

Cultural Resources

Introduction

The Congress in 1966 declared it to be our national policy that the Federal Government “administer Federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generations” (National Historic Preservation Act (NHPA) (16 U.S.C. 470-1(3)). This need was made more explicit when the National Historic Preservation Act was amended in 1980 and Section 110 was added to expand and underscore Federal agency responsibility for identifying and protecting historic properties and avoiding unnecessary damage to them. Many historic properties are fragile and once damaged or destroyed; they cannot be repaired or replaced.

Section 106 of the NHPA compels Federal agencies to take into account the effect of its undertakings on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (36 CFR 60) (Historic Properties). The Travel Management Rule requires that the effects on cultural resources be considered, with the objective of minimizing damage, when designating roads, trails, and areas for motor vehicle use on National Forest lands (36 CFR 212.55(a), 212.55(b)(1)).

Cultural resources provide information on the Forest’s unique prehistoric and historic ethnic heritage, including evidence of several American Indian groups (the Pit River Tribe, Modoc-Klamath, and Northern Paiute) and their predecessors. In addition to providing archaeological evidence of past lifeways and adaptation to the environment, cultural resources also lend a historic perspective on today’s technological and sociological change.

Cultural resources are buildings, sites, areas, architecture, memorials, and properties having scientific, historic, and cultural importance. Cultural resources comprise an irreplaceable and non-renewable resource relating to past human life. Physical remains of over 11,000 years of human history are found throughout the Modoc National Forest (Gates 1983). Except for the last 180 years of written history, the only record of this long, unwritten history are the abandoned villages, camps, and other remains left by the native prehistoric peoples and their descendants.

Paleo-Indians were the earliest inhabitants of the Forest who lived 10,000 to 11,000 years ago at the end of the last Ice Age. Using fluted projectile (spear or dart) points, they hunted big game such as mammoth, bison, ground sloth and other extinct animals. Little evidence of this period has been found.

Indian peoples who lived in this area about 8,000 years ago left abundant evidence of their habitation. Most prehistoric archaeological sites contain surface materials (chipping debris and projectile points) spanning the last 4,000 to 6,000 years. During this period, various native cultures specialized in their adaptations to locally available resources.

Today, the Modoc-Klamath, Northern Paiute, and Pit River Indian tribes are the principal occupants of the area. All followed a “hunting and gathering,” semi-sedentary existence. Groups seasonally inhabited settlements, and generally returned to the same village sites and camping spots year after year. Food resources were used on a seasonal basis whenever and wherever they occurred. These groups still use the Forest area today for the collection of various plant resources for basketry, food, and medicines, and continue to access and use certain locations for continuing traditional cultural and religious practices (Allison 1994, Roybal-Evans 1982, USDA Forest Service 2007).

Prehistoric site types on the Forest range from winter village complexes to scattered hunting stations, tool-manufacturing sites, and plant processing areas. They also include petroglyphs, pictographs, bedrock mortars, rock shelters, caves and obsidian and basalt toolstone quarries. Of particular significance are the well-know obsidian quarries in the Medicine Lake Highlands and the Warner Mountains, and the numerous rock art sites within the Devil's Garden area.

Hudson's Bay Company fur trappers, who came in the late 1820s, were the first Euro-American explorers in the area. In the 1840s and 1850s, explorers made topographic and railroad surveys. Throngs of emigrants streamed toward Oregon and California farmlands and gold fields on their way into or through Modoc County.

By the 1860s, white settlers in Oregon and California wanted the Klamath and Modoc Indians moved to a reservation and the rest of their traditional territory opened for settlement. The treaty of 1864 established the Klamath Indian Reservation for the Klamath, Modoc and Yahooskin (Northern Paiute) Indians. The Modoc War (1872-1873) effectively ended Indian and white hostilities in the area.

Settlement of the area rapidly increased in the 1870s and 1880s. Sawmills, mining operations, and ranching businesses were soon in full operation. Ranching and limited logging activities continue to be the major economic focus of Modoc County.

The most common historic sites on the Forest are homesteaders' cabins and ranchers' line shacks; mining-related sites; logging railroads and camps and dumps; and emigrant trails and wagon roads (i.e., Applegate, Lassen and Burnett emigrant trails). Of particular importance are several sites associated with the Modoc War of 1872-1873 located in the northwestern portion of the Forest outside of the Lava Beds National Monument. An intense period of Indian-white hostilities is also represented by reputed massacre sites at Fandango Valley and Bloody Point.

Historic ethnic groups – American Indian, Basque, Euro-American, and Chinese – made significant contributions to the local ranching, dairy, logging and mining industries. Ethnic sites include American Indian religious, cultural and resource gathering sites, Basque aspen carvings (dendroglyphs), and Chinese occupation sites. The Civilian Conservation Corps has left its unique legacy on the Forest in the form of roads and trails, fire lookouts, administration sites, recreation facilities, former camp locations and wildlife and fisheries projects. In addition, the Forest was the scene of an early twentieth-century gold rush in the High Grade Mining District in the Warner Mountains.

Collectively, all of the Forest's heritage and cultural resources form a valuable part of the history of this area and the nation as a whole. These non-renewable resources are an irreplaceable part of the fabric of the nation.

Analysis Framework: Statute, Regulation, Land and Resource Management Plan (LRMP), and Other Direction

Direction relevant and specific to the Proposed Action as it affects cultural resources includes the following:

The Forest Service is directed to identify, evaluate, treat, protect, and manage historic properties by several laws. However, the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.) (NHPA), provides comprehensive direction to Federal agencies about their historic preservation responsibilities. Executive Order 11593, entitled Protection and Enhancement of the Cultural Environment, also includes direction about the identification and consideration of historic properties in Federal land-management decisions.

The National Historic Preservation Act of 1966 extends the policy in the Historic Sites Act of 1935 (49 Stat. 666; 16 U.S.C. 461-467) to include resources that are of state and local significance, expands the National Register of Historic Places (NRHP), and establishes the Advisory Council on Historic Preservation and State Historic Preservation Officers. NHPA Section 106 directs all Federal agencies to take into account effects of their undertakings (actions, financial support, and authorizations) on properties included in or eligible for the National Register. The Advisory Council on Historic Preservation's (ACHP) regulations (36 CFR 800) implements NHPA Section 106. NHPA Section 110 sets inventory, nomination, protection, and preservation responsibilities for Federally-owned historic properties.

The Forest Service's policy for compliance with Section 106 of the NHPA in travel management with respect to route designation for motor vehicle use, was issued in 2005: USDA Forest Service Policy for Section 106 of the NHPA Compliance in Travel Management: Designated Routes for Motor Vehicle Use (2005). This policy was developed in consultation with the Advisory Council on Historic Preservation. It outlines minimal requirements for considering possible effects to historic properties that may be associated with designating routes and areas as part of a national Forest's transportation system. This policy statement recognizes that Forests with programmatic agreements for compliance with Section 106 of the NHPA will follow the terms of those agreements.

Section 106 of the NHPA and the ACHP's implementing regulations, Protection of Historic Properties (36 CFR Part 800), require that Federal agencies take into account the effect of their undertakings on historic properties, and that agencies provide the ACHP with an opportunity to comment on those undertakings. Programmatic agreements (36 CFR 800.14(b)) provide alternative procedures for complying with 36 CFR 800. Region 5 has such an agreement: Programmatic Agreement Among the U.S.D.A. Forest Service, Pacific Southwest Region, U.S.D.A. Forest Service, Intermountain Region's Humboldt-Toiyabe National Forest, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Regarding the Process for Compliance with Section 106 of the National Historic Preservation Act for Designating Motor Vehicle Routes and Managing Motorized Recreation on the National Forests in California (2006) (Motorized Recreation Programmatic Agreement (PA)). This agreement defines the Area of Potential Effects (APE) (36 CFR 800.4(a)(1)) and includes a strategy outlining the requirements for cultural resource inventory, evaluation of historic properties, and effect determinations; it also includes protection and resource management measures that may be used where effects may occur.

Executive Order 11593: Protection and Enhancement of the Cultural Environment, issued May 13, 1971, directs Federal agencies to inventory cultural resources under their jurisdiction, to nominate to the National Register of Historic Places all Federally owned properties that meet the criteria, to use due caution until the inventory and nomination processes are completed, and to assure that Federal plans and programs contribute to preservation and enhancement of non-Federally owned properties.

According to the Modoc National Forest Land and Resource Management Plan (LRMP 1991) the following standards (S) and guidelines (G) are designed to facilitate proper identification and management of the Forest's cultural resources:

1. (S) Inventory to identify cultural resource properties prior to any project, activity or license which may affect significant cultural resources consistent with the National Historic Preservation Act of 1966 (as amended) and other pertinent laws and regulations. Adjustments will be made to projects to comply with cultural resource laws.
2. (S) Evaluate cultural resources to determine National Register of Historic Places eligibility.

3. (S) Conserve properties that have been designated on, or are eligible for designation to, the National Register of Historic Places. (Eligibility is assumed if evaluation is incomplete.)
4. (G) Provide for the use and enhancement of cultural resources for educational, scientific, recreational, and other public purposes to the extent consistent with management requirements.
 - a. Interpret significant cultural resources through signing, brochures, displays, self-guided tours, and programs. Treat and interpret significant cultural resources appropriate to their assessed value and associated level of public interest.
 - b. Continue cooperative efforts with local groups such as the Modoc County Historical society.
5. (S) Protect access and use of sites and locations important to traditional American Indian religious and cultural practices consistent with the American Indian Religious Freedom Act of 1978.
6. (G) Protect cultural resources largely by directing activities or use away from sensitive areas, by maintaining confidentiality, and by informing Forest users of cultural resource protection requirements.

The Forest LRMP had listed as program goals for 1990-1999 the following for cultural resources:

- Protect and manage cultural resources as a non-renewable resource.
- Complete an inventory and evaluation of the Forest's cultural resources by 2050.
- Provide information for public education and enjoyment of the Forest's cultural resources.
- Protect access and use of sites and locations important to traditional American Indian religious and cultural practices.

Effects Analysis Methodology

Each individual route was assessed by either undertaking actual new on-the-ground inventories or using data from prior adequate archaeological surveys. In some instances the actual inventories have been deferred as per specifications within the Motorized Recreation Programmatic Agreement (2006) with the State Historic Preservation Office. Deferred inventory routes are known or believed to receive light use of fewer than 25 vehicles per week. Generally, the overall use of most unauthorized, routes on the Forest; fall within the light use category with overall average use of far less than 25 vehicles per week on average throughout the year. Many of these roads are simply not drivable during some fall, winter, and spring months due to snow cover or muddy conditions. Their main periods of use most likely are from May to November.

For the purposes of this strategy, all cultural resources within route APEs are considered historic properties, even if they have not been formally evaluated using National Register of Historic Places (NRHP) Criteria (36 CFR 60.4), unless they already have been determined not eligible in consultation with the State Historic Preservation Office (SHPO) or through other agreed on procedures (36 CFR 60.4; 36 CFR 800; CARIDAP, etc.). If designation of off-highway vehicle (OHV) routes and specifically defined areas may diminish historic property prospective NRHP values, Forests shall follow the provisions of 36 CFR 800 regarding evaluation and determination of effects, except as provided below.

NRHP evaluation, however, can be deferred for historic properties where (1) no physical damage or reasonable potential for physical damage exists, (2) effects are ambiguous and monitoring is prescribed, or (3) Standard Resource Protection Measures (cf., OHV Programmatic Agreement (PA)) can be prescribed to ensure that the values or potential values of the historic property can be protected. If effects are ambiguous (i.e., origin, age, severity, etc.), then limited-term monitoring (see Monitoring) may be employed to more fully characterize the nature of any

effects, the need for evaluation, or whether additional management measures might be implemented in lieu of NRHP evaluation or other procedures under 36 CFR 800. NRHP evaluation is required at sites where physical damage from past vehicle use is noted, and Forests cannot or will not protect properties from new or ongoing effects using prescribed protection or treatment measures listed in this strategy, the OHV PA, or other measures identified in consultation with the SHPO.

General Guidelines for Effects Analysis for Cultural Resources

The following factors were considered, in part, in making our effects determinations:

1. **Spatial:** The location of the historic property is the unit of spatial analysis when considering effects in action alternatives. For some historic properties (e.g., Traditional Cultural Property), the setting beyond the historic property's location must also be considered when determining whether an adverse effect will occur.
2. **Effects Time Frames:**
 - Short-term effects occur within one year.
 - Long-term effects occur up to 20 years.
 - Cumulative effects should be analyzed at a 20-year interval.
3. **Measurement Indicator and Rationale:** All cultural resources identified within the APE for all alternatives adding facilities to the National Forest Transportation System (NFTS) are considered historic properties for the purposes of this undertaking (Motorized Recreation PA), unless they already have been determined not eligible in consultation with the SHPO or through other agreed on procedures (36 CFR 60.4; 36 CFR 800). When assessing direct, indirect, and cumulative effects, base assessments on a historic property possessing at least one of the following NRHP values (36 CFR 60.4(a – d)) unless specific information already exists:
 - Prehistoric archaeological site: Criterion D
 - Historic archaeological sites: Criterion D
 - Historic structures: Criterion C
4. **Identify any Additional Prospective NRHP Values Where Needed (36 CFR 60.4(a)(b)).** Use of NFTS roads and trails within historic properties can be approved where such use is recommended by a professional archaeologist (i.e., there is no additional impact to the property expected through managed use of the route or area). Information about past effects can be used in determining whether continued use would cause additional effects.

When assessing effects under Section 106 of the NHPA, an undertaking can have no effect, no adverse effect, or an adverse effect. An adverse effect to a historic property can occur when an undertaking directly or indirectly causes alterations in its character or use. An adverse effect on a historic property occurs when an undertaking alters its important characteristics and is measured by the degree to which it diminishes its location, design, setting, materials, workmanship, feeling or association (Integrity Measures) (36 CFR 800.5(a)(1)). These integrity measures can also be used to characterize the nature of any potential effects, whether they are direct, indirect or cumulative effects; and their severity, whether they are negligible, minor, moderate, or major. The degree to which historic property values are diminished will be used to measure the direct, indirect and cumulative effects of motorized vehicle use on the NFTS.

A direct effect is caused by motorized vehicle uses, or the consequences of such use, including physical damage resulting in or from erosion, down-cutting, rutting, or displacement or damage to cultural features.

Indirect effects are associated with motorized vehicle uses but occur outside designated routes and areas, such as adjacent dispersed camping areas or areas where motorized travel off designated routes or areas may occur. The proximity of sensitive cultural resources, such as rock art, rock shelters, historic structures, and Traditional Cultural Properties, to designated routes or areas is important when determining where resources could be susceptible to greater threats or risks. Indirect effects could include those listed for direct effects, but also include destructive actions like vandalism and looting.

For the purposes of this project and the assumption of NRHP eligibility for all properties, it is not clearly known what the actual effects are from past and continuing use of the proposed OHV routes. It is the professional opinion of the Forest Archaeologist that, while many routes do directly pass through many archaeological sites, and so there is an effect, it is unclear if that effect is “adverse” or not. For most properties the apparent effects are relatively minor, some are negligible and a few, possibly moderate in nature. None has been clearly identified that would significantly lessen potential NRHP values. Therefore, it is proposed to implement the OHVPA recommendation where “effects are ambiguous and monitoring is prescribed” to get a more realistic idea of the nature of the actual effects. Again, given the overall “light” use of these routes by vehicles, it is unlikely that the actual direct use effects are significant.

In determining whether the proposed alternatives could have a direct, indirect, or cumulative effect on historic properties, the following factors were considered:

- Defined route or area. Is use restricted or confined to the established prism? (Road prisms are defined as the archaeological survey "corridor" examined adjacent to the actual road. The Modoc NF archaeological survey (ASR 05-09-1437: Off-Highway Vehicle Corridors. Gates, 2008) covers an area of 30 meters to either side of the physical road.) Is the road well defined with established tracks vs. interweaving, multiple tracks, or otherwise confined to established imprint by vegetation or other limiting physical features?
- Stability of ground surface. Are soils loose or friable and subject to erosion, or stable consisting of natural pavement or other hardened surface?
- Potential subsurface cultural deposits. Does the archaeological or historical site have known subsurface cultural deposits, or is it a type that is likely to have such deposits?
- Public use. Is there evidence of parking on the archaeological or historic site, or people visiting or walking on the site?
- Visibility or public attraction. Is the archaeological or historic site visible to the public, or does it possess cultural or natural features attractive to the public?

Table 3-32. Comparison of Effect Categories under NEPA and NHPA

NEPA	NHPA	Severity
None	No Effect	None – Negligible
Direct Effect	No Adverse Effect	Minor – Moderate – Major
	Adverse Effect	Minor – Moderate – Major
Indirect Effect	No Adverse Effect	Minor – Moderate – Major
	Adverse Effect	Minor – Moderate – Major
Cumulative Effect	No Adverse Effect	Minor – Moderate – Major
	Adverse Effect	Minor – Moderate – Major

If designation or use of routes could diminish the known or prospective values of a historic property, then there is a direct or indirect effect. Their use would result in the historic property

not being affected (i.e., equivalent of no adverse effect). The protection and management measures in appendix B of the Motorized Recreation Programmatic Agreement (PA) should be used where applicable and feasible to lessen or diminish identified effects. Direct or Indirect effects that cannot be treated using measures in appendix B of the Motorized Recreation PA may have an adverse effect on historic properties and require consultation with the SHPO. (A copy of the Motorized Recreation PA is available in the project record.) Where these measures are not applicable or feasible, consultation with SHPO is necessary to identify other alternative protection measures, or evaluation and determination of effects must comply with 36 CFR 800. Where there is uncertainty about possible direct or indirect effects to properties within or in proximity to the APE, including at risk properties described in the Motorized Recreation PA, monitoring may be prescribed.

Assumptions Specific to Cultural Resources Analysis

6. Unauthorized, user-created routes have already affected historic properties within road prisms.
7. Under the action alternatives, use will continue at current levels or possibly slightly increase over time on the designated system, with the prohibition of cross-country motorized travel.

Data Sources

1. Site-specific cultural resource inventories from adequate “prior coverage” inventories or from the OHV route designation project-specific inventory (ASR 05-09-1437: Off-Highway Vehicle Corridors. Gates, 2008).
2. Existing information from cultural resource records, historic archives, maps, and GIS spatial layers

Cultural Resources Indicators

- Degree to which the integrity of historic property values are diminished
- Number of historic properties within unauthorized routes at risk from ongoing use
- Average number of historic properties per acre at risk if new routes or areas are created

Recreation Resources Methodology by Action

1. Direct and Indirect Effects of the Prohibition of Cross-Country Motorized Vehicle Travel

The prohibition of motor vehicle use off designated NFTS roads would have a beneficial effect on cultural resources throughout the Forest in the short and long terms. It would curtail ongoing effects and reduce the risk and threat to cultural and historic properties that would occur if use were to continue on all unauthorized roads. It would also help eliminate potential effects resulting from the creation of any new routes if cross-country motorized vehicle use were not prohibited. Under this prohibition, most if not all future permitted or other authorized motorized vehicle travel off designated NFTS roads would be subject to NHPA Section 106 compliance, and potential effects to cultural and historic properties could be identified at that time.

Short-term time frame: 1 year

Long-term time frame: 20 years

Spatial boundary: Forest scale where motor vehicle use is not already prohibited by law (e.g., wilderness)

Indicator(s): (1) Number of historic properties within unauthorized routes at risk from ongoing use, and (2) Average number of historic properties per acre at risk if new routes or areas are created

Methodology: GIS analysis to identify (1) the number of historic properties at risk within existing unauthorized routes (estimate of ongoing direct and indirect effects curtailed), and (2) the average number of historic properties per acre that would be protected from any new routes created in the future without a prohibition (estimate of indirect effects).

Rationale: Motorized Recreation PA

2. Direct and indirect Effects of Adding Facilities

(adding presently unauthorized roads to the NFTS, including identifying seasons of use and vehicle class)

Short-term time frame: 1 year

Long-term time frame: 20 years

Spatial boundary: Location of historic property.

Indicator(s): Degree to which the integrity of historic property values are diminished, related to location, design, setting, materials, workmanship, feeling, or association

Methodology: Use existing data from cultural resource site atlas, historic archives, maps, site record files, and GIS spatial layers, and information obtained from archaeological inventories of unauthorized routes, to identify cultural resources in the APE that may have direct, indirect, or cumulative effects.

Rationale: Motorized Recreation PA

3. Changes to the Existing NFTS

(This can include deletions of facilities and changing the vehicle class and season of use)

None of these actions is considered an undertaking subject to NHPA Section 106 compliance (USDA Forest Service Policy for Section 106 of the NHPA Compliance in Travel Management: Designated Routes for Motor Vehicle Use (2005)). Motorized vehicles can already use NFTS roads. Allowing or prohibiting non-highway vehicle use would have no direct, indirect, or cumulative effect on cultural resources.

4. Cumulative Effects

Short-term time frame: not applicable; cumulative effects analysis will be done only for the long-term time frame.

Long-term time frame: 20 years

Spatial boundary: Forest administrative boundary (outside of designated wilderness). The geographic scope of the cumulative effects analysis is the project boundary. It was selected because impacts to cultural resources accumulate at the specific location of the cultural resources, irrespective of actions in surrounding areas. Due to this fixed nature of cultural resource sites, the geographical scope is limited to the Forest's administrative boundary (outside of designated wilderness).

Indicator(s): Degree to which the integrity of historic property values are diminished, related to location, design, setting, materials, workmanship, feeling, or association

Methodology: The cumulative effects of each alternative (all actions) will describe the additive impact of the alternatives to the existing Forest situation. Under the No Action Alternative, we would expect adverse impacts to be higher than under the action alternatives. Future actions – policy is to avoid effects. Stochastic effects (effects involving chance or probability), such as fire, may have impacts. However, each alternative, when added to past, present, and reasonably foreseeable future actions is not expected to cumulatively lead to increased impacts to cultural resources and historic properties

Rationale: Motorized Recreation PA

Affected Environment and Environmental Consequences

Affected Environment

As of 2008, about 7,000 archaeological (prehistoric and historic) properties have been located and recorded on the Modoc National Forest as a result of over 1,500 primarily project-related archaeological surveys in compliance with provisions of the National Historic Preservation Act. Over 350,000 acres have been adequately inventoried for archaeological properties in this process. At present, it is estimated that the Forest contains about 35,000 or more archaeological sites, primarily prehistoric, but with numerous historic sites as well. There are currently seven archaeological properties listed on the National Register of Historic Places, portions of three major emigrant trails (Applegate, Lassen and Burnett) that are part of the congressionally designated California National Historic Trail and Oregon National Historic Trail systems. Additionally, more than 900 archaeological sites have been determined to be eligible for the National Register of Historic Places, including a major portion of the Medicine Lake Highlands and several archaeological districts, and a thematic class of prehistoric archaeological site (small prehistoric “foraging and logistic locations; Gates 2007) that have potential to yield significant archaeological information. Other locations important to the past and ongoing traditional cultural (including resource gathering and collection) and religious practices of local American Indian tribes are also major cultural locations.

All of these cultural resources are in varying states of integrity – some have been severely degraded by natural processes, livestock grazing, past timber operations and other projects across the landscape, including general use of the Forest by the public for hunting and dispersed recreation activities. Existing roads bisect sites or allow unrestricted access to sites and locations containing recorded and unrecorded archaeological sites and locations of concern for American Indians.

No systematic monitoring on a Forest-wide basis has been undertaken, so there is a lacking of good baseline data for the overall condition of most of the known and recorded archaeological resources on the Forest. Project-specific monitoring does occur to assure that ongoing projects are not significantly or adversely affecting known archaeological resources. Generally, however, most prehistoric archaeological sites appear to be in good condition, with most effects being related to natural weathering processes, and secondarily by effects from livestock grazing and man-made actions.

On an “as-needed” basis in support of various undertakings, as per Section 106 direction, numerous archaeological sites have been evaluated for eligibility to the National Register of Historic Places and either protected from undertaking effects, or have had the effects mitigated. In the past this has been primarily for third-party related undertakings such as natural gas pipelines, electrical transmission lines, and a military defense installation. However, within the past few years there has been a significant increase in Section 110 evaluations for the NRHP.

Environmental Consequences

The environmental consequences for the unauthorized user-created routes have been identified and analyzed based on the nature of the effect that the routes have, or are believed to have, on the associated archaeological sites. The nature of effect varies greatly depending upon how each site is associated with a route. For example, a site may be bisected by a route, it may be adjacent to a route (within 30 meters of either side of the route), it may be adjacent or bisected and have a dispersed recreation camp site (hunters' camp) associated with it, it may have past wood-cutting activity present, etc. Table 1 in Appendix I shows the affected sites within the Proposed Action and the perceived effects. A "direct effect" means that the route actually crosses the site or some associated activity, such as a hunters' camp, and is directly on the site. An "indirect effect" means that the site is adjacent to the road and that there may be signs that users of the road are somehow affecting the site ("pot hunting" or looting); and "none" means that the site is adjacent to the route, but there is no evidence that it has been affected. Cumulative effects are the anticipated effects that would occur through time to sites that continue to be accessible by these routes.

As a note, for the most part, no significant "erosion" was noted on any of the sites visited; this may be due to the relatively flat nature of most of the Forest. The "rutting" may range from very minor visible "two-track traces" to very deep ruts caused by using the road in mudding conditions creating ruts up to 10-20 centimeters in depth. Generally, the overall use of these routes by OHVs and other vehicles is very light, with few roads appearing to get any major use. Also of note are the routes to be added that are actually access and/or maintenance roads for power lines (e.g., COTP, BPA Malin-Warner, WAPA), natural gas transmission lines (e.g., PGT-PG&E and Tuscarora), and the OTH-B Radar Installation. All of the associated sites, if directly affected by these routes, have been subjected to evaluation for the National Register of Historic Places and were either determined to be ineligible and therefore, not affected, or they were determined eligible and had data recovery undertaken as mitigation for the affect. Continued use of these routes by the public, however, could continue to affect those sites determined to be eligible, and still substantially intact and adjacent to the routes.

For the "Severity of Effect" column in appendix I, we have used negligible, minor, moderate, or major. Only the "major" category has the potential to significantly affect potential NRHP eligibility criteria to the point that the eligibility status may be jeopardized. Both the "major" and "moderate" categories may warrant the use of protection measures to lessen or mitigate the effects. For the most part, monitoring is recommended for these sites to determine the exact nature of the effects and to enable the decision as to what would be the best or most practicable mitigation measure to implement on a site-by-site basis. All recorded archaeological sites associated with proposed routes are listed in the following table even if determined ineligible for the NRHP for a previous undertaking. Sites ineligible for the NRHP and sites determined to be unaffected by the route designations will not be proposed for monitoring of effects of the route designations. Routes that have deferred inventory under the Motorized Recreation PA and have known or suspected recorded sites associated with them, but did not have the sites field verified, have the site identified for relocation to confirm their association and assess the nature of potential route effects.

Tribal consultation has not identified any significant effect on access to or use of traditional plant-gathering and collection areas or areas of other traditional cultural practices or religious uses.

See the effects methodology section above regarding how this analysis was conducted.

Alternative 1 – No Action

Direct and Indirect Effects: The effects under this alternative would result in a “status quo”, in that any effects occurring at present to cultural and archaeological resources would persist into the future. The creation of new unauthorized roads cross-country would result in the potential for effects on additional cultural and archaeological resources as new areas are opened up and made accessible by the routes. New roads would continue to run across archaeological sites resulting in surface disturbances, some possible erosion activity, establishment of new camping locations on sites and the illegal collection of surface artifacts, woodcutting activities, and threats to cultural and archaeological features and historic structures, etc. At present there are 374 archaeological sites associated with 347 of the total of 1,660 unauthorized routes. One year and 20-year effects would be similar, with some user-created effects continuing on some of the archaeological sites.

Cumulative Effects: The cumulative effects of this action would result in the continuation of the creation of new unauthorized routes. This would continue to open up new areas that may subject cultural and archaeological resources to potential impacts and vandalism that are now relatively protected by their present inaccessibility by motor vehicle. Thus, the lessening of cultural and archaeological values by public impacts would continue at its present pace, and more resources would continue to be placed in jeopardy.

Alternative 2 – Proposed Action.

Direct and Indirect Effects: This action would allow for the reduction in impacts to cultural and archaeological resources by prohibiting cross-country travel which includes the use of some unauthorized routes that are affecting resources. When effects on sites are currently considered to be negligible or minor; monitoring done for a period of three years on a random sample of sites, will be used for the identification of any further effects. Possible effects might be looting, rutting, or those caused by camping on the sites. The information gathered from monitoring will be the basis for the design of measures used to lessen those effects. Possible measures to lessen the effects might be closing the route, rerouting the road or closing the area to camping. Additionally the closure of FS RD 46B29HB would help to lessen the known negative effects to cultural and archaeological resources in that vicinity. Specifying periods of use for certain roads may reduce or prevent serious “rutting” of the roads through archaeological sites and lessen some amount of artifact displacement and disturbance. There may be some increase in effects to the archaeological sites associated with the routes being added to the NFTS as a result of increased use due to the ban on cross-country travel and the creation of new routes. Overall, however, this alternative should reduce negative effects on cultural and archaeological resources across the Forest and limit the creation of new effects to sites not currently associated with a route due to the ban on cross-country travel. At present there are 234 archaeological sites associated with 195 of the total of 1,168 unauthorized routes proposed for adding to the NFTS. One-year and 20-year effects would be similar, with effects continuing on some of the archaeological sites associated with designated routes; those sites associated with routes not designated for use should have reduced effects.

Cumulative Effects: This action would allow for the continued reduction of potential impacts to cultural and archaeological resources by banning cross-country travel. Additionally, the closure of FS RD 46B29HB would help to lessen the known negative effects to cultural and archaeological resources in that vicinity. By specifying periods of use for certain roads, this action may reduce or prevent serious “rutting” of the roads through archaeological sites and lessen some amount of artifact displacement or disturbance. Overall, this alternative should reduce negative effects on cultural and archaeological resources across the Forest.

Alternative 3

Direct and Indirect Effects: In this alternative cross-country travel would be prohibited which includes the use and creation of unauthorized roads. At present there are 374 archaeological sites associated with 347 of the total of 1,660 unauthorized routes. This action would allow for the reduction of potential impacts to cultural and archaeological resources associated with these routes. This alternative does not close FS RD 46B29HB, therefore the known negative effects to cultural and archaeological resources would continue in that vicinity.

Cumulative Effects: This action would reduce potential impacts to cultural and archaeological resources by banning cross-country travel which includes the use of unauthorized routes. Additionally, keeping FS RD 46B29HB open for public use would perpetuate the known negative effects to cultural and archaeological resources in that vicinity.

Alternative 4

Direct and Indirect Effects: This action would allow for the reduction in impacts to cultural and archaeological resources by prohibiting cross-country travel which includes the use of certain routes that are affecting resources. When effects on sites are currently considered to be negligible or minor; monitoring done for a period of three years on a random sample of sites, will be used for the identification of any further effects. Possible effects might be looting, rutting, or those caused by camping on the site. The information gathered from monitoring will be the basis for the design of measures used to lessen those effects. Possible measures to lessen the effects might be closing the route, re-routing the road or closing the area to camping. Additionally the closure of FS RD 46B29HB would help to lessen the known negative effects to cultural and archaeological resources in that vicinity. By specifying periods of use for certain roads, this action may reduce or prevent serious “rutting” of the roads through archaeological sites and lessen some amount of artifact displacement or disturbance. Overall, this alternative should reduce negative effects on cultural and archaeological resources across the Forest. At present there are 209 archaeological sites associated with 181 of the total of 1,024 unauthorized routes to be added to the NFTS. One-year and 20-year effects would be similar, with some user-created effects continuing on some of the archaeological sites associated with designated routes; those sites associated with routes not designated for use should have reduced effects.

Cumulative Effects: This action would allow for the continued reduction of potential impacts to cultural and archaeological resources by banning cross-country travel. Additionally, the closure of FS RD 46B29HB would help to lessen the known negative effects to cultural and archaeological resources in that vicinity. By specifying periods of use for certain roads, this action may reduce or prevent serious “rutting” of the roads through archaeological sites and lessen some amount of artifact displacement or disturbance. Overall, this alternative should reduce negative effects on cultural and archaeological resources across the Forest

Alternative 5

Direct and Indirect Effects: This action would allow for the reduction in impacts to cultural and archaeological resources by prohibiting cross-country travel which includes the use of certain routes that are affecting resources. When effects on sites are currently considered to be negligible or minor; monitoring done for a period of three years on a random sample of sites, will be used for the identification of any further effects. Possible effects might be looting, rutting, or those caused by camping on the site. The information gathered from monitoring will be the basis for the design of measures used to lessen those effects. Possible measures to lessen the effects might be closing the route, re-routing the road or closing the area to camping. Additionally, the closure of FS RD 46B29HB would help to lessen the known negative effects to cultural and archaeological resources in that vicinity. By specifying periods of use for certain roads, this

action may reduce or prevent serious “rutting” of the roads through archaeological sites and lessen some amount of artifact displacement or disturbance. There may be some increase in effects to the archaeological sites associated with the routes being added to the NFTS as a result of increased usage. Overall, however, this alternative should reduce negative effects on cultural and archaeological resources across the Forest and limit the creation of new effects to sites not currently associated with a route due to the ban on cross-country travel. At present there are 234 archaeological sites associated with 195 of the total of 1,168 unauthorized routes proposed for adding to the NFTS. One-year and 20-year effects would be similar, with some user-created effects continuing on some of the archaeological sites associated with designated routes; those sites associated with routes not designated for use should have reduced effects.

Cumulative Effects: This action would allow for the continued reduction of potential impacts to cultural and archaeological resources by banning cross-country travel. Additionally, the closure of FS RD 46B29HB would help to lessen the known negative effects to cultural and archaeological resources in that vicinity. By specifying periods of use for certain roads this action may reduce or prevent serious “rutting” of the roads through archaeological sites and lessen some amount of artifact displacement or disturbance. Overall, this alternative should reduce negative effects on cultural and archaeological resources across the Forest.

Summary of Effects Analysis Across all Alternatives

Based upon the ranking of alternatives and their potential to affect cultural and archaeological resources it appears that both the Proposed Action (Alternative 2) and Alternative 5 have equal ranking. The alternative with the most continuing effects on cultural and archaeological resources is the No Action Alternative (Alternative 1). Alternative 3 could have been ranked higher if it actually “closed” all of the unauthorized routes. This alternative does *not* include these routes on the MVUM for the Forest. The assumption is that these routes will no longer be used by the public.

Figure 3-19. Number of Unauthorized Routes to be Added, by Alternative

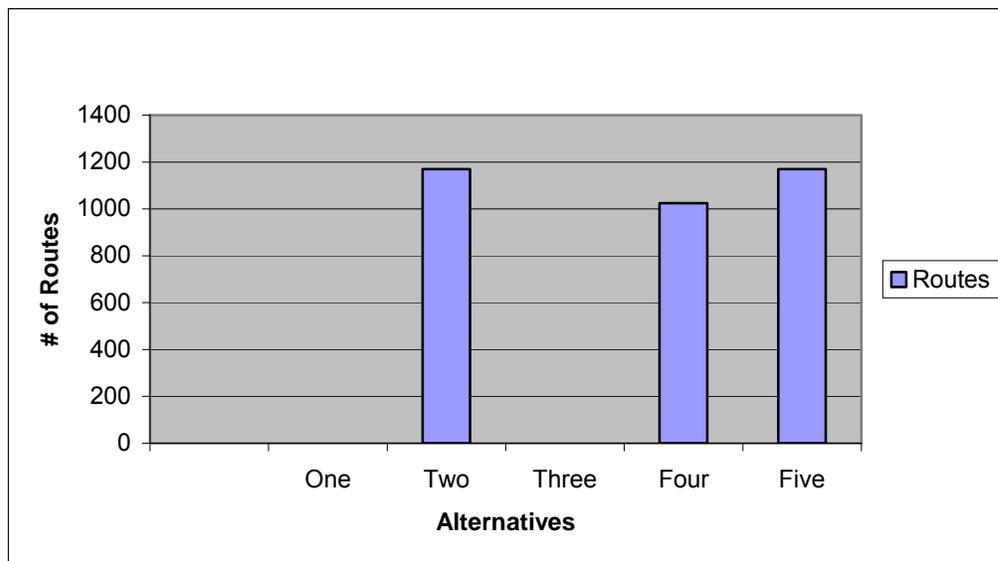


Figure 3-20. Comparison of Number of Potentially Affected Sites Across all Alternatives

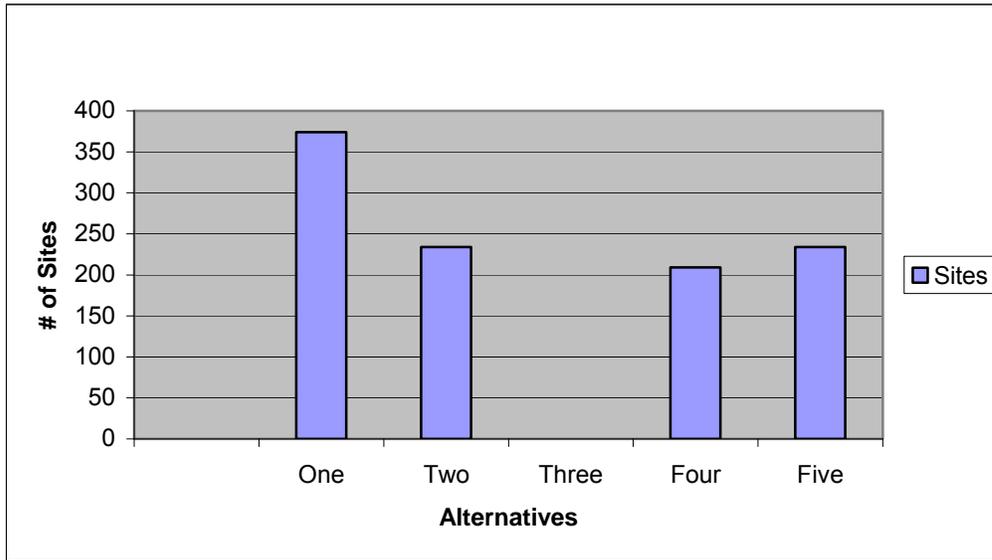


Table 3-33. Summary of Effects Analysis Across all Alternatives

Indicators – Cultural Resources	Rankings of Alternatives for each Indicator ¹				
	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
Degree to which the integrity of historic property values are diminished	1	4	4	4	4
Number of historic properties within unauthorized routes at risk from ongoing use	1	2	4	4	2
Average number of historic properties per acre protected from creation of new routes	1	5	5	5	5
Average for Cultural Resources	1	3.7	4.3	4.3	3.7

1. A score of 5 indicates the has the least impact for cultural resources related to the indicator; a score of 1 indicates the alternative has the highest impact for cultural resources related to the indicator.

Compliance with the LRMP and Other Direction

All proposed alternatives would be in compliance with LRMP standards and guidelines and existing historic preservation law, policy and regulation to the extent that the Forest is in current compliance with those regulatory directions. As with all compliance-related measures, funding is a key factor in the Forest’s ability to fully comply with directions.