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Final Environmental Impact Statement

Travel Management on the Coconino National Forest

Volume I

Coconino, Gila, and Yavapai Counties, Arizona



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Final Environmental Impact Statement Travel Management on the Coconino National Forest

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Abstract: The Coconino National Forest proposes changes to motorized use on roads, trails, and areas to meet requirements in the Travel Management Rule regulations (36 CFR 212, Subpart B). Routes and areas not designated for motorized use would be prohibited from motorized travel unless authorized under an exemption in the Travel Management Regulations. This involves amending the Coconino National Forest Land and Resource Management Plan (the “forest plan”) to restrict cross-country motorized travel in all nondesignated areas and amending other direction related to motorized use that does not comply with the Travel Management Rule. Two action alternatives (alternatives 3 and 4) propose changes to the current system of National Forest System roads, trails, and areas for motorized use. Both action alternatives also consider corridors for motorized dispersed camping and motorized big game retrieval.

This final environmental impact statement (FEIS) documents the analysis of three alternatives (1, 3, and 4) to allow motorized use on the Coconino National Forest. Alternative 1 proposes no action. Alternative 3 proposes to close 4,317 miles of road to motorized use, resulting in a system with 3,136 miles of routes (roads and trails) designated for motorized use. This alternative prohibits cross-country motorized travel except in the 13,711-acre Cinder Hills Off-highway Vehicle (OHV) Area. The emphasis of alternative 3 is to provide a high level of access across the Coconino National Forest while improving resource protection. Alternative 4 proposes to close 3,991 miles of road resulting in a system with 3,512 miles of routes designated for motorized use. This alternative also prohibits cross-country motorized travel except in the 13,711-acre Cinder Hills OHV Area. Alternative 4 was developed in response to public comments received on the proposed action and DEIS, and provides a higher level of motorized recreation opportunities and access across the Forest as compared to alternative 3, while still complying with forest plan standards and guidelines. Both alternatives include motorized dispersed camping corridors on approximately 20 percent of designated routes, and both alternatives include different levels of off-road travel for motorized big game retrieval. Alternative 3 is the preferred alternative.

Summary

The Coconino National Forest (also referred to as the “Forest”) proposes to make changes to the system of roads, trails, and areas designated for motorized use as required under Travel Management Rule regulations (36 CFR 212, Subpart B). The area affected by the proposal includes the entire Coconino National Forest. This action is needed because unmanaged motorized vehicle use on the Forest has been causing increasing amounts of resource damage and Forest-user conflict as unmanaged motorized use increases.

On November 2, 2005, the Forest Service announced the final Travel Management Rule <http://www.fs.fed.us/recreation/programs/ohv/final.pdf> regulations governing off-highway vehicles (OHVs) and other motor vehicle use on national forests and grasslands. Under these regulations, national forests and grasslands that do not already restrict motor vehicle use to “designated roads and trails and areas” must do so. These regulations require that all motorized vehicles must remain on designated roads, trails and areas while on the national forest, unless specifically exempted under the Travel Management Rule.

Currently, the Forest maintains a system of motorized roads and trails and allows for unrestricted cross-country motorized travel except in areas that are signed closed or restricted to seasonal use. Multiple closure areas restrict motor vehicle use on 70 miles of system road throughout the year. Also, a number of seasonal closures restrict motor vehicle use during parts of the year.

In July 2007, the Forest published in the Federal Register a notice of intent to prepare an environmental impact statement to analyze the effects of designating motorized and nonmotorized roads, trails and areas as required by the Travel Management Rule. The Forest presented a proposed action based on a synthesis of public comments and Forest Service specialist recommendations gathered during the travel analysis process. On March 19, 2010, the Forest published a draft environmental impact statement (EIS), which included an analysis of alternatives to the proposed action (the modified proposed action - alternative 3) including the no action alternative (alternative 1), and alternative 4. More information concerning the original proposed action and other alternatives considered but eliminated from detailed study is available in Chapter 2 of the final EIS.

Alternatives 3 and 4 would close 4,317 and 3,991 miles of road respectively. Both alternatives would result in a system of over 3,000 miles of National Forest System roads (NFS roads) open to motorized vehicle use, and both would prohibit motorized vehicle travel off of designated roads and motorized trails, except in the 13,711-acre Cinder Hills OHV Area. Both alternatives propose to add between 30 to 36 miles of unauthorized road to the Forest’s road system for motorized use. Both alternatives also include the designation of corridors on 581 miles of road up to 300 feet on both sides of designated roads and corridors on 32 miles of road up to 300 feet on one side of designated roads for the sole purpose of motorized access to dispersed camping. The modified proposed action retains all 37 miles of existing National Forest System motorized trails (NFS trails), and designates an additional 1.8 miles of unauthorized motorized trail (Lower Smasher Canyon). Alternative 4 includes designation of an additional 50 miles of motorized trail (Challenger trail). Both alternatives include corridors solely for the purpose of motorized big game retrieval. Alternative 4 proposes motorized big game retrieval up to 1 mile from designated roads throughout the Forest, but alternative 3 limits motorized big game retrieval to game management units 7W and 8, which comprise approximately 5 percent of the national forest.

Overall, the modified proposed action would result in the greatest reduction of impact from motorized use to natural and cultural resources by closing 4,317 miles of road to motorized use.

Summary

Alternative 3 would also provide the least amount of access for motorized vehicle use with 3,097 miles of open NFS roads, 39 miles of motorized NFS trails, and 13,711 acres of designated areas for cross-country motorized use, and limited motorized camping corridors and motorized big game retrieval. Alternative 4 would provide more motorized access with 3,423 miles of NFS roads, 89 miles of motorized NFS trails, and 13,711 acres in the Cinder Hills OHV Area for cross-country motorized use. Alternative 4 also allows motorized travel up to 1 mile off of designated roads for motorized big game retrieval, which is substantially more than alternative 3. Alternative 4 does not provide as much resource protection as the modified proposed action. Due to the limitations on cross-country motorized travel included in both alternatives, each alternative increases the Forest's ability to protect resources from unmanaged motorized use and to manage the transportation system more effectively. Alternative 3 has been identified as the preferred alternative.

Based upon a review of public comments and the final environmental impact statement, the forest supervisor of the Coconino National Forest will select an alternative or a combination of elements from separate alternatives. A record of decision will document his final designation of motorized and nonmotorized roads, trails, and areas as required by the Travel Management Rule.

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Chapter 1. Purpose of and Need for Action

Introduction

We have prepared this final environmental impact statement (FEIS) to comply with the National Environmental Policy Act (NEPA), the Travel Management Rule, and other relevant Federal and State laws and regulations. This FEIS discloses the potential direct, indirect, and cumulative environmental impacts that would result from proposed changes to the Coconino National Forest travel management system and alternatives to that proposal.

This document is organized into four chapters:

Chapter 1. Purpose and Need for Action: The chapter includes information on the history of the project proposal, the purpose of and need for the project, and our proposal for achieving that purpose and need. This section also details how we informed the public of the proposal and how the public responded.

Chapter 2. Alternatives, including the Proposed Action: This chapter provides a more detailed description of our proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes project design criteria. Finally, this section provides a summary table of the environmental consequences associated with each alternative.

Chapter 3. Affected Environment and Environmental Consequences: This chapter describes the predicted environmental effects of accomplishing the proposed action and other alternatives. This analysis is organized by resource area.

Chapter 4. Consultation and Coordination: This chapter provides a list of preparers and agencies consulted during development of the environmental impact statement.

Appendix: The appendix provides more detailed information to support the analyses presented in the environmental impact statement.

Index: The index provides page numbers by document topic.

Additional documentation, including detailed analyses of project area resources, may be found in the project record located at the Coconino National Forest Supervisor's Office, 1824 South Thompson Street, Flagstaff, Arizona and on the Forest website at:

<http://www.fs.fed.us/r3/coconino/tmr.shtml>.

Location of Proposed Travel Management

Proposed changes to travel management would apply to the entire Coconino National Forest¹. The Forest consists of approximately 1.83 million acres of National Forest System land located in northern Arizona. These lands encompass the red rocks and high desert of Sedona, the Mogollon Rim, and the high country in and around Flagstaff. Just north of the city of Flagstaff are the San Francisco Mountains, including Humphreys Peak, the highest point in Arizona at 12,633 feet.

¹ When speaking of the administrative body or boundary of the Coconino National Forest, a shortened version, "the Forest" will sometimes be used. Lowercase "forest" refers to the physical setting and ecological components of the land.

The Coconino National Forest has three ranger districts: Flagstaff (recently made from combining the Peaks and Mormon Lake Ranger Districts), Mogollon Rim, and Red Rock. See figure 1 for the general location of the Forest within the State of Arizona.

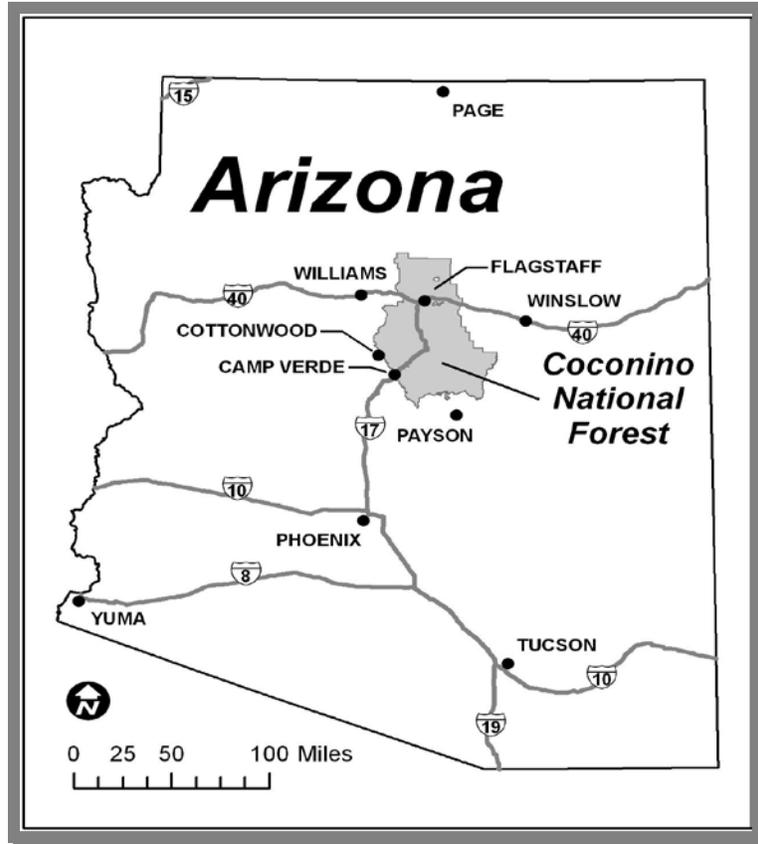


Figure 1. Location of the Coconino National Forest

Background of Motor Vehicle Use and Management on the Coconino National Forest

Motor vehicles are used for many activities on the Coconino National Forest. These activities include sightseeing, camping, hiking, hunting, fishing, recreational riding, and collecting firewood and other forest products, as well as permitted and administrative uses. Motor vehicle use is both a form of access to nonmotorized activities on the Forest and a form of recreation in and of itself. Over the past 30 years, the use of motor vehicles on the Coconino National Forest has grown substantially. A major part of this trend is a result of the increase in off-highway vehicle (OHV) travel, which has increased the level of motorized use in the Forest and has changed the way visitors experience National Forest System lands. In addition, these trends have affected the Forest itself by causing a proliferation of unauthorized roads and motorized trails in all parts of the natural landscape, which can damage forest resources and create user conflicts.

Currently, the Coconino National Forest uses several different strategies to facilitate access and motorized recreation in the Forest while limiting the negative effects associated with motorized vehicles. Forest personnel enforce a number of closures to protect parts of the Forest most

vulnerable to impacts from motorized use and to ensure public safety. Forest Service regulations also prohibit unauthorized trail construction and operation of vehicles in a manner damaging to the land, wildlife, or vegetation. However, these regulations have not proven sufficient to control the proliferation of routes and motorized use that is resulting in environmental damage and social conflict.

This problem is not specific to the Coconino National Forest. Unmanaged recreation, including motor vehicle use was listed as one of the four key threats to the health and sustainability of national forests by the Chief of the Forest Service. In November 2005, a Travel Management Rule was established as a regulation to improve management of motorized use by defining where motorized use is acceptable and where it is not. More specifically, this rule requires Forest Service staff at each national forest and grassland to designate motor vehicle use on roads, trails, and areas by vehicle class and time of year if appropriate. After designation, motor vehicle use not in accordance with the designation is prohibited, except for those exemptions listed in the Travel Management Rule, such as limited administrative use by the Forest Service or permitted activities (36 CFR 212.51). The Travel Management Rule only applies to motorized vehicle use and does not affect or prohibit any nonmotorized access.

The Travel Management Rule

On November 9, 2005, the Forest Service published regulations regarding travel management on National Forest System lands to clarify policy related to motor vehicle use, including the use of off-highway vehicles (Fed. Reg., no. 70, no. 216, p. 68264). This is referred to as the Travel Management Rule or “final rule.” The Travel Management Rule was developed in response to the substantial increase in use of OHVs on National Forest System (NFS) lands and related damage to forest resources caused by unmanaged OHV use over the past 30 years. The regulations implement Executive Orders 11644 and 11989 regarding off-road use of motor vehicles on Federal lands. The final rule “provides for a system of NFS roads, NFS trails, and areas on NFS lands that are designated for motor vehicle use. . . . Motor vehicle use off designated roads and trails and outside of designated areas is prohibited” (36 Code of Federal Regulations (CFR) 212.50). Per the final rule, national forests that do not already restrict motorized travel to designated roads, trails, and areas must do so. Therefore, the Coconino National Forest must identify the road system needed for safe and efficient travel and for administration, use, and protection of National Forest System lands. Designated roads, trails, and areas shall be identified on a motor vehicle use map and made available to the public free of charge.

Once roads, trails, and areas in the Coconino National Forest have been designated and identified on the motor vehicle use map, motor vehicle use off of the designated system is prohibited. The following vehicles and uses are exempted from this prohibition: (1) aircraft; (2) watercraft; (3) over-snow vehicles; (4) limited administrative use by the Forest Service; (5) use of any fire, military, emergency, or law enforcement vehicle for emergency purposes; (6) authorized use of any combat or combat support vehicle for national defense purposes; (7) law enforcement response to violations of law, including pursuit; and (8) motor vehicle use that is specifically authorized under a written authorization issued under Federal law or regulations (36 CFR 251.51).

The rule further states, “the responsible official may incorporate previous administrative decisions regarding travel management made under other authorities, including designations and prohibitions of motor vehicle use, in designating NFS roads, trails, and areas” (36 CFR

2212.50(b)). The final rule does not require reconsideration of any previous administrative decisions that allow, restrict, or prohibit vehicle use on NFS roads, trails or areas and that were made under other authorities. However, the responsible official may choose to reconsider past decisions, with public involvement, as necessary to achieve the purposes of the final rule (Federal Register, vol. 70, no. 216, p. 68269). This environmental analysis focuses on changes to the existing road and motorized trail system that are needed to meet the Travel Management Rule. Several of these changes may not correspond with recent NEPA decisions regarding roads. A decision on this FEIS will replace any inconsistent management direction based on previous NEPA decisions.

To comply with the travel management regulations, we initiated a Forestwide travel analysis in 2006. The intent of the travel analysis process was to identify needed changes to the existing road and motorized trail systems and identify the minimum transportation system necessary to provide safe and efficient travel and for administration, utilization, and protection of NFS lands (36 CFR 212.5(b)). The resulting transportation system, as authorized under NEPA, is not required to be the minimum system as identified by the travel analysis process.

During fall 2006 and summer 2007, we hosted several open houses in northern and central Arizona and gave Travel Management Rule presentations to groups to collect ideas regarding motorized travel in the Coconino National Forest from local citizens, forest users, State, county, local, and tribal governments, and other Federal agencies. This proposed action represents a synthesis of public comment and Forest Service specialist recommendations gathered during the travel analysis process.

The Travel Management Rule uses an iterative process that begins with the travel analysis process, followed by a NEPA analysis for proposed changes to the system of roads, trails, and areas. The NEPA process included a scoping period after the release of the proposed action, and a comment period following the release of a draft EIS. The input we received from both of these public comment opportunities and information from professional natural resource management agencies was used to update the proposed action and alternatives to correct errors and improve the sustainability of the travel system. This process results in the designated transportation system, which can be adapted over time. The motor vehicle use map will show this system and will be valid until the Forest issues a new map based on system changes found to be necessary. The rule states that the motor vehicle use map will be reissued every year, which would be reflective of any changes made to the designated system.

This FEIS includes analysis of over 8,000 individual route segments. It is clear that as environmental conditions change, local communities grow, and forest use patterns evolve, the transportation system will need to evolve over time as well. We anticipate further analysis and NEPA processes in the future to consider changes to the designated system. This will allow for a continuing relationship with Forest users of all types and will include analysis of potential motorized trails, consideration of removal of route or corridor designations where resource conflicts arise, and/or other changes to the system to maintain or provide access to private lands or connectivity for a safe, fun, and ecologically sustainable system for motorized vehicular use.

Current Management of Motor Vehicle Use on Roads and Trails

The Coconino National Forest Land and Resource Management Plan (the “forest plan”) is the guiding document for Forest Service management of the natural resources and uses of the Forest. Currently, the Coconino National Forest allows motorized cross-country travel throughout the Forest except in three types of areas: congressionally designated wilderness, areas closed to motorized use in the forest plan, or areas closed to motorized use in a Forest closure order. Areas closed to motorized use in the forest plan and areas closed to motorized use in a closure order can be seasonal closures. If areas with any motorized vehicle closure are subtracted from the land area of the Coconino National Forest, this leaves approximately 1,465,155 acres² of land open for unrestricted motorized cross-country travel. However, much of this area cannot be traversed using a motor vehicle because of steep topography, vegetation, or other obstacles.

In addition to closure orders for motorized use based on area, the Coconino National Forest has a wet weather policy to restrict use of motor vehicles during times of heavy rain or snow. Restrictions are based on the judgment of the forest supervisor to prevent travel in hazardous conditions that could lead to human injury and damage to roads and soils during times when they are most susceptible. Wet weather restrictions involve temporary prohibition of cross-country motor vehicle travel, and temporary closure of many roads. Based on weather conditions, a backbone system of roads may remain open to allow access into the national forest. However, during times of heavy rain or snow, Forest managers could choose to close all roads in affected areas to protect roads and resources and to provide for public safety. Roads that remain open are the most suitable for travel during wet conditions and are strategically located to provide reasonable access to the Forest.

The Coconino National Forest includes approximately 7,484 miles of known roads, 37 miles of system motorized trails, and 89 miles of known unauthorized motorized trails. Of the 7,484 miles of roads, approximately 929 miles are unauthorized roads. In addition, there are 934 miles of roads that are not owned or managed by the Forest Service (nonjurisdictional roads) within the Forest boundaries. Approximately 70 miles of roads are closed, which are those roads located in closure areas that are effectively enforced. Table 1 shows a summary of these route mileages.

Table 1. Existing route mileage by route type (Alternative 1)

Route type	Alternative 1 (no action)	
	Open	Closed*
Passenger car use mileage	440	1
Known roads open to high-clearance vehicle use (including unauthorized)	6,115	69
Unauthorized roads	929	n/a
Total Road Miles	7,484	70
Forest Service system motorized trails	37	n/a
Unauthorized motorized trail	89	n/a
Total Trail Miles	136	n/a

*Does not include seasonally closed roads. Routes in areas open to cross-country travel are not considered closed.

² This includes all acres of the Coconino National Forest outside of seasonal and year-round closure orders. This figure includes acreage in the Schultz Fire emergency closure order.

There are also a number of other routes existing on the Forest not accounted for in this document. Most of these include unauthorized routes for which we have no data, created by repeated off-road travel or motorized travel on previously closed roads. We assume with our current cross-country travel policy that all of these miles of road are being used.

National Forest System roads are those identified with a road maintenance level in the Forest's road management records (called the "INFRA database"). The INFRA database was established to track and report on road management and maintenance level costs for Forest access and recreation. Though this database is updated regularly, it was never previously used to manage motor vehicle access on the Forest. The database had previously been used to identify a maintenance level for each road. Thus roads not receiving maintenance by the Forest Service and all motorized trails were not included in the INFRA database. As a result, the INFRA database was used as a template to identify the known road system, but was strongly supplemented with route information from public and agency input and site visits.

Nonsystem roads and trails are those identified on National Forest System lands, but not accounted for in the INFRA database or through any other Forest database. During the travel analysis process, efforts were made to identify existing roads not in the INFRA database for consideration in the Travel Management Rule process. In addition, road and trail information from the public was used to identify existing routes. Many of these existing routes were previously created by the Forest Service such as for logging operations, but were later decommissioned and taken off of the road system database. Some roads such as campground loop roads, roads to facilities, or roads to private property were not part of the INFRA database that records road information (because they did not receive Forest Service maintenance) and needed to be included in Travel Management Rule efforts. These routes are collectively referred to as "nonsystem" routes, but may also be discussed as "unauthorized" routes given the context.

The Cinder Hills OHV Area is a 13,711-acre area just northeast of Flagstaff and is currently used as an off-road vehicle area.

Desired Management of Motor Vehicle Use on Roads and Trails

Most national forest visitors use motor vehicles to access the national forests, whether for recreational sightseeing; camping and hiking; hunting and fishing; commercial purposes such as logging, mining, and grazing; administration of utilities and other land uses; outfitting and guiding; or the many other multiple uses of National Forest System lands. For many visitors, motor vehicles also represent an integral part of their recreational experience. People come to national forests to ride on roads and trails in pickup trucks, all-terrain vehicles, motorcycles, and a variety of other vehicles. Motor vehicles are a legitimate and appropriate way for people to enjoy their national forests—in the right places, and with proper management.

Based on the Travel Management Rule (36 CFR 212.55) designation of roads, trails, and areas should include the objective of minimizing:

- (1) Damage to soil, watershed, vegetation, and other forest resources;
- (2) Harassment of wildlife and significant disruption of wildlife habitats;
- (3) Conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands; and

- (4) Conflicts among different classes of motor vehicle uses of National Forest System lands or neighboring Federal lands.

In addition, the responsible official shall consider:

- (5) Compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.

The forest plan also includes a number of management objectives related to motorized use in the form of management direction. Much of this management direction relates to management throughout the Forest:

- Maintain a variety of forest trails that include foot, horse, bicycle, and motorized trails, and challenge and adventure opportunities, as well as opportunities for the handicapped (forest plan, p. 22).
- Manage off-road driving to provide opportunities while protecting resources and minimizing conflicts with other users (forest plan, p. 22).
- Work with representatives of the spectrum of motorized users (including 2, 3, & 4 wheeled vehicles) in developing, designating, and providing information on off-road driving opportunities. This will have special emphasis in MA 13, the Cinder Hills, but will be applied over the major part of the Forest (forest plan, p. 58).

Some of the management direction relates to specific areas such as the Flagstaff/Lake Mary Ecosystem Area:

- Nonmotorized and motorized trail opportunities provide a variety of challenges and experiences and meet ROS³ objectives (forest plan, pp. 206-67).
- Identify some motorized trail routes. Motorized trail opportunities provide long distance connections and meet ROS objectives. Evaluate trails based on the criteria for roads, access, recreation opportunity, and public input (forest plan, pp.206-69).
- Continue motorized travel restrictions similar to the current Forest orders where motorized use occurs on designated open roads and trails only (forest plan, pp.206-84).

The forest plan also includes management objectives to protect and conserve key forest resources that are directly or indirectly affected by motor vehicle use, including but not limited to:

- Manage habitat to maintain viable populations of wildlife and fish species and improve habitat for selected species (forest plan, p.22-1).
- Improve habitat for listed threatened, endangered, or sensitive species of plants and animals and other species as they become threatened or endangered. Work toward recovery and delisting threatened and endangered species (forest plan, p.23).
- Identify and protect areas that contain threatened, endangered, and sensitive species of plants and animals (forest plan, p.23).

³ Recreation opportunity spectrum

- Increase opportunities for wildlife and fish oriented recreation activities (forest plan, p.23).
- Prevent any new noxious or invasive weed species from becoming established, contain or control the spread of known weed species, and eradicate species that are the most invasive and pose the greatest threat to the biological diversity and watershed condition (forest plan, p.23).
- Maintain or, where needed, enhance soil productivity and watershed condition (forest plan, p.23).
- Identify and protect wetlands and floodplains (forest plan, p.24).

Purpose of and Need for Travel Management Changes

The purpose and need of this project is based on the need to change management to conform to the Travel Management Rule and to move toward the desired conditions as stated in the forest plan. The purpose of this project is to provide for a system of National Forest System roads, trails, and areas designated for motor vehicle use on the Coconino National Forest that will minimize impacts to natural and cultural resources.

The proposed actions are necessary to address unacceptable resource damage created by increased motorized use across the Forest over the past 30 years. The magnitude and intensity of motor vehicle use has increased to the point that the intent of Executive Orders 11644 and 11989, both pertaining to the use of motorized vehicles on public land, cannot be met while still allowing unrestricted cross-country travel. Soil and water quality and wildlife habitat are being affected by unmanaged motorized use and recreation, as is the ability of some national forest visitors to have quality nonmotorized experiences.

A need exists to reduce the number of open road miles on the Forest and to address resource impacts associated with unmanaged motorized use. This need is based on the intent of the previously mentioned executive orders and the Travel Management Rule, which require that motor vehicle use of trails and areas on Federal lands be managed to address environmental and other impacts, but that motor vehicle use on Federal lands continue in appropriate locations.

There is also a need to amend the forest plan to prohibit motor vehicle use off the designated system of roads, trails, and areas to comply with the Travel Management Rule. Additionally, there is a need to provide limited motorized use off of certain designated routes for the purposes of dispersed camping and motorized big game retrieval to facilitate traditional and common use patterns of the Coconino National Forest. This action responds to the final Travel Management Rule regulations under 36 CFR 212.

Proposed Changes to Travel Management (the Proposed Action)

The proposed action focuses on changes to the existing Coconino National Forest transportation system. No changes are proposed to existing areas closed to motorized vehicles. This proposed action would not change the management of or restrict nonmotorized methods of travel on the Forest (e.g. hiking, horseback riding, bicycling, etc.). This proposed action does not apply to over-snow vehicles.

Changes to the Existing System

To achieve our purpose and need, we propose to:

- **Amend the forest plan to prohibit motor vehicle use off the designated system of roads, trails, and areas, except as identified on the motor vehicle use map.** This includes removing references to “off-road driving” currently in the plan to be consistent with the language and intent in 36 CFR 212. A table summarizing the proposed changes to the forest plan is in appendix A.
- **Close 4,317 miles of existing Forest system roads.** This includes all roads not designated for motorized use in this alternative that are not located within an area already closed to motorized use or entry. Many of these roads may already be effectively closed from lack of use or due to previous road closure efforts.
- **Add 30 miles of nonsystem roads to the Forest transportation system⁴** to provide for motorized recreational opportunities or access in consideration of criteria for designation of roads, trails, and areas in 36 CFR 212.55.
- **Add 1.8 miles of unauthorized motorized trail to the motorized trail system** (Lower Smasher Canyon Trail). This would result in a system with 39 miles of motorized trails.
- **Designate 300-foot-wide corridors for the sole purpose of motorized access to dispersed camping.** These corridors would be located along both sides of 581 miles of designated road and along one side of 32 miles of designated road. This would result in 43,313 acres of motorized dispersed camping corridors on the Forest.
- **Designate motorized big game retrieval corridors of one mile off both sides of 135 miles of designated routes within Arizona Department of Game and Fish game management units 7W and 8.** A substantial portion of these units occurs across the Coconino National Forest and the Kaibab National Forest. Motor vehicle use could occur in these areas solely for retrieving legally harvested cow and bull elk for all hunts. This would allow motorized big game retrieval on approximately 49,478 acres. This is estimated to result in approximately 74 vehicle trips each year for motorized big game retrieval.

Resulting System for Motorized Use

This action would result in approximately 3,097 total miles of designated NFS roads and 39 miles of designated trails open to motorized travel on the Forest. Designated National Forest System roads within existing seasonal closure areas would continue to be seasonally closed to motor vehicles.

⁴ Approximately 30 miles of routes are unauthorized roads. The Travel Management DEIS identified 65 miles of road to be added to the system, but after further review we found that 35 miles of these routes are previously existing routes that were never incorporated into the Coconino National Forest INFRA database. For example, many of these routes include campground loop roads or developed roads to Forest Service trailheads that were never entered into the road management system even though they have been designed and constructed by or on behalf of the Forest Service, and are regularly maintained and managed as Forest System roads. All 65 miles of these roads would be added to the Forest’s system of authorized roads and be designated as open to motorized use. Specific information for each route is available in the project record.

Of the 3,097 miles of designated roads; 407 miles would be designated for highway legal vehicles only and 2,690 miles would be designated for all vehicles (including ATVs, UTVs, and motorcycles).

A total of 39 miles of trail would be open for motorized use. Except for the 1.8-mile Lower Smasher Canyon trail, these trails have been established for motorized use through previous planning processes. These trails would be designated as follows:

- 20.5 miles of motorized trails for single-track trail (this includes the Fort Valley motorized trail system).
- 9.3 miles of motorized trails for less than 50-inch-width trails (this includes the Munds Park motorized trail system).
- 8.5 miles of motorized trails for full-size (4x4) vehicles. This includes 6.7 miles of the Casner Mountain Trail and 1.8 miles of the Lower Smasher Canyon Trail. Access to the Casner Mountain Trail is currently available by request and would continue to be managed in this manner for public safety purposes.

Additionally, the Travel Management Rule exempts permitted activities. Section 212.51 states that motor vehicle use that is specifically authorized under a written authorization issued under Federal law or regulations are exempted from route and area designations. Thus, motorized use that occurs under permitted authority may be allowed on nondesignated routes or areas if it occurs under the terms of the permit. Therefore, the selection of this alternative would not prohibit motorized travel occurring under an authorized permit for the purposes of collecting firewood, livestock management, or other activities allowed by permit.

Cross-country motorized use on 13,711 acres in the current Cinder Hills OHV Area would not change.

Decision Framework

Considering the purpose and need and public comments, the deciding official will review the alternatives and the environmental consequences to make the following decisions:

- Which changes to the system of roads, trails, and areas will be necessary to implement the Travel Management Rule;
- Whether, or how much, motorized access for dispersed camping will be allowed off certain designated roads or trails; and
- Whether, and how much, motorized access for big game retrieval will be allowed off certain designated roads or trails.

The decision to prohibit motor vehicle use off the designated system of roads, trails, and areas is not discretionary.

Public Involvement

Scoping is an ongoing process used to identify important issues and determine the extent of analysis necessary for an informed decision on a proposed action. The Forest Service has gathered comments from individuals, organizations, and local, State and Federal agencies that are interested in or affected by the proposed action. Comments may pertain to the nature and scope of

the environmental, social, and economic issues, and possible alternatives related to the development of the designated motorized system and EIS.

On July 25, 2007, our notice of intent to prepare an environmental impact statement (NOI) was published in the Federal Register. The NOI, which formally initiated the scoping process, requested public comments on the original proposed action from July 25 through September 8, 2007. We sent the proposed action to potentially affected people and those that have expressed an interest in this project during the transportation analysis process. We held a series of 14 open houses to further explain the proposed action and to provide opportunities for public input. Table 2 lists the locations and dates of each open house.

Table 2. Travel Management Rule open house locations and dates

City	Location	Date(s)
Flagstaff, AZ	Coconino High School	10/14/2006
		11/04/2006
	Sinagua High School	07/31/2007
		08/04/2007
Happy Jack, AZ	Happy Jack Lodge	10/16/2006
		11/06/2006
		08/01/2007
Phoenix, AZ	Days Inn	10/17/2006
Camp Verde, AZ	Cliff Castle Casino	10/18/2006
		11/09/2006
		08/02/2007
Winslow, AZ	Winslow High School	10/19/2006
Navajo Nation	Leupp Chapter House	02/16/2007
	Cameron Chapter House	10/16/2007

Using the comments from the public and other agencies, the interdisciplinary team developed a list of issues to address in the analysis (see “Issues” section below). These issues were used to identify alternatives to the proposed action. Additionally, comments from scoping were used to create a modified proposed action, which is analyzed in this document as alternative 3.

On March 19, 2010, we published a draft environmental impact statement (DEIS) and the Federal Register published a notice of availability. This date began the 45-day comment period for public input. The DEIS included three alternatives including no action. The DEIS included information on the potential effects of each alternative to soil and water, recreation, social and economics, wildlife, air quality, economic justice, rare plants and invasive species, and cultural resources.

We received over 3,000 comments during the comment period. Many of the comments (and additional information provided after the release of the DEIS) resulted in several modifications to the alternatives and changes to the analysis of potential effects. Changes made to the alternatives based on public input are discussed in the next section.

Issues Surrounding Proposed Travel Management Changes

Issues serve to highlight effects or unintended consequences that may occur from the proposed action and alternatives, giving opportunities during the analysis to reduce adverse effects and compare trade-offs for the decisionmaker and public to understand. Issues help set the scope of the actions, alternatives, and effects to consider in our analysis (FSH 1909.15, sec. 12.4).

In an effort to reduce excessive paperwork, the Council on Environmental Quality's (CEQ) NEPA regulations direct agencies to "Determine the scope ... and the significant issues to be analyzed in depth in the EIS" (40 CFR 1501.7(a)(2) and to, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3), narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect of the human environment..." (40 CFR 1501.17(a)(3)). Issues that are not significant to the analysis and reasons regarding their categorization as not significant may be found in the project record.

Following are the significant issues for this project, which were used to develop alternatives and focus the analysis. These issues have been expanded and more clearly defined based on comments we received on the draft EIS, as well as errors we and the public discovered. More information on how comments were addressed is in appendix C.

1a. Motorized dispersed camping opportunities for some members of the public may be reduced if motorized access to camping off of open roads is limited.

This issue was addressed in the DEIS by the designation of 300-foot-wide corridors along both sides of 581 miles of designated road and along one side of 32 miles of designated road solely for the purpose of motorized access to dispersed camping. This allows motorized dispersed camping on 43,313 acres of national forest. Areas designated for motorized dispersed camping corridors were those where car camping regularly occurs, but where resource impacts are limited.

Unit of measure: Miles and acres of designated motorized dispersed camping corridors.

1b. Motorized dispersed camping corridors allow motorized use in areas that can cause impacts to water and soil resources, wildlife habitat, and cultural resources.

This issue was addressed in the DEIS by changing the amount of acres designated for motorized dispersed camping from 130,424 acres in the proposed action to 43,313 acres in the modified proposed action (alternative 3) and alternative 4 in the DEIS. This change was the result of a more targeted approach that included designation of camping corridors in areas with known or potential use rather than designation of camping corridors on all designated roads. Based on comments we received from the public and additional site-specific spatial analysis, motorized dispersed camping corridors were further modified from the DEIS to the FEIS to remove designation of motorized dispersed camping corridors in riparian areas, meadows, archeological sites, sensitive species habitat, and management areas with emphasis on nonmotorized use.

Unit of measure: Miles and acres of designated motorized dispersed camping corridors in sensitive wildlife habitat, riparian areas, inventoried roadless areas, and areas with a high density of cultural resources.

2a. Prohibiting cross-country travel and motorized travel on unauthorized roads and trails would limit OHV enthusiasts to approximately 37 miles of National Forest System motorized trails, a limited number of designated roads, and 13,711 acres in the Cinder Hills OHV Area, which could reduce motorized recreational opportunities.

This issue is addressed in the modified proposed action (alternative 3), which would designate 3,097 miles of road (including the addition of 30 miles of unauthorized road), retain the current motorized trail system of 37 miles of trail, add an additional 1.8 miles of motorized trail, and maintain cross-country motorized use in the 13,711-acre Cinder Hills OHV Area. Alternative 4 also addresses this concern and includes designation of an additional 227 miles of road and an additional 50 miles of motorized trail.

A majority of comments we received on the DEIS specifically identified restrictions on motorized recreation opportunities as a concern. Many comments also pointed to errors in the DEIS regarding the motorized trail system. Based on comments we received on this issue from the DEIS, we modified the alternatives for the FEIS in the following ways:

- We recalculated the existing Coconino National Forest motorized trail system after discovering it was miscalculated. Where motorized trails coincided with closed or open Forest roads, the DEIS only calculated these routes as roads. Based on a recalculation of these routes and field-based GPS data collection, we changed the existing motorized trail system from 24 miles to 37 miles. This correction is reflected in all alternatives in the FEIS.
- The 1.8-mile Lower Smasher Canyon Trail was added to alternative 3 based on new information from site visits to the trail after the publication of the DEIS.
- The 50-mile Challenger Trail (Peaks Loop) was added to alternative 4 in the FEIS based on comments we received on the DEIS regarding the limited amount of single-track motorized trail being considered in alternatives. Specifically, this trail was added to alternative 4 in the FEIS for consideration of a long-distance single-track motorized trail loop.

Unit of measure: Miles of designated roads and trails and acres of areas open to motorized vehicle use.

2b. Prohibiting cross-country travel and motorized travel on unauthorized roads and trails would limit access throughout the Coconino National Forest.

This issue was addressed through the development of alternative 4, which includes over 250 more miles of routes than alternative 3, specifically requested through public comments. Though alternative 4 would close approximately 3,991 miles of known roads, it would result in a system with over 81.5 percent of the Forest within ½ mile of a designated road outside of designated wilderness areas. This means that a large majority of the Forest would stay accessible from open roads.

Unit of measure: Percentage of Forest within ½ mile of designated routes outside of designated wilderness.

2c. Route designations do not allow for any large, open tracts of unroaded areas needed for large wildlife and for the protection of roadless values.

This issue was addressed by closing approximately 4,317 miles of road in alternative 3. This would triple the amount of land on the Coconino National Forest outside of designated wilderness more than 2 miles from a road. Alternative 4 also would close thousands of miles of road, resulting in more than double the amount of land outside of designated wilderness more than 2 miles from a designated road.

Unit of measure: Percentage of Forest more than 2 miles from a designated route outside of designated wilderness.

2d. Route designations would result in impacts to water and soil resources.

Alternatives 3 and 4 are both expected to reduce the extent of motorized use and thus decrease road use adjacent to water sources and decrease overall erosion and runoff to streams. Both alternatives would reduce the amount of sedimentation by an estimated 25 percent from current conditions. Alternative 3 is estimated to result in a greater degree in the reduction of erosion and sedimentation because this alternative closes more roads, including more roads next to streams.

Unit of measure: Miles of road located within 132 feet of perennial streams or other wetland areas⁵.

2e. Route designations would result in impacts to wildlife habitat.

Both alternatives 3 and 4 are expected to reduce impacts to wildlife habitat and potential disturbance to wildlife by reducing the extent of motorized use and by prohibiting off-road travel. This issue was addressed by closing approximately 4,317 miles of road and prohibiting off-road travel outside of designated areas in alternative 3. Many of these routes were not designated specifically because of their potential impacts to wildlife habitat and potential to disturb threatened, endangered, and sensitive wildlife.

Unit of measure: Acres of disturbance, degradation, or loss of wildlife habitat. These impacts are discussed specific to each species considered in the analysis.

2f. Route designations would result in user conflict.

This issue was addressed in both alternatives 3 and 4, which prohibit off-road travel outside of designated areas and specifically designate roads and trails for motorized use. Many routes located in areas designated with nonmotorized values were not designated for motorized use.

Unit of measure: Miles of roads closed adjacent to primitive areas and in semi-primitive nonmotorized areas.

⁵ One hundred thirty-two feet equals two chains distance, which is used following the Coconino forest plan, as amended for forestwide riparian and nonriparian areas standards and guidelines as a measure of necessary vegetation width needed to adequately filter sediments that may be delivered from roads into stream systems (forest plan, pp. 71 and 72). Forest Plan guidance ranges from 0.5 chains to 2 chains depending on soil erosion hazard and stream system (riparian and nonriparian). A conservative approach and maximum width was selected to adequately protect riparian and nonriparian areas and all stream types including ephemeral, intermittent and perennial stream types.

3a. Prohibiting motorized big game retrieval off of designated routes could adversely affect the ability of the Arizona Game and Fish Department to meet herd management objectives. Prohibiting motorized big game retrieval may result in difficulty retrieving larger game species, which could result in inadequate applications for permits.

This issue was addressed in alternative 4, which designates limited use of motor vehicles within 1 mile of all designated system roads for retrieval of elk prior to November 1 of each year. This issue is also addressed in the no action alternative, which includes no restrictions on cross-country travel, and as such allows motorized big game retrieval for all species.

Unit of measure: Acres open to off-road motorized use for retrieval of elk within game management units.

3b. Authorizing motorized big game retrieval off of designated routes could adversely affect water and soil resources, wildlife habitat, cultural resources, and nonmotorized recreational experiences.

We addressed this concern in alternative 3, which designates limited use of motor vehicles within 1 mile of all designated system roads for retrieval of elk only in those game management units that primarily occur on the Kaibab National Forest. The reason for this is to provide some consistency in management of motorized use for elk hunting within game management units. The Williams Ranger District of the Kaibab National Forest signed a decision in July 2010 designating limited use of motor vehicles within 1 mile of all designated system roads (except where prohibited) to retrieve a legally hunted and tagged elk during all elk hunting seasons. The Coconino National Forest shares portions of game management units 7W and 8 with the Williams Ranger District. Thus, alternative 3 includes designation of corridors for motorized big game retrieval within 1 mile of all designated system roads for retrieval of elk within these two game management units.

Based on 2009 Arizona Game and Fish hunt data and the percentage of the game management units within the Coconino National Forest, we expect that this designation would result in approximately 74 individual motor vehicle trips off designated roads within a 49,478-acre area. We believe this small number of trips would result in a negligible impact to soil and water resources, species habitat and wildlife populations, cultural resources, and opportunities for nonmotorized recreation. Therefore, we determined that detailed analysis of an alternative with no motorized big game retrieval was not necessary.

Unit of measure: Number of average off-road vehicular trips for motorized big game retrieval.

Chapter 2. Alternatives, Including the Proposed Action

Introduction

This chapter describes and compares the alternatives considered in this FEIS. It includes a description of each alternative considered. Maps of each alternative are in the separate map packet. This chapter also presents the alternatives in comparative form, defining the differences between each alternative and providing a clear basis for choice among options by the decisionmaker and the public. Some of the information used to compare the alternatives is based upon the design of the alternative and some of the information is based upon the environmental, social and economic effects of implementing each alternative. These effects are discussed in detail in chapter 3.

Development of Alternatives

The travel analysis process was used to rank Coconino National Forest roads according to their benefits and risks by resource. The rankings were used to recommend if roads should remain open or be closed. The Travel Management Rule interdisciplinary team took these recommendations and looked at them through a finer filter to come up with a road system that would make sense from a social and resource perspective and carried the refined system into the original proposed action (alternative 2). Alternative 2 was sent out to the public in the summer of 2007, and the resulting comments were used to develop two alternatives. A modified proposed action, alternative 3, replaced the original proposed action, alternative 2, when the DEIS was drafted. See table 6 for a summary comparison of the alternatives considered.

Alternatives Considered in Detail

Alternative 1 – No Action

National Environmental Policy Act (NEPA) regulations require the no action alternative to be included as a baseline for comparison to all action alternatives. This alternative proposes no change to the existing management of motorized travel on the Forest; therefore, no amendment to the Coconino forest plan to prohibit cross-country travel is included (even though it's required by the Travel Management Rule). Cross-country travel off of National Forest System roads would continue to be allowed for any purpose, including motorized big game retrieval and dispersed camping. Existing restrictions and closures to motorized travel would remain in place (see map 2, map packet).

No changes would be made to the following:

- the existing policy of allowing motorized cross-country travel on between 1,434,592 acres and 1,496,246 acres, depending on the time of year;
- the existing Forest road system;
- the existing motorized trail system; and
- management of or access to the Cinder Hills OHV Area.

The existing 5,162 miles of National Forest System road that are currently open for motorized vehicle use on the Coconino National Forest would remain open according to the current cross-

country travel policy, as would the 929 miles of known existing unauthorized roads, plus many other miles of uninventoried unauthorized roads that exist across the Forest landscape.

There are also approximately 1,393 miles of existing National Forest System roads that have been closed to public use by previous NEPA or administrative decisions, but the majority of these are still being used for motorized travel because the current policy of Forestwide cross-country travel does not enable effective enforcement. Seventy miles of roads in existing closure areas would remain closed to motorized use (this is part of the 1,393 roads discussed above). The total mileage of these known roads is 7,484 miles. Additionally, approximately 1,465,155 million acres⁶ of the Forest are currently open to cross-country travel and would remain open to this activity.

Since the Forest currently allows cross-country motorized travel for any purpose, motorized dispersed camping, motorized big game retrieval, and general motorized cross-country travel would continue. See map 2 in the map packet for a map of the no action alternative.

Table 3. Alternative 1 road mileage by National Forest System road type

National Forest System road type	Alternative 1 (no action)	
	Open	Closed*
Passenger car use	440	1
High-clearance vehicle use	7,044	69
Total miles	7,484	70

*Approximately 1,393 roads that have been closed administratively or through the NEPA process are considered open due to continued use due to lack of permanent cross-country travel restrictions. These 70 miles are in areas subject to Forest closure orders, which are regularly enforced.

Actions Common to Alternatives 3 and 4

Alternatives 3 and 4 focus on changes to the Forest’s existing transportation system. Both alternatives would prohibit motorized vehicle use off the designated system, except as shown on the motor vehicle use map. Existing restrictions and closures to motorized travel (through forest plan closure orders or administrative closure orders) would remain in place. The Cinder Hills OHV Area contains 13,711 acres that would remain open to motorized use. Both alternatives propose the following:

Changes to the Existing System (Alternatives 3 and 4)

- **Amend the forest plan to prohibit cross-country travel off the designated system of roads, trails, and areas except as identified on the motor vehicle use map**, as required by 36 CFR 261.13. This includes removing references to "off-road driving" currently in the plan to be consistent with the language and intent in 36 CFR 212.50 and 261.13. A table summarizing the proposed changes to the forest plan is in appendix A.
- **Designate 300-foot-wide corridors for the sole purpose of motorized access to dispersed camping**. These corridors would be located along both sides of 581 miles of

⁶ This includes all acres of the Coconino National Forest outside of seasonal and year-round closure orders. This figure includes acreage in the Schultz Fire emergency closure order.

designated road and along one side of 32 miles of designated road. This would result in 43,313 acres of motorized dispersed camping corridors on the Forest.

- **Designate off-road travel for the purpose of motorized big game retrieval.** Each alternative designates different areas for motorized big game retrieval, but both alternatives include the following stipulations:
 - Only one vehicle (one trip in and one trip out) would be allowed motorized big game retrieval per harvested animal.
 - Hunters would be required to use the most direct and least ground-disturbing route in and out of the area to accomplish the retrieval.
 - Motorized big game retrieval would not be allowed in existing off-road travel restricted areas, or when conditions are such that travel would cause damage to natural and/or cultural resources.
 - Motorized vehicles would not be permitted to cross riparian areas, streams, and rivers except at hardened crossings or crossings with existing culverts.
 - Designation of motorized big game retrieval for Game Management Unit 22 would be deferred to the Tonto National Forest.

Resulting System for Motorized Use (Alternatives 3 and 4)

- Neither alternative would change use in the 13,711-acre Cinder Hills OHV area, which is currently designated for off-road motorized use.
- Designated National Forest Systems roads within existing seasonal closures would be designated open to vehicular travel by time of year. Designations that identify when the road is open would be reflected on the motor vehicle use map.
- The Travel Management Rule exempts permitted activities; therefore, the selection of either action alternative would not prohibit off-road travel for the purposes of collecting firewood or other activities allowed by permit with terms that include off-road travel.

Actions Specific to Alternative 3 – Modified Proposed Action

Alternative 3 reflects several changes we made to the EIS based on public input and input from local, State, and Federal agencies on the DEIS. More information on these changes is available in the project record. Alternative 3 would include the following changes to the Coconino National Forest travel management system:

- **Close 4,317 miles of existing Forest system roads.** This includes all roads not designated for motorized use in this alternative that are not located within an area already closed to motorized use or entry. Many of these roads may already be effectively closed from lack of use or due to previous road closure efforts.

- **Add 30 miles of nonsystem roads to the Coconino National Forest transportation system⁷ to provide for motorized recreational opportunities** or access in consideration of criteria for designation of roads, trails, and areas in 36 CFR 212.55.
- **Add 1.8 miles of unauthorized motorized trail to the motorized trail system (Lower Smasher Canyon Trail).** This would result in a system with 39 miles of motorized trails.
- **Designate motorized big game retrieval corridors of 1 mile off both sides of 135 miles of designated routes within Arizona Department of Game and Fish game management units 7W and 8.** A substantial portion of these units occurs across the Coconino and Kaibab National Forests. Motor vehicle use would be allowed on approximately 49,478 acres in these areas solely for retrieving legally harvested cow and bull elk for all hunts. We estimate this to result in approximately 74 vehicle trips each year for motorized big game retrieval.

Resulting System for Motorized Use (Alternative 3)

This action would result in approximately 3,097 total miles of designated NFS roads and 39 miles of designated trails open to motorized travel on the Coconino National Forest. Designated NFS roads within existing seasonal closure areas would be seasonally designated for motor vehicle use.

- Of the 3,097 miles of designated roads; 407 miles would be designated for highway-legal vehicles only and 2,690 miles would be designated for all vehicles (including ATVs, UTVs, and motorcycles).
- A total of 39 miles of trail would be open for motorized use. Except for the 1.8-mile Lower Smasher Canyon trail, these trails have been established for motorized use through previous planning processes. These trails would be designated as follows:
 - 20.5 miles of motorized trails for single-track trail (this includes the Fort Valley motorized trail system).
 - 9.3 miles of motorized trails for less than 50-inches width trails (this includes the Munds Park motorized trail system)
 - 8.5 miles of motorized trails designated for full-size (4x4) vehicles. This includes 6.7 miles of the Casner Mountain Trail and 1.8 miles of the Lower Smasher Canyon Trail. Access to the Casner Mountain Trail is currently available by request and would continue to be managed in this manner for public safety purposes.

See table 4 and map 3 in the map packet.

⁷ See footnote 4 on page 9.

Table 4. Alternative 3 changes and designations by route type

Route type	Changes to the Coconino National Forest route system	Resulting system	
		Designated open (miles)	Not designated (miles)
Roads designated for highway legal vehicles only	Closure of 4,317 Miles	407	0*
Roads designayed for all vehicles		2,660	3,486
Unauthorized roads designated open to all vehicles	30	30	901
System motorized designated as motorized trails	No change	37	0
Nonsystem motorized trails for designation as motorized trails	2	2	87
Total miles (roads and trails)	n/a	3,136	4,474**

* No passenger use routes were closed; approximately 33 miles were designated open to all vehicles.

** Approximately 45 miles of nondesignated trails overlap with existing roads (designated or not-designated).

Actions Specific to Alternative 4

Alternative 4 would include the following changes to the Coconino National Forest travel management system:

- **Close 3,991 miles of existing Forest system roads.** This includes all roads not designated for motorized use in this alternative that are not located within an area already closed to motorized use or entry. Many of these roads may already be effectively closed from lack of use or due to previous road obliteration efforts.
- **Add 36 miles of nonsystem roads to the Forest transportation system to provide for motorized recreational opportunities** or access in consideration of criteria for designation of roads, trails, and areas in 36 CFR 212.55.
- **Add 51.8 miles of unauthorized motorized trail to the motorized trail system (Challenger Trail and Lower Smasher Canyon Trail).** This would result in a system with approximately 89 miles of motorized trails.
- **Designate motorized big game retrieval up to 1 mile off of all designated routes on the Forest.** Motorized big game retrieval would be allowed in these areas solely for retrieving legally harvested cow and bull elk for all hunts. This would allow motorized big game retrieval from approximately 3,423 miles of designated roads, which would authorize motorized big game retrieval on up to 1,496,246 acres of NFS lands in the Coconino National Forest. We estimate this to result in 2,922 vehicle trips each year for motorized big game retrieval throughout the Forest.

Resulting System for Motorized Use (Alternative 4)

This action would result in approximately 3,423 total miles of designated NFS roads and 89 miles of designated trails open to motorized travel on the Forest. Designated National Forest System roads within existing seasonal closure areas would be seasonally designated for motor vehicle use.

- Of the 3,423 miles of designated roads; 423 miles would be designated for highway-legal vehicles only and 3,000 miles would be designated for all vehicles (including ATVs, UTVs, and motorcycles).
- 89 miles of trail would be open for motorized use. This would include 37 miles of system trails currently managed for motorized use and approximately 52 miles of unauthorized nonsystem trails that would be designated for motorized use.
- 71 miles of motorized trails would be designated for single-track trail. This includes the Fort Valley motorized trail system and the Challenger Trail (also known as Peaks Loop).
- 9.3 miles of motorized trails would be designated for less than 50-inch-width trails, which includes the Munds Park motorized trail system.
- 8.5 miles of motorized trails would be designated for full-size (4x4) vehicles. This includes 6.7 miles of the Casner Mountain Trail and 1.8 miles of the lower Smasher Canyon Trail. Access to the Casner Mountain Trail is currently available by request and would continue to be managed in this manner.

See table 5 and map 4 in the map packet.

Table 5. Alternative 4 changes and designations by route type

Route type	Changes to the Coconino National Forest route system	Resulting system	
		Designated open (miles)	Not designated (miles)
Roads designated for highway-legal vehicles only	Closure of 3,991 Miles	423	0*
Roads designated for all vehicles		2,964	3,163
Unauthorized roads designated open to all vehicles	36	36	898
System motorized designated as motorized trails	No change	37	0
Nonsystem motorized trails for designation as motorized trails	52 [†]	52 [†]	37
Total miles (roads and trails)	n/a	3,512	4,098**

* No passenger use routes were closed, but 17 miles were designated as open to all vehicles.

** Approximately 18 miles of nondesignated trails overlap with designated roads or not designated roads.

[†] This includes the 50-mile Challenger Trail and the 1.8 mile Lower Smasher Canyon Trail

Alternatives Considered but Eliminated from Detailed Study

The National Environmental Policy Act requires Federal agencies 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 the designation of roads, trails, and areas for motorized travel and the prohibition of cross-country travel on the Forest, were duplicative of the alternatives considered in detail, or were determined to have components that would cause unnecessary environmental harm.

Many of the comments received focused on a particular issue or set of issues. These issues are fully addressed in the Response to Comments (Volume II of this Final Environmental Impact Statement) document. In some instances, these issues were developed into alternatives. Some of the alternatives were considered, but not analyzed in completed detail. Those alternatives eliminated from detailed study are discussed below.

Alternative 2 – Original Proposed Action

The original proposed action would have closed 3,464 miles of road, resulting in a total of 3,950 miles of National Forest System road designated for motorized use. It would have also retained the existing 37 miles of motorized trails (originally calculated as 25 miles prior to field verification) on the current system. Motorized big game retrieval off of designated routes would have been prohibited with this alternative, and motorized dispersed camping would have been designated on a 100-foot corridor on either side of all designated routes.

We eliminated this alternative and replaced it with alternative 3 after considering comments we received during the initial scoping period. The comments identified several errors, routes desired for access and recreational use, and routes desired for closure due to impacts on forest resources. To improve consistency with motorized big game retrieval policy for game management units 7W and 8 on the Kaibab National Forest, we made changes to the motorized big game retrieval corridors, including the removal of a November 1 date. Also, we changed the motorized dispersed camping corridors to include more area with existing dispersed camping use and to remove areas where motor vehicle use could cause long-term impacts to forest resources (see discussion under alternative 7 on page 24 for more detail).

Alternative 5

Alternative 5 was developed to address all specific roads and trails on the Coconino National Forest transportation system desired by the public in their scoping comments. Open National Forest System roads would have been reduced by 3,601 miles, resulting in a total of 3,813 miles of designated National Forest System roads, or 716 more miles than the modified proposed action. Ninety-nine miles of motorized trail would have been added to the current system. These were proposed to include Upper and Lower Smasher Canyon, Long Route, Challenger, and Wing Mountain OHV Area trails. Motorized big game retrieval would have been allowed off of all designated routes. Motorized dispersed camping would have been designated along the same 628 miles of corridor, as these corridors were to be the same across all action alternatives.

After consideration, we eliminated alternative 5 because it would not adequately protect forest resources as required by the Travel Management Rule. Specifically, several routes in this alternative are located in endangered, threatened, and sensitive species habitat; in riparian areas; and in areas that would result in additional impacts to cultural resources. We created alternative 4 from this alternative, incorporating roads that didn't directly conflict with the minimization criteria identified in the Travel Management Rule under 26 CFR § 212.55.

Alternative 6

Alternative 6 was developed to represent the extent of route designations that the Coconino National Forest could reasonably afford to maintain with existing and reasonably foreseeable funding for route maintenance, or the minimal system from an economic standpoint. Priorities for

route designation would have been based on the seasonal road system developed with the Arizona Game and Fish Department for hunting access during wet weather, additional routes for vital administrative access, and additional routes to key recreation sites.

Designated National Forest System roads would have been reduced by 6,812 miles, resulting in a road system totaling 602 miles. The existing 37 miles of motorized trail would have been closed and no new miles proposed. Motorized big game retrieval off of designated routes for legally harvested cow and bull elk would have been permitted for all hunts that ended by October 31. Motorized dispersed camping would have been proposed in the same locations as the designated corridors in all the other action alternatives where roads were designated.

We eliminated this alternative because it would not be sufficient for safe and efficient travel and for administration, use, and protection of NFS lands as required by 36 CFR 212.5 (2) (b) of the Travel Management Rule.

Alternative 7

Alternative 7 was developed in response to a few comments on the DEIS that requested there be no motorized travel off the designated system for dispersed camping. It would have not included any corridors for motorized dispersed camping.

The Travel Management Rule at 212.51(b) allows the responsible official to “include in the designation the limited use of motor vehicles within a specified distance of certain designated routes, solely for the purposes of dispersed camping.” This allowance is not for general “cross-country travel” but only for access to and from a campsite. The original proposed action would have designated 100-foot corridors on either side of all 3,950 miles of designated routes, for a total of 95,758 acres. Spur roads beyond the 100-foot corridor would also be designated for access beyond the 100 feet. Scoping comments on the original proposed action suggested both less and more access for motorized dispersed camping.

After considering the intent of the rule’s allowance, the original proposed action was eliminated and replaced with the modified proposed action (alternative 3), which proposes corridors along 628 miles of road up to 300 feet on both sides of designated roads. Further changes to the motorized corridors were made based on public input to the DEIS and professional judgment was used to designate additional corridors where motorized camping regularly occurs while removing corridors with known impacts to sensitive resources. This decreased the amount of motorized dispersed camping corridors from 95,758 acres in the original proposed action to 43,313 acres in the FEIS proposed action.

The 300-foot corridor in selected areas was found to be more reflective of actual use we learned about during a multi-agency working group (USDA Forest Service 2008) and would result in fewer impacts to sensitive water and soil, wildlife, and cultural resources. Alternative 4 also has the same miles of corridors. We believe this reduction of dispersed camping corridors from 81 percent of miles of designated roads and 56 percent of total acres designated as dispersed camping corridors would both meet the intent of the rule and meet national forest users’ needs for motorized dispersed camping. Due to the extensive amount of motorized dispersed camping on the Coconino National Forest, including an alternative with no motorized dispersed camping would neither meet the intent of the Rule nor meet the needs of Forest users.

Alternative 8

Alternative 8 was developed to allow for off-road motorized use for big game retrieval more than 1 mile off of designated routes and for all big game species including elk, deer, pronghorn, bighorn sheep, and bear. This alternative was established based on comments received from several forest users and the Arizona Game and Fish, who identified the 1-mile distance from roads for game retrieval as arbitrary. This alternative also addresses comments from hunters that thought it important to include game retrieval for other big game species other than elk.

The Travel Management Rule specifically requires each National Forest to determine if off-road game retrieval is authorized by designating, “limited use of motor vehicles within a specified distance of certain designated routes, and if appropriate within specified time periods...” (36 CFR 212.51 (b)). In other words, we are required to identify a distance from designated routes that may be authorized for off-road vehicle use for motorized big game retrieval. The Coconino National Forest chose 1 mile from designated routes because in alternative 3 (the most restrictive alternative), 1 mile from designated routes would include approximately 95.7 percent of the land area of the forest outside of wilderness areas. Although this leaves dozens of small polygons of land not available for off-road motorized use for game retrieval, these areas are generally not actually accessible with motor vehicle or are in areas where motor vehicle use would cause impacts to forest resources. For example, some of these areas that would not be authorized for off-road motorized big game retrieval and the reasons include:

- Mormon Lake - not feasible to have motor vehicle use in the lake.
- Bias Canyon (southwest of Munds Mountain Wilderness) - generally inaccessible to motor vehicle use due to canyon topography
- Rattlesnake Canyon - part of the Rattlesnake Quiet Area as identified in the forest plan
- Upper Lake Mary - not feasible to have motor vehicle use in the lake and motor vehicle use in the meadow adjacent to the lake would result in impacts to scenic, soil, and watershed resources.

Based on this information, consideration of authorizing big game retrieval more than 1 mile from designated routes was dismissed from further study.

Big game retrieval for others species other than elk was considered based on comments we received on the proposed action and the DEIS. Species such as pronghorn, bighorn sheep, and bear generally make up a very small amount of the issued hunt permits on the Coconino, and of these permits, even fewer result in successful hunters. Thus, in the interest of being consistent with the adjacent Kaibab National Forest (which shares portions of game management units 7W, 7E, and 8 with the Coconino National Forest), these species were not considered for off-road motorized big game retrieval for clarity and improved management effectiveness.

Big game retrieval for deer was considered based on comments from the public and Arizona Game and Fish Department, including a need to meet harvest objectives, a need to avoid spoilage of meat, and fairness. Yet, authorizing off-road motorized use for retrieval of deer would not address these issues to the same magnitude as it would for elk. For example, deer populations are not at such a level to be resulting in recorded ecological impacts, yet elk levels have been identified as resulting in a lack of new aspen growth. Additionally, spoilage of meat is not as much a problem for deer as it is for elk since deer are often light enough to carry once they have been field dressed. Lastly, fairness was often discussed as an issue where the Coconino National

Forest was seen as favoring elk species over other game animals. Based on the information above and the importance of being consistent with the adjacent Kaibab National Forest (which shares several game management units) it is clear that the authorization of off-road motorized use for game retrieval for elk and not other species is based on practical considerations. Based on this information, this alternative was eliminated from further study.

Comparison of Alternatives

This section provides a summary of the alternatives and the potential effects of implementing each alternative considered in detail. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

Table 6 compares miles of open and closed roads and trails, acres of areas designated for motor vehicle use and corridors for motorized big game retrieval and dispersed camping by alternative. Table 7 summarizes the effects as analyzed in chapter 3.

Table 6. Changes to the Coconino National Forest motorized system by alternative

Alternative 1 (no action)	Alternative 3 (modified proposed action)	Alternative 4
No changes to the existing road and trail system	Close 4,317 miles of roads.	Close 3,991 miles of roads.
	Add 30 miles of unauthorized roads to the Forest road system.	Add 36 miles of unauthorized roads to the Forest road system.
No forest plan amendment needed (continued cross-country motorized travel).	Amend the forest plan to prohibit motorized vehicle use off the designated system, except as displayed on the motor vehicle use map.	Amend the forest plan to prohibit motorized vehicle use off the designated system, except as displayed on the motor vehicle use map.
Motorized NFS trail = 37 miles	Add 1.8 miles of motorized trails.	Add 51.8 miles of motorized trails.
No changes to off-road motorized use for the purpose of motorized big game retrieval.	Designate motorized big game retrieval up to 1 mile off all NFS roads in units 7W and 8 (approximately 49,478 acres) for any legal elk harvest.	Designate motorized big game retrieval up to 1 mile off all NFS roads for any legal elk harvest in all game management units (approximately 1,496,246 acres).
No changes to off-road motorized use for the purpose of motorized dispersed camping.	Designate corridors on 581 miles of road up to 300 feet on both sides of designated roads and 32 miles of road up to 300 feet on one side of designated roads for motorized dispersed camping.	Designate corridors on 581 miles of road up to 300 feet on both sides of designated roads and 32 miles of road up to 300 feet on one side of designated roads for motorized dispersed camping.

Table 7. Summary of effects analysis by resource area

Resource area	Effects of Alternative 1	Effects of Alternative 3	Effects of Alternative 4
Recreation and access	<ul style="list-style-type: none"> • 5,162 miles of road and 37 miles of trails open as system roads and trails, and an additional 2,252 miles of road and 89 miles of unauthorized motorized trail accessible through cross-country travel. • Between 1,496,246 and 1,434,592 acres open to off-road motorized use, depending on time of year. • Over 93% of the Forest within ½ mile of a system road outside of designated wilderness. • Increasing conflict among forest users, specifically in areas designated for nonmotorized uses. 	<ul style="list-style-type: none"> • 3,097 miles of road open for motorized use, 39 miles of trail open for motorized use. • Off-road motorized use on 43,313 acres for access to dispersed camping. Off-road motorized use on 49,478 acres for motorized retrieval of big game (elk). • Over 78% of the Forest within ½ mile of a system road outside of designated wilderness. • Very low conflict among nonmotorized and motorized users. 	<ul style="list-style-type: none"> • 3,423 miles of road open for motorized use, 89 miles of trail open for motorized use. • Off-road motorized use on 43,313 acres for access to dispersed camping. Off-road motorized use on 1,465,155 acres for motorized retrieval of big game (elk). • Over 81% of the Forest within ½ mile of a system road outside of designated wilderness. • Very low conflict among nonmotorized and motorized users.
Contemporary Tribal Uses	Negligible effects	Negligible effects	Negligible effects
Heritage	Potential increase in vandalism and damage to heritage sites with current access and likely increase in miles of unauthorized roads.	Decrease in vandalism and damage to heritage sites due to decreased motor vehicle access.	Decrease in vandalism and damage to heritage sites due to decreased motor vehicle access.
Socio-economics	Motorized recreation generates between 127 and 407 jobs on the Coconino National Forest. Jobs from motorized use may grow under this alternative, but may decrease overall employment from recreational activities on the Forest.	More limited access to the Forest could eventually lead to reduced expenditures for purchasing and maintaining OHV vehicles and equipment. This may result in a loss of income for OHV-related industries. Management of motorized access could mean positive effects on nonmotorized recreation-related businesses.	More limited access to the Forest could eventually lead to reduced expenditures for purchasing and maintaining OHV vehicles and equipment. This may result in a loss of income for OHV-related industries. Management of motorized access could mean positive effects on nonmotorized recreation-related businesses.
Soil and Water	Continued and increased erosion and sedimentation, decreased soil productivity (montane meadows/wetlands/riparian areas) and water quality; 44.5 miles of roads located within 132 feet of riparian area buffer.	Improvements in montane meadows/wetlands/riparian areas and decreases in erosion and sedimentation for slight increase in water quality and soil productivity; 16.9 miles of roads located within 132 feet of riparian area buffer.	Improvements in montane meadows/wetlands/riparian areas and decreases in erosion and sedimentation for slight increase in water quality and soil productivity; 18 miles of roads located within 132 feet of riparian area buffer.

Table 7. Summary of effects analysis by resource area

Resource area	Effects of Alternative 1	Effects of Alternative 3	Effects of Alternative 4
Aquatic Resources	Continued and increased sedimentation and decline in aquatic habitat with continuance of cross-country travel and creation of new roads. Total open roads are producing an estimated 4,300 to 24,100 tons sediment per year, plus an additional unknown amount from unrestricted cross-country motorized travel.	Decreased aquatic habitat degradation and potential increase in habitat quality. Total open roads would produce an estimated 3,300 to 18,800 tons sediment per year.	Decreased aquatic habitat degradation and potential increase in habitat quality. Total open roads would produce an estimated 3,400 to 19,000 tons sediment per year.
Watershed road density	No Change	Average reduction of 58%	Average reduction of 54%
Miles of road in proximity to streams	No Change	Average reduction of 65%	Average reduction of 62%
Road crossings	No Change	Total reduction of 62%	Total reduction of 57%
Sediment delivery to streams	No Change	Average reduction of 20-22%	Average reduction of 20%
Wildlife	Continued and increased habitat degradation and fragmentation. Regular disturbance to threatened, endangered, and sensitive species.	Less habitat degradation and fragmentation. Less disturbance to individuals of several sensitive and indicator species.	Less habitat degradation and fragmentation. Potential continued disturbances to several individuals of sensitive species.
Roadless and Wilderness Values	Regular instances of motorized use in roadless areas and all potential wilderness areas. Impacts to wilderness values resulting from motorized use adjacent to designated wilderness boundaries.	No motorized use in roadless areas, except under permit. Removal of all motorized use in two potential wilderness areas. Decreased impacts to wilderness values from motorized use adjacent to designated wilderness.	Decreased, but continued motorized use in roadless area, especially in edges of roadless areas. Decreased, but continued motorized use in potential wilderness areas. Decreased impacts to wilderness values from motorized use adjacent to designated wilderness.
Botany	Vehicles would continue to travel over much of the Forest, spreading noxious and invasive weed seeds.	Decreased opportunities for vehicles to spread noxious and invasive weeds.	Decreased opportunities for vehicles to spread noxious and invasive weeds.
Air quality	No change to total levels of dust, particulates or carbon emissions. Dust and other vehicular emissions would not change.	No change to total levels of dust, particulates or carbon emissions. This alternative may concentrate dust or other emissions in areas designated for motorized use. Concentration of dust or emissions would be evident only within feet of designated routes and for reasonably short duration. There would be no discernable difference at the county or airshed level.	No change to total levels of dust, particulates or carbon emissions. This alternative may concentrate dust or other emissions in areas designated for motorized use. Concentration of dust or emissions would be evident only within feet of designated routes and for reasonably short duration. There would be no discernable difference at the county or airshed level.