

Heritage Specialist Report Draft

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The USDA Forest Service has identified unmanaged recreation, including the effects of unmanaged off-highway vehicles (OHVs), as a major threat facing the Nation's national forests and grasslands. In response, the Forest Service published final travel management regulations governing OHVs and other motor vehicles on national forests and grasslands referred to as the Travel Management Rule (TMR). Implementing the TMR requires USDA Forest Service land managers to produce an Environmental Assessment (EA) or Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA) of 1969.

This report presents the findings of analysis conducted by the Heritage Program, Santa Fe National Forest (SFNF), New Mexico for the effects on cultural resources resulting from implementing the TMR on the Santa Fe National Forest. Archaeologists have identified the intersection of sites with designated roads, trails, and dispersed camping corridors as the primary threat to cultural resources. In addition, designation of roads, routes, trails and corridors has the potential to affect traditional cultural uses on the Forest including access and practice. Included in this report are recommendations to protect and preserve SFNF cultural resources in accordance with Federal regulations in response to the SFNF five alternatives proposed for implementing the TMR.

1.0 Introduction

1.1 Purpose of Report

The intent of this report is to give the reader an idea of the effects to cultural resources resulting from designation of a system of routes, corridors and areas to meet the requirements of the Travel Management Rule. Discussed are the kinds of effects expected for each of the alternatives using Alternative 1 as representative of the existing condition and measuring the change in effects to cultural resources when compared to Alternative 1. The intent is to portray the effects programmatically and to show the change from the existing condition for each alternative. Effects were evaluated in terms of substantive issues that resulted from external and internal scoping. Effects to cultural resources were determined to have the potential to occur to cultural resource sites and Traditional Cultural Properties (TCPs-see definition below). The report evaluates direct and indirect effects from designation on both classes of cultural resources across the alternatives.

The report also discusses mitigation from a programmatic perspective but does not address site specific effects which will be addressed in other documentation associated with the compliance requirements of the National Historic Preservation Act of 1966, as amended. This report addresses effects from the perspective of environmental effects to cultural resources but does not address site specific effects from the perspective of NHPA. To comply with the requirements of NHPA involves intensive literature review and field evaluation of the direct effects of designation of routes, corridors and areas. Site specific effects will be addressed in compliance documentation completed for the inventory, evaluation and resolution of effects to cultural

resources completed to meet the requirements of Section 106 of the National Historic Preservation Act. This specialist report does not meet the requirements of Section 106. Completion of compliance requirements will follow the procedure developed in the Standard Consultation Protocol for Travel Management Route Designation (Appendix I to the First Amended Programmatic Agreement Regarding Historic Property Protection and Responsibilities dated December 24, 2003). Development of the Protocol was completed in consultation between the Advisory Council on Historic Preservation (ACHP), the State Historic Preservation Officers of Arizona, New Mexico, Oklahoma and Texas, southwestern tribal communities and the USDA Forest Service. Completion of these requirements will occur in phases that correspond to editions of the Motor Vehicle User Map (MVUM). Only routes and areas meeting the requirements of Section 106, as articulated in the Protocol, will be posted to the MVUM.

2.0 Background

2.1 Extent of Cultural Resources on the Santa Fe National Forest

The Santa Fe National Forest has approximately 10,000 cultural resources recorded in the New Mexico Cultural Resources Information System (NMCRIIS). For the analysis conducted for this project the total number of sites is 9,896 that have been documented in the NMCRIIS database located on forest lands and 48 sites are located on system roads located outside of Forest lands for a total number of 9,944 sites used in the analysis. The sites are widely distributed across the Forest with concentrations occurring in certain parts of the Forest that were suitable for occupation (Figure 2.1).

Across most of the Forest the site density is low with there being 20 or less sites per square mile. Parts of the Forest have moderate and high site density. Moderate site density varies between 20 and 40 sites per square mile and high site density is 40 or more sites per square mile. Site density also has a direct relationship to elevation. Site density tends to decline as elevation rises with the exception of the Jemez Mesas where site densities are moderate to high above 8,000 feet in certain areas. Generally site density declines precipitously above 9,000 feet.

Much of this evaluation of site density on the Forest is tied to the distribution of survey on the Forest. For this analysis the Forest used Geographic Information System (GIS) layers for cultural resource sites and cultural resource survey. Cultural resource survey includes the systematic investigation using crew members to intensively examine transect swaths that are no greater than 15 meters in width. Transect widths have varied over time and some valid survey on the Forest was conducted at transect widths greater than 15 meters but never greater than 25 meters. The GIS layer for the Forest shows that approximately 250,000 acres (247,473 acres) have been adequately surveyed for cultural resources resulting in approximately 16% of the Forest having been surveyed. Larger areas have been subject to reconnaissance but not at levels that are expected for valid survey. Survey on the Forest corresponds primarily to areas where large scale land management activities have occurred on the Forest. A large percentage of the survey occurred when the Forest conducted large timber sales. Smaller scale surveys have occurred for small projects and for research projects on the Forest.

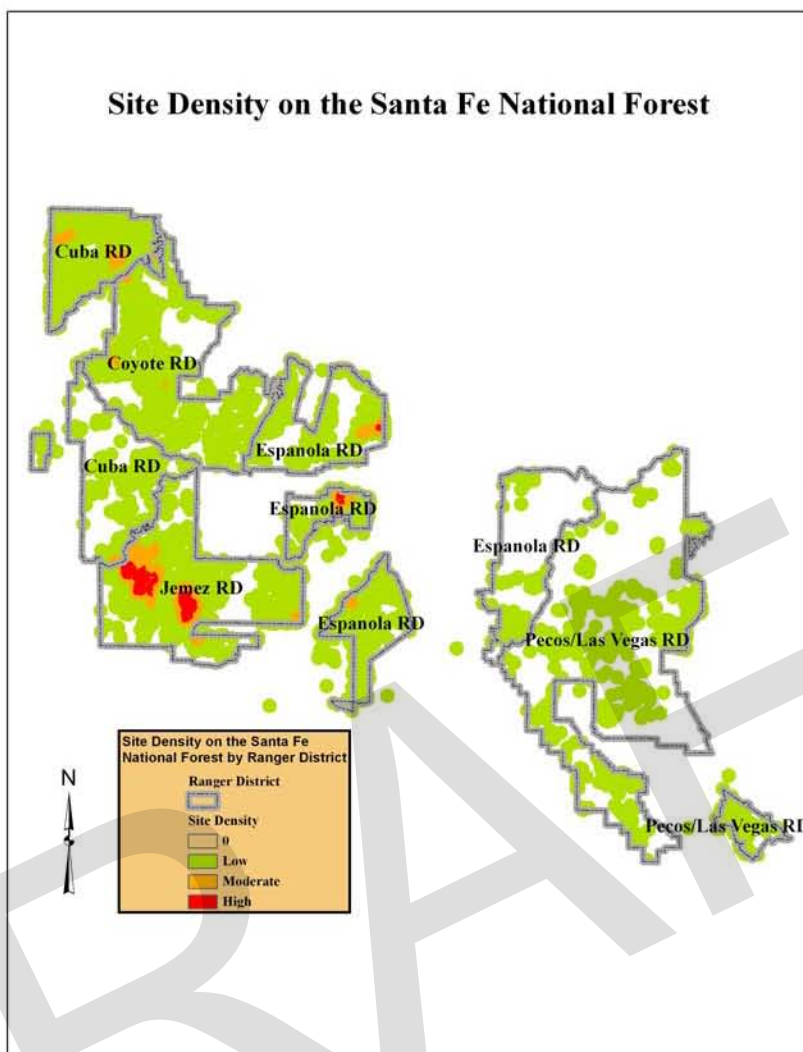


Figure 2.1: Density of cultural resource sites on the Santa Fe National Forest, in sites per square mile. Low is less than 20 sites per square mile. Moderate is 20 to 40 sites per square mile. High is greater than 40 sites per square mile.

2.2 Extent of Known and Documented Traditional Cultural Properties.

The Santa Fe National Forest recognizes the importance of the associations traditional Hispanic and Native American communities have to Forest lands. For Native Americans the Forest contains ancestral lands, significant ancestral sites, sacred areas, and resource collection areas significant to Pueblo, Navajo, Apache and Ute communities. Many of these communities are adjacent to or surrounded by Forest lands. These ties date back to “time immemorial” according to oral tradition and to the very earliest period of archaeological dating of sedentary communities along the Rio Grande; A.D. 500 for the Pueblo communities and the 15th to 16th centuries for Navajo, Apache and Ute and communities. For this report 23 known traditional cultural properties were evaluated for effects from the alternatives. Use of these properties for the analysis came about from previous work conducted with traditional communities on projects requiring consultation under the requirements of Section 106 of the National Historic Preservation Act. Documentation in the Forest overview (Scheick 1996) and other documents (Harrington 1916) shows a broad pattern of traditional use across the Forest as indicated by a

variety of features on the landscape or indigenous identification of landscape features with traditional cultural meaning.

More recent associations, but no less codified in the traditional knowledge of traditional Hispanic communities are their ties to use of Forest lands known as “common lands” or the *ejidos* of land grants. These lands provided land grant communities access to grazing land, stone resources, wood, game, other Forest products and medicinal plants. Many of these communities formed close ties reflected in the development of social and ceremonial ties to land forms for secular and religious purposes.

The Santa Fe National Forest Plan in its Management Direction specifically charts goals related to traditional uses of Forest lands by the people of Northern New Mexico. The “... enrichment of traditional cultural values...”, the “...identification, protection, and maintenance of the historical, cultural and religious sites found within the Forest...”, and “...understanding the importance of access to those sites for Native American people...” are important goals to be recognized when conducting activities on the Forest (SFNFP 1987:17).

2.3 Significance of Cultural Resources

2.3.1 Prehistoric Occupation. The Santa Fe National Forest overview divides the Forest into three major geographic subdivisions: the Española Basin, the Jemez Mountains and the Sangre de Cristo Mountains. Each of these subdivisions is divided into cultural provinces. The Española Basin includes the Española Basin, the Pajarito Plateau and the Lower Chama Valley. The Jemez Mountains includes the Gallina area, the Upper Jemez Valley and the Lower Jemez Valley. The Sangre de Cristo Mountains subdivision includes the Upper Rio Pecos Valley and the Front Range.

The cultural/historical landscape of the Forest contains the remains of human activities extending as far back as 11,000 years ago. The following presents a brief version of the prehistory and history of the subdivisions described above.

Between 9000 to 5000 B.C. Paleoindian big game hunters occupied the lands of the Santa Fe as indicated by the presence of large projectile points and limited campsites. Given the erosive and depositional character of the soils on the Santa Fe as well as the intensity of subsequent occupation one explanation for the lack of visibility of Paleoindian materials may be the obliteration or covering up of materials in the millennia since they were originally deposited.

Around 5500 BC occupation and use of the lands of the Santa Fe National Forest changed to a lifestyle associated with less reliance on large game and more of a reliance on hunting supplemented by gathering of wild plant foods including a variety of small game and plant species by Archaic populations. Sites dating to this time period are relatively more abundant than the previous period. Towards the end of this time period increasing reliance on a more sedentary lifestyle and domestication of corn, and construction of more permanent structures suggested populations were maintaining a seasonal route to access available resources including pinyon harvesting in the fall in the uplands and a return to lower elevations to spend the winter in more permanent communities.

National Forest. Population growth, settlement expansion and economic diversification occurred across New Mexico and markedly affected settlement.

Mexican independence from Spain in 1821 meant Mexico would not have the resources available to manage its far northern communities. Withdrawal of support by the Mexican government led to self-government for communities leading to a loss of the recognition of the special status of Native American communities under Spanish rule. This meant non-native settlement of lands resulted in the expansion of Hispanic communities on to tribal land and further loss of land base for those communities as well as expansion on to lands that were to become the Santa Fe National Forest. The process of granting lands increased and led to growth of Hispanic communities. In addition to the Camino Real the establishment of trade with the United States to the east via the Santa Fe Trail and to the west via the Old Spanish Trail led to further commercial expansion into New Mexico.

Conflicts over trade and contacts as the area continued to expand led to conflict between the United States and Mexico. The ensuing conflict ended in 1846 with the signing of the Treaty of Guadalupe Hidalgo in which the territory of New Mexico became part of the United States. Population growth and expansion on to Forest lands associated with growth and settlement led to intensification of use of lands later to become the Forest. In 1862 the Homesteading Act also resulted in assignment of lands to people, in many cases on lands that were formerly considered to be grant lands. Population growth at the beginning of the 20th century resulted in continuing expansion on to Forest lands. In 1912 New Mexico entered the United States as the 47th state.

Creation of the Santa Fe National Forest from the Pecos River Forest Reserve (1892) and the Jemez Forest Reserve (1905) in 1915 encompassed much of the common lands formerly held by land grants leading to conflicts between land grant communities and Forest users. Until extractive activities for timber resources began use of the Forest continued as it had since initial expansion onto Forest lands. Commercialization of Forest resources, primarily timber, led to expansion of commercial enterprises on the Forest. Although not yet Forest lands, the Jemez Mesas encompassed by the Cañon de San Diego land grant were actively logged using railroad logging and then truck logging to remove materials. The lands of the grant were eventually deeded to the Santa Fe National Forest in 1965 after logging ended.

Other historic activities that occurred on the Forest included mining, most notably in the Bland Mining District on the Jemez and in the Pecos River Canyon at the Terrero Mine. The Forest has an active range management program that includes grazing and construction of the infrastructure associated with the grazing including pipelines, drinkers, tanks and fences. The Forest Service also contributed to the historic record by construction of Forest Service administrative sites at field locations throughout the Forest including District offices, lookouts, permitting of recreation residences built by private parties, work stations, recreation sites and contact stations. Much of the built environment disappeared as locations fell into disuse before historic preservation laws were passed.

The transportation system on the Forest which forms access for much of the motorized activity resulted from construction of timber sale roads and subsequent use by the public once sales were complete. Many of these roads follow older alignments of wagon roads, trails and access ways developed by much earlier populations of Native Americans and Hispanics. In addition, the

transportation system provided access to Forest lands for cross-country travel, dispersed camping and hunting.

2.3.3 Ethnographic Context. Few forests have the ethnographic diversity found on the Santa Fe National Forest. Ethnographic use on the Forest is of a concern from a cultural resource perspective because the Forest has to consider the effects of its activities on traditional cultural properties and traditional cultural practices. Native American people have used and occupied the lands of the Santa Fe National Forest for millennia and in their eyes since “time immemorial.” Many of the archaeological sites, especially the large Classic Period pueblos, were the homes of modern day Pueblo people’s ancestors. The modern Pueblo communities include the Towa speakers of the Pueblo of Jemez living in the modern village of Walatowa, the Keres speakers of the modern day villages of Zia, Santo Domingo and Cochiti, the Tewa speakers of the six villages in the Española Basin including Tesuque, Pojoaque, Nambe, San Ildefonso, Santa Clara and Ohkay Owinge (San Juan), and the Tiwa speaking pueblos of Picuris and Taos. Members of each of these communities have experience with traditional cultural practice on lands associated with the Santa Fe National Forest. In addition non-Pueblo Native American communities include the Jicarilla Apache, the Navajo, the Ute Mountain Ute, the Southern Ute, and the Apache, Kiowa and Comanche tribes. As with the Pueblos, each of these tribes has ancestral ties to certain sites and areas on the Forest. The Pueblos have the strongest connection by virtue of proximity and ties to the abundance of archaeological resources. Sites associated with the other groups tend to be lower in number because their entry into the area was later and they did not supplant the existing ancestral Pueblo populations that were in the area. In addition, the Pueblo life-way is heavily tied to the landscape, and incorporates the land and landforms into their cosmological understanding of the order of the world. Pueblo life is reliant on ties between sacred locations marked by trails and shrines as well as other markers. They mark the landscape with prayer and ceremony and incorporate it into their daily lives. Other groups passing through the area may have trails and shrines but the association with their larger life-way does not match that of the Pueblos. Many places on Forest lands still retain a sense of importance and function for Pueblo communities. Access and use of these places is essential for the continuation of Pueblo life.

In addition to the Native American communities the Hispanic communities adjacent to and surrounded by the Forest have strong ties to the land primarily as a resource base. Lands that were once on land grants still provide fire wood and other plant resources for those communities. The ancestors of these communities lived by extracting timber, game, and subsistence and medicinal resources from Forest lands.

In sum the Santa Fe National Forest “...embraces and, in turn, is surrounded by lands within the traditional use areas of many of the Native American and Hispanic communities of northern New Mexico (Levine 1996:349).”

2.3.4 Issues of Significance under the National Historic Preservation Act. The passage of the National Historic Preservation Act (NHPA) in 1966 signaled the intent of the Federal government to account for its effects on cultural resources. Although implementing regulations were not enacted until 1974 (36 CFR 800-Procedures for the Protection of Historic and Cultural Properties) the Forest Service in the Southwest Region had a staff archaeologist as early as 1966. With the implementation of 36 CFR 800 the Southwest Region in the 1970s developed the basic

framework of cultural resource management that is in place today. The implementing regulations established a process for Federal agencies to follow to meet the requirements of NHPA. This process, more than anything else to date, resulted in the development of cultural resource management programs on southwestern forests.

To manage effects to cultural resources the Forest relies on the guidance provided by the National Historic Preservation Act. Section 106 of the act "...requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings (36 CFR 800.1.a)." Historic properties include "...any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior (36 CFR 800.16(1)(1))." Historic properties can include cultural resource sites and traditional cultural properties. Federal agencies determine the significance of cultural resources on a national scale by determining their eligibility for the National Register of Historic Places. Being eligible for the National Register means that a property has acquired significance in light of its contribution to the past, and meets one of the criteria of eligibility for the National Register. Criteria of eligibility refer to

"...the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

whether a property was associated with an important person, associated with an important event, representative of a style important in the Nation's past (Parker and King 1998:2)."

This guidance forms the basis for determinations made by the Forest regarding site management and preservation. As a result cultural resource sites that meet the definitions described above merit consideration when evaluating effects from activities associated with the alternatives.

2.4 Definition of Cultural Resources

Cultural resources on the Forest include archaeological sites, in-use historic structures, Traditional Cultural Properties (TCP), historic roads and sites, and areas of traditional use by extant populations predominantly of Native American and Hispanic origin.

2.4.1 Cultural resource sites. On the Santa Fe National Forest an archaeological site is defined as...

"...A location of purposeful prehistoric or historic human activity. An activity is considered to have been purposeful if it resulted in a deposit of cultural materials beyond the level of one or a few accidentally lost artifacts.

Locations of human activity not classifiable as sites by this definition should be considered isolated finds.

A cultural resource qualifying as a site under this definition should exhibit at least one of the following:

- a. One or more features.*
- b. One formal tool if associated with other cultural materials, or more than one formal tool.*
- c. An occurrence of cultural material (such as pottery sherds, chipped stone, or historic items) that contains one of the following:*
 - 1. Three or more types of artifacts or raw material.*
 - 2. Two types of artifacts or material in a density of at least ten items per 100 square meters.*
 - 3. A single type of artifact or material in a density of at least 25 items per 100 square meters.*

These criteria may be modified, where appropriate, based on a professional cultural resource specialist's judgment.

The boundary of a cultural resource site shall minimally include:

- a. All features, formal tools, and identifiable activity areas.*
- b. All areas of artifactual debris exhibiting a density of ten or more cultural items per 100 square meters (2003:R3-FSH 2309.24:3-4)."*

Not explicitly cited in this definition although implied are historic in-use historic structures which were included in the analysis and meet the definition of a cultural resource site as an existing feature.

The Forest uses the definition of historic property in the National Historic Preservation Act to aid in determining the age and significance of cultural resources on the Forest:

*"**Historic property**" or "**historic resource**" means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register, including artifacts, records, and material remains related to such a property or resource (NHPA-Title III-Section 301).*

Included in or eligible for the National Register means:

To be considered eligible, a property must meet the National Register Criteria for Evaluation. This involves examining the property's age, integrity, and significance.

- *Age and Integrity. Is the property old enough to be considered historic (generally at least 50 years old) and does it still look much the way it did in the past?*
- *Significance. Is the property associated with events, activities, or developments that were important in the past? With the lives of people who were important in the past? With significant architectural history, landscape history, or engineering achievements? Does it have the potential to yield information through archaeological investigation about our past (National Register of Historic Places Fundamentals-http://www.nps.gov/nr/national_register_fundamentals.htm#start).*

2.4.2 Traditional Cultural Properties. Traditional uses on the Forest are represented by the physical remains resulting from these activities or the associations traditional communities have with significant places on the landscape. The Forest documents these places using a property type developed for the National Register of Historic Places.

A traditional cultural property "... can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. (Parker and King 1998:1)."

Being eligible for the National Register of Historic Places is the way Federal agencies evaluate the significance of cultural resources on a national scale. Commonly traditional cultural properties are places that are culturally significant to living communities. Although many are Native American the definition extends to communities with historic ties to their landscapes such as Hispanic community ties to common lands associated with land grants.

2.5 Prohibition on Disclosure of Cultural Resources Locations

The locations of individual cultural resource sites and traditional cultural properties are not shown or described in detail in this report, as this location information is prohibited from release to the public under 36CFR 296.18a and EO 13007 Section 1(a)(2).

3.0 Analysis Methods

The scoping process for this project identified two issues germane to cultural resources. These are the potential for impacts to cultural resource sites, and the potential for impacts to Traditional Cultural Properties.

3.1 Issue 1: Impacts to Cultural Resource Sites.

3.1.1 Issue. Travel and travel related activities within routes, corridors, and areas have the potential to impact cultural resource sites. This issue was identified during scoping both from public and internal scoping. Impacts can be divided into several classes:

- vehicular impacts within routes;
- vehicular impacts within motorized dispersed camping corridors;
- indirect impacts within motorized dispersed camping corridors, including surface and subsurface disturbance, vandalism, and looting;
- vehicular impacts within motorized big game corridors; and
- vehicular impacts within areas.

Vehicular travel has the potential to impact cultural resource sites. Rubber-tired vehicles such as automobiles, light trucks, motorcycles and ATVs are all of a sufficient weight to damage or displace artifacts on the surface of sites, and damage surficial architectural elements and other features. Vehicular travel can also remove vegetation from a site surface, accelerating sheet-wash erosion and initiating channel erosion. Vehicles can displace surface sediments and damage subsurface archaeological deposits when sediments are soft or wet (rutting), and in other instances contribute to surface compaction.

The potential for impacts to cultural resource sites from the use of existing routes, or the designation of existing routes, will not be analyzed in this document. It has been programmatically determined that there are no substantial impacts to cultural resource sites from the designation of existing system routes (First Amended Programmatic Agreement, Appendix I.II.A). The qualities of significance, specifically those that make sites eligible for the National Register of Historic Places have already been compromised by previous route construction and maintenance (Figure 3.1). This is particularly true if the route was constructed and has been maintained using heavy equipment, such as bulldozers and road graders over a period of years. Almost all of the existing routes on the Forest were constructed prior to the enactment of NHPA in 1966, and the impact of their construction on cultural resources was not evaluated at that time. Road and trail construction activities using heavy equipment can both displace and destroy surficial and subsurface archaeological deposits, including architectural features. Existing routes have also experienced significant surface disruption (either rutting or compaction, or both) due to ongoing vehicular, and function as active water erosion channels. In many cases, the full extent of potential damage that sites located along these routes can suffer has already occurred, and no further damage to the sites will occur from the continued use of the route (Bremer 2005).



Figure 3.1: Rubble from a collapsed ancestral Pueblo field house, damaged by past road construction and use, Jemez District. All archaeological deposits within the road have already been displaced or destroyed by past road construction and use. Photograph by Scott Bierly, 2009.

The potential for impacts to sites from the designation of routes that are not existing routes has been considered for Alternatives 2 through 5 and there will be no adverse effect. Any potential impacts to sites that are identified as part of the NHPA inventory process will be mitigated (see section 6.1.1 below). As a consequence, there will be no differences in potential impacts between those alternatives. The potential for impacts will only be discussed for the existing condition (Alternative 1, no action alternative). These routes are primarily trails for vehicles less than 50 inches in width. At sites within these routes, substantial surficial and subsurface materials may be present and in-situ, and have the potential to be damaged by designated routes that have not previously seen vehicle traffic, or will have continuing traffic from previous unauthorized use. Mitigations will be implemented to prevent any identified substantial impacts.

The potential for direct and indirect impacts to sites from the designation of motorized dispersed camping corridors and areas has been considered for Alternatives 2 through 5 and there will be no adverse effect. Any potential impacts to sites that are identified as part of the NHPA inventory process will be mitigated (see section 6.1.1 below). As a consequence, there will be no differences in potential impacts between those alternatives. The potential for impacts will only be discussed for the existing condition (Alternative 1, no action alternative). Without mitigations, vehicular damage in corridors and areas is anticipated to be greater than for routes, because areas not previously experiencing vehicle travel may be traversed, resulting in impacts from rutting, compaction, and the acceleration of erosion from the removal of surface vegetation. However, the potential for any individual trip by a vehicle through a site in a motorized dispersed

camping corridor or designated area is somewhat lower in most cases than for a site located within a route. The potential for damage from vehicular travel is greater in existing and designated motorized dispersed camping corridors, in designated areas, and in some portions of existing areas that are experiencing substantial cross-country travel. As a consequence, mitigations will be implemented to prevent any substantial impacts.

Dispersed camping activities within existing and designated corridors also have the potential to have indirect impacts on cultural resource sites. Dispersed camping can cause accidental and intentional surficial and subsurface damage to cultural resource sites. Vehicular and foot traffic associated with the use of a camping area can remove vegetation, accelerating erosion. Subsurface archaeological deposits can be disturbed by the leveling of campsites for tents and recreational vehicles, and by the excavation of fire pits and latrines. Architectural stone from rubble mounds and building foundations may be collected for the construction of fire rings (Figure 3.2), and wooden architectural elements from standing or collapsed structures may be scavenged for firewood. Campers also may collect artifacts from the surface of sites, particularly those that are visually interesting or have market value, such as pottery sherds, stone arrowheads and spear points, and historic bottles. Some campers may also be inspired to loot sites by digging for artifacts, or may vandalize standing structures or features through arson or the application of graffiti (Figure 3.3).



Figure 3.2: Fire ring in a dispersed camping area constructed from the foundation stones of an early twentieth century cabin, Pecos/Las Vegas District. (Foundation is visible in shadows behind the fire ring.) Photograph by Jeremy Kulisheck, 2006.



Figure 3.3: Early twentieth century Forest Service administrative building near a dispersed camping area, painted with graffiti, Española District. Photograph by Anne Baldwin, 2008.

The potential for impacts to sites from the designation of motorized big game retrieval corridors has been considered for Alternatives 2 through 5 and there will be no adverse effect. This is because motorized big game retrieval has no substantial impact on cultural resource sites. The greatest extent of potential impacts from big game retrieval is limited to the number of permits issued for big game on units located on Forest lands, which average 438 per year (see Social and Economic Analysis Specialist Report). Motorized big game retrieval consists of a single or multiple cross-country trips to retrieve an animal or sectioned quarters of an animal. Not all permits issued result in a cross-country trip to retrieve an animal, because not all permits result in successful hunts (and thus there is no animal to retrieve), and because some animals can be retrieved without a vehicle. This activity is similar in its spatial extent and impact to district- or area-wide personal use fuelwood collection. Personal use fuelwood collection often requires one or more cross-country trips to retrieve green or dead and down fuelwood. In 2007 (the last year for which data is available) the Santa Fe National Forest issued 18,489 district- or area-wide permits for the collection of dead and down or live green fuelwood. For the period 2003 to 2007, the forest issued an average of 16,602 district- or area-wide fuelwood permits per year. (Source: Santa Fe National Forest Forestry Program Manager). It has been programmatically determined that there are no substantial impacts to cultural resource sites from personal-use district- or area-wide fuelwood collection (Region 3 Programmatic Agreement Appendix A.II.P). Because motorized big game retrieval is similar in impact, and is much less in yearly occurrence, than district- or area-wide fuelwood permits, it is reasonable to assume that there will be no substantial impact to heritage resource sites from motorized big game retrieval. As a consequence, there will be no differences in potential impacts between alternatives. Motorized

big game retrieval is considered to an undertaking that does not have the potential to affect cultural resources (Amended PA-Appendix A-Sections IIA, O, P and Q).

3.1.2 Measures: 1) number of cultural resource sites within surveyed portions of the forest that intersect unauthorized existing routes, motorized dispersed camping corridors, and areas; and 2) acreage of cultural resource sites within surveyed portions of the forest that fall within unauthorized existing routes, motorized dispersed camping corridors, and areas. Numbers and acreage of sites are measured for the existing condition (Alternative 1, no action alternative) only.

3.1.3 Rationale: Potential impacts to cultural resource sites from routes, corridors, and areas under the action alternatives (Alternatives 2, 3, 4, and 5), has been considered and there are no substantive effects, given mitigations that will be implemented through the NHPA process. The existing condition is analyzed to determine if there are current substantial impacts to cultural resource sites from motorized travel on the forest, and whether there will be an amelioration of those impacts from the selection of one of the action alternatives. Potential impacts to cultural resource sites from from existing routes in the existing condition has been considered and there be no adverse effect, because the signatories to the Protocol for Travel Management Route Designation agreed that some of level of disturbance through continued motor vehicle use on existing routes was acceptable in situations where the integrity of sites within constructed routes has already been compromised (Amended PA-Appendix I-Section IIA). Potential impacts from motorized big game retrieval in the existing condition has been considered and there will be no adverse effects, because motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to traditional cultural properties (see section 3.1.1 above). The specific rationales for the measures used for analyzing the potential impacts of the existing condition are listed below.

The use of individual cultural resource sites as units of potential impacts is a reflection that they represent unique spatial packages of physical features and/or remains with cultural, historic, and/or scientific significance. Damage to any portion of that site can be understood as diminishing the cultural, historic, and/or scientific importance of that site. Site area in acres is used as an additional measure because sites vary widely in their spatial extent, and larger sites generally have greater potential for impacts from vehicular travel and indirect impacts, because they have more area available to be driven or camped upon. At the same time, different types of vehicular activity have larger or smaller potential impact areas; the potential impact area of a route is much smaller than a corridor or area, for example, relative to its volume of vehicular travel.

Only cultural resource sites documented during cultural resource survey in those portions of the existing unauthorized routes, motorized dispersed camping corridors, and areas were used for analysis. There are undoubtedly additional cultural resource sites located in the unsurveyed portions of the unauthorized existing routes, motorized dispersed camping corridors, and areas. However, because their numbers and sizes are not known, they cannot be included in this analysis.

3.1.4 Limitations: The measures listed above for assessing the potential impacts of the existing condition (Alternative 1, no action alternative) have several potential limitations. First, the data for evaluating impacts to sites from unauthorized routes, motorized dispersed camping corridors, and areas is based on previous cultural resource survey and represents only a sample of the existing corridors and areas. Because the existing unauthorized routes, motorized dispersed camping corridors, and areas encompass a significant portion of the forest, inventory required to meet NHPA requirements may not be completed during the first round of designation requiring additional phases of survey. Despite this lack of complete survey, the surveys that have been conducted previously are representative of the potential distribution of sites and site types across existing unauthorized routes, motorized dispersed camping corridors, and areas, and are consistent between alternatives. As a consequence, the existing dataset is sufficient to generate an evaluation of existing impacts on a programmatic level.

Second, while the activities described above have the potential to impact cultural resource sites, not all sites within the existing unauthorized routes, motorized dispersed camping corridors, and areas have sustained damage. The actual numbers of sites that have sustained damage from these activities and the level of damage at any particular site have not been calculated from existing data. Actual numbers of sites affected by motorized activity will be evaluated during the NHPA inventory process.

3. 2 Issue 2: Impacts to Traditional Cultural Properties; Restriction of Access to Traditional Cultural Properties.

3.2.1 Issue. Designation of routes, corridors, and areas has the potential to impact traditional cultural properties. Traditional cultural properties can be physically damaged by vehicular traffic within routes, corridors, and areas, and from the potential indirect impacts of motorized dispersed camping. Designation has the potential to limit access to and use of traditional cultural properties on the forest by contemporary users. Designation also has the potential to facilitate access to traditional cultural properties by non-users, and allow for the disruption of use by contemporary users. This issue was identified by internal scoping.

The potential for physical impacts to traditional cultural properties from the use of existing routes, or the designation of existing routes, has been considered and will have no adverse effect for Alternatives 2 through 5. It has been programmatically determined that there are no substantial impacts to traditional cultural properties from the designation of existing system routes (First Amended Programmatic Agreement, Appendix I.II.A). Consideration of the potential for impacts to traditional cultural properties from vehicular traffic within designated routes that are not existing routes, within motorized dispersed camping corridors, and within areas; and the potential and indirect impacts to sites from the designation of motorized dispersed camping corridors has been considered and will have no adverse effect under Alternatives 2 through 5. Any potential impacts to traditional cultural properties that are identified as part of the NHPA inventory process will be mitigated (see section 6.2.1 below). The potential for impacts will only be discussed for the existing condition (Alternative 1, no action alternative). Consideration of the potential for impacts to traditional cultural properties from vehicular traffic in motorized big game retrieval corridors has been considered and will have no adverse effect. Motorized big game retrieval is similar to other activities, such as the district- or area-wide

personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to traditional cultural properties (see section 3.1.1 above).

Where traditional cultural properties have physical features, or derive their significance from natural features or aspects of the natural environment, these elements of the traditional cultural property can be damaged by the same disturbance sources that are described for vehicular travel, dispersed camping, and vandalism in Issue 1. The nature of damage is expected to be the same as that for cultural resource sites. These impacts apply to traditional cultural properties that lie within existing or designated routes, corridors and areas. Mitigations will be implemented to prevent any identified substantial impacts.

The potential for the designation of routes to limit the access to traditional cultural properties has been considered and will have no adverse effect for Alternatives 2 through 5. Where there is the potential for access to be limited, special use permits or other authorizations will be granted to the users of traditional cultural properties as a mitigation to facilitate access (see 6.2.1.2 below). Designation of routes has the potential to limit access to traditional cultural properties where existing routes not designated under the alternatives are used to access traditional cultural properties. For several of the known and documented properties on the forest, a portion of the contemporary users are elderly or otherwise mobility-impaired. These users require a vehicle to access the immediate area of the traditional cultural property, so that only a short walk to the property is required. Participation by these members in the use of these properties is central to their importance to associated communities, and their value and importance to the community is impaired if the participation of these individuals is precluded by a lack of access. In a few cases, the lack of designated routes may limit access even by able-bodied users, if the distance required to access the property by non-motorized means is extensive. Any restrictions on access by designation will be mitigated through the issuance of special use permits or other authorizations.

The potential for use disruption to traditional cultural properties from the use of existing routes, or the designation of existing routes for Alternatives 2 through 5 has been considered and will have no adverse effect. It has been programmatically determined that there are no substantial impacts to traditional cultural properties from the designation of existing system routes (First Amended Programmatic Agreement, Appendix I.II.A). The potential for use disruption to traditional cultural properties from designated routes that are not existing routes, within motorized dispersed camping corridors, and within areas; and the potential and indirect impacts to sites from the designation of motorized dispersed camping corridors has been considered for Alternatives 2 through 5 and will have no adverse effect. Any potential impacts to traditional cultural properties from use disruption that are identified as part of the NHPA inventory process will be mitigated (see section 6.2.1 below). The potential for impacts will only be discussed for the existing condition (Alternative 1, no action alternative). The potential for use disruption to traditional cultural properties from vehicular traffic in motorized big game retrieval corridors has been considered for Alternatives 2 through 5 and will have no adverse effect. Motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to traditional cultural properties (see section 3.1.1 above).

Use of traditional cultural properties can be impaired by the disruption of use by non-users. Use may potentially be disrupted when a route, corridor or area provides access to a non-user, or

facilitates ease of access by a non-user to a property that is in proximity to a route, corridor, or area. At all known and documented traditional cultural properties on the forest, when activities are conducted at the property by community groups, participation is limited to group members. The presence of non-members has a high potential of disrupting use, thus impairing the value and importance of the property to the associated community. At a few properties, usage is also by individual community members. Some of these uses are compatible with and not disrupted by the presence of non-users, while others are not. Mitigations will be implemented to prevent any identified substantial impacts.

3.2.2 Measure: Number of known and documented traditional cultural properties within existing unauthorized routes, motorized dispersed camping corridors, and areas. Number of known and documented traditional cultural properties located in proximity to existing unauthorized routes, motorized dispersed camping corridors, and areas, where proximity could disrupt use of traditional cultural properties. Qualitative case-by-case assessment of each property for the potential impacts described above. Numbers of properties are measured for the existing condition (Alternative 1, no action alternative) only.

3.2.3 Rationale: The potential impacts to traditional cultural properties from routes, corridors, and areas under the action alternatives (Alternatives 2, 3, 4, and 5) have been considered and there will be no adverse effect because there are no substantive effects, given mitigations that will be put in place through the NHPA process. The existing condition (Alternative 1, no action alternative) is analyzed to determine if there are current substantial impacts to traditional cultural properties from vehicular impacts and disruption of use, and whether there will be an amelioration of those impacts from the selection of one of the action alternatives. Analysis of potential restriction of access under the existing condition determined that there was no difference in effects between it and the action alternatives in that they will not ameliorate substantial restrictions of access as they exist under the existing condition (Alternative 1, no action alternative). This is because the action alternatives only stipulate the designation of existing system and unauthorized routes. The action alternatives do not contemplate the construction of new routes. At traditional cultural properties where access is restricted in the existing condition (two properties), the restriction of access is due to a lack of existing system or unauthorized routes that are proximate to the properties. This condition will not change under the action alternatives.

The idiosyncratic nature of traditional cultural properties defies consistent measures for any particular potential impact. The presence of human-constructed and natural features and their importance vary from property to property. For some properties, the presence of non-users can disrupt use, while at others, the presence of non-users is irrelevant to use. Likewise, for some properties, ease of access is an issue, while other properties are currently unused but are still considered important to community viability. This variability requires a case-by-case assessment of individual properties.

3.2.4 Limitations: It is almost certain that the known and documented traditional cultural properties located within existing unauthorized routes, motorized dispersed camping corridors, and areas, and within proximity for access to existing unauthorized routes, motorized dispersed camping corridors, and areas do not constitute the totality of traditional cultural properties present. There are additional potential properties known from historical and ethnological

literature in and within proximity to existing unauthorized routes, motorized dispersed camping corridors, and areas. However, confirmation of their use by and importance to contemporary communities (and thus, their status as a traditional cultural property) is required through interviews and other ethnographic inquiries. In some cases, additional properties might be identified during the site-specific inventory process. However, many other properties may remain unidentified. In some cases, particularly among Native American communities, secrecy surrounding the use of a property may discourage community members from identifying its location, use, and importance, even when queried. In other instances, communities may not realize that their traditional cultural properties warrant consideration for protection under federal laws, and may not respond to outreach for their identification. In many cases, identification may only take place following designation if damage occurs to a property, if users discover that their access to the property is now more difficult, or if conflicts arise between users and non-users.

While known and documented properties may constitute only a small proportion of the traditional cultural properties that fall within, or have access to, existing unauthorized routes, motorized dispersed camping corridors, and areas, they are likely representative of the kinds of potential impacts to these properties overall. While the individual properties vary considerably, the number of user communities are limited (to local Pueblo and Hispanic communities, and in some instances, more distant Native American communities), and impact themes are likely to be similar in kind if not in particulars.

4.0 Analysis Area

4.1 Direct and Indirect Effects

The analysis area for direct and indirect effects for cultural resource sites (excluding traditional cultural properties) under the existing condition (Alternative 1, no action alternative) includes all unauthorized routes, motorized dispersed camping, corridors, and areas on the Santa Fe National Forest. Because cultural resource sites are for the most part fixed in their location under NHPA, there is no need to assess effects to cultural resource sites that are located outside of the corridors and areas.

The analysis area for traditional cultural properties under the existing condition (Alternative 1, no action alternative) includes both those traditional cultural properties that lie within unauthorized routes, motorized dispersed camping corridors, and areas, and those where ease of access by users is facilitated by proximity to corridors and areas are included in the analysis. This is because ease of access proximity for users is defined separately for each property, and can be quantified. The area of increased ease of access by non-users facilitated by corridors and areas is only included where there is documentation regarding the potential for effects from disruption by proximity. All traditional cultural properties that lie within the forest boundary and meet these definitions are included. Traditional cultural properties that lie on in-holdings administered by other jurisdictions (state, tribal, private) within the forest boundary, but do not meet these definitions, are excluded. Traditional cultural properties that lie outside of the forest boundary, but where ease of access or potential for the disruption of use is facilitated by unauthorized routes, motorized dispersed camping corridors, or areas on adjacent forest lands, are included.

The temporal bounds for the direct and indirect effects are from the publication of the motor vehicle use map, anticipated in 2010, through 2025, for the existing condition only (Alternative 1, no action alternative). The change in effects to cultural resources will begin with the publication of the motor vehicle use map and subsequent restrictions on motorized travel, and 2025 is the next most likely time the Forest would reassess its overall management of its transportation system (as opposed to annual updates).

There is no need to evaluate indirect effects to cultural resources located along non-forest routes that contribute traffic to the forest route system. This is because it is assumed that the designation of routes within the forest will not result in any substantial changes to traffic volumes on routes managed by other jurisdictions. There are no existing routes not designated in any of the alternatives that currently contribute substantial traffic to the forest. As a consequence, there will be no substantial redirection of traffic to other designated routes, and by extension, no substantial change in traffic volume on non-forest routes that connect to those designated forest routes. It is also assumed that the designation of corridors and areas will not cause a substantial change in traffic volume on designated routes at the points where these routes connect with routes managed by other jurisdictions (see Engineering Specialist report).

4.2 Cumulative Effects

The analysis area for cumulative effects remains the same for cultural resource sites and traditional cultural properties. Only those past, current or foreseeable future undertakings that overlap with corridors and areas in the existing condition (Alternative 1, no action alternative) are included in the analysis of cumulative effects. Undertakings outside of this analysis area that have the potential to inhibit access to traditional cultural properties by users are also considered here. There are some undertakings such as the designation of public fuelwood cutting areas that could increase ease of access to cultural resource sites and traditional cultural properties outside of their geographical boundaries. These undertakings are excluded from analysis, however, because the area of potential effect where ease of access would be facilitated has not been established. The standard time range established by the Forest for assessing cumulative effects, 1987 to 2025, is used here (Cumulative Effects Analysis Guidelines 2009).

5.0 Affected Environment

5.1 Issue 1: Impacts to Cultural Resource Sites.

The potential for impacts to cultural resource sites in the existing condition are separated into categories for unauthorized routes, motorized dispersed camping corridor direct and indirect impacts, and potential impacts from vehicular traffic in areas (Table 5.1). The potential for impacts is measured for the existing condition (Alternative 1, no action alternative) only.

Table 5.1 Potential for Impacts to Sites within Unauthorized Routes, Motorized Dispersed Camping Corridors, and Areas - Existing Condition

Measure :# sites (acres sites)	Existing condition
potential vehicular impacts within existing unauthorized routes	147 (<4)
potential vehicular impacts within MDC corridors – potential indirect impacts	439

within MDC corridors	(541)
potential vehicular impacts within areas	4459 (7995)

The numbers of cultural resource sites were derived by intersecting GIS data for existing unauthorized routes, motorized dispersed camping corridors, and areas with known site boundaries. For sites that are less than 100 meters in maximum dimension (length or width) size, site boundaries are represented in most cases in the GIS data as circles representing the site's maximum dimension. For sites greater than 100 meters in maximum dimensions, the boundary represented is the actual site boundary. For each class of impact, sites that intersected more than corridor or area were counted only once.

Route intersections were buffered according to the relative widths of the various unauthorized routes. The widths account for the area of direct impact from vehicular travel in each class of route. Routes open to all vehicles and to highway legal vehicles were buffered at a width of 12 feet. Routes open to vehicles less than 50 inches in width and special designation routes were buffered at a width of 50 inches. Routes open to motorcycles only were buffered at 24 inches.

Cultural resource site acreage was derived by extracting sites using existing unauthorized route, corridor, and area polygons. Because the acreage of some sites' overlap, individual site acreages were combined, rather than summed, to prevent overlapping acreage from being counted twice.

5.2 Issue 2: Impacts to Traditional Cultural Properties

The potential impacts to traditional cultural properties are separated into physical impacts from motorized vehicular travel in unauthorized routes, motorized dispersed camping corridors, and areas, and indirect physical impacts in motorized dispersed camping corridors; and the disruption of use by location within or within proximity to unauthorized routes, motorized dispersed camping corridors, and areas (Table 5.2). The potential for impacts is measured for the existing condition (Alternative 1, no action alternative) only.

Table 5.2 Potential for Impacts to Traditional Cultural Properties from Unauthorized Routes, Motorized Dispersed Camping Corridors, and Areas – Existing Condition

Measure (# properties)	Alt. 1
vehicular impacts within unauthorized routes, MDC corridors, and areas; indirect impacts within MDC corridors	11
disruption of use by location within or proximity to unauthorized routes, MDC corridors, and areas	13

Numbers of properties were generated by intersecting unauthorized routes, motorized dispersed camping corridors and areas with the approximate boundaries of the traditional cultural properties using paper maps. In two cases, the potential for physical impacts within areas was determined from property documentation, rather than from map boundaries. The two properties that lie outside of the forest boundary were considered not to have the potential for physical impacts from vehicular traffic, or physical indirect impacts from dispersed camping and associated vandalism and looting.

Disruption of the use of traditional cultural properties by non-users was defined by intersection with or proximity to motorized dispersed camping corridors and areas. Numbers of properties were defined by intersecting unauthorized routes, motorized dispersed camping corridors, and areas with the approximate boundaries of traditional cultural properties using paper maps. Proximity was defined on a case-by-case basis where documentation has indicated that proximity is a factor in contributing to disruption.

6.0 Direct and Indirect Effects

Direct and indirect effects to cultural resource sites and traditional cultural properties are defined here within the context of the NHPA process. It is anticipated that effects to cultural resources considered significant in the NEPA process would also be identified as an adverse effect in the NHPA process. As a consequence, site treatments would be required to prevent an adverse effect under NHPA, and arrive at a determination of no adverse effect. It is possible to make a decision in an EIS that creates significant adverse effects. However, in the case of cultural resources, an additional legal requirement is presented by NHPA. That law requires that any adverse effects to cultural resources must be resolved by seeking ways to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects to historic properties (36 CFR 00.6(a)). Resolution of an adverse effect would generally require mitigations such as excavation and data recovery. However, site- and property-specific activities leading to a determination of adverse effect are not appropriate for consideration in this EIS. Thus, only a determination of “No Adverse Effect” under NHPA will be made for site- and property-specific activities resulting from the decision to designate routes, corridors and areas.

If the potential for substantial impacts to sites is identified for particular locations within routes, corridors, or areas being considered for designation during the NHPA process, those locations will be excluded from the MVUM or otherwise treated to reach a determination of no adverse effect for this project. If there are locations considered crucial to an important route, corridor, or area that cannot be excluded from the MVUM, a separate NEPA and NHPA analysis will be conducted for this location to consider mitigations to resolve the adverse effect.

Direct and indirect impacts to cultural resource sites and traditional cultural properties for the four action alternatives (Alternatives 2-5) are described with the assumption that mitigations to prevent those impacts required by the NHPA process are in place. This is because a decision to select one of these alternatives cannot be made until a determination of the project’s effect under NHPA has been made, and mitigations to arrive at a determination of “No Adverse Effect” have been implemented. The no action alternative serves to define the existing condition, and is used as a baseline for effects against which the four action alternatives are compared.

To reiterate, direct and indirect impacts to cultural resource sites and traditional cultural properties for the four action alternatives (Alternative 2-5) were considered in this analysis and will have no adverse effect because the impacts will be mitigated prior to making a decision to display unauthorized routes, motorized dispersed camping corridors and areas on the MVUM. The intent is to arrive at a decision of No Adverse Effect to historic properties for all decisions regarding display of unauthorized routes, motorized dispersed camping corridors and areas on the MVUM.

6.1 Effects to Cultural Resource Sites

Five classes of impacts are identified for cultural resource sites:

- vehicular impacts within routes;
- vehicular impacts within motorized dispersed camping corridors;
- indirect impacts within motorized dispersed camping corridors, including surface and subsurface disturbance, vandalism, and looting;
- vehicular impacts within motorized big game corridors; and
- vehicular impacts within areas.

Two of these potential impacts, vehicular impacts and indirect impacts within motorized dispersed camping corridors, are grouped for analysis.

6.1.1 Mitigation of Effects to Cultural Resource Sites

Routes, corridors, and areas identified with the potential to have substantial impacts to cultural resource sites under the Travel Management Protocol will be evaluated for effects under the NHPA process. If substantial impacts are identified, mitigations will be put in place to prevent these impacts. For this project, only mitigations that do not require separate analysis under NHPA and NEPA are considered.

6.1.1.1 Vehicular Impacts within Routes. There will be no mitigations for the designation of existing system routes. It has been programmatically determined that there are no substantial impacts to cultural resource sites from the designation of existing system routes (First Amended Programmatic Agreement, Appendix I.II.A). No mitigations are required.

For designated non-system routes where substantial impacts to cultural resource sites are identified, a route, or a portion of a route, will be excluded from the MVUM. Alternatively, the surface of the site within the route can be protected from vehicular impacts by plating the surface. Plating consists of placing a protective covering, usually consisting of geotextile and sediment to raise the grade of the route, over the surface of the site, so that vehicular travel takes place on the surface of the plate rather than the surface of the site. Plating will be considered as a mitigation if NHPA consultation determines that it does not constitute an “adverse effect” under NHPA (see First Amended Programmatic Agreement, Appendix E.III.2).

6.1.1.2 Vehicular Impacts within Motorized Dispersed Camping Corridors and Indirect Impacts within Motorized Dispersed Camping Corridors. For designated corridors where substantial impacts to cultural resources are identified, all or portions of a corridor will be excluded from the MVUM, so that the site or sites with a potential for substantial impacts are excluded from a corridor.

6.1.1.3 Vehicular Impacts within Motorized Big Game Retrieval Corridors. There will be no mitigations for the designation of motorized big game retrieval corridors, because motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use

fuelwood collection, that have been programmatically determined to have no substantial impacts to traditional cultural properties (see section 3.1.1 above).). No mitigations are required.

6.1.1.4 Vehicular Impacts within Areas. For designated areas where substantial impacts to cultural resources are identified, all or portions of an area will be excluded from the MVUM, so that the sites or sites with a potential for substantial impacts are excluded from an area.

6.1.2 Evaluation of Effects by Alternative

6.1.2.1 Existing Condition (Alternative 1, No Action Alternative)

There is no substantial impact to cultural resource sites from vehicular impacts within existing system routes. It has been programmatically determined that there are no substantial impacts to cultural resource sites from existing system routes (First Amended Programmatic Agreement, Appendix I.II.A) (see section 3.1.1 above).

There is a potential for vehicular impacts to 147 known sites within existing unauthorized routes. However, the acreage to be impacted within the sites is comparatively small, only somewhat less than 4 acres total known site acreage, or an average of approximately 98 m² per site (calculated based on 3.57 acres). This small acreage of potential impact relative to the numbers of sites is a consequence of impact being limited to the acreage of the route. Most unauthorized routes are trails less than 50 inches in width, meaning that their acreage of potential impact within a site is relatively small. This does not mean, however, that the potential impact from this type of vehicular activity is insubstantial. The degree of potential impact is dependent upon where the route passes through the cultural resource site.

There is a potential for vehicular impacts, or indirect impacts, to 439 known cultural resource sites, and approximately 541 acres of known site acreage within motorized dispersed camping corridors. Because corridors are substantially wider than routes, it is more likely that a substantial portion of or an entire site may lie within a corridor. Hence, the known site acreage relative to the number of known sites is greater, averaging approximately 1.23 acres per site. Because of this, the potential for site-wide disturbance from vehicular and indirect impacts across the surface of a site is significantly greater than it is for routes, assuming that a site falls completely within a corridor, and all portions of the site are accessible for motorized dispersed camping.

There will be no substantial impacts to cultural resource sites from vehicular impacts within motorized big game corridors. Motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to cultural resource sites (see section 3.1.1 above).

There is a potential for vehicular impacts to 4459 known sites, and approximately 7,995 acres of known site acreage within areas. Because areas within this alternative are large contiguous blocks of land, the known site acreage with a potential for impacts is greater relative to the number of sites than either existing unauthorized routes or motorized dispersed camping corridors. Hence, the known site acreage relative to the number of known sites is greater, averaging approximately 1.79 acres per site. However, it is assumed that the potential for impacts to heritage resource sites within existing areas of motorized cross-country travel is not

uniform, because travel across these areas is not uniform. As a consequence, the greater numbers of sites and site acreage within areas relative to unauthorized routes and motorized dispersed camping corridors should not be conflated with a greater potential for impacts to heritage resource sites.

6.1.2.2 Action Alternatives (Alternatives 2, 3, 4 and 5)

There will be no substantial impacts to cultural resource sites from vehicular impacts within designated routes. It has been programmatically determined that there are no substantial impacts to cultural resource sites from the designation of existing system routes (First Amended Programmatic Agreement, Appendix I.II.A). Potential substantial impacts to sites from the designation of non-system routes will be mitigated as described above.

There will be no substantial impacts to cultural resource sites from vehicular impacts, or from indirect impacts including surface and subsurface disturbance, vandalism, and looting, within motorized dispersed camping corridors. All or portions of corridors where there is a potential for substantial impacts to sites will be excluded from the MVUM. Substantial vehicular impacts will be eliminated, and only the potential for indirect effects would remain in undesignated corridors where camping would be allowed in accordance with pull-off parking. These indirect effects would be substantially reduced from the existing condition, as it is assumed that the largest portion of motorized dispersed camping will continue to occur within designated motorized dispersed camping corridors (Recreation Specialist report).

There will be no substantial impacts to cultural resource sites from vehicular impacts within motorized big game corridors. Motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to cultural resource sites (see section 3.1.1 above).

There will be no substantial impacts to cultural resource sites from vehicular impacts within areas. All or portions of areas where there is a potential for substantial impacts will be excluded from the MVUM.

6.2 Effects to Traditional Cultural Properties

Three classes of impact are identified for traditional cultural properties:

- Direct physical impacts to the physical properties of traditional cultural properties
- Limitations on access to traditional cultural properties by traditional practitioners
- Disruptions of use or function of traditional cultural properties by non-practitioners

6.2.1 Mitigation of Effects to Traditional Cultural Properties

Routes, corridors, and areas identified with the potential to have substantial impacts to Traditional Cultural Properties under the Travel Management Protocol will be evaluated for effects under the NHPA process. If substantial impacts are identified, mitigations will be implemented to prevent these impacts. For this project, only mitigations that do not require separate analysis under NHPA and NEPA are considered. Effects to traditional cultural properties from Big Game Retrieval will not be presented in this section.

6.2.1.1 Direct Physical Impacts. In situations where the physical properties of traditional cultural properties in Routes, Corridors and Areas have the potential to be directly impacted mitigation

will consist of not designating the route, corridor or area unless consultation with appropriate traditional communities or practitioners results in appropriate mitigation that will result in the traditional cultural properties being avoided or not adversely affected by designation.

6.2.1.2 Restriction of Access. Effective mitigation eliminating limitations on access is provided by existing executive and legislative direction providing for the separate permitting or authorization to traditional users to provide for access to traditional cultural properties.

6.2.1.3 Disruption of Use or Function. In situations where the function or use of traditional cultural properties has the potential to be disrupted by non-practitioners the route, corridor or area will not be designated unless consultation with appropriate traditional communities or practitioners results in appropriate mitigation that will result in the traditional cultural property being avoided or not adversely affect by designation.

6.2.2 Evaluation of Effects by Alternative

6.2.2.1 Existing Condition (Alternative 1, No Action Alternative)

There is no potential for physical vehicular impacts to traditional cultural properties within existing system routes. It has been programmatically determined that there are no substantial impacts to traditional cultural properties from existing system routes (First Amended Programmatic Agreement, Appendix I.II.A) (see section 3.1.1 above).

There is no potential for physical vehicular impacts to traditional cultural properties within motorized big game corridors. Motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to cultural resource sites (see section 3.1.1 above).

There is the potential for physical vehicular impacts from unauthorized routes, motorized dispersed camping corridors, and areas; and indirect physical impacts from motorized dispersed camping to 11 documented traditional cultural properties. All 11 properties fall completely or partially within areas accessible to cross-country travel. In addition, three are crossed by unauthorized routes, and two partially within motorized dispersed camping corridors. As with cultural resource sites, the acreage encompassed by areas is not uniformly impacted by vehicular travel, and the potential for substantial impacts overall is lower in some cases than with unauthorized routes or motorized dispersed camping corridors. However, the potential for impacts also varies between properties, and impacts from the different classes of travel-ways may not be equivalent from property to property.

There is a potential for the restriction of access from existing system and unauthorized routes at two traditional cultural properties. However, because the action alternatives (Alternative 2, 3, 4 and 5) have no capacity to change this potential restriction of access, it is not germane and is not further analyzed here (see section 3.2.3 above).

There is no potential for use disruption to traditional cultural properties from existing system routes. It has been programmatically determined that there are no substantial impacts to traditional cultural properties from the designation of existing system routes (First Amended Programmatic Agreement, Appendix I.II.A).

There is no potential for use disruption to traditional cultural properties from motorized big game retrieval. Motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to traditional cultural properties (see section 3.1.1 above).

There is the potential for use disruption from unauthorized routes, motorized dispersed camping corridors, and areas at 13 documented traditional cultural properties. Eleven (11) of the properties fall within or are in proximity to areas. In addition, four properties fall within or are within proximity to unauthorized routes, and three are within or are in proximity to motorized dispersed camping corridors. As with physical impacts above, the potential for use disruption within areas is uneven, and should not be seen as equivalent to the potential for use disruption from unauthorized routes and motorized dispersed camping corridors.

6.2.2.2 Action Alternatives (Alternatives 2, 3, 4 and 5)

There will be no substantial physical vehicular impacts to traditional cultural properties within existing system routes. It has been programmatically determined that there are no substantial impacts to traditional cultural properties from existing system routes (First Amended Programmatic Agreement, Appendix I.II.A) (see section 3.1.1 above).

There will be no substantial physical vehicular impacts to traditional cultural properties within motorized big game corridors. Motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to traditional cultural properties (see section 3.1.1 above).

There will be no substantial physical vehicular impacts to traditional cultural properties from unauthorized routes, motorized dispersed camping corridors, and areas; or from indirect physical impacts from motorized dispersed camping. All or portions of designated unauthorized routes, motorized dispersed camping corridors, or areas where there is a potential for substantial physical vehicular impacts to traditional cultural properties will be excluded from the MVUM.

There will be no impacts to traditional cultural properties from the restriction of access by the designation of routes. Where there is the potential for access to limited, special use permits or authorizations will be granted to the users of traditional cultural properties as a mitigation to facilitate access (see 6.2.1.2 above).

There will be no disruption of the use of traditional cultural properties in or within proximity to existing system routes. It has been programmatically determined that there are no substantial impacts to traditional cultural properties from existing system routes (First Amended Programmatic Agreement, Appendix I.II.A) (see section 3.1.1 above).

There will be no disruption of the use of traditional cultural properties in or within proximity to motorized big game corridors. Motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to traditional cultural properties (see section 3.1.1 above).

There will be no disruption of the use of traditional cultural properties in or within proximity to unauthorized routes, motorized dispersed camping corridors, and areas. All or portions of designated unauthorized routes, motorized dispersed camping corridors, or areas where there is a potential for the disruption of use at traditional cultural properties will be excluded from the MVUM.

7.0 Cumulative Effects

7.1 Scope and Baseline for Cumulative Effects Analysis

7.1.1 Scope. Cumulative effects to cultural resources would result from the incremental impact of activities associated with designation of routes, corridors and areas when added to the impacts of other past, present and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes those actions. For the purposes of this analysis the temporal boundary of the assessment of cumulative effects is 1987 to 2025. The spatial extent of the cumulative effects is confined to the boundary of the Forest and all existing and designated routes that fall within private property within the Forest boundary, and on private land and other jurisdictions (other federal, state, tribal and municipal) that lie outside the Forest boundary. Included in the analysis are cumulative effects to cultural resource sites and traditional cultural properties.

Since 1987 the Forest has been compliant with the requirements section 106 of the National Historic Preservation Act of 1966 and its implementing regulations (36 CFR 800). This is significant for analysis of cumulative effects because the primary intent of NHPA is the avoidance of/or mitigation of adverse effects to cultural resources. By adhering to the requirements of NHPA the Forest's management of effects to cultural resources has remained consistent for all activities on the Forest where cultural resources have the potential to be affected by Forest activities. Past, present, and reasonably foreseeable actions (between 1987 and 2025) have been, are or will be subject to the requirements of NHPA leading to the reduction or mitigation of effects to cultural resources.

7.1.2 Baseline for Assessing Cumulative Effects. The existing transportation system on the Forest achieved its present form around 1987. Active management of cultural resources on the Forest began in 1978. However, between 1978 and 1987 the Forest consistently met the requirements of NHPA. Also at the time the Forest had emerged from a contentious period with regard to the management of cultural resources. In the mid-1980s the Forest was involved in a lawsuit and subsequent settlement that led to the current management of cultural resources. The lawsuit resulted from the Forest not following the requirements of Section 106 of the NHPA resulting in effects to cultural resources from Forest activities. In 1987 the lawsuit settlement ensured the Forest would manage effects to cultural resources to the standards mandated by Section 106 of NHPA and its implementing regulations (36 CFR 800). As a result of the consistency in application of the requirements of Section 106 effects to cultural resources from Forest activities have been managed consistently with an outcome resulting in avoidance or mitigation of effects to cultural resources from all Forest activities.

7.2 Discussion of Cumulative Effects

7.2.1 Cumulative Effects of Past Actions (1987-2009). The Forest compiled a list of past actions that shaped the Forest's route system between 1987 to the present and they form the baseline for cumulative effects analysis (Table 7.2.1.1).

Table 7.1 Past Actions (1987 – 2009)		
Action	Effect or trend	Effects to Cultural Resources
Subdivision and development of private inholdings	Added roads to the national forest because landowners required vehicular access to their property.	N/A-complied with NHPA
Road construction for timber sales	Added roads to the national forest for timber extraction. Some temporary roads were decommissioned; others kept.	N/A-complied with NHPA
Mining claims and development of mining	Added roads to the national forest.	N/A-complied with NHPA
Roads to access oil and gas developments and pipelines	Added roads to the national forest.	N/A-complied with NHPA
New Mexico Senate Bill 379 (Increased safety and registration requirements for people under 18; restricted OHV use on state game commission and state park lands, except where designated; provided for the addition of state OHV parks; provided for the closure of OHV trails causing irreversible damage; provides for the development of overall enforcement across the state; and creates a fund for education, monitoring, and enforcement)	Likely to restrict motorized cross-country travel on state lands. Increases monitoring, education, and enforcement capabilities statewide.	N/A-legislation did not result in effects to cultural resources
Jemez National Recreation Act	Reduced the miles of roads on national forest. Also reduced the acres available for motorized cross-country travel.	N/A-legislation did not result in effects to cultural resources
Wild and Scenic Rivers – Pecos, East Fork, and Rio Chama	Reduced the miles of roads and motorized cross-country travel on the national forest.	N/A-legislation did not result in effects to cultural resources
Creation of the Valles Caldera National Preserve	Restricted the amount of motorized travel, on- or off-road, on public land.	N/A-complied with NHPA

Table 7.1 Past Actions (1987 – 2009)		
Action	Effect or trend	Effects to Cultural Resources
Land transfers from the Santa Fe National Forest to other entities: San Ildefonso Santo Domingo Pecos National Historic Park	Removed land from the public domain, resulting in less motorized access and travel on the national forest.	N/A-complied with NHPA and New Mexico statutes
Respect the Rio program	Increased public awareness of the effects of motorized use on the national forest, especially near water.	N/A-did not result in effects to cultural resources
Lower Jemez Complex Development Restoration	Reduced the amount of routes and dispersed camping on the national forest.	N/A-complied with NHPA
Acquisition of lands by the Santa Fe National Forest	Increased motorized access to the national forest. Slightly increased the miles of routes on the system in most cases.	N/A-complied with NHPA
Road obliteration or natural closure (e.g., trees growing in the middle of roads)	Reduced the miles of routes on the national forest system.	N/A-complied with NHPA
New list of sensitive species	Likely to have the effect of reducing the miles in the route system.	N/A-did not result in effects to cultural resources
Designation of Mexican spotted owl critical habitat	Likely to have the effect of reducing the miles in the route system.	N/A-did not result in effects to cultural resources
1995 injunction against woodcutting	Reduced motorized cross-country travel.	Temporary decrease in cross-country travel led to potential decrease in effects to cultural resources-effects to cultural resources from cross-country travel to access wood were unknown and could not be measured. If access to wood was provided to a designated wood cutting area then it complied with NHPA.
Technological advances in OHVs (e.g. 3-wheelers, 4-wheelers, side-by-sides, tracked vehicles)	Increased motorized cross-country travel because the smaller vehicles are able to go more places on more terrain.	Effects from changes in technology on cultural resources were not measured and were unknown. While technological advances might have facilitated increased access they might also have resulted in more/or less damage to cultural resources.

Table 7.1 Past Actions (1987 – 2009)		
Action	Effect or trend	Effects to Cultural Resources
Forest product collection	Increases motorized cross-country travel. Some occurred in conjunction with specific vegetation management projects.	Forest product collection to designated areas complied with NHPA. Forest-wide forest product collection for unpermitted/unauthorized or free-use resources would have been difficult to quantify. Effects to cultural resources of cross-country travel to access unauthorized or free-use Forest products were generally assumed to be insignificant.

Between 1987 and the present the Santa Fe National Forest has been open to motorized cross-country travel meaning that unless an area was closed visitors could use motorized cross-country travel to access activities on the Forest. In many portions of the Forest the level of motorized cross-country travel has already affected cultural resources but has not been measured and is not available other than as indicated on individual site records. As discussed in the section on direct and indirect effects many cultural resources have already sustained damage from activities that were outside the control of the Forest. These cannot be measured and for the analysis are considered but not evaluated. In addition other large landscape scale actions such as prescribed fire, wildfire suppression, and range management have all affected cultural resources to some degree. Site specific activities associated with these activities would have been compliant with the requirements of Section 106 of the NHPA between 1987 and the present resulting in no historic properties affected, no adverse effect or the resolution of adverse effects. However, these activities might have indirectly affected cultural resources in areas where that effect overlaps direct and indirect effects from motorized cross-country travel.

The actions fall within two categories including those that were conducted in compliance with Section 106 and those for which their activities did not have the potential to affect cultural resources. By in large the list of past actions did not adversely affect cultural resources because they were compliant with the requirements of Section 106. Those that were compliant with the requirements of Section 106 were evaluated for their effects to cultural resources and effects were avoided. If effects were determined to result from implementation of the project then those effects were mitigated per the requirements of the implementing regulations of Section 106. For the second class they did not affect cultural resources and were not in a position to cumulatively contribute to effects to cultural resources. The Forest relies on exemptions for certain kinds of activities from consultation under NHPA as codified in the Forest's Regional Programmatic Agreement. Activities that are Forest-wide and do not have the potential to affect cultural resources as determined in consultation with the SHPO include many of the activities associated with past actions. If an activity does not have the potential to cause ground disturbing activities or if the cultural resource to be affected by that activity has been compromised the activity might be exempt from consultation.

In the past, however, other classes of projects had the potential to affect cultural resources and they are noted in the table above. Although individual activities associated with each action might be location specific the scale of their impacts either cannot be measured or defining their area of impact cannot be done.

In 1995 the injunction against wood cutting led to a temporary restriction on the removal of all trees from the Forest including timber, firewood and other forest products. The assumption that motorized cross-country travel decreased cannot be adequately measured nor can its impact on cultural resources be measured. For a short period of time during 1995 to 1996 the impacts of motorized cross-country travel would have resulted in reduced effects to cultural resources but in light of the longevity of motorized cross-country travel on the Forest the reduction in effect was most likely negligible.

Changes in technology for OHVs may have the potential to affect cultural resources but measuring the effects from technological advances does not necessarily equate with increased effects to cultural resources. It may result in decreased effects. In addition the ability to measure effects from changes in OHV technology has not been portrayed for any place on the Forest. It would be speculative to discuss the effects of OHV technology on cultural resources.

Forest product collection where that collection has not resulted in intensive ground disturbance has been exempt from consultation since 1987. This would have included bow collection for ceremonial purposes, Forest-wide dead-and-down and collection of medicinal plants. Forest product collection involving more intensive ground disturbance would have required consultation and resulted in management of effects to cultural resources.

Under Issue 1 regarding impacts to cultural resources sites the cumulative effects from past actions is believed to have been low given the emphasis on the part of the Forest on completing the consultation required by Section 106.

Under Issue 2 regarding impacts to traditional cultural properties the cumulative effects from past actions is less understood than for cultural resource sites. Records do not exist documenting the nature of access or the associated difficulties communities might have experienced. The issue did not become apparent until 1989 when the concept was defined and 1992 when the regulations changed to accommodate the resource. Between 1992 and the present, the idea of access to and use of traditional cultural properties has seen a general rise in understanding on the part of Forest managers. Because TCPs are considered to be historic properties and subject to the same considerations as other cultural resource sites they are subject to the same consultation requirements. Although difficult to measure the potential for cumulative effects from past actions to TCP access was probably quite low.

7.2.2 Cumulative Effects of Present and Reasonably Foreseeable Actions (2009-2025). The Forest compiled a list of past actions that shaped the Forest's route system between 1987 to the present and they form the baseline for cumulative effects analysis (Table 7.2.2.1).

Table 7.2 Present and Reasonably Foreseeable Future Actions (2009 – 2025)		
Action	Effect or trend	Effects to Cultural Resources
Economic recession	Overall effect hard to determine. It could increase the amount of motorized travel and dispersed camping on the national forest since people might recreate closer to home. It could also reduce the amount of motorized travel if people decide not to travel at all.	N/A-does not result in effects to cultural resources
Increase in state's population	Likely to increase the amount of travel to and on the national forest as more people seek recreational opportunities. Some studies, however, show a decrease in outdoor recreation in the population at large.	N/A-does not result in effects to cultural resources
Preparation of travel management plans and motor vehicle use maps by other national forests and agencies	Likely to greatly reduce the amount of motorized cross-country travel on public lands. Likely to reduce the miles of routes open for public motorized cross-country travel. Likely to increase education and awareness of the effects of motorized use on public lands.	N/A-does not result in effects to cultural resources
Existence or creation of private or state OHV parks	Increases the amount of motorized cross-country travel available.	N/A-does not result in effects to cultural resources
Transfer of management of lands in Pecos Canyon from New Mexico Department of Game and Fish to the State Parks	Likely to decrease the amount of motorized use available on state lands.	N/A-does not result in effects to cultural resources
Development of the Continental Divide Trail on the Santa Fe National Forest	The CDT is non-motorized, and its creation is likely to affect where motorized routes are designated.	N/A-complies with NHPA

Table 7.2 Present and Reasonably Foreseeable Future Actions (2009 – 2025)

Action	Effect or trend	Effects to Cultural Resources
Evolution of recreational preferences among the general public, e.g., mud-bogging, geocaching, hiking	Likely to increase demand for motorized access to the national forest in order to engage in the activity of choice.	N/A-does not result in effects to cultural resources
Roads and trails having unclear easements on the national forest	Could result in a reduction in motorized access if a private landowner decides, in light of an unclear easement, to gate or restrict access across a forest service road or trail.	N/A-does not result in effects to cultural resources
Road maintenance agreements between the Santa Fe National Forest and counties, permittees, or private landowners	Improves the condition of roads because of regular maintenance stipulated in the agreements.	N/A-complies with NHPA
Volunteer assistance on trail maintenance	Improves the condition of motorized trails.	N/A-complies with NHPA
Availability of state Regional Trail Program funds	Improves the condition of motorized trails.	N/A-does not result in effects to cultural resources
Routes existing on other jurisdictions within the national forest boundary	Increases the miles of routes within the boundary of the national forest. The condition of the routes will vary by ownership; it is not possible to characterize them in general.	N/A-complies with NHPA
Closure orders	The Forest will continue to have the ability to implement closure orders. These will reduce the amount of motorized travel on the national forest.	N/A-complies with NHPA
Projects awarded through the American Recovery and Reinvestment Act	Will improve the condition of trails on the national forest.	N/A-complies with NHPA
Projects from the Forest's Schedule of Proposed Actions (as of 10/2007) ¹	Decrease in routes available for motorized travel, motorized cross-country travel, or motorized dispersed camping opportunities	N/A-complies with NHPA
Projects from the Forest's Schedule of Proposed Actions (as of 10/2007) ²	Increase in routes available for motorized travel, motorized cross-country travel, or motorized dispersed camping opportunities	N/A-complies with NHPA

Table 7.2 Present and Reasonably Foreseeable Future Actions (2009 – 2025)

Action	Effect or trend	Effects to Cultural Resources
Projects from the Forest's Schedule of Proposed Actions (as of 10/2007) ³	Improves road or trail condition	N/A-complies with NHPA
Forest Plan revision?		N/A-complies with NHPA

¹ See first list below² See second list below³ See third list below*List 1: Projects decreasing the amount of motorized use on the Forest:*

- Peralta Watershed Improvement Project
- Oil and Gas Leasing and Roads Management
- San Antonio Watershed Improvement Project
- East Fork Jemez Wild & Scenic River Recreation Management
- Forest Road 10J Decommissioning

List 2: Projects increasing the amount of motorized use on the Forest:

- 2008/2009 NM Motorcycle Trials Event
- Recreation Residence Permit renewal (keeps existing motorized use in place)
- South Pit Pumice Mine Expansion
- Cerro del Pino Pumice Mine
- Gallinas Municipal Watershed WUI Project
- Boone-Duran Pumice Mine EA
- San Ignacio Joint Ventures Road Easement
- County Line Forest Products
- Rio Chama Wildlife Management Prescribed Fire Project
- Bear Paw Salvage

List 3: Projects improving the condition of roads or trails on the Forest:

- Resumidero Campground Improvement Project
- Reconstruction of Forest Roads 612 and 87
- Forest Road 488 Reconstruction and Road Use
- Cañones Creek Watershed Restoration Project
- BMG Erosion Repair
- Headquarters Trailhead EA
- State Highway 4 Culvert Replacement (improves fish passage)

Based on the list of present and reasonably foreseeable actions there are those that do not have the potential to affect cultural resources and those that comply with the requirements of NHPA. This class of actions does not have the potential to affect cultural resources and will not contribute to cumulative effects on cultural resources at present and in the reasonably foreseeable future.

The remaining actions fall within a class that is consistently compliant with the requirements of Section 106 on the basis of existing Forest policy and direction. As a result all effects resulting from these actions will result in No Historic Properties Affected, No Adverse Effect or resolution of Adverse Effect. The potential for cumulative effects resulting from these actions is low.

Under Issue 1 the management of effects to cultural resource sites would be managed to achieve No Historic Properties Affected, No Adverse Effect or appropriate resolution of an Adverse Effect. No cumulative effects are anticipated to cultural resource sites.

Under Issue 2 the management of effects to traditional cultural properties would be managed to achieve No Historic Properties Affected, No Adverse Effect or appropriate resolution of an Adverse Effect. No cumulative effects are anticipated to cultural resource sites.

7.3 Irreversible or Irrecoverable Effects

Irreversible effects to cultural resources are those resulting in a loss of cultural resources that cannot be regained. Cultural resources are non-renewable resources and by definition any loss is irreversible. For all past, present and reasonably foreseeable actions associated with designation of a system of routes, corridors and areas no irreversible effects are anticipated. Effects to cultural resources will be managed as required by Section 106 and will result in No Historic Properties Affected, No Adverse Effect or effective resolution of Adverse Effect.

Irrecoverable effects would be the loss of cultural resources such that they could not be recovered. Cultural resources are nonrenewable resources and as a finite resource they cannot be recovered. For all past, present and reasonably foreseeable actions associated with designation of a system of routes, corridors and areas no irretrievable effects are anticipated. Effects to cultural resources will be managed as required by Section 106 and will result in No Historic Properties Affected, No Adverse Effect or effective resolution of Adverse Effect.

8.0 Effects of Forest Plan Amendments

The action alternatives (Alternatives 2-5) contemplate several forest plan amendments that have the potential to affect cultural resources located within the management area (Area I) designated for “providing active management of cultural resources (Santa Fe National Forest 1987:135).” The amendments also have the potential to affect cultural resources located within the management areas (P, Q, R, and S) where “cultural resources location, inventory, nomination, and protection...are emphasized (Santa Fe National Forest 1987:157, 161, 165, 170).” One set of amendments are location-specific and affect particular locations within a portion of a management area. In a few cases, the location-specific amendments are common to all of the action alternatives. In most cases, however, they apply to only one or more of the alternatives. These amendments apply to management areas I and R. A second set of amendments are forest-wide and affect all portions of management areas. They are common to all of the action alternatives. These amendments are applicable to management areas P, Q, R, and S.

The unit of analysis used here is acres of management area, rather than number of cultural resource sites (except where appropriate for some location-specific amendments). Although each of the five management areas (I, P, Q, R and S) contain discrete cultural resource sites, the areas were designated under the forest plan based on their high potential to contain cultural resource sites, in addition to their known presence. Overall, the density of cultural resource sites in the five management areas is high. Because the five management areas were created in the forest plan specifically for the management of cultural resource sites, impacts to traditional cultural

properties located within the five areas are not assessed, although traditional cultural properties do occur within these management areas.

The locations of management areas designated for active cultural resource management (Area I) are not shown or described in detail in this report, as this location information is prohibited from release to the public under 36CFR 296.18a.

8.1 Area-wide Amendments

Three area-wide amendments are proposed. One of the amendments is common to management areas P, Q, R, and S. Of the other two amendments, one is common to management areas P and Q, while the other is common to management areas R and S. The amendments are described in detail below. The amendments are identified by letter.

8.1.1 Amendment A (Management Areas P, Q, R, and S).

Description: Deletes language stating that “(t)hese lands are generally open to [off-road vehicle] travel except for the restrictions and closures displayed on the [off-road vehicle] map (Santa Fe National Forest 1987:158, 163, 166, 171).” Language is superseded with Travel Management direction, “(m)otor vehicle use off designated roads and trails and outside of designated areas is prohibited, except where exempted under 36CFR 212.51.”

Evaluation of Effects: The amendment will eliminate the potential for vehicular impacts to cultural resource sites within the four management areas by restricting motorized travel to designated routes, corridors, and areas that have been determined to have no substantial impact to cultural resource sites, and to motorized big game retrieval corridors (in Alternatives 4 and 5). Table 8.1 summarizes the acreage in each of the four management areas currently available for travel within motorized dispersed camping corridors and areas under the existing condition (Alternative 1, no action alternative). Motorized big game retrieval corridors are not considered here, because there will be no substantial impacts to cultural resource sites from the cross-country travel associated with motorized big game retrieval (see section 3.1.1 above).

Table 8.1 Acres Available for Cross-country Travel in Management Areas P, Q, R, and S – Existing Condition

Management Area	Total	Alt. 1
<i>Motorized Dispersed Camping Corridors</i>		
P	30,749	496 (1.6)
Q	15,491	0 (0.0)
R	132,996	1768 (1.3)
S	33,667	318 (0.9)
Total	212,903	2282 (1.1)
<i>Areas</i>		
P	30,749	13,745 (44.7)
Q	15,491	12,666 (81.8)
R	132,996	36,940 (27.8)
S	33,667	5798 (17.2)
Total	212,903	69,149 (32.5)

Note: percentages of total acres available for each alternative are shown in parentheses.

Overall, under the existing condition (Alternative 1, no action alternative) the portion of the four management areas that have the potential for impacts from motorized dispersed camping is small, no greater than 3.1 percent for any one area, and no greater than 2.2 percent overall. Under the action alternatives the potential for these impacts will be eliminated, because mitigation measures will be put in place for any corridors where substantial impacts are identified. Portions of or an entire motorized dispersed camping corridor will be removed from the alternative to avoid sites with the potential for impacts. Any substantial differences between the alternatives will be negated as mitigation measures to prevent substantial impacts to sites are put in place.

Under the existing condition (Alternative 1, no action alternative), the area currently used for undifferentiated cross-country travel varies widely between the four management areas, from 17.2 to 81.8 percent for any single area; collectively, 32.5 percent of the area is open to undifferentiated cross-country travel. There are no areas designated for general cross-country travel within the four management areas for any of the action alternatives. Under each alternative, there is no cross-country travel, and the potential for impacts from this activity is eliminated.

8.1.2 Amendment B (Management Areas P and Q)

Description: The amendment removes a minimum road density of 1.0 miles of open roads per square mile within the two management areas. Eliminates language that states “(r)oad use will be managed with the objective of limiting open road density to 1.0 to 2.5 miles per square mile (Santa Fe National Forest 1987:160, 164).” This language is replaced with “(t)he objective for open public road density is 2.5 miles per square mile or less.”

Evaluation of Effects: This amendment will have no effect on cultural resources. The amendment is merely a change to clarify that the lower threshold of 1.0 miles per square mile is not sensible in the context of the guideline’s intent of “limiting open road density”. It was never envisioned, for example, that if there were areas where road density was less than 1.0 miles/square mile that we would be required to build more road, or in this context, only consider alternatives that have at least 1.0 miles/square mile. Given the intent of the original guideline and the amendment, all alternatives achieve the goal of having less than 2.5 miles/square mile except Alternative 1 in Management Area R (see Table 8.2 below).

Table 8.2 Allowed and Actual Road Densities for Management Areas P, Q, R, and S, in Linear Road Miles per One Square Mile

Management Area	Existing Allowed Density	Proposed Allowed Density	Actual Density				
			Alt 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
P	1.0-2.5	<2.5	2.6	1.3	0.6	1.4	1.4
Q	1.0-2.5	<2.5	2.3	0.6	0.6	0.6	0.6
R	0.3-1.5	<1.5	2.8	1.2	0.8	1.4	1.0
S	0.3-1.5	<1.5	2.1	0.8	0.5	0.9	0.9

8.1.3 Amendment C (Management Areas R and S)

Description: The amendment removes a minimum road density of 0.3 miles of open roads per square mile within the two management areas. Eliminates language that states “(r)oad use will be managed with the objective of limiting open road density to 0.3 to 1.5 miles per square mile (Santa Fe National Forest 1987:168, 173).” This language is replaced with “(t)he objective for open public road density is 1.5 miles per square mile or less.”

Evaluation of Effects: None. While each of the action alternatives reduces road densities in the two management areas below current levels, none reduce them below 0.3 miles per one square mile (Table 8.2).

8.2 Location-specific Amendments

All but one of the amendments is location-specific and deal with only one particular segment of a management area (identified by name, in the case of management area I). One of the amendments (Amendment 9) has the potential to affect cultural resources within multiple segments of management area I. All of location-specific amendments fall within management area I, except for one (Amendment 11), which is located in management area R. The changes are summarized in Table 8.3 and discussed in detail below

8.2.1 Amendment 1 (Cuba District—Management Area I).

Description: Transfer 107.1 to 216.1 acres (Sections 20, 21, 29 and 30, T26N, R1W) from the Wolf Draw management area I to management area R to allow 150' corridors for the purposes of motorized dispersed camping and motorized big game retrieval only. The corridors must have NHPA clearance for cultural resources before designation.

Justification: To accommodate the current motorized dispersed camping occurring in this area.

Proposed for: Alternatives 2 and 4.

Evaluation of Effects: None, if mitigation measures for motorized dispersed camping corridors (see section 6.1.1.2 above) are followed. The potential for effects to cultural resources sites from vehicular traffic and indirect camping impacts will continue if sites without substantial prior impacts are found to be located within the corridor. To prevent these impacts, portions of or the entire corridor will be removed from the alternative to avoid sites with the potential for impacts.

Differences among alternatives: Slightly more than twice as many acres will be transferred under Alternative 4 (216.1 acres) than under Alternative 2 (107.1 acres). With mitigation measures in place, impacts will be the same.

8.2.2 Amendment 2 (Cuba District—Management Area I).

Description: Transfer 78.7 to 155.1 acres (Sections 4 and 5, T25N, R1E; and Section 32, T26N, R1E) from in the Rattlesnake Ridge management area I to management area R to allow 150' corridors for the purposes of motorized dispersed camping and motorized big game retrieval only. The corridors must have NHPA clearance for cultural resources before designation.

Justification: To accommodate the current motorized dispersed camping occurring in this area.

Proposed for: Alternatives 2 and 4.

Evaluation of Effects: None, if mitigation measures for motorized dispersed camping corridors (see Section 6.1.1.2 above) are followed. The potential for effects to cultural resources sites from vehicular traffic and indirect camping impacts will continue if sites without substantial prior impacts are found to be located within the corridor. To prevent these impacts, portions of or the entire corridor will be removed from the alternative to avoid sites with the potential for impacts.

Differences among alternatives: Almost twice as many acres will be transferred under Alternative 4 (155.1 acres) than under Alternative 2 (78.7 acres). With mitigation measures in place, impacts will be the same.

8.2.3 Amendment 3 (Coyote District—Management Area I).

Description: Transfer 0.15 acres (Section 6, T22N R5E [projected]) from the Tsi'Ping management area I to management area G.

Justification: The boundary of the Tsi'Ping management area I is on top of the mesa, whereas the road in question is next to Cañones Creek, extending north from County Road 0198. The I area was improperly mapped.

Proposed for: Alternatives 2, 3, 4 and 5

Evaluation of Effects: None. The cultural resources identified for protection in the Tsi'Ping management area I are not located in or adjacent to the area where the transfer from management area I to management area G is being proposed. They are located on the mesa-top high above the transfer area.

Differences among alternatives: None; no effects.

8.2.4 Amendment 4 (Jemez District—Management Area I).

Description: Transfer 5 acres (Sections 10 and 15, T17N R5E) from the Kotyiti management area I to management area C.

Justification: The boundary of the Kotyiti management area I is on top of the mesa, whereas FR 89 is in the canyon. This segment of management area I is improperly mapped.

Proposed for: Alternatives 2, 4 and 5

Evaluation of Effects: None. The cultural resources identified for protection in the Kotyiti management area I are not located in or adjacent to the area where the transfer from management area I to management area G is being proposed. They are located on the mesa-top high above the transfer area.

Differences among alternatives: None; no effects.

8.2.5 Amendment 5 (Jemez District—Management Area I).

Description: Transfer 94.4 to 256.4 acres (Sections 3, 9 and 15, T17N, R3E; and Sections 27, 28, 33, and 34, T18N, R3E) from the San Juan Mesa/Paliza Canyon management area I along FR 10 and FR 137 to management area P to allow 150' corridors for the purposes of motorized dispersed camping and motorized big game retrieval only. The corridors must be cleared for cultural resources before designation.

Justification: To accommodate the current motorized dispersed camping occurring in this area.

Proposed for: Alternatives 2, 4 and 5

Evaluation of Effects: None, if mitigation measures for motorized dispersed camping corridors (see Section 6.1.1.2 above) are followed. The potential for effects to cultural resources sites from vehicular traffic and indirect camping impacts will continue if sites without prior substantial impacts are found to be located within the corridor. To prevent these impacts,

portions of or the entire corridor will be removed from the alternative to avoid sites with the potential for impacts.

Differences among alternatives: More than twice as many acres will be transferred under Alternative 4 (256.4 acres) than under Alternatives 2 and 5 (94.4 acres). With mitigation measures in place, impacts will be the same.

8.2.6 Amendment 6 (Jemez District—Management Area I).

Description: Transfer 0.39 miles of unauthorized road (Sections 7, 8, and 18, T18N, R2E [projected]) from the Stable Mesa management area I to management area R.

Justification: To accommodate having the motorized route.

Proposed for: Alternatives 2, 4 and 5

Evaluation of Effects: None, if the mitigation measures for routes (motorized trails) (see Section 6.1.2 above) are followed. The potential for vehicular impacts from the current use of the presently unauthorized route will continue. The potential for impacts may increase as this route is designated as part of a loop for motorcycle travel, and travel along the route increases (up to a 20 percent increase; see Recreation Specialist report). However, it is likely that any potential impacts are insubstantial, because this is a constructed road, and past road construction has likely already caused any substantial damage that could be generated by the use of the route. If substantial impacts to cultural resource sites are identified, the route will be dropped from the alternative, or other site treatment measures will be put in place.

Differences among alternatives: Effects will be the same in Alternatives 2, 4 and 5.

8.2.7 Amendment 7 (Jemez District—Management Area I).

Description: Transfer 0.86 miles of unauthorized road (Sections 10 and 16, T18N, R2E [projected]) from the Camp management area I to management area R.

Justification: To accommodate the new route.

Proposed for: Alternative 4.

Evaluation of Effects: None, if the mitigation measures for routes (motorized trails) (see Section 6.1.2 above) are followed. The potential for vehicular impacts to cultural resource sites will increase, due to the addition of traffic on the route from vehicles greater than 50 inches in width. The route is currently used as an unauthorized route by traffic from vehicles less than 50 inches in width (all-terrain vehicles and motorcycles). The amendment would open the route to traffic from all vehicles. However, it is likely that any potential impacts are insubstantial, because this is a constructed road, and past road construction has likely already caused any substantial damage that could be generated by the use of the route. If substantial impacts to cultural resource sites are identified, the route will remain limited to vehicles less than 50 inches in

length, the route will be dropped from the alternative, or other site treatment measures will be put in place.

Differences among alternatives: Not applicable; proposed only for Alternative 4.

8.2.8 Amendment 8 (Forest-wide—Management Area I).

Description: Allow licensed hunters to retrieve tagged down big game (elk and mule deer) with a motor vehicle in the areas shown on the motor vehicle use map during hunting season only. Retrieval is defined as one trip in and one trip out using the most direct path available to the animal.

Justification: Provides access to important cultural and subsistence activity; dispersed nature of use is not expected to cause resource impacts.

Proposed for: Alternatives 4 and 5.

Evaluation of Effects: There will be no substantial impacts to cultural resource sites from vehicular impacts within motorized big game corridors. Motorized big game retrieval is similar to other activities, such as the district- or area-wide personal use fuelwood collection, that have been programmatically determined to have no substantial impacts to cultural resource sites (see section 3.1.1 above).

Differences among alternatives: None.

8.2.9 Amendment 9 (Jemez District—Management Area I).

Description: Transfer 15.1 acres (Section 28, T18N, R3E) from the San Juan Mesa/Paliza Canyon management area I to management area P to allow a 150' corridor in along FR 269BB for the purposes of motorized dispersed camping and motorized big game retrieval only. The corridor must have NHPA clearance for cultural resources before designation.

Justification: To accommodate the current motorized dispersed camping occurring in this area.

Proposed for: Alternative 5.

Evaluation of Effects: None, if mitigation measures for motorized dispersed camping corridors (see Section 6.1.1.2 above) are followed. The potential for effects to cultural resources sites from vehicular traffic and indirect camping impacts will continue if sites without prior substantial impacts are found to be located within the corridor. To prevent these impacts, portions of or the entire corridor will be removed from the alternative to avoid sites with the potential for impacts.

Differences among alternatives: Not applicable; proposed only for Alternative 5.

8.2.10 Amendment 10 (Jemez District—Management Area R)

Description: Allow motorcycle use along FT424 (Medio Dia Trail).

Justification: To accommodate having the motorized trail.

Proposed for: Alternative 4.

Evaluation of Effects: None, if the mitigation measures for routes (motorized trails) (see Section 6.1.1.1 above) are followed. The potential for vehicular impacts from the current use of the presently unauthorized route will continue. (The route is currently designated for non-motorized use only, but is receiving unauthorized motorized use by motorcycles.) The potential for impacts may increase as this route is designated and travel along the route increases (up to a 20 percent increase; see Recreation Specialist report). If substantial impacts to cultural resource sites are identified, the alignment of the route will be modified to avoid sites, the route will be dropped from the alternative, or other site treatment measures such as plating will be put in place.

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Table 8.3. Proposed Forest Plan Amendments with the Potential to Affect Cultural Resources

#	Proposed Amendment	Justification	District- Management Area	Amendment Proposed for:			
				Alt. 2	Alt. 3	Alt. 4	Alt. 5
1	Transfer 107.1 to 216.1 acres (Sections 20, 21, 29 and 30, T26N, R1W) from the Wolf Draw management area I to management area R to allow 150' corridors for the purposes of motorized dispersed camping and motorized big game retrieval only. The corridors must have NHPA clearance for cultural resources before designation.	To accommodate the current motorized dispersed camping occurring in this area.	Cuba-I	X		X	
2	Transfer 78.7 to 155.1 acres (Sections 4 and 5, T25N, R1E; and Section 32, T26N, R1E) from in the Rattlesnake Ridge management area I to management area R to allow 150' corridors for the purposes of motorized dispersed camping and motorized big game retrieval only. The corridors must have NHPA clearance for cultural resources before designation.	To accommodate the current motorized dispersed camping occurring in this area.	Cuba-I	X		X	
3	Change 0.15 acres (Section 6, T22N, R5E [projected]) of the Tsi'Ping management area I to management area G.	The boundary of the Tsi'Ping I area is on top of the mesa, whereas the road in question is next to Cañones Creek, extending north from County Road 0198. The I area is improperly mapped.	Coyote-I	N/A	N/A	N/A	N/A

#	Proposed Amendment	Justification	District- Management Area	Amendment Proposed for:			
				Alt. 2	Alt. 3	Alt. 4	Alt. 5
4	Change 5 acres (Sections 10 and 15, T17N) of the Kotyiti management area I to management area C.	The boundary of the Kotyiti I area is on top of the mesa, whereas FR89 is in the canyon. The I area is improperly mapped.	Jemez-I	N/A		N/A	N/A
5	Transfer 94.4 to 256.4 acres (Sections 3, 9 and 15, T17N, R3E; and Sections 27, 28, 33, and 34, T18N, R3E) from the San Juan Mesa/Paliza Canyon management area I along FR 10 and FR 137 to management area P to allow 150' corridors for the purposes of motorized dispersed camping and motorized big game retrieval only. The corridors must be cleared for cultural resources before designation.	To accommodate the current motorized dispersed camping occurring in this area.	Jemez-I	X		X	X
6	Transfer 0.39 miles of unauthorized road (Sections 7, 8, and 18, T18N, R2E [projected]) from the Stable Mesa management area I to management area R.	To accommodate having the motorized route.	Jemez-I	X		X	X
7	Transfer 0.86 miles of unauthorized road (Sections 10 and 16, T18N, R2E [projected]) from the Camp management area I to management area R.	To accommodate the new route.	Jemez-I			X	
8	Allow licensed hunters to retrieve tagged down big game (elk and mule deer) with a motor vehicle in the areas shown on the motor vehicle use map during hunting season only. Retrieval is defined as one trip in and one trip out using the most direct path available to the animal.	Provides access to important cultural and subsistence activity; dispersed nature of use is not expected to cause resource impacts.	Forest-wide-I			X	X

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#	Proposed Amendment	Justification	District- Management Area	Amendment Proposed for:			
				Alt. 2	Alt. 3	Alt. 4	Alt. 5
9	Transfer 15.1 acres (Section 28, T18N, R3E) from the San Juan Mesa/Paliza Canyon management area I to management area P to allow a 150' corridor in along FR 269BB for the purposes of motorized dispersed camping and motorized big game retrieval only. The corridor must have NHPA clearance for cultural resources before designation.	To accommodate the current motorized dispersed camping occurring in this area.	Jemez-I				X
10	Allow motorcycle use along FT424 (Medio Dia Trail).	To accommodate having the motorized trail.	Jemez-R			X	

X=Alternative affected by amendment

N/A=Mapping correction, no substantive effect from alternative

9.0 Legal Consistency

National Historic Preservation Act of 1966 (NHPA)

The National Historic Preservation Act (P.L. 89-665, 80 stat. 915), first passed in 1966, established the U.S. policy of preserving history, while balancing that preservation with concerns for current, efficient use of property. The act set a framework for national historic preservation policy, including a provision for a National Register of Historic Places. This act forms the basis for requiring the Forest Service to evaluate the effects of designation on cultural resources or historic properties. Section 106 [16 U.S.C. 470f-Advisory Council on Historic Preservation, comment on Federal undertakings], although a short section of the act, forms the basis for requiring agency compliance with NHPA. The process is codified in 36 CFR 800. All alternatives are consistent with NHPA because all actions that have the potential to affect cultural resources will comply.

36 CFR Part 800-Protection of Historic Properties (incorporating amendments effective August 5, 2009)

This body of regulations forms the guidance and procedures for meeting Section 106 of the National Historic Preservation Act. These regulations outline the process to be used to implement NHPA and form the basis for guidance for making determinations regarding effects to cultural resources. All alternatives are consistent with these regulations because all actions that have the potential to affect cultural resources will comply.

Archaeological Resources Protection Act 1979 (ARPA)

ARPA protects archaeological resources on public lands and Indian lands. The purpose of this Act is to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained before the date of the enactment of this Act. All alternatives are consistent with ARPA because no activities proposed by the alternatives have the potential to violate the protection requirements of ARPA.

Native American Graves Protection and Repatriation Act 1991(NAGPRA)

NAGPRA provides a process for museums and Federal agencies to return certain Native American cultural items -- human remains, funerary objects, sacred objects, and objects of cultural patrimony - to lineal descendants, culturally affiliated Indian tribes, and Native Hawaiian organizations. All alternatives are consistent with NAGPRA as actions described in the alternatives will comply with the requirements of NAGPRA.

American Indian Religious Freedom Act 1978 (AIRFA)

United States federal law and a joint resolution of Congress which pledged to protect and preserve the traditional religious rights of American Indians, Eskimos, Aleuts, and Native Hawaiians. The Act does not have any implementing regulations. Many times issues concerning religious issues for American Indians or Native Americans are addressed through NHPA via consultation on Traditional Cultural Properties. The lack of implementing regulations for AIRFA makes it difficult for the alternatives to be consistent. The law acts as a mechanism for agencies to at least consider issues included in the legislation. Frequently, issues arising from AIRFA concerns are addressed through the Section 106 process and from that perspective all alternatives are consistent with AIRFA.

Religious Freedom Restoration Act 1993(RFRA)

United States federal law aimed at preventing laws which substantially burden a person's free exercise of their religion. This act addresses religious freedom for every citizen and not just for Native Americans. It has been used to address some issues associated with the practice of Native American religion on Forest lands. All alternatives are consistent with the intent of RFRA in that issues arising from religious concerns receive consideration during the Section 106 process.

Executive Order 13007

E.O. 13007 requires Federal land managing agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. In addition to NHPA the Forest considers the requirement for consultation to address concerns regarding EO 13007. All alternatives are consistent with EO 13007 in that the Section 106 process acts as a proxy for addressing issues of access and effects to ceremonial and sacred sites by tribal practitioners.

Executive Order 13175

E.O. that requires consultation and coordination with Indian Tribal governments in order to establish regular and meaningful consultation and collaboration with Indian tribal governments in the development of regulatory practices on Federal matters that significantly or uniquely affect their communities; to reduce the imposition of unfunded mandates upon Indian tribal governments; and to streamline the application process for and increase the availability of waivers to Indian tribal governments. All alternatives are consistent with EO 13175 because the requirements of NEPA and NHPA will ensure that tribal communities are consulted before designation occurs.

Region 3 Programmatic Agreement

The Region 3 programmatic agreement is a document that is authorized under 36 CFR 800.14 concerning Federal agency program alternatives to completing the Section 106 process. In many cases the programmatic agreement provides for a streamlined procedure to Section 106 requirements. Of specific concern for this project is the provision in Section IV.4 of the Agreement regarding the development of standard consultation protocol for conducting certain classes of undertakings where effects on historic properties and resulting protection and

treatment measures are similar and repetitive. The Agreement has stipulations that cover Management of Historic Properties, Public Participation, Tribal Consultation, Programmatic Consultation, Consultation Procedures, Post-review Discoveries, Council Participation, SHPO Participation, Data Sharing, Personnel, Training, Dispute Resolution, Monitoring, Amendments, Suspension for Cause, Termination, Execution and Implementation. If the Protocol developed for a class of project does not address an issue then the language in the Programmatic Agreement applies. Because of the requirements of Section 106 all alternatives are consistent with the requirements of the Region 3 programmatic agreement.

Standard Consultation Protocol for Travel Management Route Designation

This protocol was developed per the Section IV.4 of the Region 3 Programmatic Agreement in order to facilitate Section 106 consultation for Travel Management Route Designation on Forests in Region 3. The Protocol provides for certain exemptions to consultation or review and outlines requirements for situations requiring consultation. It also includes stipulations for public involvement, tribal consultation, planning, inventory requirements, phasing, protection measures, resolving adverse effects, reports, consultation procedures, monitoring, discovery situations, related activities requiring consultation, annual review, modification, cancellation and implementation. Because of the requirements of Section 106 all alternatives are consistent with the requirements of the Region 3 programmatic agreement.

10.0 Forest Plan Consistency

The following table portrays areas where there may be issues in consistency between the Forest Plan and the proposed alternatives.

Table 10.1 Consistency of Alternatives with Forest Plan			
Page	Applicable Forest Plan text	Consistent?	Reason
8	Nearly 38,000 acres will be allocated specifically to cultural resource management, excluding major land disturbing activities	Yes	No major land disturbing activities are proposed under the Travel Management Rule
17	Identification, protection, and maintenance of the historical, cultural and religious sites found within the Forest: and	Yes	Consistent with requirements of NHPA
17	Understanding of the importance of access to those sites for Native American	Qualified Yes	The Alternatives provide for differential access to traditional sites.

Table 10.1 Consistency of Alternatives with Forest Plan

Page	Applicable Forest Plan text	Consistent?	Reason
	people		Some access maybe restricted.
19	Inventory, protect, evaluate, nominate, interpret and enhance cultural resources	Yes	Consistent with requirements of NHPA and the R-3 Programmatic Agreement
22	Manage Forest activities and programs within the capability of the land while recognizing the value of maintaining the traditional cultures of Northern New Mexico	Qualified Yes	The Alternatives provide for differential access to resources although some access may be restricted by the alternatives.
52	Criteria for restricted use or closure of an area may include:...4. Disturbance of known Native American religious or cultural resource sites	Yes	All alternatives are in compliance with NHPA which will avoid adverse effects.
59	The following guidelines are provided to coordinate Native American cultural needs with other resource management activities...	Yes	Consultation is ongoing with tribes with traditional and cultural ties to lands on the Santa Fe
59	The Forest will comply with the National Historic Preservation Act of 1966, as amended and 36 CFR 800 regulations.	Yes	All alternatives are in compliance with NHPA.
60	Assess the potential effects of proposed actions upon cultural resources.	Yes	The Forest is conducting surveys and completing evaluations of effects to cultural resources

Table 10.1 Consistency of Alternatives with Forest Plan

Page	Applicable Forest Plan text	Consistent?	Reason
			associated with all alternatives.
61	Protect all sites listed in, nominated to, eligible for or potentially eligible for the NHRP.	Yes	The decision to be made will ensure that there will be No Historic Properties Affected or No Adverse Effect to Historic Properties.
135	Emphasis (in I-Areas) is on providing active management of the cultural resources including protection, stabilization, interpretation, evaluation and opportunities for research.	Yes	Portions of alternatives that are located in or pass through I-Areas will be managed in accordance with plan standards and guidelines.
136	Existing roads (in I-Areas) through important sites will be evaluated for the possibility of closure or realignment. All sites listed on the NRHP will be evaluated for mineral withdrawal and closed to ORV use.	Yes	Evaluation of this will be conducted during the compliance report process and NRHP locations with issues will be managed to meet this direction.
136	Motorized travel (in I-Areas) is allowed only on open roads. Cross country travel is prohibited, except under the terms of a special use permit.	Yes	Amendments have been proposed that would authorize cross-country travel in dispersed camping areas and authorize existing unauthorized routes making the alternatives consistent with the Forest plan. The plan is silent on whether system roads through I-areas are

Table 10.1 Consistency of Alternatives with Forest Plan

Page	Applicable Forest Plan text	Consistent?	Reason
			appropriate and assumption is that they are.
137	(In I-Areas) Roads will not be constructed except where necessary for permitted special uses, mineral activities, private land access, to access adjacent management areas where other reasonable access is not available or to support cultural resource management.	Yes	No new roads will be constructed as a result of designation
137	(In I-Areas) Road management will be implemented with the objective of closing all unnecessary roads where they currently exist.	Yes	All alternatives propose to close or not designate unnecessary roads.
157	(In Management Area P) Roaded dispersed recreation experiences are emphasized.	Yes	Forest plan amendment would change this language to make it compatible with the Travel Management rule and other guidance offered in the Santa Fe's direction for travel management.
158	(In Management Area P) Existing roads through important sites will be evaluated for the possibility of closing or realignment. All sites listed on the NRHP will be evaluated for	Yes	Evaluation of this will be conducted during the compliance report process and NRHP locations with issues will be managed to meet this direction.

Table 10.1 Consistency of Alternatives with Forest Plan

Page	Applicable Forest Plan text	Consistent?	Reason
	mineral withdrawal and closed to ORV use.		
158	These lands (In Management Area P) are generally open to ORV travel except for the restrictions and closures displayed on the ORV map.	Yes	Forest plan amendment would change this language to make it compatible with the Travel Management rule and other guidance offered in the Santa Fe's direction for travel management.
160	Road use will be managed with the objective of limiting open road density to 1.0 to 2.5 miles per square mile.	Yes	Forest plan amendment will clarify this language.
162	(In Management Area Q) Existing roads through important sites will be evaluated for the possibility of closing or realignment. All sites listed on the NRHP will be evaluated for mineral withdrawal and closed to ORV use.	Yes	Evaluation of this will be conducted during the compliance report process and NRHP locations with issues will be managed to meet this direction.
163	These lands (In Management Area Q) are generally open to ORV travel except for the restrictions and closures displayed on the ORV map.	Yes	Forest plan amendment would change this language to make it compatible with the Travel Management rule and other guidance offered in the Santa Fe's direction for travel management.
164	Road use (in Management Area Q)	Yes	Forest plan amendment will

Table 10.1 Consistency of Alternatives with Forest Plan

Page	Applicable Forest Plan text	Consistent?	Reason
	will be managed with the objective of limiting open road density to 1.0 to 2.5 miles per square mile.		clarify this language.
166	(In Management Area R) Existing roads through important sites will be evaluated for the possibility of closing or realignment. All sites listed on the NRHP will be evaluated for mineral withdrawal and closed to ORV use.	Yes	Evaluation of this will be conducted during the compliance report process and NRHP locations with issues will be managed to meet this direction.
166	These lands (In Management Area R) are generally open to ORV travel except for the restrictions and closures displayed on the ORV map.	Yes	Forest plan amendment would change this language to make it compatible with the Travel Management rule and other guidance offered in the Santa Fe's direction for travel management.
168	Road use (in Management Area R) will be managed with the objective of limiting open road density to 0.3 to 1.5 miles per square mile.	Yes	Forest plan amendment will clarify this language.
171	(In Management Area S) Existing roads through important sites will be evaluated for the possibility of closing or realignment. All sites listed on the NRHP will be evaluated for	Yes	Evaluation of this will be conducted during the compliance report process and NRHP locations with issues will be managed to meet this direction.

Table 10.1 Consistency of Alternatives with Forest Plan

Page	Applicable Forest Plan text	Consistent?	Reason
	mineral withdrawal and closed to ORV use.		
171	These lands (In Management Area S) are generally open to ORV travel except for the restrictions and closures displayed on the ORV map.	Yes	Forest plan amendment would change this language to make it compatible with the Travel Management rule and other guidance offered in the Santa Fe's direction for travel management.
173	Road use (in Management Area S) will be managed with the objective of limiting open road density to 0.3 to 1.5 miles per square mile.	Yes	Forest plan amendment will clarify this language.
Managing Special Status Species Habitat Amendment	No specific language related to Cultural Resources	N/A	N/A
Final Pecos Wild and Scenic River Management Plan Amendment	Use education and interpretation as the primary means of protecting heritage resources	N/A	N/A
East Fork Jemez Wild and Scenic River Management Plan Amendment	Use education and interpretation as the primary means to protect heritage resources, by increasing appreciation and respect for historic and prehistoric sites.	N/A	N/A
Jemez National Recreation Area Management Plan	-Ensure protection of religious and cultural sites and provide access to those sites by Indian peoples for traditional cultural	Yes	Language in this document and the requirements of Federal law will ensure these guidelines are met.

Table 10.1 Consistency of Alternatives with Forest Plan

Page	Applicable Forest Plan text	Consistent?	Reason
	<p>and customary uses (PL 103-104, Sec. 2[d]).</p> <p>-When making or identifying archaeological sites to be protected during project implementation, consider options other than paint.</p> <p>-Strive to maintain the character of the Civilian Conservation Corps (CCC) facilities through the use of similar materials and design elements.</p>		Decision to arrive at No Adverse Effect determination will comply with the guidelines in the JNRA amendment.

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