APPLYING THE VISITOR EXPERIENCE AND RESOURCE PROTECTION (VERP) FRAMEWORK TO CULTURAL RESOURCES IN THE NATIONAL PARKS

William Valliere
Researcher
University of Vermont,
School of Natural Resources,
Burlington, VT 05405.

Robert Manning
Professor,
University of Vermont,
School of Natural Resources,
Burlington, VT 05405.

Abstract: The National Park Service has developed the Visitor Experience and Resource Protection (VERP) framework for addressing carrying capacity in the National Parks. This framework has been successfully applied to natural and recreational resources in diverse units of the National Park System. However, most units of the National Par System also contain significant cultural resources. This paper outlines how the VERP framework might be applied to cultural resources, the challenges this may present, and some suggestions of how to meet these challenges.

Introduction

Although most people probably associate the National Parks with scenic landscapes and natural resources, nearly all National Parks in the United States also contain significant cultural resources. In fact, nearly two-thirds of all national parks in this country were designated with the specific purpose of preserving cultural resources. Like other resources contained in these special places, cultural resources are potentially threatened by public use. The National Park Service uses the concept of carrying capacity to protect resources from being overused. Over the past decade, the National Park Service has developed and applied a management by objectives framework – Visitor Experience and Resource Protection (VERP) – to address carrying capacity in the National Parks. Application of VERP to cultural resources represents both opportunities and challenges.

In this paper, we will:

- Discuss the significance of cultural resources in National Parks
- Discuss the VERP framework
- Discuss VERP's opportunities for use with cultural resources
- Discuss some challenges in applying the VERP framework to cultural resources
- Propose possible strategies for applying VERP to cultural resources

Cultural Resources in the National Parks

Cultural resources are an important part of the National Parks in the United States. They offer visitors an important link to historic events and cultures and a way to bring history to life. While nearly all of the National Parks contain some cultural resources, 222 units of the National Park System were created specifically to conserve cultural resources. With increasing use of the National Park System, concern for the integrity of the cultural resources contained in the National Parks has been raised.

The primary measure of cultural resource integrity is the resource's eligibility to be listed on the National Register of Historic Places. The National Register of Historic Places is the nation's official list of cultural resources that should be preserved. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service (National Park Service, 2002).

The National Register's standards for evaluating the significance of properties were developed to recognize the accomplishments of all peoples who have made a significant contribution to our country's history and heritage. The criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the National Register. The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. Places considered for inclusion on the National Register must also:

- be associated with events that have made a significant contribution to the broad patterns of our history or;
- associated with the lives of persons significant in our past or;
- 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;
- have yielded or may be likely to yield, information important in prehistory or history (National Park Service, 2002).

The mandate to consider carrying capacity in the national parks

Under National Park Service administrative policies, park superintendents are mandated to address carrying capacity

concerns as they relate to cultural resources. "Park superintendents will set, enforce, and monitor carrying capacities to limit public visitation to, or use of, cultural resources that would be subject to adverse effects from unrestricted levels of visitation or use. This will include (1) reviewing the park's purpose; (2) analyzing existing visitor use of, and related impacts to, the park's cultural resources and traditional resource users; (3) prescribing indicators and specific standards for acceptable and sustainable visitor use; and (4) identifying ways to address and monitor unacceptable impacts resulting from overuse. Studies to gather basic data and make recommendations on setting, enforcing, and monitoring carrying capacities for cultural resources will be conducted in collaboration with cultural resource specialists representing the appropriate disciplines (National Park Service, 2001)."

Not only do these policies state that carrying capacities will be set, but also how they will be set. According to the above policy statement, a framework like VERP is to be used to determine the carrying capacity for cultural resources within national parks. Early work on how best to analyze and manage social and resource carrying capacity resulted in the Limits of Acceptable Change (LAC) framework, developed by the U.S. Forest Service in 1985 (Stankey, et.al., 1985). Since then, several planning and management frameworks have been developed to address carrying capacity, including the National Parks and Conservation Association's Visitor Impact Management (VIM) process (Graefe, et. al., 1990), the Parks Canada Visitor Activities Management Process (VAMP) (Environment Canada and Park Service, 1991). In 1992 the National Park Service began development of VERP to address carrying capacity issues in units of the National Park System. All of these frameworks includes refinements to address specific needs of each agency. However, they all share a set of common steps: 1) a description of desired future conditions for park resources and visitor experiences, 2) identification of indicators and standards of quality, 3) monitoring techniques to determine if and where standards of quality have been violated, and 4) development of management actions to ensure that indicators are maintained within designated standards of quality (National Park Service, 1997).

The VERP process uses nine elements to accomplish these steps. These elements and their relationship to cultural resources are outlined and discussed below.

Element 1: Assemble an interdisciplinary project team

The VERP process has several strengths when being applied to cultural resources. First, the process calls for an interdisciplinary team and this is very useful when cultural resources are the focus of planning efforts. Effective management of cultural resources often requires several disciplines working together. Often, many disciplines, from

historians, and archeologists, to hydrologists and ecologists, are necessary to adequately manage and interpret cultural resources. Consultants may be needed for the VERP process. This gives managers an opportunity to

gain perspectives on cultural resources from disciplines not normally represented on park staff.

Element 2: Develop a public involvement strategy

Public involvement is necessary for any planning effort. However, when non-renewable resources, like cultural resources are involved, public involvement is essential. Public participation helps the planning team understand the values people hold in relation to park resources and the visitor experience, and is critical to creating a plan that can be implemented. Any planning decision is a compromise between competing values. Understanding public values enables the planning team to make informed decisions. Informed decision-making helps ensure that important public values related to irreplaceable cultural resources are adequately represented and protected.

Element 3: Develop statements of park purpose, significance and primary interpretive themes; Identify planning constraints

The VERP process challenges park planners and managers to clearly identify the most important aspects of park resources and the quality of the visitor experience. Park purpose and significance statements clarify the most basic assumptions about park use and management, and provide context for how a park should be managed and used. Park purpose is the reason or reasons the area was set aside as a unit of the National Park System. Park significance statements capture the essence of the park's importance to our natural or cultural heritage. Identification of park purpose and significance can help park planners identify important interpretive themes or information about the park that every visitor should leave the park knowing. With cultural resources, interpretation of the site is often one of the most important components of the visitor experience. Therefore, the VERP process gives cultural resource managers an opportunity to improve on interpretation and, thereby, the visitor experience.

Element 4: Analyze park resources and the existing visitor use

Element four of the VERP process allows park planners and managers an opportunity to take an objective look at the current condition of park resources and visitor experience. Baseline information is important as a point of comparison for future monitoring of indicator variables. Additionally, it allows resource managers an opportunity to separate fact from widely held, though possibly erroneous assumptions about current conditions. This may help managers clarify which carrying capacity issues are most salient.

Element 5: Describe a potential range of visitor experiences and resource conditions (potential prescriptive zones)

The objective of element five is to determine the range of potential visitor experiences and resource conditions that can be accommodated in the park. The focus moves from

descriptive to prescriptive. This element helps park managers provide for a diversity of park experiences. Visitors may come to national parks for different and sometimes conflicting reasons. By clarifying the potential range of experiences and conditions, managers can begin to eliminate uses of park resources that are incompatible with the park's purpose. For cultural resources, this is important because certain management practices may need to be undertaken (stabilization, reconstruction, etc.) depending on the desired condition of cultural resources and the range of potential visitor experiences chosen.

Element 6:Allocate the potential zones to specific locations in the park (prescriptive management zoning)

In element 6, the potential management zones described in element 5 are allocated to specific places within the park. This step helps further clarify what types of use are appropriate in the park. This element is a synthesis of elements 2 through 5, taking into account input from the public, the planning foundation set by park statements of purpose and significance, potential and limitations of park resources, and the range of experiences and resource conditions that park managers wish to provide.

The preceding six elements of the VERP framework allow park managers to take an objective, interdisciplinary look at conditions and resources as they currently exist within the park. The interdisciplinary team sets an overall direction for park management based on the park's resources, and purpose and significance. From this information, an acceptable range of experiences and resource conditions is determined. The remaining steps in the VERP framework help managers determine if these acceptable conditions can be maintained with current or increased visitor use levels.

Element 7: Select indicators and specify standards for each zone; develop a monitoring plan

Element 7 is a pivotal element because it is the point at which the VERP framework moves from being qualitative to being quantitative. Once prescribed social and resource conditions are converted into indicator variables that can be measured and monitored, park staff can determine whether or not conditions are acceptable and take management action if needed. To do this, indicators of quality must be selected and a standard for each indicator variable must be set. Indicators are specific, measurable, manageable variables that reflect the overall condition of park resources and the quality of the visitor experience. Indicator variables measure visitor impacts on the biological, physical and cultural resources of a park, and the visitor experience. Standards are the minimum acceptable condition for each indicator variable.

A critical element of selecting and monitoring indicators is understanding the relationship of the variable to visitor use. This is an often overlooked characteristic of indicator variables for carrying capacity. A potential indicator variable may represent the integrity of a resource, however, if the indicator is not related to visitor use of the resource, it has little utility in carrying capacity planning. Determining

the relationship between cultural resource indicators of quality and visitor use has proven to be a primary challenge to using the VERP framework with cultural resources. Figure 1 shows a hypothetical relationship between use and impact at a resource that demonstrates that as use increases, impact to the resource also increases. The actual relationship between use and a specific indicator of quality may not be as simple as implied by this figure. However, it is useful to understand the actual relationship to determine an appropriate standard of quality.
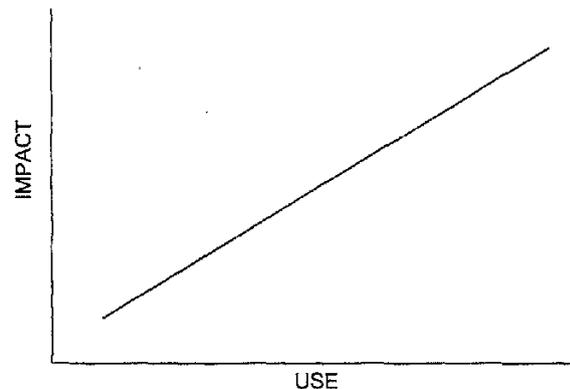

Figure 1. Hypothetical relationship between use and impact.

Elements 8 & 9: Monitor resource and social indicators and take management action

Once indicators of quality are chosen and standards for each indicator are set, the focus of activities shifts from planning to management. Indicator variables are monitored according to the monitoring plan developed in the previous element. Monitoring and analysis may identify one of two situations that will trigger management action. The resource may deteriorate to a point that would indicate that standards will soon be violated. This would trigger action to prevent the resource from deteriorating below the standard. Monitoring may also indicate that the resource has deteriorated beyond the minimum standard of quality. In this case, management action may be taken that restricts or modifies use to the degree necessary to restore and maintain acceptable conditions.

VERP's opportunities for use with cultural resources

The VERP process has several characteristics that make it useful for evaluating carrying capacity of cultural resources in the National Park System. Preliminary elements of the VERP framework require parks to determine the purpose and significance of the resource. This requires managers to understand what makes the resources they manage special and important. The benefits of this exercise include an understanding what characteristics of cultural resources are fundamental to their being listed on the National Register, a greater understanding of historic events, personality or culture that the resource attempts to interpret, and the potential to improve interpretation of the site to the public.

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Carrying capacity planning has sometimes been described as development of a compromise between absolute protection of resources and the unrestricted access to resources for recreational use (National Park Service, 1997). If one of these goals cannot be compromised, then a framework like VERP is not necessary. By applying this principle, parks are required to determine the "bottom line" about the amount of allowable resource impact with regard to cultural resources. Since cultural resources are often rare and non-renewable, any impact to the resource may be seen as too much. However, in many cases, the actual amount of impact that can be allowed is more than no impact at all. In fact research on the impacts of recreation on ecological resources suggests that even relatively little recreation use may cause some resource impacts (Hammitt and Cole, 1998). The "bottom line" for the allowable amount of impact may be the point at which a cultural resource is no longer eligible for the National Register.

Another strength of VERP for use with cultural resources is that the process allows managers to determine specific threats to resources and the current status of the resource. For cultural resources, some types of potential impacts include artifact removal, artifact displacement, collapse of architectural fabric, loss of architectural elements, defacement, disturbance or displacement of cultural deposits, social trails that develop into erosion channels, intrusive management actions, introduction of exotic materials (crystals, human ashes), compaction of soils, compaction of fill resulting in damage to artifacts, and loss of opportunity for conducting traditional activities (National Park Service, 2002a). Cultural resources can be monitored for these types of impact and specific threats can be identified. This allows management actions to be tailored for the specific problems that exist with the cultural resources within each park.

Finally, the VERP framework requires parks to consistently monitor the condition of the resource. This requirement facilitates and guides long-term investment in resource monitoring. Without the monitoring component, VERP and other carrying capacity frameworks cannot meet their objectives of appropriately compromising the competing values of resource protection and access to the resource.

Challenges in applying VERP to cultural resources

For cultural resources, there may be an implied "zero tolerance" for impacts to nonrenewable resources as noted above. While in specific cases this may be true, it is often not the case. However, the implied "zero tolerance" for impact may represent a barrier to determining appropriate indicators and standards of quality.

To meet the "zero tolerance" challenge to understanding the carrying capacity of cultural resources, a site specific integrity index could be used. Managers could determine the thresholds that would shift any particular resource from eligible to ineligible on the National Register. A site-specific integrity index could be created for each site that would use measurable attributes that contribute to the site's integrity. These attributes could be monitored and changes

at each site can then be translated into an estimate of change in integrity at that site. When the integrity index drops below a certain level, management actions could be triggered to control the impacts of visitor use and bring the resource back within acceptable standards.

While a resource integrity index would be useful in quantifying the amount of impact a resource is receiving, it does not reveal the relationship between visitor use and impacts to resource integrity. One way to begin to understand this relationship is by use of control sites. It may be possible to identify cultural resources within a relatively small geographic area with similar characteristics that receive differing levels of visitor use. If this is possible, natural deterioration of the sites could be assumed to be relatively constant since natural conditions would be relatively similar. Therefore, by comparing the condition of these sites, the relationship between impact to the resource and visitor use levels could begin to be understood. Figure 2 shows the how this could work.
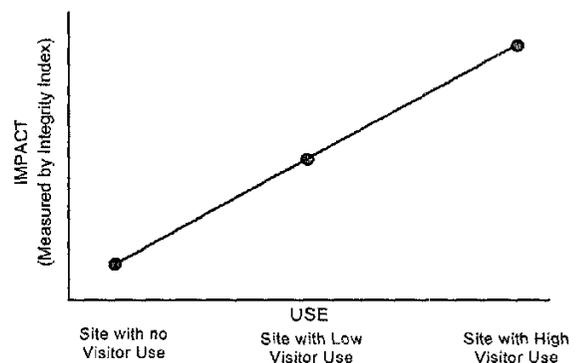

Figure 2. Hypothetical relationship between use and impact as determined by control sites.

Conclusions

While there are some significant challenges to using VERP or related carrying capacity frameworks with cultural resources , this paper suggests that these frameworks can be usefully applied to cultural resources. The "zero-tolerance" assumption sometimes associated with cultural resources and difficulties with relating visitor use to these impacts are the primary challenges to using the VERP framework for carrying capacity planning for cultural resources. These challenges might be at least partially overcome by using a site-specific integrity index as described above. In this way, a set of indicator variables could be measured and an relatively objective measure of resource integrity would result. Standards for this integrity index could then be formulated and monitoring could begin. Response of the integrity index could be related to visitor use of the resource through the use of control sites. Cultural sites, preferably within the same park or protected area, that receive little or no visitor use could provide cultural resource managers with "control points" for comparison to sites that receive larger amounts of visitor use. By comparing the sites, a relationship between visitor use and impact to cultural resources could be determined.

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Carrying capacity planning frameworks like VERP offer resource managers an opportunity to take an informed, objective look at the resources they manage. By requiring an interdisciplinary team approach, the significance of a given resource is determined from a variety of disciplinary and professional perspectives. Public involvement in the process helps assure that the values that a resource holds to society are considered and maintained. Baseline data about the current condition of the resource helps managers understand the impacts and threats the resource faces now, and helps managers decide what type of visitor experience they hope to provide. By monitoring key indicators of resource integrity and taking management actions to assure that these indicators do not drop below minimum standard of quality, managers can help ensure that cultural resources will be adequately protected and that these resources will provide a high quality visitor experience.

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