



**CENTER FOR  
DESERT  
ARCHAEOLOGY**

*a nonprofit corporation*

March 15, 2011

William H. Doelle, Ph.D.  
*President and CEO*

Chief Tom Tidwell  
U.S. Forest Service  
1400 Independence Ave., SW  
Washington, D.C.  
20250-0003

Dear Chief Tidwell:

Re: Travel Management, Implementation of 36 CFR, Part 212, Subpart A (36 CFR 212.5(b))

Dear Chief Tidwell:

The Center for Desert Archaeology is a non-profit organization operating in Arizona, New Mexico and portions of Mexico. For 25 years, we have pursued our mission to preserve the places of our shared past on behalf of all who find meaning in such places. To this end, the Center strives to:

- *conduct research that addresses questions of broad interest and connects people of today with the past;*
- *enable people to explore and learn about the Southwest's past through creative and varied means; and*
- *achieve long-term protection of our cultural heritage—archaeological sites, historic buildings, and cultural landscapes—in the Greater Southwest, including promoting a stewardship ethic with the public and professionals.*

Through a recent partnership with the National Trust for Historic Preservation, we have extended our capacity to promote the long-term protection of our cultural heritage. Working with private and public landowners, we are exploring ways to better protect our cultural heritage while meeting their needs and responsibilities as landowners and managers.

Towards this end, we are very pleased with the United States Forest Service initiative to “right-size” the National Forest road system as outlined by Deputy Chief Holtrop in his recent guidance dated November 10, 2010 directing the use of the travel analysis process (TAP) described in Forest Service Manual 7712 and Forest Service Handbook (FSH) 7709.55, Chapter 20. Here in the Southwest, it is our experience that cultural resources on public lands are most threatened, at least in a collective sense, from

300 N. Ash Alley  
Tucson, Arizona 85701

(520) 882-6946

(520) 882-6948 fax

• center@cdarc.org

• www.cdarc.org

inadvertent destruction (e.g. vehicles running over sites), surface artifact collecting, looting, and in some instances, outright vandalism. These impacts are largely a reflection of the accessibility of cultural resource sites to the public which often is facilitated by trails or routes open to motorized uses. While much progress has been made over the last 30 years in protecting sites, absent increased resources to more directly manage and monitor sites on the ground and to provide increased public education, travel management becomes an essential element of the National Forest's stewardship of our Heritage resources. It may be the single most important Forest-wide action that can better steward cultural resources.

The direct impacts of vehicular travel to cultural resources are well documented and commonsensical. When vehicles drive over historic features, those features are degraded if not outright destroyed. Even for sites wholly under the ground, vehicular travel can have a direct impact through soil compaction or by increasing soil erosion which can expose buried features. Efforts underway to restrict cross country vehicular travel in National Forests through implementation of a travel management rule will provide substantial protection for cultural resources. We commend your leadership on travel management planning throughout the National Forest system.

A second, and equally pernicious, impact to cultural resources from roads open to motorized use is an indirect impact<sup>1</sup>. Simply stated, a historic site is more likely to be visited (either intentionally or unintentionally) when it is closer to a road that you can drive a vehicle on and the increased visitation often leads to increased levels of unintentional and intentional impacts associated with casual surface artifact collecting, recreational uses associated with motorized dispersed camping, vandalism and looting. This issue has not received appropriate consideration in the TAP analyses we have reviewed. We present more in-depth information on this issue and provide recommendations on consideration of cultural resource impacts in the TAP.

For unintentional visitors, driving closer to a site increases the likelihood that a visitor will encounter the site either because the site is visible from the road (e.g. building, above ground masonry features, rock shelter or cave, petroglyphs) or if they leave their vehicle, a site's proximity increases the likelihood of a chance encounter. For intentional visitors to a site (i.e. they know where the site is in advance), and for whom intentions are not good (e.g. looters/vandals), being able to drive closer provides an individual(s) an easier way in which to transport heavy, awkward or delicate artifacts as well as the implements that may be needed to excavate the site. If a site is closer to a motorized route, it is usually easier to reach the site (whether driving off road or walking), particularly at night when illegal activities are more likely to occur. A

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<sup>1</sup> CEQ defines "Effects" in the context of the National Environmental Policy Act as "direct" .... and "indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable".

looter/vandal's perceived risk of detection is less if they know they have less distance to travel to reach the site once they leave the road, and their perceived risk of capture is less if they know their vehicle will be closer at hand.

Looting remains a persistent problem on our National Forests. Apart from the natural process of degradation that all human-made features experience, we believe that looting and vandalism are the two most significant threats to cultural resources on federal lands. As such, any Forest actions that have the potential to deter looting or vandalism should receive serious and thorough scrutiny. It is our position that a decision to continue to designate an existing trail or route open to motorized travel, designating a new trail or route open to motorized use, or designating a motorized dispersed camping corridor constitutes a risk to the long-term preservation of these irreplaceable resources. With this in mind, we urge you to consider accessibility to cultural resources properties as "factors when setting up travel analysis" and more importantly as described below to identify vulnerable historic sites as risk elements in any Travel Analysis Reporting. We believe that based on the information presented below that there is a well-documented relationship between motorized use of our National Forests and impacts to cultural resources.

A good discussion of the issue is presented in the Apache-Sitgreaves National Forest Cultural Resource Specialist report prepared in support of their recently proposed TMP rule (enclosed). Pages 15-16 of that report discuss indirect impact and its relation to site accessibility and reference several studies (two of which we enclose) that document the issue with field data. In addition to the studies mentioned in this report, we include in the enclosures a report of our work in 2010 on the Tonto National Forest. Our observations involving 96 prehistoric sites that are prone to looting/vandalism<sup>2</sup> indicate that these sites experienced significantly more recent damage (damage which is less than 5 years old) when located near a route open to motorized use when compared to sites located farther from a trail or route open to motorized use regardless of route condition. In addition, sites closer to routes open to motorized use were classified in poor condition in greater frequency than sites classified as fair or good condition. These results were found to be statistically significant at the  $p < 0.05$  level.

The issue of site accessibility as it pertains to travel management planning revolves around the question of what we term "threshold distance": at what distance from a trail or route open to motorized use can discernible differences in impact to sites be demonstrated when compared to similar sites found at greater distances? Once determined the threshold distance becomes an important aspect of evaluating impacts and comparing alternatives in motorized trail and route designation. It also becomes a significant factor in National Forest efforts to identify roads which should be considered

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<sup>2</sup> These are sites that included major habitation sites, above-ground features, petroglyphs/pictographs, and rock shelters/caves.

for closure to motorized use as part of an effort to develop the minimum road system needed.

Two of the studies referenced in the Apache-Sitgreaves specialist report and included herein, looked specifically at several factors to explain variability in impacts to sites. Francis concluded that there was a statistically significant difference in impacts to sites located within 150 m of a road when compared to sites located at greater distances and Lightfoot discerned statistically significant greater impacts to sites located within 0.50 miles of road when compared to sites at greater distances. The recommendations included by Lightfoot regarding new road building are especially apt: *"It should be recognized that the effects of building roads will go much beyond those sites modified through road construction and maintenance. The construction of roads will increase the flow of people into an area, making the sites located in the immediate vicinity more accessible to pothunters....It is proposed that road clearance surveys should cover at least .25 of a mile (approximately 1350 feet) on either side of the right of way"*. We believe that his concerns regarding road building are the mirror image of decisions to close existing routes to motorized use as well as designating new routes or motorized dispersed camping corridors. Our work on the Tonto National Forest indicates that statistically significant differences could be found in relation to recent damage and overall site condition at distances up to 300 meters. Nickens et al (1981)<sup>3</sup> found that distance to a road accounted for statistically significant ( $p < 0.5$ ) differences in the distribution of vandalized sites in several different analyses. Their statistical analysis was supplemented by interviews of local residents who admittedly visited sites and collected artifacts and who confirmed the importance of easy access to sites. Nickens et al state in their Summary on page 132 with regard to access: *"Without a doubt, ease of access has a tremendous effect on site vandalism. Both known data and interviews indicate an overwhelming preference for prospective sites located within about a quarter-mile of a road capable of two-wheel drive access."* Spangler (2006), who did not use statistical analyses but provided a simple frequency distribution of vandalized sites in relation to their distance from a road demonstrated that the highest frequency of vandalized sites occurred when sites are within 200 meters of route open to motorized use.

With these aforementioned studies in mind, (absent Forest-specific, empirical information), we recommend at a minimum, that the following information be evaluated as part of any National Forest TAP:

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<sup>3</sup> Nickens, P.L., S.L. Larralde, G.C. Tucker, Jr. 1981. A Survey of Vandalism to Archaeological Resources. Bureau of Land Management Colorado. Cultural Resource Series No.11. This report was not enclosed due to its size can be ordered through the BLM Library (<http://www.blm.gov/nstc/library/library.html>).

1. National Register listing or eligibility for a site.
2. Vulnerability to impact from visitation. This would at a minimum include historic structures, moderate or high density artifact scatters, above ground archaeological features, rock shelters/caves and rock surfaces with petroglyphs/pictographs.
3. The numbers of vulnerable sites within 300 meters of a trail or route currently open to motorized use or new trails or routes proposed for designation as open to motorized use.

While our recommendations are focused at the site level, they are not intended to undermine consideration of a broader array of sites that together constitute a cultural landscape based on the in-depth knowledge and experience of Forest cultural resources specialist.

All National Forests maintain a list of Heritage site locations, varying information on site condition and recent damage as well as thorough route inventories. The advent of computer-based Geographic Information Systems suggests that this recommended level of analysis would be relatively straightforward and not beyond the scope of other analyses conducted as part of the TAP.

The importance of using cultural resources to guide travel management decisions cannot be understated. Cultural resources are a non renewable resource whose degradation or eventual destruction is cumulative and constitutes an irretrievable loss of the resource. Their importance to our shared heritage and in many instances their direct relationship to existing Native American cultures require that as public land managers every reasonable action is taken to provide them with long-term protection.

We appreciate your commitment to right sizing our National Forest road system and welcome the opportunity for continued participation in this important process.

Sincerely,



Andy Laurenzi

Cc: Rebecca Schwendler, National Trust of Historic Preservation

Encl: A-S Cultural Resources Specialist report (select sections), Plog et al. 1978 (select sections), Spangler 2006, Hedquist & Ellison 2010.