixie NF. I expect you'll find that 6 would be the minimum number needed just for the Cedar City office.	See response to comment 95-3 on page B-4.
34-2	Closing routes to the general public, but allowing administrative access will be almost impossible to enforce. Most administrative routes cannot be gated or otherwise closed. It is doubtful that the Forest Service has the capacity to effectively enforce such closures.	See response to comment 95-3 on page B-4.
115-17	…interagency coordination. There are 29 routes, both motorized and non-motorized that cross jurisdictional boundaries between the Dixie NF, Pine Valley Ranger District and the BLM, St. George Field Office. In Alternatives B, C, and D, over half of these routes are classified as closed or limited to administrative access only. From a spatial perspective, the designations for these routes are perfectly logical. In many cases, it is even likely that a number of these routes have been pushed into the forest illegally by motorized users coming from adjacent routes on BLM lands. The question is how these closures would be performed. Will there be signs, fences, and increased patrols? If motorized users come upon a road closure deep in the backcountry, are they likely to honor it? SGFO staff believe that in many cases, they will not. It may be more successful to place signs further back on BLM lands saying, “road closed to motorized use six miles ahead.” If users are expecting to see a closure they may plan accordingly and are more likely to honor it. The SGFO would be happy to work with the Dixie NF on signing during implementation of the MTP.	See response to comment 95-3 on page B-4.

Letter-Comment	Comment	Response
59-3	Enforcement: Please describe the Dixie Forest's enforcement plan for implementation of the prohibition on cross country travel and new designated routes. How will Dixie National Forest evaluate or determine compliance with procedures established in Executive Order 11989 (1977) regarding the use of off-road vehicles on public lands.	See response to comment 95-3 on page B-4.
108-11	We appreciate your long-term implementation policy of 'Education-Engineering-Enforcement'...It will be critical to encourage self-policing by motorized users through education	See response to comment 95-3 on page B-4.
71-1	ATV users need ongoing education about the fragility of the forests, need to be closely supervised, and must be restricted to established forest service roads only.	See response to comment 95-3 on page B-4.
72-2	We need to educate those that break the law by creating their own trails the destroy the beauty of our land. Their is a big concern about being able to fund such an undertaking...	See response to comment 95-3 on page B-4.
58-10	When a person comes to our Forest and enjoys motorized riding and camping; Ect. They to should know and respect the rules. If pamphlets with the Forest rules were available at pull offs at the start of going up the mountain, with a sign with an arrow pointing to the pull off. As well the sign could say: Know the rules of the Forest, Don't be Fined, Rules Est. 2008. Thus change the date and people will know rules have changed and a new rule book has been written. Only with education and enforcement of the rules can we truly protect the Future of our Forest.	See response to comment 95-3 on page B-4.

B.4. Already Decided by Law, Regulation, or Policy

Letter-Comment	Comment	Response
122-12	All school districts in the state of Utah are required to follow Utah administrative rule R277-400 for the establishment and maintenance of school emergency response plans. This rule provides guidance in the establishment of general criteria for both emergency preparedness and emergency response plans required of schools and districts in the event of natural disasters or school violence emergencies. This rule is authorized under Utah Constitution Article X Section 3 which vests general control and supervision of public education in the local school board, Section 53A-1-401(3) which allows the school board to adopt rules in accordance with its responsibilities, and Section 53A -1-402(1)(b) which directs the school board to adopt rules for student health and safety. This rule also calls specifically for alternative routes of evacuation to be identified and practiced. Garfield County is a rural school district, and many of its schools are served by only one major highway or road in or out of a locality. The Garfield County School Board strongly believes that the most precious natural resource in this count is our children and their safety is of utmost importance. For our board to address the safety of our school children and comply with state law, we must identify and have properly maintained alternative evacuation routes for school bus travel across portions of the Dixie National Forest. Please review the following evacuation routes for specific schools…As further background information, Garfield County has been designated by the federal government as a low income population by meeting the U.S. Department of Human Health and Services guidelines. Garfield County School District also meets the designation of a public transportation carrier as defined by the Federal Highway Administration and the Federal Department of Transportation. Given these facts, the Garfield County School Board respectfully requests that the National Forest Service comply with the Title VI of the Civil Rights Act of 1964, Executive Order 12898, the DOT Order on Environmental Justice and any other applicable law or regulation relating to this issue.	Already decided by other law, policy, or regulation.

Letter-Comment	Comment	Response
150-233	Henderson Canyon Trail. The Henderson Canyon trail is a road that has been in existence since prior to the turn of the century and pre-dates forest designation. It was the main route from Widtsoe to Loseevill. It is shown on the GLO plats that predate the forest and is asserted by Garfield County as a valid existing right.	Already addressed by law, regulation, or policy. Reference the Dixie National Forest's Forest Plan final management area map (USDA 1986). Public entities or individuals who want to assert their rights under R.S. 2477 may still do so.
58-6	Henderson Canyon Trail. Portions of the route shown on the forest base map indicate that it is a jeep trail, and it is shown on Garfield County's Class D road system. It is necessary to provide OHV access from the John's Valley/Bryce Canyon area to the Tropic area. Garfield County is anxious to consider other viable routes. However this route currently provides Garfield County with its strongest claim for motorized access that is needed.	Already addressed by law, regulation, or policy. Reference the Forest Plan final management area map (USDA 1986). Public entities or individuals who want to assert their rights under R.S. 2477 may still do so.
100-3	Under all of the alternatives ATVs are allowed on a substantial part of the Non-Motorized SWT. This is irrational and unacceptable. There exists a separate GWT for ATVs and there is no rational for allowing ATVs on the Non-motorized GWT as this trail has been set up to prevent conflict between motorized and non-motorized use.	Already decided by law, regulation, or policy. The current Travel Map for the Dixie National Forest allows for both motorized and non-motorized mixed use on several segments of the GWT.
125-134	Seasonal closure during wet periods. SMU Alternative: Seasonal closure of roads/routes without hardened surfaces that are subject to damage and erosion during wet periods such as spring and early fall rain/snow conditions (p. 77) DEIS Alternatives: Some routes are subject to similar seasonal closure Significance: Some differences in which routes are so designated	This comment has already been decided by other laws, regulation or policy. The Forest Plan gives us general direction to classify areas as to manage road use by seasonal closure (USDA 1986, pages IV-49 and IV-50).
514-1	Public Comment. All area around Pine should be closed to ATVs until after April.	This comment has already been decided by other laws, regulation, or policy. The Forest Plan gives us general direction to manage motorized use by seasonal closure (USDA 1986, pages IV-49 and IV-50). Alternatives B, C, D, and E prevent cross-country travel; reference FEIS section 2.2.

Letter-Comment	Comment	Response
108-3	Long-distance connector routes. User-created routes are opening up connector routes that are changing the scale of motorized recreation infrastructure on the DNF, e.g. McGath Lake over the Boulder Swale creating a long-distance connector to the north side of Boulder Mountain (30475B & 31406). Also of concern within the Boulder and Escalante communities are potential long-distance connector routes resulting from Garfield County and State policies. For example, the Street Legal ATV bill (SB181) would connect routes that the County has designated for ATV use - Burr Trail, Hell's Backbone Road and the Garkane Power Plant road (Road Draw). That combination would funnel ATV recreation traffic directly through the center of our town, and create a primary long-distance route through the county and beyond; clearly a stark conflict with the desire of Boulder residents, business owners and visitors to protect our quality of life, peace and quiet.	Already decided by law, regulation, or policy. This is a general comment, position statement, or opinion.
108-20	The whole Great Western Trail that runs through this area is overlapped with some type of OHV route. Even areas where only non-motorized travel is permitted, ATVS are encroaching on those trails because of their proximity to portions of the GW non-motorized trail that overlaps with an ATV or OHV route. Non-motorized trails should be returned back to their non-motorized status and not be shared with ATV and OHV routes.	Already decided by law, regulation, or policy. The current Travel Map for the Dixie National Forest allows for both motorized and non-motorized mixed use on several segments of the GWT. Reference 2005 Travel Map (USDA 2005a). Access conflicts have been addressed in FEIS section 1.10.1 and section 2.1, *Alternative Development*.

B.5. Concern Can be Better Addressed Through Another Decision Process

Letter-Comment	Comment	Response
125-100	U4701A - Sustainable Multiple Use Alternative: C [Closed] DEIS Alternative B: O [Open] DEIS Alternative C: O [Open] DEIS Preferred Alternative: O [Open] These two routes facilitate further damage to Antimony Creek and adjacent meadows.	This comment is better addressed through other analysis. See FEIS section 2.4.12 and Table 2-6.
25-4	A trail from the Great Western Trail at the end of Podunk/Bullrush should be open to ATV/MC to Meadow Canyon to allow connection to Crawford Pass and continuation of the Great Western Trail and Fremont trail for OHV travel.	Concerns better addressed through another site-specific decision.
34-35	The Dixie N.F. has not provided a continuous ATV trail system to ride through the forest on an ATV. There needs to be more thought and planning put into providing continuous trail systems for ATVs. There are numerous short, broken segments that dead end and/or terminate on highways or other unauthorized ATV travel routes (non-motorized trails, closed roads or administratively open roads). This causes several problems for both the ATV rider and the Forest Service. The inclination for the ATV rider is to continue on, therefore breaking forest rules or State laws and causing you law enforcement problems and potential resource damages. ..The Forest should be looking for opportunities to provide ATV riders with trail systems that will take the rider for several miles across the forest. Routes should be designed so a rider could start at one forest boundary and travel across the forest visiting several points of interest along the way to the other side of the forest. And, not just one route across the Forest but several.	Please see FEIS section 1.12 regarding the project decision. This proposal is better addressed through a separate decision process.

Letter-Comment	Comment	Response
9-1	Closure of parallel trails. Parallel trails are the answer. One for hikers and horseback riders and one for motorized vehicles. They would be easier to patrol and perhaps act as a fire break. Construction costs could be reduced by getting of clubs and organizations involved.	Concerns better addressed through another decision. Please refer to FEIS section 1.5.
79-1	We have regularly discussed how great it would be to have this complete ATV trail access via Brian Head. We support this recommendation and hope the local and state officials will provide this access to local and national rider enthusiasts.	Concerns better addressed through another decision.
125-128	No "trail heads" or "off loading areas" are identified on the maps of the various alternatives. The analysis should include staging areas as part of the MTP and shown on the maps as either existing or proposed and so identified on the legend.	Concerns better addressed in another decision. Please reference *Recreation and Scenery Specialist Report*, section 3.3.3.1 for a list of current loading/unloading areas (USDA 2009k).
60-3	[Trailheads and off loading areas] should be included as part of the MTP and shown on the maps as either existing or proposed and so identified on the legend. . . Displayed trails information should be a part of the "Trail Head" site. If appropriate, other desired facilities should be considered in the MTP analysis.	Concerns better addressed in another decision. Please reference section 4.2.1.6 in the *Recreation and Scenery Specialist Report* for a list of current loading and unloading areas (USDA 2009k).
107-2	Even our few monitoring reports for D4 and D5 indicate that there are increasing examples of motorized routes conflicting with designated non-motorized trails. This is especially evident along many parts of the Great Western Trail - a prime long-distance hiking trail...We recommend that routes and/or trails be rerouted to avoid conflicts between incompatible uses, and that effective measures be taken to keep motorized users off non-motorized trails.	This comment is better addressed in a separate decision process.
167-1	Government Creek. Not showing on our map. County may propose to make it motorized trail.	Concerns better addressed in another decision.

Letter-Comment	Comment	Response
125-227	Upper Antimony Watershed Area Recommendation: close all routes in shaded area [small 2x2" map included with comments] unless they serve a specific and needed destination (we do not know of any such destinations in this area). Route should be severely minimized in the shaded area below. The upper Antimony Creel watershed is in disrepair, and has severe problems with erosions and steep hillsides. The Dry Lake area is antelope fawning area, and there are a lot of elk in there. Much of the area is scree, meadow or tundra. The route, shown in green on this map, that comes from the southeast side of the area towards the center, was closed a long time ago, but the closure was never enforced. The number of user-created routes in the area is damaging, and testifies to the necessity for better enforcement. This area is of concern to local hunters and wildlife enthusiasts.	Concerns are better addressed in another decision. Please refer to FEIS section 2.4.12 and Table 2-6.
34-36	Iron County proposes a motorized route from USF 30052A at the junction with T34052B and following T34052B to route 31599; following 31599 to its junction with T34052A; thence along or parallel to route T34052A to it's approximate junction with T34052; thence construct a new route of approximately .75 miles to the Midway Valley divide near the Bristlecone Pine trail head; continuing approximately .75 miles to its junction with route 31633; thence follow route 31633, 31632, 31661A and 31661 to its junction with Highway U-14. Crossing U-14 construct a dividing route; one that leads north to route 31656 (approx .15 miles), and a second route that leads south to route G2681. The north route follows route 31656, T34101, and 30796 to its junction with the Red Desert road 30240 or 30381. The south route follows routes G2681, 30797A, G2680, 30382, 30800, and 30383 to it's junction with U-14. Thence crossing U-14 to route 30053; thence following route 30053 to route 30054; thence following 30054 to its junction with the Cascade Falls motorized trail.	Concerns better addresses in another decision. Please see response to comment 119-2 on page B-54.

Letter-Comment	Comment	Response
105-8	Snowmobile travel. SMU Alternative: Tracked vehicles use designated over-snow routes only and only when at least 8 " of snow is present. DEIS Alternatives: Snowmobile use is allowed cross-country in "most" areas of the Forest when "adequate" (not specified) snow is present. Significance: Section 3(a) of Executive Order 116441 requires that regulations be based on protecting the resource, promoting the safety of all users, and minimizing conflicts among various off-road vehicle users. Specifically, the regulations further require that the location of areas and trails minimize— • Damage to soil, watershed, vegetation, or other resources [bold]; • Harassment of wildlife or significant disruption of wildlife habitats; and • Conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands [bold]. The DEIS indicates only "big game winter range" conflicts could result in future restriction of over-snow vehicles to designated routes.	Concerns better addressed through another decision. Outside scope of this project.

B.6. General Comment, Position Statement, or Opinion

Letter-Comment	Comment	Response
10-5	One consideration in reclaiming impacted wildlife habitats is the ability to enforce the travel management plan. If existing roads are closed at the base of the mountain, the closure is more enforceable. Once vehicles get up into the mountain, there are so many places for them to travel illegally, that enforcement isn't practical.	This is a general comment, opinion, or position statement.
76-3	I do not agree with Garfield County's claim that more non-motorized use will create a social and economic burden on us. Our tourism economy is based on non-motorized recreation and increased motorized recreation will hurt that, as well as affecting our quality of life.	General comment, position statement, or opinion. Consideration of motorized recreation as far as tourism is concerned has been considered in the *Social and Economic Specialist Report*, pages 9-14 (USDA 2009m).
27-2	The Forest Service also needs to consider the undermining of the fragile economic well-being of the area that depends on ATV and other motorized use of the National Forest.	General comment, position statement, or opinion. Consideration of motorized recreation as far as tourism is concerned has been considered in the *Social and Economic Specialist Report*, pages 2-34 (USDA 2009m).
100-2	As a business owner in the Town of Boulder interacting with visitors to our area everyday, the overwhelming majority of people express appreciation for the quiet, rural nature of our town and its environs (the GSENM and Dixie Forest). Many business owners, including myself and my husband who is a permitted outfitter on the Dixie, have based our business plans on the unique aspects of our remote, 'undiscovered', quiet landscape. Business owners and residents of Boulder have petitioned the FS and the Garfield County Commissioners to help us preserve this special and increasingly scarce attribute.	This is a general comment, opinion, or position statement.
23-1	I think it would be a major disappointment if this did not pass (alternative D) and link to the other trails. What is Brianhead missing in economic benefits by not having this in place.	This is a general comment, opinion, or position statement.
86-1	From an economic perspective, the area I represent (eastern Garfield County) should focus on non-motorized recreation and should not be designed in ways that encourage recreational ATV tourism. In contrast, in the area to the west, it makes economic sense to have an ATV trail system that encourages recreational ATV tourism.	This is a general comment, opinion, or position statement.

Letter-Comment	Comment	Response
21-1	I want you to know that my family and I support option "D" of the Motorized Travel Plan project and DEIS. We feel that It would do a great disservice to many of the citizens of BrianHead and surrounding areas to apply any of the other options. We also feel that any choice other than "D" would hurt the businesses of BrianHead by restricting these Motorized sports and blocking city access.	This is a general comment, opinion, or position statement.
304-1	After reviewing your consultation documents, historic preservation department – traditional cultural program (HPD-TCP) has concluded the proposed undertaking/project area will not impact any Navajo traditional cultural properties or historic properties.	This is a general comment, opinion, or position statement.
108-10	The support that we have received from local businesses in Boulder and Escalante for our Quiet Use brochure clearly shows that our businesses support non-motorized tourism. There are also many research studies (Institute for Outdoor Recreation and Tourism, Utah State University, Southern Utah University, Outdoor Industry Foundation, etc.) that consistently show that the non-motorized recreation sector constitutes around 80-90 % of users. OIF quotes the top four outdoor recreation activities as bicycling, wildlife viewing, trails (non-motorized), and camping.	This is a general comment, position statement, or opinion.
47-1	However, we note that even on this trail, the Off-Road-Vehicles keep making it wider and wider to avoid the "wet spots".	This is a general comment, position statement, or opinion.
34-9	There are wonderful trails to enjoy ATV riding, but it is limited as we cannot connect to the larger trail systems.	This is a general comment, position statement, or opinion.
15-1	Finally, we can remember during our participation in the Duck Creek Travel Management Plan folks identifying a need for a connector route from Mammoth Creek Road and Panguitch Lake. It seems an obvious need to provide a route that gets folks through without having to travel through Hatch. In fact, it is my recollection that all involved in the Duck Creek planning agree that connector route is critical to a well managed trail system in the area.	This is a general comment, position statement, or opinion.
110-12	Loop route Habbeshaw suggested adding. Spirit of "all reasonable alternatives" Loop was already closed after a Kaibab Timber Sale is not driven now. There are new points off it.	This is a general comment, position statement, or opinion.

Letter-Comment	Comment	Response
62-22	Recreational use of public lands has also changed. Besides hikers, hunters, and horse riders that have typically used the back country for generations, we now have a very viable contingent of ATV riders as well. They are just as deserving of a place to "ride" as any of the other and users. Closing off roads to ATVs but allowing foot and horseback travel may indeed be grounds for discrimination.	This is a general comment, position statement, or opinion.
5-1	This distresses me even more since I brought the property to make their lives happier and to have the freedom to enjoy the outdoors.	This is a general comment, position statement, or opinion.
6-5	Closure of dead end trails. Or as Public Affairs Officer, Kenton Call said "trails to nowhere". All trails go somewhere. At the end may be a favorite picnic spot, or pine nut gathering area. Many families have set up hunting camps on these "dead end trails" in Pine Valley for generations. These are great trails to ride because most people only drive them once. They are easier to police, there is only one way in and out.	This is a general comment, position statement, or opinion.
38-3	We do use a lot of Little Valleys, 5 Mile, Horse Valley, Williams Hollow and all the small adjacent roads over to Hwy. 20, up Paragonah Canyon, up on Bunker, on over the top between Yankee and Panguitch. We use these hunting and some fishing and wood gathering as a main source of heat.	This is a general comment, position statement, or opinion.
10-2	The DNF needs to implement the Combined Use concept that several states and public agencies have adopted, catering to any special group will never be successful they all need to work together and improve and enjoy the provided routes and trails. The idea that different groups cannot use the same area is old school thinking. We have hiked, ridden and packed on horseback, driven 4x4 vehicles, and rode Atvs in all of these areas and when we knew we might encounter another type of trail user we were alert, we have never had any problems or had a bad experience.	This is a general comment, position statement, or opinion.
25-2	Closing down main roads and creating corrals to camp in is not the answer.	This is a general comment, position statement, or opinion.
86-2	The terrain and habitat in the Escalante Ranger District, the Top of Boulder Mountain and the Teasdale/Powell Ranger District tend to be particularly sensitive to the problems caused by ATV use and to be particularly well adapted to non-motorized recreation use.	This is a general comment, position statement, or opinion. The Boulder Top travel management plan was a previous decision and is thus outside the scope of this document. Please see FEIS section 2.4.12 for further information.

Letter-Comment	Comment	Response
51-1	My comments on the DNF Motorized Travel Plan Alternative D are as follows: 2. The forest area below Powell Point and Barney Top is a beautiful area that is easily accessed from SH12 and is near to services in Escalante. Every effort should be made to develop and enhance the motorized travel through this area. The Stump Springs forest is an excellent example of the benefits of proper timber management through selective harvesting. There is also easy access across SH12 to the Caanan Mountain area. This area is a great example for further OHV development. It can be well defined and managed, has great resources, and can be easily reached from either Tropic or Escalante for economic development.	This is a general comment, position statement, or opinion. The motorized travel opportunities associated with Alternative D are found in FEIS Tables 2-2 and 3-17, and Alternative D map in section 2.7: Dixie National Forest, Escalante and Teasdale.
170-14	The proposed road closures would severely handicap my ability to enjoy the Boulder Mountain during brief visits and breaks from work.	This is a general comment, position statement, or opinion. Please see FEIS section 2.2.1, Table 2-2, and Section 2.7 (Alternative A map).
49-3	The Dixie National Forest is a very large forest. The Boulder Mountain or Aquarius Plateau is a huge area. Road closures should be kept to a minimum.	This is a general comment, position statement, or opinion. Reference FEIS Table 2-6 and section 2.4.12 regarding previous decisions. Also reference FEIS section 2.2.1 Alternative A, and 2.2.5 Alternative E.
99-9	As the population increases so will use and with no logical plan or thinking it will create a very difficult problem for the DNF	This is a general comment, position statement, or opinion. Please refer to FEIS section 1.5.
30-2	Our family travel from New Mexico and California just to see the back country. We go hunting up in the red desert every year on back roads that are there already. My cousin she comes up for a month every year and she loves to see the back country. We've made traditions up there and I want to keep going up on the mountain to Sydney Valley, Red Desert, and the Hatch road. This is what I love to do. So Alternative E is my final choice.	This is a general comment, position statement, or opinion. Alternative E is considered in FEIS section 2.2.5.
75-2	I choose Alternative E because those are the roads that we hunt and camp on. Every year we have all our family come up. We like to go up on the mountain to ride our four wheelers and look for those big deer.	This is a general comment, position statement, or opinion. Please refer to FEIS section 2.2.5.

Letter-Comment	Comment	Response
7-1	I began enjoying outdoor sporting activities during my teenage years and the Boulder Mountain is where I learned to fish, hunt, camp and enjoy the beautiful country with my friends who were familiar with that area. It immediately became a part of who I am and I cannot imagine enjoying a place more with my wife and future family. I have since married a southern Utah girl whose family loves the Boulder Mountain and respects that land as it is also tied so integrally to their memories and family experiences. I support Option A as it will impact less of the mountain range that I love so dearly.	This is a general comment, position statement, or opinion. Consideration for Alternative A is referenced in FEIS section 2.2.1.
105-9	Why do we have to specify the exact trail in our comments? There are 2496 miles of trails that you have proposed to close (but opening 1.26 miles of trails. Thanks, nice trade off). I have only scratched the surface of the miles of trails through the Dixie National Forrest, yet I am expected to name the exact trail I want to keep open. Since the individual making the decision to close all 2496 miles of trails has "vast" experience exploring this area, he should be fully aware that no one likes to do the same trails over and over again. So I can only assume that he had drove all 5238 miles of trails and roads within the Dixie National Forrest, this is what gives him the "right" to shut it down.	General comment, position statement, or opinion. 36 CFR 212 and 261 have given the Forest Service the authority to manage OHV use and provide specific regulations for the agencies based on Executive Orders 11644 and 11989. Please refer to FEIS section 1.11.
105-7	Why is one man making the decision for such an important issue that will affect thousands of people who utilize the National Forest?	General comment, position statement, or opinion. 36 CFR 212 and 261 have given the Forest Service the authority to manage OHV use and provide specific regulations for the agencies based on Executive Orders 11644 and 11989. Please refer to FEIS section 1.11.
115-14	The BLM Cedar City, Richfield and Kanab FOs also reviewed the document and do not believe that the Dixie MTP would affect BLM lands and resources in those FO areas.	This is a general comment, position statement, or opinion.
135-1	32094. Bear Valley. Proposed ATV only - County supports it.	This is a general comment, position statement, or opinion.

Letter-Comment	Comment	Response
29-1	As time progresses, there is more and varied use of the National forests. I also believe that each and every situation mandates close scrutiny as decisions that are made regarding local circumstances. The Cedar City Ranger District is far different. The topography is much more gradual, and the geography lends itself much more to recreational uses as a tourist destination. It is home to several major sect's of private property complete with residential homes and an increasing population.	This is a general comment, position statement, or opinion.
150-1	Garfield County is concerned with the extensive number of routes that are being closed to public use and motorized access.	This is a general comment, position statement, or opinion.
83-158	The County recognizes that multiple-use has inherent challenges, but multiple-use is still a valid and required tool for the management of federal, state and local lands.	This is a general comment, position statement, or opinion.
76-4	I prefer your Alternative 'C' as proposing a realistic balance between various users and the health of the forest itself - particularly as it is the only Alternative using a decision-making process based on local and public knowledge of specific routes (rather than the ARS computer tool).	This is a general comment, position statement, or opinion. Consideration for Alternative C can be referenced in FEIS section 2.2.3.
140-3	Alma Adams would like to go on the ground to see some of the Virgin river Rim ATV connection suggestions.	This is a general comment, position statement, or opinion.
19-2	I have a father who is somewhat disabled, however, he can ride an ATV to enjoy the beauty of the forest.	General comment, position statement, or opinion. All alternatives accommodate ATVs. Please see FEIS Table 2-3 and *Chapter 2: Alternatives*.
26-1	I am in favor of a trail or trails that would connect the Piute ATV System to further extend my rides into other riding areas in the State. As the Piute ATV Trail has been a real blessing to our local economy as I live in Richfield. People come from all over the United States and the World for that matter to experience the ATV Trail System.	This is a general comment, opinion, or position statement, and outside the jurisdiction or authority of the Dixie National Forest.
113-1	The Forest should be looking for opportunities to provide ATV riders with trail systems that will take the rider for several miles across the forest. ..An ATV rider should be able to travel from Cedar City to Panguitch or Paragonah over Forest trails. Or travel from Navajo Lake to Panguitch Lake or Yankee Meadows. Or, travel from Duck Creek to Orderville or Bear Valley.	This is a general comment, position statement, or opinion. Better addressed in separate decision process.

Letter-Comment	Comment	Response
20-1	The Forest Service should strictly regulate off-road vehicles so they will not damage the great public values of the land.	This is a general comment, position statement, or opinion. The Forest Service has the authority and responsibility to manage OHV use and provide regulations. Reference FEIS section 1.11. The final Travel Plan will prohibit the use of motor vehicles off the designated system, as well as use of motor vehicles on routes and in areas that are not consistent with the designations (36 CFR 212.50).
113-2	I believe that a combination of Alternative D and Alternative E would be the most effective. Another demand that I have encountered is the limited trail heads that are needed within the Brian Head and Panguitch Lake area. These would include, but are not limited to, parking for trailers, kiosk that would identify trail maps and information available to the public.	This is a general comment, position statement, or opinion. Please see response to comment 50-2 on page B-3. Consideration for Alternatives D and E is detailed in FEIS sections 2.2.4 and 2.2.5.

The following comments did warrant a detailed agency response.

B.7. Soils

Letter-Comment	Comment	Response
115-19	Alternatives B, C, and D would provide beneficial outcomes for the Dixie NF, but could result in negative impacts for adjacent BLM-managed lands. The SGFO [St. George Field Office] feels that a simple disclosure of this in the individual Cumulative Impacts sections would be appropriate. The following is a list of affected resources: 3.1 Soils. Table 3.1 (page 3-5) measures change by alternative using soil indicators. It shows positive effects for Alternatives B, C, and D, and negative effects of Alternative A and E. Because soils on adjacent BLM-managed lands are similar, and it is likely that Alternatives B, C, and D will result in increased use on adjacent BLM lands due to displacement, the impacts to BLM lands could be the reverse of what is shown in this table.	Cumulative impacts to the soil resource are addressed in FEIS section 3.1.2.2. In response to this comment, we have added a paragraph in the *Soils Specialist Report* and in FEIS section 3.1.2.1.
20-8	Check the erosion-resistance of every route to be opened to ORVs. Forest Service national standards should be used to make sure ORVs will not cause erosion and gullying on any open route.	An analysis of miles of roads that are on high erosion potential soils was conducted within FEIS section 3.1.2.1.3. This analysis was completed using a Geographic Information System analysis of each route on the Forest.

Letter-Comment	Comment	Response
6-3	I will agree that the roads [on the Dixie] are often poorly planned. They were built in time when environmental concerns were not important to most people. However, it is unfair to say these road causes significant erosion, especially on the Boulder Top. The Boulder Top is a plateau -- essentially a flat area. I was driving my truck on it last weekend, and very little erosion has occurred. Any thinking individual can ride these roads and realize that erosion cannot happen much because of the flat land. The roads have been there for a hundred years, and all except the main road are essentially in the same order they were when built. It might be true that some roads on the sloping areas (North or East slopes) have environmental issues, but these should be dealt with by new and better roads. Closing roads, especially on the tope area, solves a nonexistent environmental problem.	The effect to the soil resource from some roads is very minor, as you have stated, but other environmental concerns (e.g., wildlife, hydrology, scenery) have been considered and addressed in other Specialist Reports and the FEIS. The Boulder Top decision has already been completed and is outside the scope of this project. Please see FEIS section 2.4.12 and Table 2-6 . Alternative A maintains the existing condition, and effects to soil can be found in FEIS section 3.1.2.

B.8. Hydrology

Letter-Comment	Comment	Response
59-7	Water Quality - The FEIS should identify any existing perennial streams and lakes in the watershed(s) of the Forest that may be impacted by new road construction. If impacts are expected, current water quality data should be disclosed and potential impacts discussed.	These impacts were recognized and incorporated into the *Hydrology Specialist Report* under section 4.1 (USDA 2009g). Table 1 in the report lists those waters that are on the 303d list or have an existing Total Maximum Daily Load (TMDL). The effect of new route construction on water quality, perennial streams, and lakes was in the *Hydrology Specialist Report*, Chapter 4.
59-8	In addition, the DEIS does not mention wetland impacts. Please indicate if impacts of wetlands or other critical habitat will occur as a result of this project.	We acknowledged that impacts will occur to wetlands in FEIS section 3.2.2.1. Effects to wetlands were analyzed and considered in the *Hydrology Specialist Report*, section 4 (USDA 2009g) and FEIS section 3.2.2.1. Wetlands were addressed in FEIS section 3.19.2.5 when referring to Executive Order 11990. For impacts to "other critical habitat," refer to responses in FEIS section 3.6, *Wildlife*.
115-20	Alternatives B, C, and D would provide beneficial outcomes for the Dixie NF, but could result in negative impacts for adjacent BLM managed lands. The SGFO feels that a simple disclosure of this in the individual Cumulative Impacts sections would be appropriate… 3.2 Hydrology. The watersheds that comprise the southern slope of the Pine Valley Mountains are shared with the SGFO. The 5% threshold analysis used is applicable for entire watersheds, and if motorized users are displaced onto BLM-managed lands by Alternatives B, C, and D, negative impacts in the lower reaches of these watersheds could occur.	Cumulative effects were considered to each 6th HUC watershed, which often included SGFO BLM-administered land. Please refer to *Hydrology Specialist Report*, Table 1, pages 3-8 (USDA 2009g). Action alternatives proposed in the FEIS, which would restrict motorized use to varying degrees, may result in additional motorized impacts on adjacent or nearby BLM-administered lands. See *Hydrology Specialist Report*, section 4.2.4, *Cumulative Effects, Alternatives B,C,D and E* (USDA 2009g).

Letter-Comment	Comment	Response
87-8	Failure to Consider Impacts from Unauthorized Trails… There are numerous unauthorized trails that have not been inventoried or acknowledged by the Forest Service. Concentrated OHV use on FS Route #30050 is a major reason leading to the creation of unauthorized trails. The unauthorized trails are the biggest threats to the sensitive Clear Creek headwater areas. The DEIS should consider better means to eliminate all motorized trails within the Clear Creek watershed boundaries to ensure that the sensitive headwater areas are protected.	Unauthorized routes developed after these analyses are disclosed in FEIS section 1.7, paragraph 3. Clear Creek Watershed falls within the Ipson Creek 6th HUC watershed. Effects to the Ipson Watershed are disclosed in Appendix A (A- 4 and A-9) in the *Hydrology Specialist Report* (USDA 2009g).
125-235	Routes in the Pine Creek and North Creek watersheds should be severely minimized, and eliminated if possible. These watersheds are Escalante's water, supplying the town irrigation company. These are both Type 2 irrigation districts. The East and West Boulder Creek and Bear Creek watersheds should be treated similarly.	Effects to municipal watersheds are disclosed in Appendix A in the *Hydrology Specialist Report* (USDA 2009g). The FEIS analyzed a range of alternatives (see FEIS section 3.2.2). Impacts to irrigation water are considered and disclosed in the *Hydrology Specialist Report* section 3.1.4.
125-236	Ex-FS employees and biologists in the area say that a great deal of effort (much of it decades ago) was put into projects repairing the southern slope of Boulder Mountain (the watersheds for Boulder Town and Escalante). Designating high numbers of routes for ORVs is bad watershed management, and degrades the projects' effectiveness. In desert towns, water quality should come before recreation.	Please refer to response to comment 125-235 on page B-34.
108-1	Watershed protection is of prime importance to our local communities, as well as protection of riparian areas in general terms. We urge you to give special consideration to watersheds such as Pine Creek, North Creek, Lake Creek, East & West Boulder Creeks, The Baldies, Bear Creek and the Boulder Swale. We suggest closing or minimizing roads/motorized routes in watershed areas, which will also benefit habitat and wildlife.	Please see response to comment 125-235 on page B-34.

Letter-Comment	Comment	Response
125-129	Proximity of campsites to water. SMU Alternative: Designated and signed undeveloped camping sites, non-motorized and motorized are at least 200 feet from the nearest water source (p. 77). DEIS Alternatives: The only width mentioned in relation to dispersed camping is the 150-foot swath on each side of a route (2-18). Significance: The Dixie NF website gives this "tip for low-impact camping": "Dispersed camping is allowed… 200 feet from any stream, spring, or other water source. Likewise, the ORV User page on the Dixie website sports the "Tread Lightly" logo. Tread Lightly is "the nation's signature ethics message for outdoor enthusiasts that use motorized and mechanized vehicles" The Tread Lightly website states, "Camp at least 200 feet from water..." However, the DEIS is silent on making this a reality, as numerous dispersed campsites are within a few feet of water. The DEIS fails to acknowledge the damage motorized campsites are causing to riparian areas and fish habitat.	Designating dispersed campsites is outside the scope of this decision. See FEIS sections 1.12 and 1.7. Designating dispersed camp sites will be addressed when physical and social conditions reach a level where it is deemed necessary (see FEIS section 2.4.9). The *Hydrology Specialist Report* did consider effects of motorized routes in riparian areas and to aquatics (see sections 4.1, 4.1.1, 4.1.2, 4.1.5, 4.1.6, 4.1.7, 4.1.9, 4.1.10, 4.1.11, and 4.1.17) (USDA 2009g).
125-133	'Limits to riparian bare ground. SMU Alternative: Allow no more than 15 percent total bare ground (i.e, from all vehicle, recreation, and livestock use) per 200 feet of stream bed. Coordinate with livestock management a progressive removal system to decommission roads and routes that exceed this limit (p. 81) DEIS Alternatives: No alternative describes a clear means of avoiding cumulative denudation of stream beds among livestock grazing, recreation, and motorized travel (e.g., stream crossings). Significance: The Forest's Level II riparian inventory data sheets, for instance, often note where both livestock and ORV travel, dispersed camping, and/or roads are affecting a given stream or creek.	The *Hydrology Specialist Report* discloses cumulative effects in the riparian influence zone (see USDA 2009g, section 4.2).

Letter-Comment	Comment	Response
125-138	Riparian routes. SMU Alternative: Ten percent of unnecessary roads and routes within 100 feet of creeks/streams should be decommissioned each year. (p. 78) DEIS Alternatives: The DEIS proposes no priorities for road/route decommissioning. Significance: Absent goals for decommissioning of the most ecologically problematic routes, the DEIS offers no guidance for implementation of route closures.	Please see response to comment 95-3 on page B-4.
89-4	Watersheds are a major concern for wildlife, irrigators and community water supplies. The Escalante and Boulder watersheds already suffer from siltation problems. Roads and illegal ATV routes along the waterways and adjacent to the reservoirs only add to the problem. Due to the occasional need to do maintenance, it may not be possible to eliminate all roads in the Pine Creek, North Creek, Boulder Creek, and the Lake Creek watersheds, but a compromise solution should be sought. Decreasing motorized access along these waterways and their reservoirs would decrease erosion, sedimentation and habitat loss to the benefit of irrigators and wildlife.	Please see response to comment 125-235 on page B-34.
20-3	Keep vehicles out of watercourses. ORVs should be barred from traveling in any streambeds or dry washes, and from crossing streams except on bridges. ORVs fording a stream leave pollution from engine fluids and sediment washed from the undercarriage. Vehicles traveling in dry washes degrade these areas' value as wildlife habitat; they are often the richest habitat in an arid landscape because subsurface water is tapped by deep-rooted plants.	Please see FEIS section 1.5. All action alternatives require OHVs to remain on designated routes (refer to FEIS section 2.2). Impacts from ATVs crossing streams and chemical pollutants were described in the *Hydrology Specialist Report (*see sections 4.1, 4.1.1, 4.1.2, 4.1.5, 4.1.7, and 4.1.10) (USDA 2009g).

B.9. Vegetation

Letter-Comment	Comment	Response
83-160	The residents of Wayne County rely on the ability to access the forest in search of firewood in order to supply heat for homes due to the fact that Wayne County does not have the option of using natural gas for heating. The residents of Wayne County rely on the ability to access the forest in order to extract resources such as firewood, fence poles, cedar posts, wood timber, etc. as a means of supplemental or main source of income.	Firewood gathering is a permitted activity on the Dixie National Forest. Access to administrative routes and areas open to off-road travel for wood collection will be specified by the firewood collection permit at the time of issuance (FEIS section 2.4.10). The effect of this proposal on firewood collection has been analyzed in FEIS section 3.4.2.1.1. Under FEIS section 3.4.2.1.2 it states that, with the exception of the No Action Alternative, Alternative D is second only to Alternative E in the level of access provided to firewood collectors.
38-2	I would like all roads on the Dixie National Forest left open. Alternative E. My reason: My parents are in their 80's, they still heat their home (the old fashion way) with wood. My husband and I buy wood permits, and gather wood all summer long, so that it will be enough to keep them warm all winter. With all the roads open, it makes it easier for us to do. Sometime there is not a lot of wood along the road.	Please see response to comment 83-160 on page B-37.
124-1	Our Families use wood stoves and fire places to heat several of our homes here in the Cedar City area. Some of us heat entirely with firewood collected from the DNF. The closing of the forest to cross country travel will limit access to these resources.	Please see response to comment 83-160 on page B-37.
127-1	I would like to see the Dixie National Forest roads left open. Alternative E. The reason: My family needs to go and gather wood for me, because we still heat our home, with a wood burning stove. These roads makes it a lot easier for the family to do this job.	Please see response to comment 83-160 on page B-37.

B.10. Terrestrial Wildlife

Letter-Comment	Comment	Response
125-162	Examples of faulty or incomplete analysis...[excerpt beginning "Alternatives B, C, and D: Implementation of any of these three alternatives would result in an incremental decrease in motorized access"] (DEIS, Mojave Desert Tortoise Impacts Analysis, p. 3-37). First, this analysis does not disclose any site-specific route impacts. It is hard for the public to make informed decisions as to the appropriateness of certain route designations, as NEPA requires, without knowing what impacts will occur in what places. Merely counting route miles is not adequate analysis, as one route can be far more damaging than another of the same length. Some routes are also more necessary than others. Second, the DEIS must demonstrate that all routes are avoiding damaging known Mojave Desert Tortoise habitat. Simply noting that reducing route miles will result in better habitat is not sufficient to meet the requirements of the Endangered Species Act, or other laws and regulations protecting sensitive species. This criticism applies to all analysis of threatened, endangered or sensitive species in the DEIS.	Regarding desert tortoise habitat, neither critical nor suitable habitat for this species exists within the project area. See FEIS section 3.6.2.1.3. The *Wildlife Specialist Report* has been revised (USDA 2009i). Site-specific impacts for known locations of Threatened, Endangered, and Sensitive species are analyzed in section II, Direct and Indirect Effects, pages 18-48 (USDA 2009p).
125-163	Examples of faulty or incomplete analysis…[excerpt beginning "up to 18 [northern goshawk] nest sites would be impacted] (DEIS, Northern Goshawk Effects Analysis, p.3-48) When routes are going to cause nest abandonment (or other significant and measurable ecological degradation) the DEIS must provide a specific explanation as to why the damaging routes are not being closed and how impacts are being minimized. Otherwise, the Dixie NF is not meeting the minimization criteria of the Executive Orders and the Travel Management Rule here. Further, the mitigation measures explained here seem both strange and inadequate. If routes are going to disrupt habitat, simply marking a new place on a map that the displaced wildlife can go will not ensure that the population will be preserved. This is one of the few specific habitat mitigation measures listed in the DEIS, and it is either not well explained or is not at all realistic.	The *Wildlife Specialist Report* has been revised (USDA 2009i). The revised report applies updated nest location data and refined analysis of route impacts to northern goshawks. Site-specific analysis for known locations of northern goshawk nests are included in section II. Direct and Indirect Effects, pages 30-33 (USDA 2009p).

Letter-Comment	Comment	Response
125-164	Examples of faulty or incomplete analysis…[excerpt beginning "The recommended OMRD of 2.0 miles/square mile"] (DEIS, Mule Deer Effects Analysis, Alternative D, p. 3-62) Though the preceding paragraph discloses that the preferred alternative crosses recommended route density thresholds, there is no explanation as to why this is allowed. The next paragraph simply says, without justification, that viable populations of mule deer are still likely to be maintained. Again, the DEIS must demonstrate that the Dixie NF took a hard look at the impacts of high route densities in the affected areas, show why all the routes in the area are necessary, and demonstrate that the minimization criteria are being met.	The Forest Plan (USDA 1986, p. IV-50 3.G.1) describes a guideline of 2 mi/sq mi. The Preferred Alternative (Alternative D) would move OMRDs towards the desired guideline, and therefore in a direction that would result in improved wildlife habitat effectiveness. Please see the Forest Service 1998 letter, *Implementing the DNF Two Miles/Square Mile Open Road Density Guideline* (USDA 1998). The analysis of effects to mule deer can be found in the *Wildlife Specialist Report* (pages 39-40). This complete analysis discloses effects by Wildlife Management Unit (WMU). The minimization criteria were identified in the Dixie LRMP IV-50 3.G.1, 2 mi/sq mi of open road. The effects to this criterion are disclosed within the report pages mentioned above.
115-21	Alternatives B, C, and D would provide beneficial outcomes for the Dixie NF, but could result in negative impacts for adjacent BLM managed lands. The SGFO feels that a simple disclosure of this in the individual Cumulative Impacts sections would be appropriate… 3.6 Terrestrial Wildlife Any species whose habitat extends beyond the Dixie NF boundary could be subject to increased impacts on BLM-managed lands. These impacts would be created by the displacement of motorized users onto adjacent BLM lands in Alternatives B, C, and D.	This has been included in the *Wildlife Specialist Report*, section II, Direct and Indirect Effects, page 18.

Letter-Comment	Comment	Response
125-135	Road/route density limits. SMU Alternative: Not including currently developed campgrounds and picnic areas, road/route density for each District does not exceed 1 mile per square mile. In no sixth field watershed does road and motorized trail density exceed 1.3 miles per square mile. There is no more than 2.5 miles per square mile in any given square mile on the Forest (p. 77) DEIS Alternatives: The DEIS alternatives offer no particular aims limit on road density. Significance: We find that the SMU Alternative does include some areas in which there is more than 2.5 miles per square mile motorized routes. Under the SMU Alternative, wherever possible, additional routes should be eliminated to meet this density standard.	The Dixie Forest Plan offers guidelines of 2 mi/sq mi (pages IV-50, 3.G.1). Please see the letter, *Implementing the DNF Two Miles/Square Mile Open Road Density Guideline* (USDA 1998).
59-8	In addition, the DEIS does not mention wetland impacts. Please indicate if impacts of wetlands or other critical habitat will occur as a result of this project.	We acknowledged that impacts will occur to wetlands in FEIS section 3.2.2.1. Effects to wetlands were analyzed and considered in the *Hydrology Specialist Report*, section 4 and FEIS section 3.2.2.1. Wetlands were addressed in FEIS section 3.19.2.5 when referring to Executive Order 11990. For impacts to “other critical habitat,” refer to responses in the FEIS section 3.6, *Wildlife*.

B.11. Social and Economic Resources

Letter-Comment	Comment	Response
27-4	The negative impact on my property value is incalculable.	Effects to the social economic resource are analyzed in the *Social and Economic Specialist Report* (see specifically Table 7).
303-1	The Six County area comprising Juab, Millard, Wayne, Sevier, Piute, Sanpete is concerned about the lack of a viable socio and economic database utilized by public lands administrators in developing their management plans. Dealing with similar issues across the state, Utah officials contracted with USU to complete a state-wide baseline socio and economic analysis of public lands. The purpose of this research is to fill the void of flawed and disparate data currently utilized as the socio and economic component of management plans governing public lands administration in Utah. After nearly eighteen months, USU is nearing completion of the Study. Even though not fully published, data from this research is becoming available for use and distribution. As the Dixie National Forest is completing their Motorized Travel Plan, I realize that time constraints will not allow this data to be utilized in the main body of the Plan. However, it is my understanding that it can be referenced in the Specialist Report.	The *Social and Economic Specialist Report* references the USU Study (see page 2).
127-2	I would like to see the Dixie National Forest roads left open. Alternative E. The reason : I worked for the Forest Service for many years. I graded and maintained most of the roads. I have been retired for over 25 years, put I am still proud, of those roads, and a job well done. Plus, the Forest Service provided good jobs for the local people. These roads still need to be maintained, and the local people, still need the job.	Socio-economic effects under Alternative E have been considered in FEIS section 3.7.2 and the *Social and Economic Specialist Report*, pages 35-55.

Letter-Comment	Comment	Response
125-173	The DEIS fails to take a hard look at the social and economic impacts of roads and OHV use in the Dixie NF…To accurately account for the social and economic impacts of any changes to the Travel Plan, the Dixie NF, must include analysis that is not so simplistic, overbroad, and obviously biased towards more roads and ORV use. The current analysis does not reflect the history or current trends of life in rural Utah. In particular, analysis should account for the cumulative impacts of routes used to connect larger road or trail systems to each other (such as the proposed motorized trail leading down Boulder Swale to McGath Lake). Such connector routes, and any other routes used to facilitate future increases ORV tourism, are clearly contrary to the desires of a significant part of the residents of the Dixie NF area who wish to see the peace and quiet of their rural way of life preserved.	The FEIS analyzes the impacts of these recreational uses on the Forest and Forest-user experiences. Please refer to FEIS section 3.11.2.1.7. The social and economic analysis does not foresee major changes to the "broad trends and challenges" facing rural communities due to this Motorized Travel Plan, regardless of the alternative selected. Please reference the *Social and Economic Specialist Report* sections 4.1.2 and 4.1.3.
150-4	Closure of the routes identified in your preferred alternative coupled with other federal agency action could have a significant detrimental effect on the County's custom, culture, economic base, as well as opportunities for the public to use public forest lands.	Cumulative effects are disclosed in FEIS section 3.7.2.3 and pages 50-52 in the *Social and Economic Specialist Report.* Profiles of economic base and opportunities are found in the *Social and Economic Specialist Report* on pages 2-34.
76-3	I do not agree with Garfield County's claim that more non-motorized use will create a social and economic burden on us. Our tourism economy is based on non-motorized recreation and increased motorized recreation will hurt that, as well as affecting our quality of life.	This is a general comment, position statement, or opinion. Consideration of motorized recreation as far as tourism is concerned has been considered in the *Social and Economic Specialist Report* on pages 9-14.
27-2	The Forest Service also needs to consider the undermining of the fragile economic well-being of the area that depends on ATV and other motorized use of the National Forest.	This is a general comment, position statement, or opinion. Consideration of motorized recreation as far as tourism is concerned has been considered in the *Social and Economic Specialist Report* on pages 2-34.

Letter-Comment	Comment	Response
89-8	I find it interesting that Alt. C would increase the social and economic impacts on the county. With the vast amount of motorized trails that are already in existence, including such well known routes as the Markagunt and Paunsagaunt, there is no basis to assume that ridership will decrease and thereby impact local businesses catering to motorized users. On the contrary, many businesses on the east end of the county are dependent on non-motorized users and visitors for their income and could be adversely affected by an increase in motorized use. The blanket statement in the DEIS (p. 3-86) needs to be researched with real data before making such assertions.	Effects by alternative are described in the *Social and Economic Specialist Report* pages 41-50, and FEIS section 3.7.2.2.1.
125-172	The DEIS fails to take a hard look at the social and economic impacts of roads and OHV use in the Dixie NF…The primary outdoor tourism draws to Wayne, Garfield, Iron, Kane and Washington counties are lands mostly protected from OHV use: National Parks and Monuments. Therefore, suggesting that Alternatives B and C will cause, as the DEIS states, "greater pressure on the county's economy to change and provide services to non-motorized visitors" (p. 3-86) is not at all supportable. Nearly every tourism-related business in the Dixie NF area already caters to non-OHV tourists, many of them exclusively (e.g. river runners and horse packers). Lower road densities in the Dixie NF would not likely cause the Dixie to become a tourism draw similar to Parks or Wilderness, and so Alternatives B and C would not require agrarian communities to accommodate significantly larger numbers of tourists. As the DEIS states, "Motorized opportunities at this scale could create a disincentive for other visitors…to visit the county. This could have economic implications for many county businesses." Indeed, many businesses and residents in the Dixie NF area have expressed their desire to see more public land protected from ORV damage, noting that their businesses depend on the attractions of an unspoiled landscape [three examples given].	Effects by alternative are described in the *Social and Economic Specialist Report* pages 41-50, and FEIS section 3.7.2.2.1.

Letter-Comment	Comment	Response
108-9	In Clause 3.7.2.2.1. [of the DEIS] Garfield County tries to make the case that more non-motorized recreation will place additional burdens on the county. In our view the opposite is true - increased emphasis on motorized recreation will incur more burden on law enforcement, EMTs, fire crews. Further, it will adversely affect our local quality of life, and deter our lucrative non-motorized tourism base.	Effects by alternative are described in the *Social and Economic Specialist Report* section 4.2.1, pages 42-43.
120-5	The State through the Governor's Public Lands Policy Coordination Office (PLPCO) contracted with Utah State University to complete a number of economic and social-attitude studies regarding the use of, and values attributed to, public land resources by Utah residents. Several of these studies, including Recreational Off-Highway Vehicle Use an Public Lands in Utah, Economic Impacts of Land Use Restrictions Statewide on OHV Recreation in Utah (Draft), and Public Lands and Utah Communities: A Statewide Survey of Utah Residents, are provide herewith. Although some of the information is in draft form, PLPCO encourages the Dixie national Forest to consider the information in its analysis.	Please see response to comment 303-1 on page B-41.
81-7	I cut a lot of firewood for my house. ..Wood is the only way I have to heat my house, and with petroleum products rising in price like they are I think it is going to come back in style. If you were to close many of these roads it would dramatically impact my way of life.	Wood cutting will continue to be a use of the Forest lands. This activity will continue to be authorized under permit and will not be impacted by the Motorized Travel Plan as permits will identify areas permitted for firewood gathering. See FEIS section 2.4.10.
124-15	…with escalating gas, fuel, and heating costs it can and will place a financial hardship on our families if we are not able to continue this practice [firewood gathering].	See response to comment 81-7 on page B-44.

Letter-Comment	Comment	Response
125-11	The DEIS fails to take a hard look at the social and economic impacts of roads and OHV use in the Dixie NF. The DEIS' analysis of the potential social and economic impacts of the various alternatives is overgeneralized and inaccurate. Most of the section seems to rest on the unsupported assumption that limitations on OHV travel and route mileage will be "disruptive" to social and economic systems in nearly every county in the Dixie NF area. However, while OHV use is a very visible and high-impact use, it represents a very small portion of total use of the Dixie, by either tourists or locals. Several studies point to the limited popularity of OHV use among Dixie NF users, and the far greater popularity of nonmotorized recreation. The most obvious is FS' 2004 National Visitor Use Monitoring (NVUM) survey. The NVUM found that approximately 2.45% of Dixie NF users visited the Forest specifically to ride an OHV. 12.84% of users indicated some participation in OHV use, though it was not their primary activity. Much higher numbers were assigned to activities such as hiking, wildlife watching, hunting and fishing (presumably the hunters or fishermen that rode in on OHVs listed show up in the 12.84% participation figure). "Hiking/walking" had more than double the numbers of OHV use, with 5.90% listing it as their main activity and 42.14% participating. Downhill skiing was by far the most popular main activity in the Dixie, nearing 30% in both categories. Even in the Fishlake National Forest, with its much-advertised and massive Paiute ATV Trail, the NVUM reported that nonmotorized trails were the most popular facility.	See response to comment 125-172 on page B-43.

B.12. Livestock Grazing

Letter-Comment	Comment	Response
69-8	Grazing Permittees such as myself need to be protected. Livestock we run on these permits need to be protected for the abusive nature of ATV riders. They continue to harass livestock and vandalize fences, gates and structures associated with permitted Livestock grazing. Along with other personal and private property.	In response to your comment, we have added a paragraph in the *Livestock Grazing Specialist Report* and FEIS section 3.8.1 addressing current conditions with vandalism and livestock harassment. This document is to look at the effects to resources under lawful activities in compliance with the Travel Plan, leaving law enforcement of vandalism and harassment of livestock outside the scope of this document. See FEIS section 1.5, *Purpose and Need for Action*.
10-4	To say that roads do not have an impact upon grazing lease holders is incorrect. The resulting lost of range habit, vandalism, and harassment are a major impediment to grazing leasers.	Please see response to comment 69-8 on page B-46.

B.13. Noxious Weeds

Letter-Comment	Comment	Response
115-22	Alternatives B, C, and D would provide beneficial outcomes for the Dixie NF, but could result in negative impacts for adjacent BLM-managed lands. The SGFO [St. George Field Office] feels that a simple disclosure of this in the individual Cumulative Impacts sections would be appropriate… 3.9 Noxious Weeds. The implementation of Alternatives B, C, or D could result in increased motorized traffic on BLM-managed lands in the SGFO. Since noxious weeds can be transported by vehicles, a corresponding increase in the spread of noxious weeds could occur.	The displacement of dispersed recreation is addressed in FEIS section 3.11.2.2. We have addressed the increased risk of having areas open to cross-country travel. This discussion can be found in FEIS sections 3.9.2.1 and 3.9.2.2. The correlation between roads and the spread of noxious weed is addressed in FEIS section 3.9.2.1.

B.14. Special Uses

Letter-Comment	Comment	Response
68-33	We request that we be allowed to engage in cross country travel in emergency situations. We have an internal Emergency Response Team that is activated in the case of medical emergency, lost or runaway students, or in response to a natural disaster such as forest fire or lightning strike. Cross country travel would only occur when circumstances required it and only to the degree necessary to ensure the safety of clients.	Emergency cross-country travel is addressed in FEIS section 2.4.2, and activities covered under a permit are addressed in section 2.4.5. Also see the *Special Uses Specialist Report*, section 3.4.
68-32	We request that we be allowed to engage in cross country travel in emergency situations. We have an internal Emergency Response Team that is activated in the case of medical emergency, lost or runaway students, or in response to a natural disaster such as forest fire or lightning strike. Cross country travel would only occur when circumstances required it and only to the degree necessary to ensure the safety of clients.	Please see response to comment 68-33 on page B-48.
102-2	Second, the road up “The Narrows” or on your map, the second over from the top. counter clock wise. There is an irrigation access up that trail/road. I vote to keep it open, but close the unauthorized road made to the left, to the deer fence north west center.	Dixie National Forest employees could not locate “The Narrows” on any map. Alternatives A and E leave all motorized routes as “open to all” in the specific area described in the comment letter. Please see FEIS section 2.2 for more information on Alternative A, and section 2.2.5 for more information on Alternative E. Maps for Alternatives A and E can be reviewed within FEIS section 2.7.
150-260	The non-motorized trail from the Dark Valley Lake to Row Lake is shown on 1923 survey plats and is believed to be an RS 2477 right-of-way. Garfield County believes that additional discussion needs to take place between the Forest Service and the County prior to designating the route in a manner that prohibits vehicular traffic.	R.S. 2477 provided right-of-way for the construction of highways over public lands, not reserved for public uses. R.S. 2477 was repealed in 1976; however, 43 U.S.C. Section 1769 preserved valid existing rights. The Forest recognizes that roads that existed prior to 1903, when the Dixie National Forest Reserve was set aside for public use, would be considered a valid existing right. Public entities or individuals who want to assert their rights under R.S. 2477 may still do so.

Letter-Comment	Comment	Response
68-1	The following comments are with respect to … Alternative D...There are many routes marked as "administratively open" that we have used historically in the operation of our business. We request that as a permittee we are allowed to continue to use these routes.	As noted in FEIS section 2.4.5, permitted activities such as livestock operations, mineral development, outfitter-guide operations, and access to special use developments are approved or denied through the permit process and operating plan.

B.15. Recreation

Also see the Transportation section beginning on page B-84; many comments in the Transportation and Recreation sections are similar.

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General

Letter-Comment	Comment	Response
98-1	I believe a trail connecting Brian Head with the rest of Utah would be a great benefit for the economy of the town. Also, it would ease the frustration and cost of having to trailer ATVs out of town for Brian Head locals. I believe it would bring more people to the area and help stimulate the local economy.	Please see FEIS section 2.2., *Alternatives Considered in Detail*, regarding new trail construction.
125-153	Trail Design Parameters and the Appropriateness of Full Size Vehicle Designation…The FS "Trail Design Parameters" guidance has no design parameter for anything larger than an ATV. Forest Service Manual Section 7705 defines an ATV as "a type of off-highway vehicle that…has handle-bar steering; is less than or equal to 50 inches in width; and has a seat designed to be straddled by the operator." The scope of this guidance leads us to conclude that the Forest Service makes a distinction between categories of users and conveyances that are appropriate for trails, and others such as UTVs, Jeeps, Hummers, rock crawlers, etc., which are not appropriate for use on trails. If the FS has no established methodology for designing, constructing, or maintaining a trail for vehicles larger than an ATV, then it is inappropriate for the agency to allow use of these vehicles on trails. This would include use on routes which exceed 50 inches—the typical cutoff between a road and trail--but are nonetheless "managed as a trail" The "Trail Design Parameters" guidance states that "exceptions and variances to these parameters can occur, however, when site-specific circumstances demand such exceptions." We read that to mean that in certain cases trail width may exceed established parameters, but it is a stretch to conclude that this exception is intended to encompass entirely new classes of vehicles, such as UTVs and larger full-size vehicles such as jeeps, pickups and Hummers.	None of the action alternatives consider designating a trail which would allow a vehicle greater than 50 inches in width. Please refer to FEIS Appendix A, Table A-12. Any future decision allowing vehicles greater than 50 inches in width on trails would be addressed in a separate site-specific analysis.

Letter-Comment	Comment	Response
115-18	There are several places in the plan where the following statement is made: "Currently, the Richfield, Kanab, Arizona Strip, Ely, and St. George Field Offices are in the process of updating their respective Resource Management Plans (RMPs)." The St. George Field Office RMP was signed in March 1999 and is not currently being updated. The Arizona Strip Field Office RMP was completed and the ROD was signed in May 2008. The statement is correct for the remaining BLM offices.	Please see the updated section 4.3.2.1 of the *Recreation and Scenery Specialist Report* and FEIS sections 3.10.2.2 and 3.11.2.2.

Big Game Retrieval/Antler Gathering

Letter-Comment	Comment	Response
115-18	I would like to see us be allowed to recover game with an ATV.	Please see FEIS section 2.6.3.
82-2	The proposal to prohibit Game Retrieval off of designated routes is essential. Opening the door to game retrieval is open a flood of off road travel that cannot be controlled.	Please see FEIS section 2.6.3.

Motorized – General

Letter-Comment	Comment	Response
10-3	My comments on the DNF Motorized Travel Plan Alternative D are as follows: 1. The recent Corn Creek fire presents an opportunity to develop the burned area into a recreational area, especially for additional single track motorcycle trails. The DNF OHV TWIG "suggested" the development of designated OHV recreational areas close to towns to provide economic development and to better manage OHV usage. Such single track trails could be easily built and managed while the vegetation regrows. Part of the burned area was designated as "Travel Restricted" but that designation is unnecessary due to the devastation of the fire. The trails could be built paralleling Corn Creek Road off of FH17 and meander through the burned area to provide sufficient trail length. A trailhead or staging area exists at the beginning of FH17 right off of SH12 that is currently a gravel quarry on Utah School Trust Land. Route 31449 should be kept open to motorized travel and connected in some way to the suggested single track system. There are excellent elevation changes and view points for several pink cliffs, Powell Point and the GSENM that make for wonderful destinations. DNF recreational staff should work with the public to develop this area into a useful recreational destination. Previously, this forest was overgrown and underutilized, making it ripe for fire.	The Main Canyon (Corn Creek fire) area was covered by a previous decision and is thus outside the scope of this document. Please see FEIS section 2.4.12 for further information. FS route 31449 is listed as administratively open in Alternatives B, C, and D. Reference route reports in the project file.
119-1	There is logical route extensions in the area south of Enterprise that should be considered as "proposed motorized trail" to create additional loop opportunities in this area.	See response to comment 98-1 on page B-51.
99-4	My simple request is to adopt option "D" of the proposals. I believe it will be a huge benefit to the Brian Head area and promote responsible riding with more alternatives.	See response to comment 98-1 on page B-51.

Letter-Comment	Comment	Response
15-2	I strongly support Alternatives “D” or “E” as they are the only proposed alternatives which provide for the construction of two short motorized travel trails which will interconnect with existing motorized travel trails and provide a continuous route from Brian Head to Duck Creek and the currently existing trail system in Garfield County. The two routes proposed for construction will motorized travel recreationalists an opportunity to access other trails in the areas not previously available from Brian head, Duck Creek and Garfield County. Hopefully with an increase in trail availability and adequate standardized signage motorized travel users will utilize the designated trails and refrain from unauthorized cross country travel and thus preserve the environment.	See response to comment 98-1 on page B-51.
50-1	I am in full support of a loop type ATV trail that would connect the towns of Brian Head, Panguitch, and Duck Creek. Although there are many ATV trails in the area, none support a main loop trail to attach each of these communities to one another, which would be beneficial to everyone who enjoys riding through such a scenic area of Utah.	See response to comment 98-1 on page B-51.
119-2	The [Iron County] Commission appreciates that the MTP has considered provisions to provide for new road/trail construction in the DEIS that provides motorized access to communities and tying connecting routes to other counties, communities and facilities. However, it did not include, in any alternative, the proposal made by the County in written comments dated January 10, and February 26, 2007 (attached) to provide a motorized trail that would connect from Iron County's facility at Woods Ranch to tie to the Red Desert and Cascade Falls trails/roads.	Please see response to comment 50-1 on page B-54.
60-1	WHEREAS, the Brian Head Town Council also recognizes the need to form a partnership with the Forest Service in order to provide a designated trail system throughout the Dixie National Forest, Counties and Town areas linking Brian Head to other communities for recreational purposes and access…NOW THEREFORE BE IT RESOLVED by Brian Head Town Council of Brian Head, Iron County State of Utah…The Town Council is in strong support of Alternative "D: which would create two new trails that would provide OHV trail access from Brian Head Town to the Dixie National Forest, Duck Creek area, Panguitch Lake and the Piute ATV trail systems.	Please see response to comment 50-1 on page B-54.

Letter-Comment	Comment	Response
107-3	WHEREAS, one of the proposed alternatives the Forest Service has identified is "Alternative D" (Attachment A) Which would create two new trails that would link Brian Head Town to designated trails in the Dixie National Forest, Duck Creek area, Panguitch Lake and a major trail system known as the Piute ATV Trail…NOW THEREFORE BE IT RESOLVED by the Brian Head Town Council of Brian Head, Iron County, State of Utah…The Town Council in favor of forming a partnership with the Dixie National Forest Service in order to assist the Forest Service in completing a designated OHV trail system.	Please see response to comment 50-1 on page B-54.
47-3	The Piute trail is there for those who want to adventure out on far trips. If any thing I think we need to focus on making sure Brian-head, Duck Creek, the Red Dessert [sic] and other sites all have access to the Piute.	Please see response to comment 50-1 on page B-54.
150-244	At the meeting I made mention that some people enjoy a short ride and other like trails that link together. When I made this statement I was speaking within the Red Desert, or within Brian-Head. I do not believe we should build the 1.26 trail. Yes some people would like to see these two sites hooked together by a trail. I think it will cause more destruction of the forests.	Please see response to comment 50-1 on page B-54.
58-5	I understand works are in place to open the trail on Thompson Ridge to permit Brian Head riders to get to Sydney and that's a step in the right direction. This can all be done without adversely effecting the wonderful wildlife in the area.	Please see response to comment 50-1 on page B-54.

Motorized OHV – Insufficient Opportunity

Letter-Comment	Comment	Response
117-2	I am writing to encourage you to consider Option A with regard to the proposed road closures that will impact the Boulder Mountain. There are already significantly fewer roads that we are able to access via ATVs and other motorized vehicles and further closures would severely hinder our ability to utilize the beautiful recreational areas on the Boulder Mountain.	Consideration for motorized access within Alternative A is located in FEIS Table 2-2 and in the Alternative A map in FEIS section 2.7. Previous decisions can be referenced in FEIS section 2.4.12 and Table 2-6.
18-1	The Grand View Trail should be open to ATV/MC 2 to 3 days a week such as Tue, Wed, and Thursday. The UT/AZ ATV Club has for a long time offered volunteer service to do the trail work. This may be a unique idea but it just might work for everyone and deserves a try.	Refer to FEIS section 2.4.12, *Previous and Pending Decisions*.
117-3	We imagine you have already heard about the problem at Casto Canyon. Please add us to the list of folks who strongly request reconsidering the need to retain the Casto to Limekiln ATV trail “loop” opportunity. Honestly, if not corrected in the Final Plan, this is going to be a huge problem.	Showing route U31510 as Unauthorized Closed in Alternative D of the DEIS was an error. The FEIS will show this route as a motorized trail.
110-11	We use the Sidney Valley, Hancock Peak, Red Desert and Tippets Valley areas quite regularly. These roads and trails should remain open [to ATVs].	All alternatives consider leaving routes in these areas open to motorized use. Reference FEIS Table 2-2 and section 2.7, *Alternative Maps*. Also reference route reports in the project file.
24-2	I have a suggestion. Rather than closing many of the roads on top of Boulder, loop them so people can access the lakes, or maybe start at the Aquarius Ranger Station and develop a trail system that would extend across the top of Boulder and go down that old road an the east side to the Wildcat Ranger Station.	Reference FEIS Table 2-6 and section 2.4.12 regarding previous decisions.
49-4	I believe that a combination of Alternative D and Alternative E would be the most effective. Brian Head is cut off from the ATV trail systems and there is an overwhelming demand in Brian Head to expand ATV trails to other communities and outside riding areas.	Consideration of Alternatives D and E is provided for in the FEIS. Reference FEIS sections 2.2.4 and 2.2.5.

Letter-Comment	Comment	Response
170-18	Make an addition and change to Alternative "E" by providing for a motorized trail that connects the Iron County facility at Woods Ranch to the Red Desert road and Cascade Falls trail by proposing a new constructed route and changing the identified designations in Alternative "E" of existing trails and routes.	Please see response to comment 50-1 on page B-54.
170-17	Specific trails that should be considered for future motorized trail construction include a trail that would connect Iron County's facility at Woods Ranch to tie the Red Desert and Cascade Falls trails/roads.	Please see response to comment 50-1 on page B-54.
146-1	The Wet Sandy route segment (above) connects with the locally known "Italian Trail" that connects via Italian Wash with the Silver Reef Road north of Leeds. The Italian Trail segment is not shown on the DEIS maps indicating a glaring hole in the route inventory.	Alternative A considers leaving this route open. Reference FEIS section 2.7, Alternative A map.
124-3	I would like to see good ATV access in the East Fork Sevier River and on Mount Dutton.	All alternatives provide ATV access to both the East Fork of the Sevier and Mount Dutton. Please refer to FEIS section 3.11.2.1 and Table 3-17.
170-35	We further encourage the access to be provided to both traditional and side x side ATV vehicles such as the Rhino and Ranger - thus making these trail rides more family friendly and safer (roll bars, bucket seats and seat belts) for young families due to the 4 up seating capability. They also allow disabled individuals the opportunity to comfortably enjoy trails rides.	None of the action alternatives consider designating a trail which would allow a vehicle greater than 50 inches in width. Please refer to FEIS, Appendix A, Table A-12. Any future decision allowing vehicles greater than 50 inches in width on trails would be addressed in a separate site-specific analysis.

Motorized OHV – Excessive Opportunity

Letter-Comment	Comment	Response
12-2	I ask you to consider reducing the number of motorized trails in the Dixie Forest on the lands adjacent to the Town of Boulder, especially since new state laws and county road claims would allow forest ATV users to use county and state roads though our town.	Please see FEIS section 2.3, *Range of Alternatives* and Table 2-2 regarding the differences in motorized trail designations.
86-11	The explosion of ATV use on forest lands is a phenomenon no one predicted. The impact of motorized use on the land and on 'quiet users', (hikers, horsemen, fishermen, etc.) is significant. While ATV use is a suitable option for some areas, I am asking you to consider a more mosaic approach to motorized use in the Dixie.	Please see FEIS section 2.3, *Range of Alternatives,* and Table 2-2 regarding the differences in motorized route designations.

Non-motorized – Insufficient Opportunity

Letter-Comment	Comment	Response
97-1	We are also concerned about maintaining sufficient mountain biking trails for use by the "baby boomer" generation and older. What we mean is trails like the Lower Louder Pond trail that is beautiful but doesn't take a twenty-something buff biker dude to negotiate.	Non-motorized mountain bike trails are not a part of the EIS document, and are thus outside the scope of this decision. Please refer to FEIS section 1.12.

Conflicts Between Motorized and Non-motorized

Letter-Comment	Comment	Response
108-4	There are many places where ATV's are getting onto non-motorized trails, particularly [sic] along the Great Western Trail. This highlights the issue of conflicts between motorized and non-motorized uses. As with noise issues, the concept of 'multiple-use' is not realistic, and the non-motorized users always lose out. Please address these issues in this DEIS as you move towards a comprehensive travel plan avoiding conflicting uses.	Within the *Recreation and Scenery Specialist Report*, all the action alternatives should work to reduce user conflict (including conflict stemming from noise pollution) from current levels through alleviation of motorized cross-country travel. Please see sections 3.3, 4.2.3.1, 4.2.6.1, 4.2.7.1, and 4.2.10 in that report. Please refer to FEIS section 1.10.1 and section 2.2.2, *Alternative B*.
76-2	Since hiking and other nonmotorized trail use activities are more than ten times as popular as ORV use on the Dixie (according to the National Visitor Use Monitoring (NVUM), FS should take special care to ensure that: 1) The EIS includes a site-specific analysis of every place where an open route crosses a nonmotorized trail, with a report on any motorized incursions and a plan to stop them in the implementation phase	Please see response to comment 108-4 on page B-59.
125-157	During series of field checks…we found that every section of the GWT we visited had been visited by ORVs. In many cases, the GWT had seen both damage and illegal user construction. This situation is unacceptable; the GWT should be a crown jewel of the Dixie NF, providing an experience for hikers, equestrians and other quiet recreationists to experience the Forest away from the noise and crowds of civilization. This type of experience is becoming more and more difficult to find...All alternatives propose to change the designation of this portion of the GWT trail from non-motorized to motorized. This renders the GWT it essentially unusable for the hikers, bikers, and equestrians for whom the GWT was intended. Allowing the GWT to be converted to ORV use is in clear violation of presidential executive orders (discussed in greater detail below) to minimize ORV routes' conflicts with other recreational uses.	Please see response to comment 100-3 on page B-18.

Letter-Comment	Comment	Response
125-9	Looking at alternative "D" I am struck by the large number of roads open to motorized travel that directly connect to non-motorized routes.	Regarding the effects of motorized and non-motorized routes on the recreation resource, please refer to FEIS sections 3.11.2 and 3.11.2.1.5, and Table 3-18. Also refer to the *Recreation and Scenery Specialist Report*, section 4.2.5.
56-1	Multiple use of trails is a fallacy with non-motorized users losing the peace and quiet that they are seeking.	Regarding the effects of motorized and non-motorized routes on the recreation resource, please refer to FEIS sections 3.11.2 and 3.11.2.1.5 and Table 3-18. Also refer to Table R4-7 in the *Recreation and Scenery Specialist Report.*
89-6	With the current number of miles of motorized routes outnumbering the miles of non-motorized routes by 3:1, it only seems appropriate to downsize the number of motorized miles and to protect the non-motorized miles.	Alternatives B, C, and D reduce motorized route mileage from both A and E Alternatives. Please see FEIS section 2.2 and Table 3-17.
89-5	Although this process relates to motorized travel, current and potential conflicts with non-motorized trails can and should be addressed within the scope of this process in order formulate an integrated travel plan for all users. We refer you to 'Best Management Practices for Off-Road Vehicle Use on Forest Lands' by Wild Utah Project and Wildlands CPR, and specifically paragraph 5.1.1 'Planning and Decision-Making BMPs for Use Conflicts'.	Conflict between motorized and non-motorized use has been addressed in the *Recreation and Scenery Specialist Report* section 4.2 and FEIS s*ection 3.11.2*.
108-5	The results of the various alternatives including Alt. D do little to noting to meaningfully reduce user conflict.	Please see response to comment 89-5 on page B-60.

Recreation Experiences

Letter-Comment	Comment	Response
29-3	We would like to see the roads left open so that we can continue to do the things the we enjoy, but also so people don't just start new trails the will interfere with our hunting grounds. The more roads that are closed will just create more problems in meadows and on hillsides when the disrespectful 4-wheeler enthusiast starts looking for places to ride.	Alternatives A and E analyze the effects of leaving routes open. Please refer to FEIS sections 2.2.1, 2.2.5, and 3.11.2 and the *Recreation and Scenery Specialist Report* section 4.2.
60-2	WHEREAS, Brian Head Town is known as a recreational resort community that has identified trails as an important factor in providing safe and enjoyable experiences to the residents and guests of Brian Head Town…NOW THEREFORE BE IT RESOLVED by the Brian Head Town Council of Brian Head, Iron County, State of Utah…The Brian Head Town Council strongly encourages Dixie National Forest to adopt the implementation of Alternative "D" as the preferred system of designated motorized routes, which include OHV trails.	Please see response to comment 50-1 on page B-54.
47-2	Several of the Atv routes go nowhere or dead end this is the type of trail that causes problems. We feel this is an area of the plan that was not given much thought and was done only by looking at a map. We have rode several hundred miles of the Piute Atv trail and the trail systems these are well thought out and designated trails with little or no off trail travel. The DNF needs to put more thought into the trails and Atv routes or the problem will not go away.	Please refer to FEIS sections 1.5 and 2.2. Also refer to the *Recreation and Scenery Specialist Report* section 4.2 describing consideration for motorized opportunities (ATV routes). Also see FEIS section 2.7, *Alternative Maps*.
124-4	I would strongly encourage you not to close any roads if possible. The Boulder Mountain range is one of the few places that is truly a land on "many" uses that can be enjoyed by hikers, campers, hunters, fishers, 4-wheelers, 4-wheel drive vehicles and even pickups and cars. Any road closures you undertake will significantly impact one or more of these user groups.	Please see response to comment 29-3 on page B-61.
4-2	I'm concerned about closing down roads… because the forest should be there to enjoy.	Please see response to comment 29-3 on page B-61.

Letter-Comment	Comment	Response
2-4	Noise pollution. Engine noise is obviously an integral aspect of motorized use. As above, we recommend relocating incompatible uses to avoid conflicting uses. This conflict always adversely affects the non-motorized users, while being a non-issue for motorized users. You may know that several national parks have used noise monitoring studies to evaluate impacts. We are at risk of deterring visitors seeking a peaceful experience of nature - at our cost.	Please refer to FEIS section 3.11.2.1.8. Also refer to the *Recreation and Scenery Specialist Report* sections 4.2.7 and 4.2.8.
108-6	I strongly feel that no more roads should be closed and that existing closed roads should considered to be re-opened. … Many places were families once camped are now prohibited motor areas. Once these areas are limited or closed, many families no longer take time to find a new area and many even quite going to the mountains. If children do not learn to love the outdoors, nature, and the mountains as children they no longer find an interest it when they are in the teenage years.	Please see response to comment 29-3 on page B-61.
27-5	I was raised on the Boulder Mountain, and I am a better person because of it. Much of what I am goes back to lessons learned in the DNF. Now I have 5 kids of my own, and my oldest is just entering her teenage years. I need the Boulder Mountain to keep her on the right track throughout her teenage years. If these road closures go through, our trips to the DNF will go from several times a month to one backpacking trip each summer. The cost in money and time in taking a full week to backpack or bike to these lakes is simply too much for me to do it more than once or twice each year. Kids need to be in the mountains. They need to hike, backpack, bike, ride ATVs, hunt, fish, and learn to drive a stick shift truck. I need the Boulder Mountain. Please do not close its access.	Please refer to the description of Alternatives in FEIS section 2.2 regarding access opportunities within all alternatives. Also refer to the *Recreation and Scenery Specialist Report* section 4.2.

Letter-Comment	Comment	Response
75-15	The Boulder region plan has massive closures to all motorized travel, essentially limiting access to biking, horseback riding, or hiking. However, because the Boulder is so expansive, walking or biking requires a week-long camping trip. I could never take my kids fishing to any of the lakes on a day trip. I would have to wait until they were teenagers and had the aptitude and strength to bike or walk through a week. This is totally unacceptable since my five kids are ages 12 and under. Our country has a hard enough time getting the current generation of kids into the mountains. Is this what our government wants to do to solve the problem? We need to encourage all types of access for all types of people, including the very young and very old.	Please see response to comment 27-5 on page B-62.
6-2	I would like to see some trails opened up so you can leave out of Cedar City and be able to go to Panguitch on an ATV. We used to do that a lot by horseback	Please see response to comment 34-36 on page B-22.
82-4	My cousin comes up from Vegas to stay with us for a month and the thing she looks forward to most is camping and fishing with us, so if you close the roads it would be really bad for my family. Please do not close the roads cause it would ruin my family fun.	Please see response to comment 27-5 on page B-62.
78-2	I enjoy the freedom of discovering and exploring new roads, and I don't want my right to do this removed.	Please see response to comment 27-5 on page B-62.
79-2	Other uses than that of ATV's need to be preserved. There are still people who enjoy and desire access to National Forest Lands by other means than that of ATV's, such as hiking and horse backing riding. There needs to be areas provided for this experience where the threat and danger of ATV's is not present.	Please refer to FEIS sections 1.5, 1.12, and 2.2 regarding the decision to be made and the range of alternatives that are considered. Also refer to the *Recreation and Scenery Specialist Report* sections 4.2.7 and 4.2.8 regarding effects of motorized route designation.
69-7	The Utah Fish and Game allows children to catch fish without a license. They also allow boys between ages of fourteen and eighteen to have special hunting privileges. Exceptions by the Fish and Game are made so children can develop a love for outdoor activities and enjoy them for the rest of their lives. By closing the roads, you take away this privilege from a lot of children.	Please see response to comment 27-5 on page B-62.
9-2	We have got to address this issue before there is even more damage done everywhere. We have a cabin at Rainbow Meadow Rancho's near Cedar Breaks and those of us up there are in constant conflict with riders who abuse the land.	Please refer to FEIS section 1.7.

Letter-Comment	Comment	Response
25-1	I would like all roads on the Dixie National Forest left open. Alternative E. My reason: We have a teenage grandson living with us, I want him to know and love the forest as much as his grandparent and great grandparents has loved it. I want him to learn to love and respect it, and take care of it for year to come.	Please see response to comment 30-2 on page B-27.
82-1	We spend weekends with my own kids fishing and riding ATV's between the different lakes on the Boulder Mountain. It has come to my attention that there plans to be continued road closures on the Boulder Mountain and more specifically on the Boulder Top. To say the least, I am disgusted of the thought that places I loved to visit with my children may soon become inaccessible to families. Walking two or three miles with small children is not possible and we missed visiting one of our favorite lakes as a family. With more and more kids across America spending more and more time on the couch watching TV and playing video games, it is very sad that the few families that do enjoy the outdoors may soon be canceling outdoor vacations because of restricted travel.	Please see response to comment 27-5 on page B-62. Also see FEIS section 2.4.12 and Table 2-6 regarding previous decisions.

Access – Sense of Place

Letter-Comment	Comment	Response
12-1	Throughout my life, I have always dreamed of taking my children out on the Boulder Mountain to experience and cherish the memories that I had when I grew up. If the roads were to be closed, my future family (and many other families) wouldn't be able to have those cherished experiences together.	Please see response to comment 27-5 on page B-62.

Access – Discrimination

Letter-Comment	Comment	Response
24-1	The Boulder Mountain should not just be available to those who can hike or ride horses. It is one of the few Forest Service lands that still offers wide opportunities for everyone.	Please see response to comment 27-5 on page B-62.
4-4	We do a lot of Hunting, Recreating, Camping and Fishing in, on and around the DNF, restricting travel, limiting motorized access, and closing of roads and trails will be a tremendous blow to our lifestyles, it will also be discriminatory to the older people who cannot access our public lands by motorized means due to age and physical impairments, the forest should be open and accessible to all ages and physical abilities and in "all areas" not limited or restricted.	Please refer to FEIS section 2.21 regarding consideration for Alternative A. See FEIS sections 1.5 and 1.11 regarding agency regulatory authority.
124-2	Please consider those who are unable to access the great outdoors without the aid of motorized travel when making your evaluations and recommendations.	Please see response to comment 4-4 on page B-65.
96-1	We fully acknowledge that the “primitive fishing experience” is highly valued and unique on the Dixie, and we understand the agency’s desire to protect and enhance that experience. However, we hope the agency will also acknowledge that limiting motorized use also limits this experience to those who are healthy and hardy enough to hike to these high mountain lakes. It is appropriate and reasonable to maintain motorized vehicle access to some of these small lakes for forest visitors who require the use of vehicles.	Please see response to comment 4-4 on page B-65.
110-10	I feel like you are treating ATV riders as second class citizens. Your trail systems cater to hikers and bike riders. Several of the existing trails offer the public scenic opportunities, but the best are restricted to foot or bike traffic. For example, I would like to see the scenic rim trail that follows the breaks south of Navajo Lake (Virgin River Trail?), open to ATV use. This is probably one of the most scenic trails on the Forest. When it was originally constructed, it was open to ATVs. But after a short period of time, it was restricted to foot, horse and bicycle traffic.	Please see response to comment 82-1 on page B-64.

Letter-Comment	Comment	Response
170-4	I feel like you are treating ATV riders as second class citizens. Your trail systems cater to hikers and bike riders. Several of the existing trails offer the public scenic opportunities, but the best are restricted to foot or bike traffic. For example ..the spruce trail and the trails north of Lowder Ponds should be open for ATVs.	Please see response to comment 82-1 on page B-64.
170-5	I feel like you are treating ATV riders as second class citizens. Your trail systems cater to hikers and bike riders. Several of the existing trails offer the public scenic opportunities, but the best are restricted to foot or bike traffic. For example ..we should also be able to ride an ATV to Powell Point.	Please see response to comment 82-1 on page B-64.
170-6	Being handicapped has presented its own problems and challenges in getting around when we go camping. Being able to ride on our ATV has provided me with some of the access that I used to have to be able to get around in the forest without being limited to just riding down the road in a car. Now with the proposed Alternative D, more and more of the forest would be shut off from access to me and others with limited physical ability.	Please see response to comment 4-4 on page B-65.
170-37	I request the you consider reasonable access for the out of shape, short on time, elderly and infirm as you proceed with rash off road closures sweeping the nations public lands.	Please see response to comment 4-4 on page B-65.

Over-snow Travel

Letter-Comment	Comment	Response
41-4	Since part of the proposal is banning cross country travel. How does this affect snowmobiles? According to the National Forest website, unless I am mistaken, a snowmobile is treated the same as an ATV. Why was this not discussed? I fully agree with staying on the trail with an ATV but a snowmobile with four feet of snow under it is not tearing up the environment. There should be special exceptions made concerning snowmobiles.	Please refer to FEIS section 2.4.7 regarding over-snow or winter travel.
125-137	Opportunities for traditional wintertime experiences of solitude in the national forest have dramatically decreased because of allowing snowmobiles to encroach into areas that historically have required cross country skies or snow shoes. A request is made to dramatically reduce areas allowed for snowmobile access and to keep them on designated trails. Provide limited play areas and prohibit their use in the remainder of the forest. This is an area where vision is needed to preserve for the future.	Please see response to comment 105-8 on page B-23.

Dispersed Camping

Letter-Comment	Comment	Response
58-2a	Designated motorized camping sites. SMU Alternative: A reasonable number of undeveloped, signed [motorized] camping sites are permitted based on roads and route designation and density criteria. One hundred and fifty-foot stubs of closed routes and roads should be considered as potential undeveloped camping sites (p. 78) DEIS Alternatives: “Some” (i.e., three, see DEIS at 3-102) areas have been restricted to designated campsites only; more dispersed campsites and dispersed camping “areas” may be designated in the future “if physical and social conditions reach a level where it is deemed necessary.” Significance: The SMU Alternative suggests designation of many motorized camping sites at the stubs of appropriate closed routes, as one means of providing numerous dispersed camping sites.	Please see FEIS sections 1.5, 1.7, and 1.12 regarding decision framework and the project purpose and need.
125-130	I ask as you create a plan, please try not to closedown to many of the campsites.	Please see response to comment 58-2a on page B-68.

Letter-Comment	Comment	Response
58-2b	The DEIS fails to address the significant resource damage caused by motorized. Off-route (i.e., "dispersed") camping…the Travel Management Rule as published in the Federal Register states: "The Department expects the Forest Service to apply this provision sparingly, on a local or State-wide basis, to avoid undermining the purposes of the final rule and to promote consistency in implementation" (68285 FR Vol. 20 No.216). Instead, at 2-18, the DEIS indicates that a feature common to all alternatives included in the DEIS is the allowance of dispersed camping within 150 feet along designated open routes. This means that a swath of 300 feet (150 feet on both sides of a route) off-route driving and camping would be allowed unless specifically restricted. The width of this swath for off-route driving and camping, then, is a football field's length (i.e., 100 yards). This cannot be considered "sparingly" applied, nor designated route by route. The decision to allow such a blanket exemption could be interpreted as a violation of the travel management rule, the executive orders relating to ORV damage, and made arbitrarily in violation of NEPA. Any preferred alternative needs to have the dispersed camping exemption applied sparingly, with route-by-route analysis that takes a hard look at potential impacts to each resource identified in the DEIS – Affected Environment chapter.	Please refer to FEIS sections 1.5, 1.7, and 1.12 regarding the project purpose and decision framework. Section 2.4.9 of the FEIS discloses that dispersed camping designations are not part of the decision. Chapter 3 of the FEIS discloses resource effects.
125-166	On pp. 17 and 18 of our January 31, 2007 scoping comments, we described the serious resource damage that is often caused by driving to and using dispersed campsites...The SMU Alternative addressed this problem by proposing that undeveloped campsites be designated, but not within 200' of water (scoping comments, pp. 75 and 77). The DEIS fails to acknowledge this proposal, in part because it fails to analyze and publish the Sustainable Multiple Use Alternative.	Please see response to comment 58-2b on page B-69.

Letter-Comment	Comment	Response
125-167	The DEIS is careful to indicate the width of allowed dispersed driving/camping, but provides no restrictions as to riparian areas. The Sustainable Multiple Use Alternative's proposed 200' foot buffer along creeks, streams, and other wetlands, however, is entirely reasonable, given that the Dixie National Forest offers its visitors a 200' foot "tip for low-impact camping" at its website: http://www.fs.fed.us/r4/dixie/recreation/campgrounds/dispcamp.html	Please see response to comment 58-2b on page B-69.
125-168	[A]t 2-18 - 2-19, the DEIS does state that areas will be designated for dispersed camping 150' off-route. It fails, however, to consider the option of limiting non-developed camping to designated sites and fails to consider the option of prohibiting off-route motorized camping within 200' of streams, creeks, and other wetlands. Aside from failing to limit off-route motorized camping within riparian areas, the DEIS fails to indicate any intent to limit such camping within any other of the areas our scoping comments and Sustainable Multiple Use Alternative indicated to be of concern, such as • meadows • aspen clones • ponderosa pine stands • potential habitat for recovery of Utah prairie dog, aspen, amphibians (e.g., boreal toad), sage grouse, native fish, and other species known to be declining and vulnerable to habitat destruction or harassment by motorized vehicles, noise, frequent travelers, or vehicle camping.	Please see response to comment 58-2b on page B-69.

Letter-Comment	Comment	Response
125-169	While the Forest may not want to consider designation of undeveloped campsites within this travel plan process, the reality is that dispersed camping does involve off-route driving, and results in proliferation of compacted, denuded, and weedy off-route sites; sloughs sediment into creeks and streams, reduces functional riparian areas; stresses already-stressed and declining aspen stands; compacts and reduces understory in ponderosa pine stands; compacts and reduces biodiversity in the Forest's all-too-rare wet meadows; and ignores the Forest's "tip" for low-impact camping and Tread Lightly's recommendation that campsites be located 200' from water. Thus the Forest has erred in refusing to include an alternative (i.e., the Sustainable Multiple Use Alternative) that has proposed that undeveloped campsites occur (a) only at designated sites (as opposed to "areas"), and (b) only at least 200' from creeks, streams, and other water.	Please see response to comment 58-2b on page B-69.

Letter-Comment	Comment	Response
125-170	Off-road camping. SMU Alternative: Off-road driving for dispersed camping prohibited (p. 75). DEIS Alternatives: Off-road driving 150' from each side of a road allowed except where specifically prohibited. No limit is made as to width [underline] of the swath of off-road campsites. Significance: No Dixie alternative considers anything but allowance for a football-field's width of cross-country driving and camping along roads and routes throughout essentially all the Forest. [powerpoint from So Rockies Conservation Alliance] The Forest does acknowledge that "adverse affects [sic] to soil quality [e.g., compaction, denudation, increased suitability for invasive exotic species] are expected" in these areas. However, the DEIS fails to acknowledge number of stream crossings or miles of routes within 150 feet of creeks, streams or other wetlands as a soil indicator of motorized vehicles (see DEIS at 3-5 to 3-7). Executive Orders 11644 and 11989 note that designation of "off-road vehicle routes" should include "protection of meadows, wetlands, riparian areas, and streams." The DEIS alternatives provide no such protection within its allowed 150' roadside swath given over to "dispersed" motorized driving/camping.	Please see response to comment 58-2b on page B-69.

Law and Regulations

Letter-Comment	Comment	Response
34-10	…general comments...Wayne County does not support the closing of any roads or area in which any type of recreational or economic use is observed and documented. This is stance is part of the General Land Use Plan that Wayne County has established and follows.	Please see response to comment 27-5 on page B-62.

Cumulative Effects

Letter-Comment	Comment	Response
83-159	Alternatives B, C, and D would provide beneficial outcomes for the Dixie NF, but could result in negative impacts for adjacent BLM managed lands. The SGFO feels that a simple disclosure of this in the individual Cumulative Impacts sections would be appropriate… 3.11.2.2 Cumulative Effects. Travel Management Decisions on BLM and other Forest Service Lands Page 3-110, Paragraph 1: This paragraph states, "Generally speaking, the three main categories for OHV use on BLM lands are Open, Limited, and Closed." There are actually four specific designations: Open, Limited to Existing Roads and Trails, Limited to Designated Roads and Trails, and Closed. Even though two of these area designations are considered "Limited," there is an important distinction between the two: "Limited to Existing" means all roads and trails in that particular area are open to motorized use. "Limited to Designated" means that only specific roads and trails in that area are open to motorized use. Others may be closed or limited to administrative use. As an example, once the Dixie NF MTP is final, the entire forest would qualify under the "Limited to Designated Roads and Trails" category.	Section 4.2.1.1 has been updated in the *Recreation and Scenery Specialist Report.* Also please see FEIS section 3.11.2.2.
115-24	Alternatives B, C, and D would provide beneficial outcomes for the Dixie NF, but could result in negative impacts for adjacent BLM managed lands. The SGFO feels that a simple disclosure of this in the individual Cumulative Impacts sections would be appropriate… 3.11 Recreation. The displacement of motorized and non-motorized users is adequately analyzed in this section, although the cumulative impacts by alternative, as described above, could be further fleshed out.	Please see response to comment 83-159 on page B-74.

Letter-Comment	Comment	Response
115-23	[T]he DEIS does not take a hard look at the potential cumulative impact of a reasonably foreseeable increase in ORV use on the Forest. If efforts to increase the promotion of ORV tourism are successful, any parts of the route system that are currently or forseeably popular for ORV recreation may see a major increase in traffic within the life of this Travel Plan. NEPA analysis must take a hard look at such areas, showing how they will support increased use.	Please refer to the *Recreation and Scenery Specialist Report* section 4.2 for direct and indirect effects. Also refer to FEIS section 3.11.2. 40 CFR 1508.7 and 36 CFR 220.4(f) discuss obligations to disclose cumulative effects.

Administrative Routes

Letter-Comment	Comment	Response
125-160	One of the primary objections to Alt. D is the number of administrative roads that have been left open. With the current lack of enforcement and no foreseeable increase, administrative roads are an attractive nuisance for ATV riders. Already most of these roads have been encroached upon by motorized traffic, and in many cases they are the conduits to illegal ATV use on non-motorized trails. There are numerous examples, such as off White's Flat and Hell's Backbone, where ATVs have used administrative roads to access and ride the Great Western Trail. In some areas, the number of administrative roads that have been left open create serious wildlife issues. For example the Allen Canyon area is a major deer migration and fawning area and is riddled with administrative roads.	Please see FEIS section 1.10.2 regarding issue and alternative development and section 2.2, *Alternatives Considered in Detail*. FEIS section 3.15.2.1.8 describes management of administrative roads and FEIS Appendix A discloses route designation differences by alternative.
89-3	If the roads are more important enough to keep open for administrative purposes then look more closely at keeping them open for camping purpose as well.	Please refer to response to comment 125-160 on page B-75.

Concentrating Use

Letter-Comment	Comment	Response
90-4	Please don't close our beloved trails or ruin our fantastic camping by cramming us all into confined spaces.	Consideration for Alternative A can be found in FEIS section 2.2.1.

Wilderness

Letter-Comment	Comment	Response
110-8	Second, regarding the proposed Wilderness/recommended Wilderness issue, only Congress can designate Wilderness under the Wilderness Act. The act specifically states that, wilderness areas are "to be composed of federally owned areas designated by Congress as 'wilderness areas'…no Federal lands shall be designated as 'wilderness areas' except as provided for in this chapter or by a subsequent act." 16 USC §1131(a). Reviewing courts have agreed that this express command reserves the power to designate wilderness exclusively to Congress. State of Wyoming v. U.S. Dept. of Agriculture, 277 F.Supp.2d 1197, 1233 (D. Wyo. 2003), vac. On other grounds, 414 F.3d 1207 (10th Cir. 2005); Parker v. United States, 309 F.Supp. 593, 597 (D.Colo. 1970), aff'd, 448 F.2d 793 (10th Cir. 1971). While the Secretary of Agriculture, and therefore the Forest Service, certainly has responsibilities under the Wilderness Act, those duties are succinctly summarized as "the duty to study and recommend." Parker, 309 F.Supp. at 597. The Forest Service simply does not have the authority to make any Wilderness-specific management directives until Congress has made a determination of Wilderness status. Off-road vehicles use, which are generally prohibited in designated Wilderness areas, but frequently enjoyed within proposed wilderness areas, must be properly and effectively managed by the Forest Service in non-wilderness areas, including proposed or recommended wilderness areas.	Please see FEIS section 1.5 regarding the project purpose and need and section 1.12 regarding the decision to be made. The Dixie National Forest Motorized Travel Plan does not propose or recommend wilderness.

B.16. Roadless and Unroaded and Undeveloped Areas

Letter-Comment	Comment	Response
119-52	My comments on the DNF Motorized Travel Plan Alternative D are as follows: 32. We are opposed to the creation of large roadless areas in the DNF. It appears that that is the goal on Boulder Top. Roads and motorized travel are important components of a total forest management plan for issues like fire protection, wildlife management, pest/weed control, etc. These are public lands, and the public should have access to them for use and to assure they are being managed correctly. The concept that making something roadless will protect it forever is flawed. Look to Cedar Mountain along SH14 as an example where access and multiple use had no bad effect. What destroyed that forest for generations was insect infestation and environmental extremists.	The evaluation and subsequent designation of roadless areas was required by RARE I and II and protection of those areas was established by the 2001 Roadless Area Conservation Rule at 36 CFR 294 subpart B. The purpose for this project (FEIS section 1.5) is to provide opportunities for both motorized and non-motorized recreation as well as to designate a system that improves recreation management and enforcement related to motor vehicle use. This includes managing conflicts between user groups. Access is not prohibited. Non-motorized access is still available forest-wide. In order to help focus the review and analysis, some previous decisions were incorporated as authorized by the 36 CFR 212.5 (b) of the Travel Rule (FEIS section 1.6). Motorized access effects on other resources like wildlife, water, and cultural resources, and the spread of noxious weeds are disclosed in FEIS Chapter 3.
119-51	My comments on the DNF Motorized Travel Plan Alternative D are as follows: 31. The local residents, as a part of their rural culture, have always used the DNF as a location for family reunions. These outings frequently involve OHV use. The DNF motorized travel plan must take these local needs into account and help to preserve these traditions. The DNF recreational staff should work with local communities to better understand these needs.	The Motorized Travel Plan planning process involved several opportunities to engage the public, including meetings, radio announcements, and an extended comment period. Please reference FEIS section 1.8 and public involvement section of the project record.

Letter-Comment	Comment	Response
89-7	There is a lack of non-motorized loop opportunities. On the other hand, ATV users have connecting routes all over the map - many of them user created and recognized. The Boulder Swale trail is an obvious example. Created by users and recognized by the Forest Service without any environment assessment, trail 31406 is a steep, erosion prone and a safety hazard. It is the one motorized trail in an otherwise roadless area. The Boulder Swale area along with the Bear Creek area and the Baldys should be left roadless as previously identified in IRA studies.	Route 31406 is a Forest Service motorized system trail, and is not located within an IRA (*Roadless and Unroaded and Undeveloped Areas Specialist Report*, USDA 2009l). The range of alternatives is discussed in FEIS section 2.2. See also the alternative maps in FEIS section 2.7.
125-147	The DEIS states: "Under Alternatives B, C and D, no roads within IRAs are proposed to be added to the system with the exception of those routes needed for public water access and that fit the criteria in RACR" (p. 3-124). This statement, however, is confusing, as the Roadless Area Conservation Rule (RACR) specifically prohibits roads in IRAs, allowing only "motorized trails." This point must be clarified. All alternatives in the DEIS designate a number of routes inside Inventoried Roadless Areas as either "open to all vehicles" or "administrative." This decision, however, appears to be in direct conflict with the reinstated Roadless Rule as well as Region 4 guidance of May 2008… ...Designating a road in a roadless area is thereby violating the Roadless Rule's prohibition on road construction and reconstruction in a Roadless Area. No alternative can include such roads. As all alternatives authorize many routes within IRAs that are open to all vehicles and are not called "motorized trails," the Dixie NF must either change these routes to "closed" in all alternatives, or explain why each route's status is not in conflict with RACR. If the explanation is that every one of these routes is actually a motorized trail, the Dixie NF must ensure that they are in step with the guidelines established for the designation of motorized trails in IRAs	The Roadless Area Conservation Rule (RACR) was enjoined again on August 12, 2008. Under the RACR, road construction or reconstruction is prohibited except under certain exemptions 36 CFR 294.12. The Rule was not in effect during the inventory of roadless areas that resulted in our current IRA dataset. The Rule did not prohibit roads that already exist within the IRA from remaining on the system or being utilized by motorized vehicles. The Rule defines "road construction" as the "addition" of road miles to the system (36 CFR 294.11). IRAs are not wilderness and thus can contain roads and have motorized use (10th Circuit Court of Appeals, July 8, 2008. Wilderness Workshop vs. US Bureau of Land Mgmt, no. 08-1165). If the routes are already on the system, the Rule does not prohibit changing use designations. Under RACR, if a non-system route is to be added to the system or if a system route is being reconstructed, it must meet the exemption criteria and will require Regional Forester approval. In some cases, a route may be suitable for motorized recreational opportunities and can be designated as a motorized trail.

Letter-Comment	Comment	Response
125-154	[W]e would like to register our strong opposition to designating any openings for vehicle travel inside IRAs (with a very narrow exception for routes that have been well-established and maintained for decades, currently serve a needed purpose and destination that is not served by another route, and were simply overlooked by mistake in the IRA inventory).	A purpose of the Motorized Travel Plan process is to analyze designating a system of routes that will improve recreation management and enforcement related to motorized use (FEIS section 1.5). Consideration for roads within IRAs is recognized in FEIS section 1.10.4 and section 2.2, *Alternatives*. Designation of routes within IRAs is not prohibited. Reference RACR rule.
125-156	[T]he DEIS' claim that all proposed motorized routes in IRAs are existing, and therefore will not damage the character of the IRAs, is highly suspect. First, any motorized route damages the character of an IRA. Many of these routes have been recently constructed or improved by ORV users, and are thus already illegally damaging the character of the IRA. Second, permanent designation of motorized routes in IRAs will undoubtedly result in increasing impacts on surrounding ecosystems as well as changes to the routes themselves as they receive higher levels of use and maintenance.	The FEIS section 3.13.1.1 states, "However, on the Dixie, IRAs contain both constructed and two track roads since the inventory datasets only included system roads at that time" and in section 3.13.2, "Under Alternatives B, C, and D, no roads within IRAs are proposed to be added to the system." Effects analysis is disclosed in *Chapter 3* of the FEIS and effects to roadless characteristics are disclosed in FEIS section 3.13.2.
125-148	Recently issued guidance from FS Region 4 elaborates current limits on the designation of motorized trails in IRAs…The 'motorized trail classification must not be used simply to avoid designating a road in an IRA [cite from May 30, 2008, R4 letter]… ...routes in IRAs that are not currently classified as "motorized trails" cannot be switched to that status simply to perform an end run around the Roadless Rule. They must truly conform to these guidelines, and they should be designated sparingly. As previously discussed, it is not entirely clear by the classification "open to all" that the Dixie uses whether the FS is attempting to designate these routes as "motorized trails open to full size vehicles." If it is the Dixie's intent to designate system and non-system routes as motorized trails open to all vehicle types, this raises many concerns. We challenge how these designations can be construed to minimize impacts, as directed by Executive Orders 11644 and 11189, when the management guidelines and monitoring requirements for motorized trails are more lax than those for roads.	The Rule does not prohibit changes in route designation of existing system routes. The term "Open to All" applies to roads and refers to any size vehicle (FEIS footnote to Table 2-5). Any non-system route that is being added within IRAs will be compliant with current direction (reference seven exemptions at 36 CFR 294.12). A non-system route within IRAs will only be added as a motorized trail less than 50 inches (reference FEIS Table A-12). 36 CFR 212.56 allows the responsible official to identify on the MVUM the type of vehicle allowed. The less than 50 inches restriction does not allow "all" types of vehicles, e.g., Jeeps or other 4-wheel-drive vehicles.

Letter-Comment	Comment	Response
20-4	Prohibit ORVs from all Inventoried Roadless Areas. These areas are protected by the national Roadless Area Conservation Rule, which recognizes their high value as wild lands. ORVs should be steered away from these roadless areas and into alternative areas where roadless character is not at issue.	Please reference response to comment 125-154 on page B-80.
20-5	Close ORV routes that approach the boundaries of wilderness, national parks and national monuments. We urge the Forest Service to terminate any open ORV routes at least 2 miles back from these boundaries, so riders will not be tempted to violate the boundary and drive on into the protected area. This closure will also cut down on noise pollution radiating into the wilderness and parks.	FEIS section 1.9 discusses project scope and analysis. Alternatives were developed through consideration of scoping and public meeting comments (FEIS section 2.1). Alternative effects are disclosed in FEIS Chapter 3.
20-6	Close ORV routes that lead into proposed BLM wilderness areas in America's Red Rock Wilderness Act (H.R. 1919, S. 1170). The Forest Service should not encourage ORV traffic into these areas, which have been found to have wilderness characteristics and are proposed for wilderness status by 178 Senators and Representatives in the US Congress.	Please see response to comment 20-5 on page B-81.
75-4	Wilderness access. I believe in wilderness areas and have enjoyed many horse back trips into the Pine Valley wilderness. But please remember only 4% of American households own a horse according to the American Pet food Products Manufacturers Association. (www.appma.org) Everyone needs to be able to access areas of national forests.	Restrictions on motorized access within wilderness areas are controlled by Federal law and are outside the scope of this analysis (Wilderness Act of 1964). Non-motorized access is not prohibited. Please see FEIS section 1.12, *Decisions to be Made*. Please also refer to FEIS section 2, *Alternatives*, regarding access.

Letter-Comment	Comment	Response
110-7	Even if the 2001 Roadless Rule is deemed to be the applicable standard, the agency must not interpret the Forest's authority in an unduly restrictive manner, concluding that existing unclassified (or unauthorized) routes effectively can not or should not be added to the designated route network without violating the 2001 Rule's prohibition on "road construction" in IRAs. This interpretation is contrary to the regulation and to the representations of the Forest Service and preservationist groups, who contend that the Roadless Rule does not prohibit motorized access to IRAs. See, 2001 Roadless Rule, 66 Fed. Reg. 3251 (Jan. 12, 2001).	The RACR (36 CFR 294.11) and the ORV Rule (36 CFR 212.1) do contain differing definitions for "road construction." However, within IRAs, the RACR is the applicable direction. Under Alternatives B, C, D, and E, some non-system routes are being added to the system (FEIS Table 2-5, section 2.3, and section 2.5.3). The Forest Service Washington Office directed Forest Supervisors to defer actions within IRAs that would conflict with either the Wyoming or California District Court rulings (USDA 2008n). The RACR does not strictly prohibit road construction or the addition of non-system roads but provides exemptions and requires higher approval (36 CFR 294.12 and Regional guidance to Forest Supervisors June 13, 2008).

B.17. Cultural Resources

Letter-Comment	Comment	Response
115-4	How is the Forest determining impacts to cultural resources in the alternatives summary? Is it primarily from direct impacts to roads and adjacent land used by motorized vehicles, or are potential impacts that would occur by increasing overall visitor numbers to an area that was previously more remote before OHV use was formally allowed being considered? And, what modifications to the proposal would occur if, as a result of archeological and cultural surveys, significant cultural resources were found in this area?	Effects to cultural resources have been analyzed in the route reports (USDA 2003b, 2006c). The analysis of the routes included evaluating potential for cultural resources using the Forest's Cultural Resource Reports and site maps. This information was included in the route reports and has been kept confidential under the Freedom of Information Act (FOIA). Direct, indirect, and cumulative effects have been analyzed and considered in the *Cultural Resource Specialist Report,* pages 7-13, and in FEIS sections 3.14.2 through 3.14.2.*2*. This analysis is in compliance with all federal regulations and laws (36 CFR 800). This will be done in consultation with the Utah State Historic Preservation Office under a Programmatic Agreement (USDA 2009j).
304-2	If there are any inadvertent discoveries made during the course of the undertaking, your agency shall cease all operations within the project area. HPD-TCP shall be notified by telephone within 24 hours and a formal letter be sent within 72 hours. All work shall be suspended until mitigation measures/procedures have been developed in consultation with the Navajo Nation.	Any discoveries will be evaluated following legal protocol as included in the following law and regulations: Native American Graves Repatriation Act (43 CFR Part 10), Preservation of Historic Properties (36 CFR 800), National Historic Preservation Act of 1961 (16 USC 470 et seq.), Archaeological and Historical Preservation Act (16USC 469-469c-2), American Antiquities Act of 1906 (10 USC 431-433), Executive Order No. 13007, American Indian Religious Freedom Act (42 USC 1996-1996a).

B.18. Transportation

Also see the Recreation section beginning on page B-50; many comments in the Recreation and Transportation sections are similar.

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General

Letter-Comment	Comment	Response
59-4	Transportation - 2.5.1.7 The Forest Service has responsibility for protecting vital watershed within the Forest. We recommend that all new road environmental impacts, including construction and maintenance, should be identified, evaluated and disclosed in this document.	No new road construction or reconstruction is proposed in this project. The only proposed trail construction is under Alternatives D and E. This has been clarified in FEIS section 2.5.1.7.
10-1	Although more capable motorized vehicles can be produced, this does not justify their ever increasing encroachment into wild places in our public lands. Roads that are approved by the EIS for motorized access will likely remain open into perpetuity. It is easy to open more routes, but difficult to close routes once they have a history of use. This is a time of vision to preserve traditional forest values that are the attraction for nearly all groups of users. Most of the forest should be limited to a road density of less than 0.5 miles per square mile to limit the impacts of wildlife.	Open road density direction is addressed in the Forest Plan under the General Direction section for Transportation System Management (USDA 1986, p. IV-50). Road density obligations are clarified in the *Implementing the DNF Two Miles/Square Mile Open Road Density Guideline* letter (USDA 1998).
6-4	Most DNF roads get almost no travel anyway. During the summer, it is common to spend an entire day on the Boulder Top without seeing other parties during a day. The only time travel increases significantly is during the deer hunt, and most hunters won't obey road closure signs anyway. The impact of motorized travel cannot be the most significant problem in the DNF. Has a detailed traffic study been done? Do you have data on how much travel goes through the roads that might be closed (i.e. the non-main roads)?	According to the National Visitor Use Monitoring (NVUM) results for the Dixie National Forest (USDA 2004c), the Forest received 773,789 visits in 2003. Please see the *Recreation and Scenery Specialist Report*, page 7. Previous decisions are addressed in FEIS section 2.4.12 and Table 2-6.
99-10	It appears that Alternative D would be the best alternative if it can be modified to provide for better connection of popular riding areas includes other routes that exist but were not inventoried.	Consideration of Alternative D is provided for in FEIS section 2.2.4. Road and trail inventory data can be found in the RAP (USDA 2003b, 2006c).

Letter-Comment	Comment	Response
4-1	The Boulder Mountain is much different than most mountain ranges in the State of Utah or elsewhere in the US. In that it is neither really steep (except for the final rim that rises to the Boulder Plateau) and it has very large plateaus on both the Boulder Top and the Griffin Top, as well as in many other places on and around the mountain. As a result, I am convinced that, unlike the Uinta or Wasatch Mountains, it is much more conducive to motorized travel. Hiking across much of the Boulder Top Plateau is unrealistic for both older and very young people. Similarly, hiking around the other vast plateaus such as Jacob's Valley, Big Lake Country, etc., is unrealistic for those same groups. Because of the vast, non-steep terrain of the Boulder Mountain, the many lakes for fishing and the few other forest lands that still have broad access, I would strongly encourage you to keep an open use policy on the Boulder Mountain. I don't believe any roads should be closed and that even those roads that are already closed should be opened back up.	Alternatives A and E maintain the same level of roads as the existing condition. Please refer to FEIS sections 2.2.4 and 2.2.5. The roads closed on the Boulder Top were covered under The Boulder Top previous decision and were not revisited in this decision. Please refer to FEIS section 2.4.12 and Table 2-6.
59-5	"The project engineer and hydrologist will determine which decommissioned roads would be best served by obliteration and will determine which type of closure would be the most effective". What factors are taken into account when making this decision? Will there be consideration of environmental impacts when determining choice of roads and type of closure? Slope, erosion potential, stream crossings, critical habitat, etc. could be used as criteria to make such determinations.	Decommissioning and obliteration activities would follow the methods described in *Road Closure and Obliteration in the Forest Service* (USDA 1996). Please also refer to FEIS section 2.5.1.7.
125-152	[S]ince most non-system routes were not constructed to any standard, their environmental impacts could be, and likely are, greater than system routes. Therefore, the designation of any non-system route as a motorized trail should also include an assessment of current compliance with trail construction standards and how any areas of non-compliance will be addressed.	For trail maintenance information, please refer to FEIS section 3.11.1.1. Also please see trail standards described in FSH 2309.18.

Letter-Comment	Comment	Response
125-151	[I]f the Forest Service insists upon designating any motorized trails open to full size vehicles, the effects of these motorized trails should be evaluated the same way a road would be during wildlife and other environmental analysis. We recommend that to make this process easier and simpler for the Forest Service and to minimize future environmental impacts of these motorized routes, it would make more sense to designate motorized trails that are open to vehicles over 50" as OML 2 roads, which would receive more regular and more stringent maintenance.	The Dixie National Forest Motorized Travel Plan is not proposing motorized trails greater than 50 inches in width. Please refer to FEIS Appendix A, Table A-12.
125-150	There is a long history regarding the definitions of "road" and "trail" as related to Forest Service management. The definition of "road" in the travel management rule is carried forward from the definition contained in the final Roads Rule, Roads Policy, and Roadless Rule, with minor modifications. The new definition is: "A motor vehicle route over 50 inches wide, unless identified and managed as a trail" (36 CFR 212.1). Prior to the implementation of the travel management rule, trail was not defined in 36 CFR 212.1, but it was, and still is, defined in FSM 2350 as "a pathway for travel by foot, stock, or trail vehicles." That definition will be changed by the final adoption of the draft directives to mirror the definition from the travel management rule. That definition, first adopted in 2005, is: "A route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail." At a minimum, we recommend that the Forest Service provide detailed guidance on what "trail character" means and what "management as a motorized trail" will entail. Otherwise, the Forest Service can indiscriminately convert roads to "trails and the ecological impacts of a decaying road will remain unaddressed, and definitely not minimized.	Trail design parameters, which include trail character, are covered under other law, regulation, or policy. Please refer to FSM 2309.18. Definitions for road and trail can be referenced in the FEIS glossary

Letter-Comment	Comment	Response
125-149	We also challenge the decision that a “trail” that allows vehicles over 50” can be called anything other than a road. The definitions of road and trail provide very little guidance about the actual characteristics that separate these different types of routes, about the differences in management, or about the differences in on-the-ground impacts. One might suppose that the principle difference between a road and a trail is “what the Forest Service chooses to call it.” Once a road is reclassified as a trail, it is often no longer considered in road density analyses and it no longer receives the same maintenance. The definition of a trail under the Travel Management Rule allows the dimensions of a trail to extend beyond 50” in width, if it is designated and managed as a trail. However, this definition does not address the vehicle type that is appropriate to be permitted on a trail. That designation is left to the discretion of the forest and must be made with the objective of minimizing impacts to forest resources. Designating trails for use of vehicles that are over 50” ignores the increased impacts of motorized use by larger and heavier vehicles, ignores the lack of standards that are in place for trail construction and maintenance (as compared to those that are in place for roads), poses a threat to the integrity of cattle guards that are less than 50”, and blurs the distinction that should be maintained between roads and trails. Motorized trails that are designated for vehicles over 50” should be called what they are – Operation and Maintenance Level (OML) 2 roads - and maintained as such.	Please see response to comment 125-150 on page B-89.

Letter-Comment	Comment	Response
125-7	The DEIS fails to disclose or analyze the benefits of road obliteration as proposed by the SMU Alternative compared to any of the FS' alternatives...The DEIS does not provide adequate clarity or attention to the different kinds and degrees of impacts that occur from administratively closed roads versus roads that were obliterated/decommissioned. For example the DEIS defines "closed road" as a term inclusive of "administrative road" "decommission" and "obliteration". It makes sense to combine decommission and obliteration as they both involve spending money with 'shovels in the dirt' to remove a road forever and take it off the system for good. But the term administrative road is very different and should not have been treated as one and the same as obliteration and decommissioning. Because the DEIS chapter 3 analysis of environmental consequences repeatedly lumps the analysis of administrative roads (i.e. OML 1) together with obliterated and decommissioned roads, it fails to disclose and consider the increased degrees of long term negative presence impacts to administratively (closed) road when compared to those obliterated or decommissioned.	The FEIS also defines administrative roads and decommissioned/obliterated roads; please refer to the glossary. Also please refer to FEIS section 3.15.2.1.3 for a discussion of decommissioned roads. Administrative routes are Maintenance Level 1 roads that are closed to the public but may be used for administrative or permitted purposes. This is in accordance with the OHV Rule 36 CFR0 212.5 and 36 CFR 261. Additional effects disclosure can be found in FEIS Chapter 3 and in the specialist reports located in the project file.
83-156	We believe that the data we present here demonstrates the actual condition of the roads and the ability to access the National Forest grounds. We believe that it more than adequately proves that these roads are not damaging the forest and are of significant importance to the residents of Wayne County. We therefore ask the Forest Service to explain why these roads should be considered for their designated classifications under the Preferred Alternative.	Alternative A considers no change in current management. Alternative E was developed to provide the most motorized access on designated routes. Please refer to FEIS sections 2.2.1, 2.2.5, and Table 2-2. Changes in route designations were considered in FEIS section 1.10, *Issues*, and section 2.1, *Alternative Development*.

Motorized – General

Letter-Comment	Comment	Response
140-1	Biggest conflict with County is that there is no way to get from Cedar City to the Navajo Lake Basin without going through private or going way around.	Please see response to comment 119-2 on page B-54.
119-49	My comments on the DNF Motorized Travel Plan Alternative D are as follows: 28. The DNF should review the OHV maps provided by the Garfield County Trails Committee (DNF participated in there creation) and assure that all major loop routes are preserved in the new motorized travel plan.	Consideration of Alternative A is discussed in FEIS section 2.2.1 and shown in section 2.7, *Alternative Maps*. The criteria for designating motorized routes are found in 36 CFR 212.55 and are summarized in the Purpose and Need statement (FEIS section 1.5).
54-1	The road closure and limited access plans that were proposed at the public meeting in Bicknell are totally unacceptable to me.	Please see response to comment 83-156 on page B-89.
27-1	Although I can't attend the meeting in Cedar City on July 10, 2008, I want to voice my concern that the Forest Service is eliminating far too many ATV trails in the Dixie National Forest. I reviewed the database for decisions that lead to the closure of over 1000 trails already and it was clear that a thorough review of the trails eliminated was performed. For example, my cabin located in the heart of Dixie National Forest, has no legal access to any ATV trail in the Duck Creek area and we have been threatened by the Sheriff and Forest Service is we drive along the highway or cut our own trail to provide access. Note that access existed for several decades before closure by the National Forest Service.	Alternative A considers no change in current management. Alternative E was developed to enhance motorized opportunities. Please refer to FEIS sections 2.2.1, 2.2.5, and Table 2-2. Routes in the Duck Creek area were closed under the Duck Creek-Swains previous decision and were not revisited in this decision. Please refer to FEIS section 2.4.12 and Table 2-6. State Bill 181 authorizes motorized travel on roads (State of Utah 2008).

Motorized OHV – Insufficient Opportunity

Letter-Comment	Comment	Response
83-161	…general comments…Wayne County will state that all roads be reclassified as Open to All in order to maintain access to all parts of the forest, however, the County in not totally opposed to the road classification of Administratively Open as long as this classification is kept to a minimum and is not used to restrict access to a large area. Wayne County feels that Administratively Open can still be restrictive but can be accepted as a last resort in order to keep accessibility to areas available.	Please see response to comment 83-156 on page B-89. Please refer to FEIS section 2.4.12 and Table 2-6 regarding previous decisions.

Recreation Experiences

Letter-Comment	Comment	Response
119-50	My comments on the DNF Motorized Travel Plan Alternative D are as follows: 30. Many visitors to the DNF have no other way to see this beautiful land than by motorized vehicle. Many choose to use OHV's to experience as much of the forest as possible. Not everyone is physically able to hike long distances over such complicated terrain. The DNF motorized travel plan must incorporate these accommodations for adult, children, and handicapped visitors.	Please see response to comment 19-2 on page B-29.

Letter-Comment	Comment	Response
8-7	Motorized access to the Boulder Top allows me to take my family and experience a great escape in only a couple of days, and then be back to my office to treat patients. Without this access accessing the Boulder Top lakes is something I will only be able to share with my children once every one or two years.	The routes closed in this area were closed in the Boulder Top decision and were not revisited in this decision. Please see FEIS section 2.4.12 and Table 2-6.

Access – General

Letter-Comment	Comment	Response
57-1	I strongly disagree with the proposed alternative D. If I am understanding it correctly, this plan will significantly reduce the areas available for public use. I am 51 years old and I have traveled this area for most of my life...No one should have the right to tell me I can no longer travel the roads my grandparents and great grandparents traveled.	Alternative A retains all existing National Forest System roads and trails as open. Reference FEIS section 2.2.1. Current restrictions remain in place. Reference FEIS section 2.4.12 and Table 2-6.
102-4	I am in favor of the least restrictive and most open roads. Lets keep our historic, most used, not made by unauthorized vehicles, roads. I like the fact I can go look for deer, wildflowers and firewood.	Alternative A retains all exiting National Forest System roads and trails as open. Reference FEIS section 2.2.1.
30-3	Please consider leaving ALL the roads open.	Alternative A retains all exiting National Forest System roads and trails as open. Reference FEIS section 2.2.1.
78-1	Me and my family camping and fishing and hunting and hiking almost every weekend and we have family reunions on the roads you want to close to motorized vehicles so I recommend alternative E. If you close the road me and my family won't be able to do all of the things we love. We mostly use the roads to hatch Mountain, Sydney Valley, and Red Desert.	Consideration for Alternative E is provided for in FEIS section 2.4.5.

Letter-Comment	Comment	Response
72-1	I would like to see all of the trails and logging roads left open to the public, I do not believe by trying to ban roads and trails is going to cure the problems.	Please see response to comment 57-1 on page B-92.
58-1	Yet I don't agree maintenance roads, well worn roads and well worn dead end roads should be closed to the public. B road and Hatch road and others like this are great places to camp and a way to allow a child to ride yet stay out of the main stream of more aggressive riders.	Please see response to comment 57-1 on page B-92.
170-3	A large majority of the roads you are proposing to close to the public have been assigned a road number. This means that the roads are on the Forest's transportation system. These roads were approved for construction by the public and paid for by public funds. Therefore, the public should have access to the facilities for their use and enjoyment. And, the Forest Service has a management need for the roads.	Please see response to comment 57-1 on page B-92. Also refer to the OHV Rule 36 CFR 212, 261, and 295.
48-1	I would like to comment on the Dixie National Forest Travel Plan. I would prefer Alternative A the no action Alternative. I feel that no Roads should be closed.	Please see response to comment 57-1 on page B-92.
40-2	I propose that all previous logging roads (not maintained) such as exist on the Boulder Mtn Top and the north slope be opened and added to the Nat'l Forest system of roads and motorized traffic, horse or ATV, thereby becoming authorized routes.	Please see response to comment 57-1 on page B-92
20-2	Close unauthorized user-created routes. These routes started when an ORV rider drove off a NFS road and pioneered a cross-country trajectory. They reflect no engineering principles nor any concern for avoiding damage to the lands and waters through erosion or degradation of fish and wildlife habitat. Many are too steep to resist erosion. Few have any erosion-resistance features built in, such as water bars or dips. Taken all together, these routes fragment wildlife habitat by creating too high a density of motorized routes.	For the disposition of non-system routes, please see FEIS section 2.5.3 and Table 2-7.
X-2	I recommend leaving as many roads open as possible. By closing roads, you are only causing people to seek out new places to ride, whether that is in a meadow, on a hillside. Or even on the highway. People will continue to ride 4-wheelers. Let's just make it nicer by having roads and trails that we've used for years still available to us!	Please see response to comment 57-1 on page B-92.
115-6	For at least as long as ten years, and as recently as 2005, the Dixie National Forest Travel Map (1998, 2005) has shown what is now	Routes 30180 and 30180A provide access to range improvements for special use permit holders and provide

Letter-Comment	Comment	Response
	proposed route 30180 as an open ATV (=OHV) two-track trail as far as its junction with 31348. Route 31348, a spur off of the main route that terminates at the park boundary to the north of 30180, is indicated as open on these maps, and 30180 is not designated as open east of the junction. From its origin at Highway 12, route 30180 passes to the east across roughly eight miles of Forest Service land before reaching, and terminating at, the boundary of Grand Staircase-Escalante National Monument (at the northern edge of Section 22, Township 32 South, Range 6 East, SLB&M). An administrative road passes through the Monument for approximately ¾ of a mile. Route 30180 begins again at the forest boundary at the northeast corner of Section 22, and continues across about 2.8 miles of Forest Service lands before terminating at the Monument boundary. Significantly, neither the 1998 or 2005 travel maps nor the maps associated with the current planning document show the portion of road passing through the Monument as open. However, in order to reach route 31348 and the portion of 30180 east of its termination at Section 22, a vehicle operator would have to pass through the Monument on a road that is closed to public motorized use. Grand Staircase-Escalante National Monument identifies the road that passes across Section 22 as an administrative road (Map 2, Management Zones and Transportation System, 1999 Grand Staircase-Escalante Management Plan). The Monument's 1999 plan indicates, in part, that such routes …"lead to developments which have an administrative purpose, where the BLM or some permitted user must have access for regular maintenance or operation. These authorized developments include such things as …spring developments, corrals, and water troughs…Access will be strictly limited and will only be granted for legitimate and specific purposes. Authorized users could include grazing permittees, researchers, State or Federal agencies, Native American Indians accessing recognized traditional cultural properties, and others carrying out authorized activities under a permit or other authorization." The portion of the route that passes through Grand Staircase-Escalante National Monument through Section 22 is	access to a scenic overlook of Grand Staircase-Escalante National Monument. Route 31348 also provides access to range improvements for special use permit holders (USDA 2003b, 2006c). The designation of these three routes (30180A is a segment of 30180) by alternative is as follows: 30180 • A and E: Open to all • B, C, and D: Proposed motorized trail 30180A • A, C, and E: Open to all • B: Closed • D: Open to all 31348 • A and E: Open to all • B and C: Closed • E: Proposed motorized trail

Letter-Comment	Comment	Response
	an administrative road that is closed to the public; this is designation has been in effect since 1999, when, during a public lanning process, the monument determined that an administrative function for the road was appropriate. The National Park Service would oppose amending the Monument's Management Plan to allow public motorized travel across the Monument on this road.	
19-1	Please leave existing roads open.	Please see response to comment 57-1 on page B-92.
102-1	It is hard to see, but there is a small access road the travels east along the "Deer Fence" joining up with the road to Kelsey Mare Hollow. The real road starts a mile or so farther north on Pace's draw. Over time, as you know, vehicles have "cut" and driven down the steep bank along the deer fence and created a new way. I am in favor of a "new way" being closed, as long as the original access to Kelsey Mare Hollow and Bumblebee Mountain remains open.	Please see response to comment 57-1 on page B-92.
70-1	We are definitely opposed to such closer because it will effect so many people of our area, and of our state, such as sportsman, cattlemen, people who are traveling, and those who have wood permits for down and dead fire wood to keep their homes warm this winter.	Please see response to comment 57-1 on page B-92.
8-1	I strongly oppose further road closure on the Boulder Mountain.	Please see response to comment 57-1 on page B-92.
30-1	For I don't want any of the roads closed.	Please see response to comment 57-1 on page B-92.
140-2	Still a concern about connecting counties (Look at Iron County proposal.	Please see response to comment 119-2 on page B-54.
145-1	Hay Canyon. Alt. route to Cedar Mtn to N. Fork, to Hay Canyon and up into Strawberry or Swains. Is there public access? Kane Co does not claim ROW thru the Muddy.	Motorized public access opportunities are detailed in FEIS section 2.2, *Alternatives Considered in Detail* and section 2.7, *Alternative Maps*.
99-6	(need #) Near Pinto there are "single track" routes that are shown on the Dixie NF travel map (1998) that are not even shown on the DEIS maps. There is also a route shown on the travel map as "ATV two-track trail) that is not shown on the DEIS maps. The inventory appears to be inadequate.	The existing condition maps still shows the following routes as single track trails: Trail numbers 31005, 31017, 31010, and 31049. This has been corrected on the Alternative A maps.
99-7	There are routes west of Pinto that appear to be "unauthorized closed". These should be "open to all".	Please see response to comment 57-1 on page B-92.

Letter-Comment	Comment	Response
86-83	Posy Lake Area: The Area around Posy Lake is very popular. On Preferred Alternative D there are a large number of Administrative roads that serve no obvious purpose. Such roads invite abuse and most of these roads should be closed. Alternative C and B close these roads. In sum, in the area around Posy Lake the roads closed in Alternatives C and B should be closed.	Alternatives C and B analyze the effects of closing these roads. Please see FEIS sections 2.2.2 and 2.2.3.
8-5	I also am in favor of keeping the Boulder Top open because it is already such a remote and in many ways unused area. I can't think of a time when I have been on the Boulder Top and seen more than one or two other people. I can understand closing an area that is being beat down by masses of people, but I can in no way see that the Boulder Top can be abused by what little traffic and little impact I have experienced.	The routes on the Boulder Top were closed under the Boulder Top previous decision and were not revisited in this decision. Please see FEIS section 2.4.11 and Table 2-6.
34-1	We…maintain that an extensive system of authorized routes open to motorized use is vital. We therefore support Alternative E because this alternative accommodates the widest array of legitimate motorized access across the forest.	Consideration of Alternative E is detailed in FEIS section 2.2.5.
34-3	If a route has been established for motorized access, it should be maintained in such a fashion that all users can access the rout without impairing resource values.	This is a general comment, position statement, or opinion.
120-4	For some time there has been a recognized need for a motorized connecting route between the Mammoth Creek Road and the Panguitch Lake that does not travel through the town of Hatch. The existing connector route from Mammoth Creek to the Black Rock area passes through the town of Hatch, but has been closed with locked gates. For this reason Utah State Parks proposed and flagged in a suitable route from Mammoth Creek to Dry Lake to make the needed connection. A map and GPS tracks were provided to the Dixie National Forest. Apparently this route was dropped from alternative D because Garfield County has said the existing road across the hatch property is a public right-of –way and intended to force the landowner to remove the locks and allow public passage. This would be a satisfactory solution, if it takes place. We recommend however, that provision be made in the travel plan to permit the construction of the proposed State Parks route should the county be unsuccessful in getting the existing road opened within the next year.	Motorized travel on existing public roads is authorized in SB 181 (State of Utah 2008). Decisions regarding adjacent private lands are disclosed in FEIS section 1.7. Consideration of future proposals is better handled in another project analysis.

Letter-Comment	Comment	Response
117-1	Access from the west side of Pansagunt Plateau from the valley to the top should be considered.	Decisions regarding adjacent private lands are disclosed in FEIS section 1.7.
150-2	At a minimum, Garfield County needs the routes identified in the specific comments to be left open for motorized use in order to preserve the custom and culture in the area and to provide, needed motorized recreation opportunities.	Please see response to comment 57-1 on page B-92.
7-2	Any more closures would be disappointing to many, including future generations that would take advantage of being in the outdoors. My recommendation would be to open some of the closed roads on the mountain and to do all we can to prevent further road closures.	Please see response to comment 57-1 on page B-92.

Access – Historic Routes/RS 2477

Letter-Comment	Comment	Response
102-3	Third, let's talk about the road up Main Canyon. This is also an access road to irrigation equipment. Until the floods of 2005, this road was actually in pretty good shape. Now it needs some work, and that in itself is self regulating. This road traverses through some private property, and amazingly once this property was sold to Charlie Judd, the actual real access road was blocked by workers hired by Charlie. I for one see a need to keep the old historical access open, and if Charlie wants to put up a gate, a locked gate to his house, he can. Oh, wait, he already has! Let's open the historic access, and allow New Harmony Irrigation Company, and the general Public a way to get to beautiful, historic Main Canyon and Frogs Mouth.	Alternative A retains all exiting National Forest System roads and trails as open. Reference FEIS section 2.2.1.

Letter-Comment	Comment	Response
150-5	At the beginning of the motorized travel planning process, Garfield County submitted detailed maps identifying the routes that were known to exist prior to creation of the forest. Garfield County asserts those routes as valid County transportation facilities, and RS 2477 rights-of-way. It seems reasonable to evaluate those transportation facilities and their existence prior to the forest. If found to be per-existing rights, they should be left open for public use.	R.S. 2477 provided right-of-way for the construction of highways over public lands, not reserved for public uses. R.S. 2477 was repealed in 1976; however, 43 U.S.C. Section 1769 preserved valid existing rights. The Forest recognizes that roads that existed prior to 1903, when the Dixie National Forest Reserve was set aside for public use, would be considered a valid existing right. Public entities or individuals who want to assert their rights under R.S. 2477 may do so.
83-157	We believe that the roads identified as having Unauthorized Use or Closed Classified characteristics within the boundaries of Wayne County and the Fremont River District Teasdale Portion should be managed for multiple use-sustained yield, and we believe that the date we have supplied support this position, indicate that the roads and lands have had long and diverse use.	Alternatives A and E maintain the same level of roads as the existing condition. R.S. 2477 provided right-of-way for the construction of highways over public lands, not reserved for public uses. R.S. 2477 was repealed in 1976; however, 43 U.S.C. Section 1769 preserved valid existing rights. The Forest recognizes that roads that existed prior to 1903, when the Dixie National Forest Reserve was set aside for public use, would be considered a valid existing right. Public entities or individuals who want to assert their rights under R.S. 2477 may do so.

Access – Discrimination

Letter-Comment	Comment	Response
38-1	I would like all roads on the Dixie National Forest left open. Alternative E. My reason: I am not a young person. I cannot hike like I used to, but I still love the forest and what it stand for.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.
75-3	Americans with Disabilities Act. Has this been addressed? There was no mention of it in the meeting I attended. Will special permits be available to allow disabled people to access some wilderness areas? Don't forget the baby boomers and hippies. We may not have handicap license plates yet, but we can't hike like we use to. Our ATV's allow us access.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.
49-1	I have to say the road closures being proposed will limit access to many of the locals and others favorite fishing lakes and hunting areas. This action will discriminate against the elderly and the every young making access to many areas impossible except for a few ardent hikers, mountain bikes and horse owners.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.
170-1	I've reviewed the proposed alternative and I'm very concerned that you intend to eliminate a lot of the access we've enjoyed over the years and restrict our use of our national forest. My wife has been physically handicapped for the past 15 years and unable to walk to enjoy the places we've used over the years. We rely on the use of an ATV to be able to enjoy the beauty and tranquility of the forest. By closing access you're negatively impacting our enjoyment and use of the Dixie National Forest. I feel that you're discriminating against the handicapped and elderly. We don't have the ability to walk, ride a horse, or ride a bike to enjoy the forest.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.

Letter-Comment	Comment	Response
54-2	Wayne County is a home to many retired people and senior citizens that are still active hunters and fishermen. However, if your road closure and 150 ft access policy is implemented, they will no longer be able to participate in these activities. They could not retrieve game or cut firewood. This policy definitely discriminates against the very young, disabled, and older citizens who cannot hike a long distance. For years, hiking ant top of Boulder Mountain has been an enjoyable thing to us. But as we get older, we can no longer do that but still enjoy trips via 4-wheeler and four wheel drive vehicles.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.
8-6	Another reason I object to closing roads on the top is that it discriminates against those who are disabled or physically impaired. While in Montana I had dozens of patients who complained that 1) there was so much private land limiting access to the forests for those who found it physically challenging to take alternative routes around miles of private land to reach the forests, and 2) once they reached the forests they could not access the lakes and streams because the trails were closed to motorized vehicles. Not only does road closure of so much area discriminate against physically impaired, but it also discriminates against the very young. It is impossible to load my four kids all under age 12 with a pack and ask them to walk long distances so that we can camp and fish at the Boulder Top lakes. The Boulder Mountain is an area unlike any other. When the Boulder Top is accessible, people from all walks of life can enjoy all it has to offer. If motorized travel is restricted, only the most fit people in the prime of their life will have access. But wait till these folks are old and can no longer do the 20 mile hikes and see if they still believe in restricted access.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.
27-3	Lastly, and ending a personal note, when the National Forest Service restricts access to horse riders and hikers they are discriminating against those of us who are retirement age and need motorized assistance to enjoy our national forests. I suspect the AARP along with our US Senators and Congressman should be made aware of the uproar against closing motorized access to the Dixie National Forest and National Forest in general and the impact on its older citizens.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.

Letter-Comment	Comment	Response
72-4	I would like to see Alternative (E) in place, being the nature of my limitation this is my means of transportation to enjoy the beauty of our great lands. In restricting access to roads and trails the areas that my self and others can enjoy.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.
61-1	In general, I think these road closures are impacted by the Americans with Disabilities Act.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.
70-2	We are older people who enjoy going on the boulder mountain with our 4-wheeler. We have traveled almost all of the off shoot roads on our wheeler, and really enjoy the days outing. We are unable to walk the distances, and try to obey the rule of staying on the roads. Why would you want to close these roads to our older Americans who enjoy the beauty of the boulder mountain?	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.
54-3	This mountain should be open to everyone. Not just a select few who are young and fortunate enough to be able to have time and energy to hike long distances or own their own horses. This group would be a very small percent of the people who would enjoy this area.	Please see response to comment 57-1 on page B-92. All alternatives accommodates ATVs. Please see FEIS Table 2-3.

Cross-country Travel

Letter-Comment	Comment	Response
58-9	It is important we stop Cross-Country riding and the abuse done to the Forest. Still I think it is important that we don't make the mistake of closing down roads that should stay open to the public.	Please see response to comment 57-1 on page B-92.
20-7	Prohibit all cross-country ORV travel. No "free play" zones should be allowed in Dixie NF, because the landscape cannot withstand the impacts of this type of use. ORVs should be restricted to designated routes the Forest Service has identified for their use.	Alternatives B, C, D, and E analyze this. All action alternatives analyze the impacts of eliminating cross-country travel. Please see FEIS section 2.2.

User-created Routes

Letter-Comment	Comment	Response
125-14	[S]ince non-system routes were never constructed to any standard, their environmental impacts could be, and likely are, greater than system routes. Therefore, the designation of any non-system route as a motorized trail should also include an assessment of current compliance with trail construction standards and how any areas of non-compliance will be addressed.	Please see response to comment 125-152 on page B-86.

Mixed Use

Letter-Comment	Comment	Response
170-2	My other concerns are that your preferred alternative forces all the traffic, vehicles and ATVs, to use the major arterial routes. This will diminish the satisfaction of taking a leisurely ATV ride without being concerned with dodging vehicle traffic and dust. It also makes it hazardous for vehicular traffic encountering ATVs. This will make forest travel congested and hazardous. You are also eliminating the opportunity to be able to explore the forest for unique and scenic experiences.	Please see response to comment 57-1 on page B-92. Also please refer to pages 11-26 in the *Transportation Specialist Report* for analysis on motorized mixed use. Effects of Alternative D are disclosed in FEIS Chapter 3.

Safety

Letter-Comment	Comment	Response
108-8	Safety and route grade standards. Our monitoring and input from other residents indicate that many sections of motorized routes are dangerously steep for all but the most advanced users. Despite official cautioning of users, inevitably riders who are not suitably experienced will be risking their lives, and the lives of others, in attempting such routes. It would seem more appropriate for the Forest Service to limit the risks by defining standards for maximum grades and severity of terrain.	Roads on the Forest do not have a difficulty rating. Instead, each road is assigned a Road Maintenance Level between 1 and 5. Please see FEIS section 3.15.1.1. For trail degree of difficulty, please refer to the *Recreation and Scenery Specialist Report*, section 4.4 and Table S4-3.
115-12	The Rigg's Spring loop trail is a popular destination within the [Bryce Canyon]park's southern section. In the event of an injury or public health emergency, Park Rangers can access the area near the trail with a response vehicle via several public and Forest Service roads. The park requests that the Forest Service consult with our Chief Park Ranger regarding permanent closures to potential emergency vehicle access roads adjacent to the southeast section of the park.	The Travel Plan does not restrict responses to emergency events to protect human life, property values, structures, and Forest resources. Emergency activities are coordinated through the authorized official. Refer to FEIS section 2.4.2.
2-2	One other concern, we have on specific subdivision called Ponderosa Ranch in which the ATV road coming out of the subdivision has been closed down. This has been a VERY bad thing because now those residents have to ride down the HWY to get to an opened road to ride on. This is not only a danger to them but all those around.	The routes in this area were closed in the Duck Creek-Swains previous decision and were not revisited in this decision. Please see FEIS section 2.4.12 and Table 2-6.

Dispersed Camping

Letter-Comment	Comment	Response
58-1	The concern is how many camp sites will be lost to the closure of roads.	Effects of road closures on recreation were analyzed in a range of alternatives. Please see FEIS section 3.11.2.1.9 and Table 3-20. Also see the *Recreation and Scenery Specialist Report*, section 4.2.

Enforcement

Letter-Comment	Comment	Response
115-7	Designating the routes on Dry Bench as open to public motorized travel would be, we believe, very problematic. As proposed, the routes would terminate at or near the park boundary. However, the routes are passable beyond the boundary; OHVs presently regularly travel onto park lands. Although the park boundary is marked, boundary signs are frequently vandalized and removed. The areas where these routes pass across the boundary are typically flat and open—gating or fencing would not be effective at these locations. Several other existing two-track trails persist in the area, and though the preferred alternative indicates that these routes (several of which pass onto park lands and onto the Monument) would be closed, we believe that effective closure of these routes would be very difficult if public motorized traffic is permitted in the area.	Please see response to comment 115-6 on page B-93
115-11	Several currently open roads adjacent to the [Bryce Canyon National] park's western and southeastern boundaries will be affected by implementation of the Motorized Travel Plan. Changes in road designations from "open to all" to "administratively open", "closed classified", and "unauthorized closed" could benefit resources on the forest as well as reducing negative impacts to the park's border area. One issue we continually address on the park's western side (west and south of the rim road) is poaching. Individuals that participate in this illegal activity often access the park on ATVs using existing Forest Service roads. If roads will be closed in this area, the park requests that they are completely closed off (using appropriate barriers) to prevent ATV access. By closing these roads using berms or partial gates/barriers, our Park Rangers will not be able to patrol the area and poachers will have greater access to the park with less law enforcement.	Disposition of motorized routes near Bryce Canyon National Park are detailed FEIS section 2.2, *Alternatives Considered in Detail*, and Section 2.7, *Alternative Maps*. Specific route dispositions are detailed in the individual route reports found in the project file.

Letter-Comment	Comment	Response
8-4	My first objection to closing the roads on the Boulder Top is that because this area is so open with numerous access sites, it will be physically impossible to prevent people from taking motorized vehicles on these roads. Rather than stick to an approved designated road, motorized vehicles will tread all over the meadows and fields as they work their way to access the roads that were once open. This will create much more damage and will be a greater environmental impact than simply keeping the road open and allowing ATV riders to stick to a designated open road . There is simply no way in such an vast and open area to forcefully disallow people from making improvised trails to get where they want.	Routes on the Boulder Top were covered under the Boulder Top previous decision and were not revisited in this decision. Please see FEIS section 2.4.12 and Table 2-6.

Maintenance

Letter-Comment	Comment	Response
53-1	There are many reasons to select Alternative B... Data presented in Section 3.15.1.1 Road Operation and Maintenance, discloses that over the period from 2004 to 2007, budgets have limited maintenance to less than 30% of the classified road systems. Clearly, maintenance is more costly when deferred as compared to performing the maintenance on schedule. Even with the current system of classified roads, maintenance budgets are woefully insufficient... Forest Service policy requires that the transportation system be limited to those which can be maintained given expected budgetary constraints. Alternative B best fits this policy.	Consideration for Alternative B is detailed in FEIS section 2.2.2. Maintenance priorities and budget allocations are outside the scope of this project. Please see FEIS section 3.15.2.13.
40-1	By not maintaining roads for the past 10-15 years the Forest Service has caused use conflicts and resource impacts. Some problems have occurred in riparian areas and on highly erosive slopes. Types of impacts include the introduction and spread of invasive plant, displacement and compaction of soils, impacts on rare plants, rutting of wetlands, displacement of wildlife and livestock, damage to cultural resources, degradation of water quality, and impacts on riparian and fisheries habitat, road maintenance 3, 4, 5 roads. These are higher standard roads that are maintained to low clearance (passenger cars) vehicles.	Resource effects of the alternatives are summarized in FEIS Chapter 3 and are included in the specialist reports located in the project file. Maintenance priorities and budget allocations are outside the scope of this project. Please see FEIS section 3.15.2.13.

Letter-Comment	Comment	Response
59-6	Affected Environment - 3.1.5.2.2.3 It appears that besides potential construction impacts of new unauthorized roads, other long term impacts of these roads may result due to low maintenance levels. The maintenance categories of the new roads to be constructed are not described. It appears that, since they are for administrative or permit usage, that the maintenance levels will be low - Level 1. Less than 20 percent of Maintenance Level 2 roads are maintained forest-wide. What are the maintenance levels of the new roads and what percentage of the new roads will be maintained? Please explain what is meant by "maintenance to reduce environmental impacts" for Level 2 (low level) road maintenance for the existing and new construction roads.	No new road construction is proposed in this project. Please see FEIS section 2.2. Operational Maintenance Level discussions can be referenced in FSH 7709.58.

Parking/Staging Areas

Letter-Comment	Comment	Response
51-2	I believe a good location for the main parking/laydown area for autos and trailers would be the Bear Flat/Sugar Loaf area.	Please see response to comment 50-2 on page B-3.

Roads Analysis Process/Transportation Analysis Process (RAP/TAP)

Letter-Comment	Comment	Response
59-1	While the project does minimize new road construction, we have concerns about the resource impacts caused by construction of new or relocation of designated routes. The DEIS references the RAP which considers the need for the remaining system and non-system roads and trails and weighs those needs against possible environmental, social and safety concerns. Will the RAP analysis be used to predict areas of highest resource impacts and inform decisions concerning routes for these new relocated roads? If not, how will the least environmentally damaging new or relocated route be determined?	No new road construction is proposed in this project. Please see FEIS section 2.2. Please refer to individual route reports which are part of the RAP, located in the project file. Consideration for physical and biological resources is detailed in FEIS section 1.10.3.

Administrative Routes

Letter-Comment	Comment	Response
170-36	I propose that instead of implementing your Preferred Alternative D, that you consider Alternatives A or E. Or, make all the Administrative Use roads in Alternative D open to the public.	Consideration for alternatives is detailed in FEIS sections 2.2.1 and 2.2.5. See also response to comment 57-1 on page B-92.
34-4	Administrative closures should be minimized. Alternative E accomplishes this objective.	Alternative E has been analyzed and considered. Please see FEIS section 2.2.5.

Private Property

Letter-Comment	Comment	Response
120-3	The “open to all” route south of Crawford Pass along the Great Western Trail stops short of the Forest boundary. We recognize the reason for this is the lack of any public right-of-way south of the boundary. It is recommended that a provision be included in the travel plan to open this short section if and when right-of -way is established in the future.	Alternatives A and E analyze keeping this route open. Please refer to FEIS section 2.7, *Alternative Maps*.

Concentrating Use

Letter-Comment	Comment	Response
90-5	By closing many of these roads that don't seem to go anywhere you are confining a lot of people into smaller areas just making a recipe for disaster by not letting us spread out so everyone is free to engage in whatever particular activity they like without encroaching on somebody else's good time.	Please see response to comment 57-1 on page B-92.

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Acronyms

ATV	All-terrain Vehicle
BBS	Breeding Bird Survey
BCT	Bonneville cutthroat trout
BLM	Bureau of Land Management
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CRCT	Colorado River cutthroat trout
DEIS	Draft Environmental Impact Statement
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
FSH	Forest Service Handbook
FSM	Forest Service Manual
FWS	[U.S.] Fish and Wildlife Service
GHG	Greenhouse gases
GIS	Geographic Information System
GPS	Global Positioning System
GWT	Great Western Trail
HUC	Hydrologic Unit Code
IRA	Inventoried Roadless Area
MIS	Management Indicator Species
ML	Maintenance Level
MMBF	Million Board Feet
MTP	Motorized Travel Plan
MVUM	Motor Vehicle Use Map
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NF	National Forest
NFMA	National Forest Management Act
NFS	National Forest System
NOI	Notice of Intent
OMRD	Open Motorized Road Density
OHV	Off-highway Vehicle
PFA	Post Fledgling Area (Goshawk)
R4	Region 4 (Intermountain Region)
RACR	Roadless Area Conservation Rule
RAP	Roads Analysis Process
RD	Ranger District
RIZ	Riparian Influence Zone
ROS	Recreation Opportunity Spectrum
SHPO	State Historic Preservation Office
SIO	Scenic Integrity Objective
SMUA	Sustained Multiple Use Alternative
TAP	Travel Analysis Process
TCP	Traditional Cultural Property

UDEQ	Utah Department of Environmental Quality
UDWR	Utah Department of Wildlife Resources
USC	U.S. Code
USDA	U.S. Department of Agriculture
SHPO	State Historic Preservation Office
WMU	Wildlife Management Unit

Glossary

100-year flood
A flood event of such magnitude it occurs, on average, every 100 years (this equates to a 1 percent probability of occurring in any given year).

adaptive management
A type of natural resource management that implies making decisions as part of an on-going process. Monitoring the results of actions will provide flow of information that may indicate the need to change a course of action. Scientific findings and the needs of society may also indicate the need to adapt resource management to new information.

administrative road
Authorized vehicle use of otherwise closed roads and/or areas to carry out Forest management activities. Includes but is not limited to access for prescribed burning, fish and wildlife habitat improvement, and timber sales. Also includes use by permittees as authorized by permit to conduct authorized activities.

affected environment
The natural, physical, and human-related environment that is sensitive to changes from the alternatives.

air quality
The composition of air with respect to quantities of pollution therein; used most frequently in connection with standards of maximum acceptable pollutant concentrations.

all-terrain vehicle (ATV)
See *off-highway vehicle*.

allotment (grazing)
An area designated for the use of a certain number and kind of livestock for a prescribed period of time according to an Allotment Management Plan.

analysis area
The geographic area defining the scope of analysis for the project. Sometimes for a particular resource, the analysis area may have to be larger when effects have potential to extend beyond the boundaries of the proposal.

annual maintenance
Maintenance performed to maintain serviceability or repair failures during the year in which they occur.

aquatic nuisance species
Aquatic and terrestrial organisms and plant species that have been introduced into new ecosystems throughout the U.S. and the world and are having harmful impacts on the natural resources in these ecosystems and the human use of these resources (Nonindigenous Aquatic

Nuisance Prevention and Control Act of 1990, amended by National Invasive Species Act of 1996).

archaeological site
Any site that is attributed to prehistoric American Indian cultures. A site is any location of use or occupation by human beings. In this part of the country, including the areas of the Dixie and Fishlake National Forests, this generally refers to sites dated to pre-1700.

arterial road
A forest road that provides service to large land areas and usually connects with other arterial roads or public highways (FSH 7709.54 – Forest Transportation Terminology Handbook, no longer in print).

beneficial uses
Water uses necessary for the survival or well-being of humans, plants, or wildlife.

Best Management Practices (BMPs)
A practice or combination of practices that are the most effective and practical means of achieving resource protection objectives during resource management activities.

big game
Those species of large mammals normally managed as a sport hunting resource..

capability
The potential of an area of land to produce resources, supply goods and services, and allow resource uses. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils, and geology, as well as the application of management practices such as protection from insects and disease.

closed road
See *administrative road*, *decommission*, and *obliteration*.

collector road
A forest road that serves smaller land areas than does an arterial road. Usually connects forest arterial roads to local forest roads (FSH – 7709.54 – Forest Transportation Terminology Handbook, no longer in print).

Code of Federal Regulations (CFR)
A codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the federal government.

community
A group of one or more populations of plants and/or animals in a common spatial arrangement; an ecological term used in a broad sense to include groups of various sizes and degrees of integration.

conifer
Any of a group of needle and cone bearing evergreen.

cover
The present vegetation and litter of an area.

cross-country travel
Traveling across the countryside (as fields and woods) rather than by roads or trails. Travel off of designated roads or trails.

cultural resources
The physical remains of human activity (artifacts, ruins, burial mounds, petroglyphs, etc.) having scientific, prehistoric, or social values.

cultural site
Any location that includes prehistoric and/or historic evidence of human use, or that has important sociocultural value.

cumulative effect
The impact on the environment that results from the incremental impact of the action when added to other actions over time and space. Individual impacts can either amplify or negate each other depending on the location, timing, and types of interactions involved. Individually minor but collectively significant actions can result from cumulative effects.

cumulative effects area
An area with a mapable boundary where individual impacts can accumulate and result in cumulative effects. Cumulative effects areas are often different for each resource or plant and animal species, and often require consideration of more than one spatial temporal scale.

deciding official
The Forest Service employee who has the authority to select and carry out a specific planning action. For this project, the Forest Supervisor on the Dixie National Forest is the deciding officer for the Cedar City, Escalante, Pine Valley, and Powell Ranger Districts, and the Forest Supervisor on the Fishlake National Forest is the deciding officer for the Teasdale portion of the Fremont River Ranger District.

decommission
To deactivate or dismantle a road; the denial of use, elimination of travelway functionality, and removal of the road from the forest transportation system; and the return of the road corridor to resource production by natural or designed means.

deferred maintenance
Maintenance that was not performed when it should have been or when it was scheduled, and therefore was put off or delayed for a future period.

designated road, trail, or area
A National Forest System road, a National Forest System trail, or an area on National Forest System lands that is designated for motor vehicle use pursuant to § 212.51 on a motor vehicle use map (36 CFR 212.1).

direct effects
Effects on the environment that occur at the same time and place as the initial cause of action.

developed recreation
Recreation that requires facilities and results in the concentrated use of an area (e.g., campgrounds or ski resorts).

dispersed campsite
Temporary undeveloped campsites that are typically created and maintained by forest users. Existing temporary campsites can be distinguished by evidence of rock fire rings, old tent sites, and tracks from earlier vehicle accesses. On the Dixie National Forest, motorized vehicles are used to access most of these sites.

dispersed recreation
Recreation that occurs outside a developed setting (e.g., hunting, scenic driving, or backpacking).

disturbance
Any event that alters the structure, composition, or function of an ecosystem, including grazing, human trampling, logging, foraging by wildlife ungulates, wind, flood, insects, disease, and fire.

diversity
The relative distribution and abundance of different plant and animal communities and species within an area.

ecosystem
A naturally occurring, self-maintained system of varied living and non-living interacting parts that are organized into biophysical and human dimension components.

effects
Environmental consequences (the scientific and analytical basis for comparison of alternatives) because of a proposed action. Effects may be either direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable of cumulative.

endangered species
". . . [A]ny species which is in danger of extinction throughout all or a significant portion of its range . . . " which is designated by the Secretary of the Interior or the Secretary of Commerce (Endangered Species Act of 1973 Sec. 3(6)).

environment
The aggregate of physical, biological, economic, and social factors affecting organisms in an area.

environmental impact statement (EIS)
A detailed statement prepared by the responsible official when a major federal action that significantly affects the quality of the human environment is described, alternatives to the proposed action provided, and effects analyzed.

erosion
Detachment or movement of soil or rock fragments by water, wind, ice, or gravity. Accelerated erosion is much more rapid than normal, natural, or geologic erosion, primarily because of the influence of activities of people, animals, or natural catastrophes..

existing route
A road or trail that currently exists on the ground but that may or may not be designated as open to motorized use. Includes constructed roads and trails maintained by the Forest Service or cooperating agencies. Constructed roads and trails are often characterized by a road or trail

prism with cut and fill slopes or through-fills. An existing route may also be an evident two-track and single-track route with regular use that has resulted from continuous passage of motorized vehicles over a period of years where perennial vegetation is devoid or scarce.

Federal Register
A daily publication that reports Presidential and Federal agency documents.

floodplain
The lowland and relatively flat areas adjoining inland and coastal waters including, at a minimum, that area subject to a 1 percent or greater chance of flooding in any given year.

forage
Plant material (usually grasses, forbs, and brush) that is available for animal consumption.

forbs
Broadleaf ground vegetation with little or no woody material.

forest highway
A forest road under the jurisdiction of, and maintained by, a public authority and open to public travel (23 USC Section 101 (a)).

Forest Plan
Shortened name for a unit's Land and Resource Management Plan. Provides strategic guidance to management activities on National Forest System lands.

forest road or trail
A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources (36 CFR 212.1).

Forest Service Handbook (FSH)
The principal source of specialized guidance and instruction for carrying out the direction issued in the Forest Service Manual (FSM). Specialists and technicians are the primary audience of handbook direction.

Forest Service Manual (FSM)
Contains legal authorities, objectives, policies, responsibilities, instructions, and guidance needed on a continuing basis by Forest Service line officers and primary staff in more than one unit to plan and execute assigned programs and activities.

four threats
Management issues identified by the Chief of the Forest Service as the greatest threats to the Nation's forests and grasslands. The four key threats are hazardous fuels, invasive species, loss of open space, and unmanaged recreation. These program areas are currently receiving the highest priority and funding emphasis in the Forest Service. See http://www.fs.fed.us/projects/four-threats/ for more information.

fragmentation
The process by which aquatic or terrestrial habitats are increasingly subdivided into smaller units, resulting in their increased insularity as well as losses of total habitat area.

game species
Any species of wildlife or fish for which seasons and bag limits have been prescribed, and that are normally harvested under state or federal laws, codes, or regulations.

geographic areas
Sub-divisions of the forest defined by topographic, climatic, and geologic features or special habitats or uses that provide a sense of place.

grazing
The consumption of native forage by livestock or wildlife.

ground cover
The material covering the land surface. Ground cover can include live vegetation, standing dead vegetation, litter, cryptograms, and rock.

habitat
The place where a plant or animal lives and grows.

historic
After the introduction of written records. In this part of the country, including the areas of the Dixie and Fishlake National Forests, this generally refers to sites or uses of areas or landscapes dated from 1700 to the present.

historical site
Any site that is 50 years of age or older that is attributed to any historical cultures, including American Indian or European immigrant cultures. A site is any location of use or occupation by human beings. In this part of the country, including the areas of the Dixie and Fishlake National Forests, this generally refers to sites dated from 1700 to the present.

Hydrologic Unit Code
The U.S. is divided and sub-divided into successively smaller hydrologic units which are classified into four levels: regions, sub-regions, accounting units, and cataloging units. The hydrologic units are arranged within each other, from the smallest (cataloging units) to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system (http://water.usgs.gov/GIS/huc.html).

Indian Tribe
Any American Indian group in the U.S. that the Secretary of the Interior recognizes as possessing tribal status.

indirect effects
Secondary effects that occur in locations other than the location of the initial action or significantly later in time.

interdisciplinary team
A group of resources professionals with different expertise that collaborates to develop and evaluate resource management decisions.

invasive species
An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. Includes both native and non-native forest and rangeland pests.

irretrievable impact or commitment
The elimination of a resource, its productivity, and/or its utility for the life of the project.

irreversible impact
The start of a chemical, biological, and/or physical process that could not be stopped. As a result, the resource or its productivity and/or its utility would be consumed, committed, or lost forever.

invasive plants
Nonnative aquatic and terrestrial species that have the capacity to dominate, overwhelm, and replace native vegetation. A species is considered invasive if it is nonnative to the ecosystem under consideration, and if its introduction causes or is likely to cause economic or environmental harm or harm to human health. Noxious weeds are a subset of invasive plants.

landscape
The aspect of the land that is characteristic of a particular region or area.

jurisdiction
The legal right to control or regulate use of a transportation facility. Jurisdiction requires authority, but not necessarily ownership. The authority to construct or maintain a road may be derived from fee title, an easement, or some other similar method (FSM 7705 – Transportation System).

leasable minerals
Minerals subject to exploration and development under leases, permits, and licenses under various mineral leasing acts. Leasable minerals include oil, gas, coal, and geothermal resources. The Forest Service determines which lands are available for leasing and under what conditions, while the Bureau of Land Management (BLM) determines whether or not to offer the lease.

lek
A specific location where male grouse congregate and strut to attract and breed with female grouse. Most male grouse return to the same lek every year.

local road
A forest road that connects terminal facilities with forest collector, forest arterial, or public highways. Usually forest local roads are single purpose transportation facilities (FSH 7709.54 – Forest Transportation Terminology Handbook, no longer in print).

locatable minerals
Minerals subject to appropriation under the General Mining Law of 1872. Locatable minerals include gold, silver, copper, gypsum, uranium, and other hard rock minerals. The BLM is responsible for subsurface rights, while the Forest Service is responsible for the surface rights. By agreement with the BLM, the Forest Service administers locatable mining activities on National Forest System lands.

maintenance
The upkeep of the entire forest development transportation facility including surface and shoulders, parking and side areas, structures, and such traffic-control devices as are necessary for its safe and efficient utilization (36 CFR 212.2 (i)).

Maintenance Level
See *Operational Maintenance Level*.

management direction
A statement of multiple use and other goals and objectives, along with the associated management prescriptions and standards and guidelines to direct resource management.

Management Indicator Species
A species of wildlife, fish, or plant whose health and vigor are believed to accurately reflect the health and vigor of other species having similar habitat and protection needs to those of the selected indicator species.

mineral materials
Minerals that are sold instead of leased or located. Mineral materials include common varieties of sand, gravel, clay, and decorative stone. The Forest Service has sole discretion over mineral minerals. Also referred to as common variety minerals or salable minerals.

mitigation
Actions to avoid, minimize, reduce, eliminate, replace, or rectify the impact of a management practice.

mixed traffic
A National Forest System road designated for use by both highway-legal and non-highway-legal motor vehicles.

monitoring
The process of collecting information to evaluate if objectives and anticipated results of a management action are being realized or if implementation is proceeding as planned.

motor vehicle
Any vehicle which is self-propelled, other than: (1) a vehicle operated on rails; and (2) any wheelchair or mobility device, including one that is battery-powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area (36 CFR 212.1).

Motor Vehicle Use Map (MVUM)
A map reflecting designated roads, trails, and areas on an administrative unit or a Ranger District of the National Forest System (36 CFR 212.1).

motorized mixed use
Designation of a National Forest System road for use by both highway-legal and non-highway legal motor vehicles (EM-7700-30 – Guidelines for Engineering Analysis of Motorized Mixed Use on National Forest System Roads).

multiple use
According to the Multiple-Use Sustained-Yield Act of 1960, the management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

National Environmental Policy Act of 1969 (NEPA)
An act mandating an environmental analysis and public disclosure of federal actions.

National Forest Management Act (NFMA)
A law passed in 1976 as amendments to the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of regional and forest plans and the preparation of regulations to guide that development.

National Forest System
All National Forest land reserved or withdrawn from the public domain of the U.S.; all National Forest lands acquired through purchase, exchange, donation, or other means; the National Grasslands and land utilization projects administered under Title III of the Bankhead-Jones Farm Tenant Act; and other lands, waters, or interests therein that are administered by the Forest Service or are designated for administration through the Forest Service as a part of the system (36 CFR 212.1).

National Forest System road
A forest road other than a road that has been authorized by a legally documented right-of-way held by a state, county, or other local public road authority (36 CFR 212.1). Previously referred to as a classified road.

National Forest System trail
A forest trail other than a trail that has been authorized by a legally documented right-of-way held by a state, county, or other local public road authority (36 CFR 212.1).

National Register of Historic Places
A register of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, and culture. The register was established by the National Historic Preservation Act of 1966 and is maintained by the Secretary of the Interior.

native species
With respect to a particular ecosystem, a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem.

NEPA process
An interdisciplinary and environmental effects disclosure process, mandated by the National Environmental Policy Act, which concentrates decision making around issues, concerns, alternatives, and the effects of alternatives on the environment.

nest area (for northern goshawk)
The nest tree and stand(s) surrounding the nest that contain prey handling areas, perches, and roosts.

new road construction
An activity that results in the addition of forest classified or temporary road miles (36 CFR 212.1, FSM 7705 – Transportation System).

No Action Alternative
An alternative required by regulations implementing the NEPA (40 CFR 1502.14). The No Action Alternative provides a baseline for estimating the effects of other alternatives.

non-motorized travel
Modes of travel that include hiking, equestrian, and mountain bikes and exclude all motorized use.

noxious weed
Any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests of agriculture, irrigation, navigation, the natural resources of the U.S., the public health, or the environment (Plant Protection Act).

Objective Maintenance Level
The maintenance level to be assigned at a future date considering future road management objectives, traffic needs, budget constraints, and environmental concerns. The objective maintenance level may be the same as, or higher or lower than, the operational maintenance level (FSH 7709.58 Sec 12.3 – Transportation System Maintenance Handbook).

obliteration
To unbuild, decommission, deactivate, or dismantle a road; the denial of use, elimination of travelway functionality, and removal of the road from the forest development road system; return of the road corridor to resource production by natural designed means.

Off-highway vehicle (OHV)/off-road vehicle (ORV)
Any motor vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain (36 CFR 212.1). Vehicle types include but are not limited to sport utility vehicles, jeeps, ATVs, mini-bikes, amphibious vehicles, over-snow vehicles, off-highway motorcycles, go-carts, motorized trail bikes, and dune buggies. Wheelchairs that are designed solely for use by a mobility-impaired person for travel are not included in this definition.

open to the public
Except during scheduled periods, extreme weather conditions, or emergencies, a route open to the general public for use with a standard passenger auto without restrictive gates or prohibitive signs or regulations, other than general traffic control or restrictions based on size, weight, or class of registration (23 CFR 660).

Operational Maintenance Level
The maintenance level currently assigned to a road considering today's needs, road condition, budget constraints, and environmental concerns. It defines the level to which the road is

currently being maintained (FSH 7709.58 Sec 12.3 – Transportation System Maintenance Handbook).

overland travel
See *cross-country travel*.

over-snow vehicle
A motor vehicle that is designed for use over snow and that runs on a track or tracks and/or a ski or skis, while in use over snow (36 CFR 212.1).

paleontological resources
Any evidence of fossilized remains of multicellular invertebrate and vertebrate animals and multicellular plants, including imprints thereof. Organic remains primarily collected for use as fuel such as coal and oil are paleontological resources, but are excluded from the prohibitions under the rule (36 CFR 261.2).

permittee
An individual who has been granted a permit for a specific activity such as livestock grazing or an outfitter and guide operation.

population
A community of individuals that share a common gene pool.

Post-fledgling Area (for northern goshawk)
An area of concentrated use by the goshawk family after the young leave the nest.

prehistoric
Prior to written records being kept. As with archaeological sites, in this part of the country, including the areas of the Dixie and Fishlake National Forests, this generally refers to sites or uses of areas or landscapes dated to pre-1700.

prescribed fire
See *wildland fire*.

private road
A road under private ownership authorized by easement to a private party or a road which provides access pursuant to a reserved or private right (FS 643 – Roads Analysis – Informing Decisions About Managing The National Forest Transportation System, August 1999).

project area
The spatial boundary that envelops the proposed actions and alternatives.

project file
An assemblage of documents that contain all the information developed or used during project development and environmental analysis. This information may be summarized and incorporated by reference in the environmental impact statement.

Public Forest Service Road
A designated public road under Forest Service jurisdiction that meets the definition of 23 USC Section 101.

range/rangeland
Land that supports vegetation that provides forage for grazing and browsing animals.

Ranger District
An administrative subdivision of a national forest, supervised by a district ranger who reports to the forest supervisor.

Record of Decision
A concise public document disclosing the decision made following preparation of an EIS and the rationale use to reach that decision.

Recreation Opportunity Spectrum (ROS)
A framework for stratifying and defining classes of outdoor recreation based on environments, activities, and experience opportunities. The settings, activities, and opportunities for obtaining experiences are arranged along a continuum or spectrum divided into seven classes: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Roaded Natural, Roaded Modified, Rural, and Urban. Neither the Dixie or Fishlake National Forest contain any Roaded Modified, Rural, or Urban ROS classes.

recreation residence
A residence on National Forest System lands generally located in an established tract and built for recreation purposes with agency approval. These residences are authorized by special use permit.

Research Natural Area
"Research Natural Areas are part of a national network of ecological areas designated in perpetuity for research and education and/or to maintain biological diversity on National Forest System lands. Research Natural Areas are principally for nonmanipulative research, observation, and study. They also may assist in implementing provisions of special acts, such as the Endangered Species Act of 1973 and the monitoring provisions of the National Forest Management Act of 1976" (FSM 4063).

responsible official
The official with the authority and responsibility to oversee the planning process and to approve plans, plan amendments, and plan revisions (36 CFR 219.16).

right-of-way
An accurately located strip of land with defined width, beginning of point, and point of ending. It is the area within which the user has the authority to conduct operations approved or granted by the landowner in an authorizing document, such as a permit, easement, lease, license, or Memorandum of Understanding.

riparian
Related to, living, or located in conjunction with a wetland, on the bank of a river or stream, or at the edge of a lake or tidewater.

road
A motor vehicle route over 50 inches wide, unless identified and managed as a trail. A road may be a system road, unauthorized road, or temporary road.

road construction or reconstruction
Supervising, inspecting, actual building, and incurrence of all costs incidental to the construction or reconstruction of a road (36 CFR 212.1).

Road Maintenance Level
Roads assigned to maintenance levels 2-5 are either constant service roads or intermittent service roads during the time they are open to traffic. Maintenance levels 1-5 (operational and objective) are described below.

1. Level 1: Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed one year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate." Roads receiving level 1 maintenance may be of any type, class, or construction standard, and may be managed at any other maintenance level during the time they are open for traffic. However, while being maintained at level 1, they are closed to vehicular traffic, but may be open and suitable for non-motorized uses.
2. Level 2: Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to (1) discourage or prohibit passenger cars, or (2) accept or discourage high clearance vehicles.
3. Level 3: Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.
4. Level 4: Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced; however, some roads may be single lane. Some roads may be paved and/or dust abated. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.
5. Level 5: Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. The appropriate traffic management strategy is "encourage" (FSH 7709.58, 10).

Road Management Objective
Defines the intended purpose of an individual road based on management area direction and access management objectives. Road management objectives contain design criteria, operation criteria, and maintenance criteria (FSH 7709.55 Sec 33 – Transportation Planning Handbook).

route
A generic term that includes roads and trails as defined in this glossary.

R.S. 2477
Revised Statute 2477 is legislation that allows counties to assert that they have access rights on roads and/or trails that existed prior to the establishment of the Forest.

scale
Geographic extent (e.g., regional, sub-regional, or landscape).

Scenic Integrity
A measure of the degree to which a landscape is visually perceived to be complete. Scenic integrity is used to describe an existing situation, standard for management, or desired future condition. The highest scenic integrity ratings are given to those landscapes that have little or no deviation from the character valued by constituents for its aesthetic appeal. Scenic Integrity ranges from Very High to Unacceptably Low, as defined below. There are no areas mapped as either Very Low or Unacceptably Low on the Dixie National Forest. All definitions are from *Landscape Aesthetics: A Handbook for Scenery Management* (USDA 1995b).

Very High
Landscapes where the valued landscape character "is" intact with only minute if any deviations. The existing landscape character and sense of place is expressed at the highest possible level.

High
Landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.

Moderate
Landscapes where the valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.

Low
Landscapes where the valued landscape character "appears moderately altered." Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but compatible or complimentary to the character within.

Very Low
Landscapes where the valued landscape character "appears heavily altered." Deviations may strongly dominate the valued landscape character. They may not borrow from valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles within or outside the landscape being viewed. However, deviations must be shaped and blended with the natural terrain (landforms) so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.

Unacceptably Low
Landscapes where the valued landscape character being viewed appears extremely altered. Deviations are extremely dominant and borrow little of any form, line, color, texture, pattern, or scale from the landscape character. Landscapes at this level of integrity need rehabilitation. This level should only be used to inventory existing integrity. It must not be used as a management objective.

scoping
The procedures by which the Forest Service determines the extent of analysis necessary for a proposed action, i.e., the range of actions, alternatives, and impacts to be addressed, identification of significant issues related to a proposed action, and establishing the depth of environmental analyses, data, and task assignments needed.

seasonal closure
A route or area closed part of the year. The season of closure is defined by the reason for the closure (e.g., winter range, snow, etc.).

Section 106 compliance
The requirement of Section 106 of the National Historic Preservation Act that any project funded, licensed, permitted, or assisted by the federal government be reviewed for impacts to historic properties and that the State Historic Preservation Officer and the Advisory Council of Historic Preservations be allowed to comment on a project.

sediment
Any material carried in suspension by water that will ultimately settle to the bottom. Sediment has two main sources: from the channel area itself and from disturbed sites.

Sensitive species
Those species identified by the Regional Forester for which population viability is a concern as evidenced by significant current or predicted downward trends in population numbers or density, or habitat capability that would reduce a species' existing distribution.

snag
A standing dead tree.

special use permit
A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of National Forest System lands for some special purpose.

species
A unit of classification of plants and animals consisting of the largest and most inclusive array of sexually reproducing and cross-fertilizing individuals, which share a common gene pool.

stand
A contiguous group of trees sufficiently uniform in age class distribution, composition, and structure, and growing on a site of sufficiently uniform quality to be a distinguishable unit.

summer range
A range, usually at higher elevation, used by deer and elk during summer. A summer range is usually much more extensive than a winter range.

summer home
See *recreation residence*.

temporary road or trail
A road or trail necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a Forest System road or trail and that is not included in a Forest Transportation Atlas (36 CFR 212.1). These routes are not considered necessary for long-term access, recreational use, or resource management.

Threatened species
". . . [A]ny species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" which is designated by the Secretary of the Interior or the Secretary of Commerce (Endangered Species Act of 1973 Sec. 3(19)).

Traditional Cultural Property
A location or community that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that are rooted in that community's history, and are important in maintaining the continuing cultural identity of the community. Properties can include buildings, structures, and sites; groups of buildings, structures or sites forming historic districts; landscapes; and individual objects (36 CFR 60.4).

trail
A route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail. A trail may be authorized, unauthorized, or temporary.

Tribe
Term used to designate a federally-recognized group of American Indians and their governing body. Tribes may be comprised of more than one Band.

unauthorized road or trail
A road or trail that is not a Forest System road or trail or a temporary road or trail and that is not included in a Forest Transportation Atlas (36 CFR 212.1). The term "unclassified" was used in some of the earlier project file documentation that predated the Travel Rule.

undesignated roads and trails
Roads and trails that have not yet gone through site-specific travel planning to determine if they should be open, closed, or restricted to motorized vehicle use, or roads and trails that have gone through travel planning and determined that motorized vehicle use is not appropriate and is not allowed.

watershed
A land area that contributes all its water to one drainage system, basin, stream, or river. Watersheds can be described at multiple scales.

wetland
An area that is either permanently inundated with water or has seasonally high water tables that support vegetation requiring these conditions for growth and reproduction.

wilderness
As defined by the Wilderness Act of 1964, "an area where earth and its community of life are untrammeled 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 or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value" (16 USC 1131).

wilderness area
An area designated by Congress as part of the National Wilderness Preservation System, according to the criteria established in the Wilderness Act of 1964.

wildland fire
Any non-structure fire that occurs in the wildland. There are three types of wildland fire: wildfire, wildland fire use, and prescribed fire.

> **wildfire**
> An unplanned, unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out.
>
> **wildland fire use**
> The application of the appropriate management response to naturally-ignited wildland fires to accomplish specific resource management objectives.
>
> **prescribed fire**
> Any fire ignited by management actions to meet specified objectives.

winter range
A range, usually at lower elevation, used by migratory deer and elk during the winter months; usually better defined and smaller than summer ranges.

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