The National Park Service Visual Resource Inventory: Capturing the Historic and Cultural Values of Scenic Views

Submitted by

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Abstract

Several United States federal agencies have developed visual resource inventory (VRI) and management systems that reflect specific agency missions and visual resource management objectives. These programs have varied in the degree to which they incorporate historic and cultural elements and values into the scenic inventory process.

The recent nationwide expansion of renewable energy and associated transmission development is causing an increase in visual impacts on both scenic and historic/cultural resources. This increase has highlighted the need for better integration of visual and historic/cultural resource assessment and management activities for land use planning purposes.

The U.S. Department of the Interior National Park Service, in response to concerns arising from potential scenic impacts from renewable energy, electric transmission, and other types of development on lands and waters near Park Service units, has developed a VRI process for high-value views both within and outside Park Service unit boundaries. The Park Service VRI incorporates historic and cultural elements and values into the scenic resource inventory process, and provides practical guidance and metrics for successful integration of historic and cultural concerns into the Park Service's scenic resource conservation efforts. This article describes the Park Service VRI process, and compares it with the VRI processes of the U.S. Department of the Interior Bureau of Land Management and the U.S. Department of Agriculture Forest Service with respect to incorporation of historic and cultural values. The article discusses why a scenic inventory approach that more robustly integrates the historic and cultural values of the landscape is essential for Park Service landscapes, and for fulfillment of the Park Service mission. Inventories are underway at many Park Service units, and the results indicate that the VRI process can be used successfully to capture important historic and cultural resource information and incorporate that information into the assessment of scenic values of views within and outside Park Service units.

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Introduction

The National Park Service (NPS) Organic Act of 1916 (16 U.S.C. 1-18f, 39 stat 535) states that the purpose of establishing the Park Service is to "…conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The Park Service manages the 409 parks of the National Park System, and also helps administer dozens of affiliated sites, the National Register of Historic Places, National Heritage Areas, National Wild and Scenic Rivers, National Historic Landmarks, and National Trails (National Park Service 2016). The Park Service thus administers many of the most scenic and historically significant landscapes in the country. Each unit of the national park system has special visual characteristics that are often a central component of the unit's management and visitor experience; many of these units also have significant historic or cultural features that, in addition to their intrinsic historic or cultural value, form an important part of the scenic experience of visitors.

Recent years have seen the rapid development of energy facilities, especially utility-scale renewable energy projects and associated electric transmission lines, that because of their size and unique visual characteristics may cause large scenic impacts (Sullivan and Abplanalp 2013, 2015; Sullivan et al. 2012a, 2012b, 2013a, 2013b, 2014). Some renewable energy projects and transmission lines have been built, or are proposed to be built, adjacent to or crossing national parks and national scenic and historic trails. In some cases, the projects are visible from inside

Park Service units, and the development is affecting the views of park visitors, even though the projects are located outside the park units.

The Park Service has recognized the need to develop a comprehensive approach that can be used to assess the visual landscape qualities in and near Park Service units and understand how best to protect them as a resource for future generations. The Park Service is currently developing the Visual Resource Program, a scenic resource inventory and conservation planning system (Meyer and Sullivan, 2016). The Visual Resource Program provides a method for the inventory and evaluation of scenic resources to advance protection of important scenic views within and near Park Service units.

This paper discusses the integration of historic and cultural values into the Park Service VRI. After discussing the U.S. Department of the Interior Bureau of Land Management Visual Resource Management program and the U.S. Department of Agriculture Forest Service Scenery Management System and their incorporation of historic and cultural values into the scenic inventory process, this article discusses why a scenic inventory approach that more robustly integrates the historic and cultural values of the landscape is essential for Park Service landscapes and for fulfillment of the Park Service mission. The article also discusses the methods used to record and evaluate historic and cultural values in the scenic inventory process.

The Bureau of Land Management and Forest Service Scenic Resource Inventory Programs

The concept of inventory and evaluation of the visual landscape, and its subsequent management as a resource, has been in place at the federal agency level since the 1970s. The Bureau of Land Management and the Forest Service have developed and implemented visual resource programs to manage the scenic values of the large areas of lands they manage. Other agencies, such as the U.S. Army Corps of Engineers and the Natural Resource Conservation Service, also have their own systems for assessing the value of the visual landscape. In each case, the systems were developed to meet the needs of their respective agencies' resource management missions, with the primary purpose of assessing the visual impacts of projects on a particular landscape. In most cases, these programs have emphasized primarily the purely visual aspect of scenery inventory and evaluation, as appropriate for the landscapes managed or affected by the respective agencies, and in the context of their management mission. Although these programs do recognize the importance of historic and cultural landscapes and features within the landscape, the systems vary in the degree to which they incorporate historic and cultural values and importance into the inventory and evaluation of scenery.

The BUREAU OF LAND MANAGEMENT VRI

The Bureau of Land Management's Visual Resource Management Program inventories scenic values on lands the agency manages, establishes visual resource management objectives for the lands that incorporate the inventoried values, and then evaluates proposed activities (such as energy development projects) to determine whether they conform with the management objectives (Bureau of Land Management 1984). The Bureau of Land Management's VRI process evaluates three primary factors when assessing scenic values to establish a VRI Class, which is a

ranking of relative scenic value: scenic quality, sensitivity (a measure of public concern for visual values), and distance zone (the distance at which most viewers would view the landscape elements).

Within the Bureau of Land Management VRI process, public lands are evaluated with regard to their scenic quality, defined as the visual appeal of a particular tract of land (Bureau of Land Management 1986). Scenic quality is determined systematically by (1) dividing the landscape into Scenic Quality Rating Units based on conspicuous changes in physiography or land use, and (2) in a field-based observation, ranking scenic quality within each Scenic Quality Rating Unit based on the assessment of seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. Points are assigned for each factor and then totaled, on a scale ranging from 3 points for the lowest possible scenic quality rating to 32 for the highest possible rating under normal circumstances.

In the Bureau of Land Management VRI, the cultural modifications factor of the scenic quality rating assesses human-made elements in the landscape and is the primary means for incorporating historic/cultural elements into the inventory process. The cultural modifications factor is described as follows (Bureau of Land Management 1986): “Cultural modifications in the landform/water, vegetation, and addition of structures should be considered and may detract from the scenery in the form of a negative intrusion or complement or improve the scenic quality of a unit. Rate accordingly.”

In the field-based assessment, the persons conducting the inventory assign a cultural modifications value ranging from -4, for an Scenic Quality Rating Unit where “modifications add variety but are very discordant and promote strong disharmony,” to a +2, where “modifications add favorably to visual variety while promoting visual harmony.” There is also room on the form to write notes about each factor, and most inventories contain a brief summary of reasons for the assigned rating.

The scenic quality evaluation guidance also includes the following statement: “Another important concept is that the evaluation of scenic quality is done in relationship to the natural landscape. This does not mean that man-made features within a landscape necessarily detract from the scenic value. Man-made features that complement the natural landscape may enhance the scenic value. Evaluations should avoid any bias against man-made modification to natural landscape.”

In essence, the Bureau of Land Management VRI scenic quality rating process does not address historic or cultural landscape elements explicitly; rather, they are incorporated into the more general cultural modification factor evaluation, which is based on the historic or cultural element’s visually contrasting or harmonious relationship to the natural landscape. This is a purely visual evaluation that treats the historic or cultural element as a pictorial design element in a visual composition analogous to a landscape painting. It does not encompass or capture any value that results from the viewer’s knowledge that the viewed element has historic or cultural value, beyond its visual appearance. Arguably, this is appropriate, given that the rating is for scenic quality, and that the value added by knowledge of the historic or cultural element should

be captured by another scenic inventory metric. In the Bureau of Land Management VRI, the sensitivity analysis provides another means to incorporate historic/cultural values.

In the Bureau of Land Management VRI, visual sensitivity is defined as a measure of public concern for scenic quality (Bureau of Land Management 1986). Sensitivity is determined by evaluating the types and numbers of potential viewers of a specified area (this area is referred to as a Sensitivity Level Rating Unit), the level of public interest in the Sensitivity Level Rating Unit, adjacent land uses, and the presence of special areas. In the evaluation, the level of public interest and presence of special areas may in some cases serve to incorporate historic and cultural values into the scenic inventory.

If a Sensitivity Level Rating Unit contains historic or cultural elements that are well known and valued by the public, then this fact should be incorporated into the sensitivity analysis and recorded as a cause for increased sensitivity. If the historic or cultural elements have been designated as special areas—for example, listed on the National Register of Historic Places, designated as a National Historic Landmark or National Historic Trail, or designated as a Bureau of Land Management Area of Critical Environmental Concern because of outstanding cultural values—this designation should also be incorporated into the sensitivity analysis and recorded as a cause for increased sensitivity.

It can be argued that incorporation of historic and cultural values through the sensitivity level rating is better at capturing historic and cultural values that are not directly tied to scenic quality, because the sensitivity measures are independent of scenic quality, and tied more directly to the

intrinsic historic or cultural value of the elements. In essence, the sensitivity measures provide a way to incorporate values that are not necessarily scenic values into the scenic inventory.

A drawback of the sensitivity measure is that it is dependent either on public knowledge and valuation of the historic or cultural elements or on official recognition of historic or cultural values through a special area designation. There may be many valuable historic and cultural features that are relatively unknown to the public, or which, for one reason or another, have not received a special designation. And, similarly to the scenic quality evaluation, although there is room on the form for noting the reasons for a given sensitivity rating, the description of the historic or cultural values is typically very brief and not systematic, with concomitant drawbacks for future use of the information for analytical and other purposes.

The Forest Service Scenery Management System

The Forest Service's Scenery Management System provides an overall framework for inventory, analysis, and management of scenery on National Forest lands. The Forest Service uses the Scenery Management System as the framework for integrating scenery management data into Forest Service planning (Forest Service 1995). The Scenery Management System approach involves the following steps:

- A *Landscape Character Description* is developed from the Ecological Unit Description for a planning area. The Landscape Character Description provides the frame of reference for defining the Scenic Attractiveness classes.

- *Scenic Attractiveness* classes are developed to determine the relative scenic value of lands within a particular landscape character.
- An *Existing Scenic Integrity Inventory* is conducted; scenic integrity indicates the degree of intactness and wholeness of the landscape character.
- A *Constituent Analysis* is conducted to determine forest users' perceptions of attractiveness, to help identify special places, and to define the meaning people give to places within the area. The constituent analysis results are expressed as Concern Levels for particular locations within the area.
- *Landscape Visibility* is determined and mapped. Landscape visibility addresses the relative importance and sensitivity of what is seen and perceived in the landscape. It includes both human values as they relate to the relative importance to the public of various scenes, and the relative sensitivity of scenes based on distance from an observer.
- *Seen Areas and Distance Zones* are mapped for the locations with specific concern levels to determine the relative sensitivity of scenes based on their distance from an observer.
- Using the scenic attractiveness, landscape visibility, and concern level areas information, numerical *Scenic Class* values are assigned to the areas. The ratings indicate the scenic value of landscape areas. Mapped scenic class values are used to compare the value of scenery with the value of other resources.
- A *Landscape Value* map is prepared using overlays of all the data gathered. The map provides information to planning teams concerning the relative scenic values of a subject area and the extent to which those values are intact.

The Scenery Management System approach is more extensive and more direct than the Bureau of Land Management's Visual Resource Management program in its incorporation of historic and cultural values. First, the Scenery Management System process begins with an assessment of existing landscape character, which may explicitly incorporate historic or cultural elements such as fences, hedgerows, or buildings with historic character as desirable landscape elements if they are consistent with the overall landscape character. Instead of assessing landscape features purely as design elements in a visual composition, the landscape is evaluated on the degree to which it most fully expresses its desired scenic character, which is not necessarily completely natural-appearing, although the Scenery Management System guidance explicitly states as a fundamental principle that "Generally, natural appearing landscapes are the most valued." The Scenery Management System explicitly recognizes "structures that have positive cultural connotations" as landscape character attributes.

Importantly, the Scenery Management System guidance states that "Scenic attractiveness…exhibits the combined effects of the natural and cultural forces in the landscape." The Scenery Management System recognizes land use patterns and cultural features as one of five elements that should be used to determine scenic attractiveness, assessed as the degree to which "visible elements of historic and present land use … contribute to the image and sense of place," which clearly could include non-scenic values.

The Constituent Analysis is another Scenery Management System scenic inventory process that may incorporate values of historic and scenic character elements. The Constituent Analysis is somewhat similar to the Bureau of Land Management VRI's sensitivity analysis, which

measures public concern for scenic values; however, the Constituent Analysis addresses the "significance of scenic quality and aesthetic experience [of a National Forest] to people" and emphasizes establishing which elements contribute to a "sense of place." While the emphasis is clearly on scenic elements, as noted above, visible historic and cultural elements can contribute to sense of place, apart from their scenic quality, which may in fact be low.

Clearly, at a conceptual level, the Scenery Management System more fully integrates historic and cultural values into the scenic resource inventory process than the Bureau of Land Management VRI, by explicitly recognizing them as positive elements in appropriate landscape character types, by explicitly including historic land use patterns and cultural features into the scenic attractiveness assessment, and by emphasizing the importance of "sense of place" rather than simply scenic quality as an important inventory goal. The Scenery Management System also suggests more thorough documentation of historic and cultural elements in the inventory process, noting that "A complete and accurate description of character is also essential when a cultural element such as a historic structure is involved," though no specifics are provided about what to record.

Despite the increased emphasis at a conceptual level on integration of cultural and historic values into the scenic resource inventory, an important drawback of the Scenery Management System is a lack of specific guidance about how to actually incorporate historic and cultural values into the inventory process. The guidance contains repeated statements about the importance of incorporating historic and cultural values into the inventory, but lacks specific instructions on how to do so, or what metrics to employ, for example, some kind of specific metric or rating

scale to incorporate the values, which the Bureau of Land Management Visual Resource Management program does have. And while the Scenery Management System does encourage better documentation of historic and cultural elements, it does not provide instructions about what should be documented.

The Bureau of Land Management and Forest Service scenic inventory processes can both be described as dealing more effectively with, and placing somewhat higher value on, natural or natural-appearing landscapes. Both systems recognize that historic and cultural features can contribute positively to scenic values, and have some mechanism for integrating historic or cultural values into scenic resource inventory, though neither system can be said to provide robust methods for doing so. The Bureau of Land Management Visual Resource Management program is straightforward to understand and implement, and has relatively clear metrics for incorporation of historic and cultural values, but the methods are coarse in application, and may not fully capture the depth or range of contributions to scenic value that historic and cultural elements may provide. The Forest Service Scenery Management System better integrates historic and cultural values into the inventory at a conceptual level, but lacks specific practical information and easy-to-use metrics for incorporating historic and cultural values in the actual inventory process. Both systems fail to systematically capture important information about historic and cultural elements in the landscape.

It can be argued that the emphasis these systems place on the more purely visual aspects of scenery may be a result, in part, of the type of landscape managed by these agencies. Relative to the Park Service, the Bureau of Land Management and the Forest Service both manage

landscapes that are primarily natural or natural-appearing, and whose visitors are more likely to be seeking natural-appearing landscapes for recreational purposes, potentially resulting in less emphasis on historic and cultural values in the agencies' visual resource management missions. Historical reasons may be factors as well: both the Bureau of Land Management and Forest Service systems were designed primarily by landscape architects with a goal of assessing the visual impacts of projects, and therefore understandably focused on more traditional design-oriented scenic resource evaluation. However, as both Bureau of Land Management and Forest Service discover more historic and cultural resources on lands they manage, and as more renewable energy and transmission projects result in major visual impacts on both scenic and historic/cultural resources, the need for better integration of "traditional" scenic and historic/cultural values into scenic resource inventory has become apparent.

The National Park Service VRI

Historic and cultural resources play a major role in the Park Service's overall mission; many Park Service units exist primarily to preserve historic or cultural resources of national importance. These units and many other units that are regarded primarily as "scenic" units contain landscapes where the presence of historic or cultural features is of central importance to the visitor's viewing experience and is a major attractant for visitors, in some cases constituting the sole reason that visitors have come to the particular Park Service unit. Many of these landscapes have unremarkable scenic quality, but the historic and cultural elements make the view attractive to visitors, and thus important to consider in terms of scenic conservation.

Furthermore, views not only *of*, but in some cases *from* historic or cultural landscape features often play a critical interpretive role for the Park Service, and are used to educate visitors about important historic or cultural events and concepts. Lastly, in some cases, the Park Service has made substantial programmatic and financial investments not only in creating and maintaining high-quality visitor experiences—for example, by building roads and providing parking, restrooms, interpretive panels, brochures, and other amenities at key viewpoints—but also in structure and vegetation management to preserve views such as at historic battlefields. In these landscapes, it is very important that a scenic inventory captures and documents the contribution of historic or cultural elements to scenic values relatively completely and robustly.

In the past, individual Park Service units have conducted visual resource inventories in one form or another to meet specific park needs. A variety of methods were used, given that no standardized approach existed. Generally, these approaches focused primarily or exclusively on scenic qualities, and did not integrate historic or cultural values of views into the inventory process. While these approaches met the needs for which they were designed, the Park Service VRI is designed to incorporate visible historic or cultural elements into the scenic inventory process, so that the effects of these elements on scenic values are fully considered.

The VRI Process

The Park Service Visual Resource Program is designed around the central concepts of identifying important views, determining the scenic values of each view, analyzing threats to high-value views, and then designing protection strategies to preserve the valued characteristics

of the view (Meyer and Sullivan 2016). Scenic values of views are based not only on the physical qualities of the scenery, but also on its value to the visitor experience and park unit's mission. The Visual Resource Program process consists of two major parts—*inventory*, and *protection* (Figure 1). As of this writing, the inventory component is complete, and it is the focus of the remainder of this article.

The VRI is focused on identifying key information about the scenic views of a Park Service unit. Unlike both the Bureau of Land Management VRI and the Forest Service Scenery Management System, in which the unit of inventory is a pre-determined scenic quality rating area or a forest planning unit, in the Park Service VRI the unit of inventory is a *view*. The view-based inventory unit was chosen because the Park Service is concerned with specific landscape areas seen from specific viewing locations, which is how the Park Service visitor experiences the landscape. A view is defined as consisting of a viewpoint, a viewed landscape, and viewers. Each of the three view components is described and evaluated in the VRI inventory.

The information collected for each view includes a description of the visible components of the viewed landscape, its scenic quality, characteristics of likely viewers, and the importance of the view to the Park Service and its visitors. The inventory process leads to the identification of a scenic inventory value that is the basis for deciding if the view is of sufficient value to the Park Service to justify the development of a protection strategy. The information gathered in the VRI process is stored in a geospatial database, and is then used in the development of conservation strategies for high-value views.

As shown in Figure 1, the inventory comprises two primary parallel processes that lead to ratings for scenic quality and view importance: the *landscape description and scenic quality assessment* and the *view importance assessment*. The landscape description process identifies and describes visible elements of the viewed landscape and includes the assessment of scenic quality of the view. The view importance assessment identifies and describes key attributes of the viewpoints, viewed landscape, and the viewers that determine the importance of the view to the Park Service and to the visitor experience. Both the landscape description and scenic quality assessment component and the view importance component of the Park Service VRI are discussed below. While the landscape description process is done in the field, typically by a team of Park Service staff and park volunteers, the view importance assessment is done in the office.

The division of the inventory into the *landscape description and scenic quality assessment* and the *view importance assessment* has major implications for the incorporation of historic and cultural values into the scenic inventory value. The landscape description and scenic quality assessment can be thought of as focusing on what is seen in the view by the visitor, that is, the strictly scenic portion of the value of the view. The view importance assessment can be thought of as focusing on the other values of the view, that is, things that make the view important to visitors and to the Park Service, but are sometimes not apparent in the view itself. While the view importance assessment does record information about certain elements of the view, such as designated or non-designated scenic or historic/cultural elements in the view, this information requires research or knowledge beyond what is apparent to the casual observer. Significantly, the View Importance Rating contributes one half of the scenic inventory value score for the view, and the Scenic Quality Assessment the other half. In other words, in the Park Service VRI, non-

scenic quality values, which include a number of items relevant to historic and cultural values, count as much as the scenic quality in determining the total value of the view. For views that contain significant historic or cultural elements, this approach ensures that the contribution of these elements to the overall scenic value of the view is accounted for, and can significantly affect the value where it is warranted.

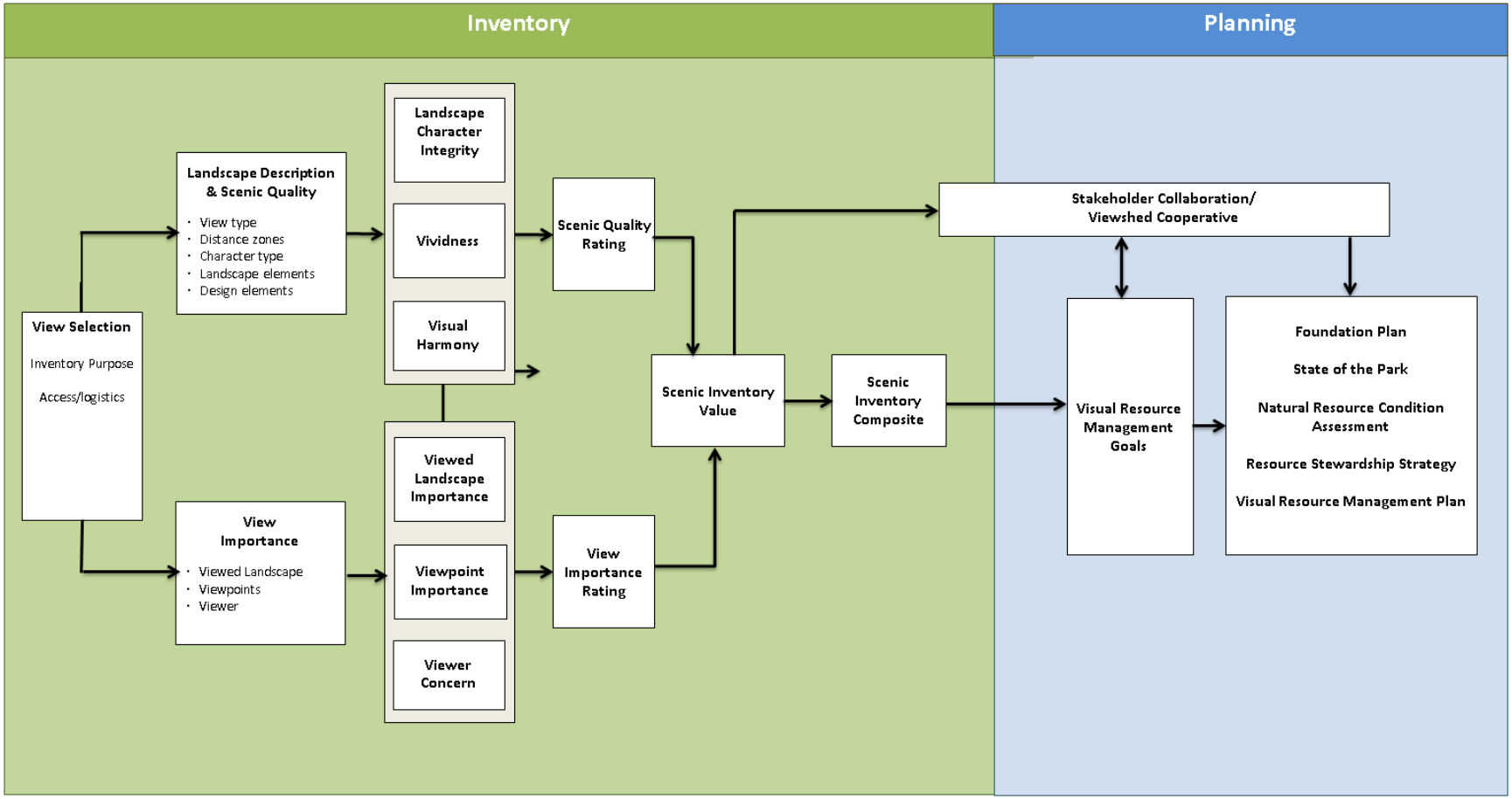

Figure 1. National Park Service VRI Process Flow Diagram

Landscape Description and Scenic Quality Assessment

The landscape description and scenic quality assessment portion of the VRI process includes a field-based description of the visual elements in the viewed landscape and an assessment of the scenic quality of the composition of the elements in the view. The landscape description records basic data about the viewpoint and observation for future reference. The data are descriptive, not evaluative. The scenic quality assessment that follows the landscape description is an evaluation, conducted as a group discussion and consensus exercise that assigns a single scenic quality value to the view.

Data collected and activities undertaken as part of the landscape description process include the following:

Observation Data

These include data about the observation, such as date, viewpoint coordinates, the direction and width of the view, and the names of the evaluating team members.

Landscape Description

These data include the view type, landscape character, and other key descriptive elements of the viewed landscape.

View Type

The view type is a general descriptive term for the viewing experience of the landscape, based on the spatial relationship of elements within the viewed landscape and the spatial relationship of the viewer to those elements. Examples of view types include *panoramic views*, which provide expansive views to a distant

horizon, and *feature views*, which include a prominent natural or manmade feature that attracts the viewer's attention.

Landscape Character Type

Somewhat similarly to Scenery Management System, the Park Service VRI assessment includes identifying the landscape character type for the viewed landscape. Landscape character is an overall visual and cultural impression of the landscape, and embodies distinct landscape attributes that exist throughout an area or region. It is a product of both the natural and human influences on the landscape. It represents a distinct, recognizable, and consistent pattern in the landscape that makes one landscape different from another rather than better or worse. The landscape character types in the VRI are *Natural/Natural Appearing, Pastoral, Agricultural, Rural, Suburban, Urban,* and *Industrial.*

Distance Zones

Similarly to both the Visual Resource Management and the Scenery Management System, the Park Service VRI inventory delineates distance zones for a view ─*foreground, middle ground,* and *background*─ that are related to the visibility of landscape elements and the degree to which landscape details can be discerned; however, unlike the Visual Resource Management and the Scenery Management System, the distance zones are determined for the specific view, rather than being generalized to a larger area that would encompass many views.

Landscape Elements

The landscape elements are the specific features of the view that give it its unique characteristics and value as a scenic view and include the features of *landform, land cover, land use,* and *structures*. It should be noted that the landscape elements description is far more detailed than that conducted for either the Visual Resource

Management approach or the Scenery Management System. In the Park Service VRI, these detailed data provide a baseline for identifying the existing scenic condition of the viewed landscape and for identifying elements (both positive and negative, from a scenic perspective) that could be affected by changes to the viewed landscape.

Design Elements

Similarly to both the Visual Resource Management approach and the Scenery Management System, the design elements of *form, line, color,* and *texture* are used to describe the primary visual attributes of features in the viewed landscape. The Park Service VRI process identifies the most visually prominent design elements in the existing viewed landscape to provide a baseline for identifying how changes to the viewed landscape would contrast or harmonize with the existing dominant visual elements.

Scenic Quality Rating

The Park Service VRI defines scenic quality as the value of the viewed landscape based on its perceived visual attractiveness, as determined by the aesthetic composition of the visual elements. Scenic quality is a primary reason (but not the sole reason) for conserving scenic values in a viewed landscape, as it is well established that high-quality scenery attracts Park Service visitors and enhances the visitor experience (Kulesza et al. 2013).

The Park Service VRI differs somewhat from both the Visual Resource Management approach and the Scenery Management System in the factors it uses to evaluate scenic quality; however, the basic goal and general results are the same. In the Park Service VRI, assessing scenic quality involves field-based assessments of *Landscape Character Integrity, Vividness,* and *Visual Harmony*. Each factor is assessed while viewing the landscape from the viewpoint, and the assessment requires that the group evaluate three equally weighted components for each factor.

Landscape Character Integrity

Somewhat similarly to Scenery Management System, the Park Service VRI assesses how closely the viewed landscape conforms to an idealized version of the assigned landscape character through a measure called *landscape character integrity*. Landscape character integrity indicates the degree of intactness and wholeness of the landscape character identified in the landscape description section. The highest integrity ratings are given to those landscapes which have little or no deviation from the identified landscape character type.

The rating process assumes that in order to have the highest degree of integrity, i.e., to be a high-quality example of the identified landscape character, the view must

- Have most or all of the key elements of landscape character present;
- Have elements that are of high quality and in the appropriate condition for the landscape character, i.e. well-built and well-cared-for, or, for historic/rustic landscapes, appropriately worn/aged; and
- Be relatively free of elements that are inconsistent with the landscape character.

Vividness

Vividness is the degree to which landscape elements are distinctive or striking enough to make a view memorable. The rating assumes that to have a high degree of vividness, the view must

- Contain one or more dominant visual features or focal points;
- Contain striking forms and/or lines; and
- Contain striking colors, textures, or visible motion.

Visual Harmony

Visual harmony is the extent to which there is a pleasing array of visual elements in a landscape, usually as a result of a sense of visual order, compatibility, and completeness between and among the land forms, water forms, vegetation, or built elements visible in the landscape. The approach assumes that a high degree of visual harmony is achieved when

- There is a clearly recognizable structure, pattern, or order to the spatial relationships of the landscape elements;
- The landscape elements display pleasing scale relationships; and
- The landscape displays pleasing color relationships.

Each of the components is assigned a rating of one to five points according to a pre-determined scale, and the total score indicates the scenic quality rating. The ratings fall into five classes from A to E. Class A views have the highest scenic quality and Class E the lowest.

It should be noted that while *historic* or *cultural* are not landscape character types (primarily because they may lack distinguishing visual characteristics, i.e., they can look like almost any other landscape character type), historic and cultural landscape elements can contribute positively to scenic quality through any of the three scenic quality components, e.g., through both vividness and visual harmony, as well as through being consistent with the landscape character type. If the historic or cultural elements are typical for the Park Service unit landscapes, they are not considered to be intrusions in the landscape character integrity assessment, nor are they penalized for their quality and condition if they are appropriate, in appearance and condition, for their age.

View Importance

As noted earlier, the unit of inventory in the Park Service VRI is a view consisting of a viewpoint, a viewed landscape and the viewers. The View Importance Rating identifies Park Service and visitor values for each of these factors of the view. As part of the process, key descriptive information about the viewpoint and viewed landscape is gathered that helps inform the rating process. This information is used to assign numeric ratings to the components that are combined to create a View Importance Rating for the view. View Importance Ratings fall into five classes from 1 to 5. Class 1 views have the highest view importance and Class 5 the lowest.

The View Importance Rating is an office-based exercise. The assessment is done by an interdisciplinary team that could include staff from natural and cultural resources, interpretation, operations, and law enforcement. Each component is assessed by the team, and as for Scenic Quality, all components are equally weighted. Figures 2 and 3 are the front and back pages of the View Importance Form, respectively.

NPS Visual Resource Inventory

View Importance Form

Viewpoint No.:

NPS Unit Name:	Recorder:	Date:
Viewpoint Name:	Viewed Landscape Name:	
Evaluators:		

VIEWPOINT DESCRIPTION

VIEWPOINT TYPE

Viewpoint Value Type(s) (Choose all that apply): ☐ Scenic ☐ Historic/Cultural ☐ Other

Viewpoint Spatial Type (Choose one): ☐ Point ☐ Linear ☐ Area

VIEWPOINT SUBTYPE (Complete for selected viewpoint value type)

Scenic

☐ Designated scenic overlook ☐ National Scenic or Recreation Trail ☐ Other trail
☐ National Parkway ☐ National Scenic Byway/All American Road ☐ Other designated scenic road
☐ Wilderness Area ☐ Wild & Scenic River [☐ Wild ☐ Scenic ☐ Recreational]
☐ Natural feature (e.g. peak, promontory) ☐ Other

Describe:

Historic/Cultural

☐ National Historic Trail [☐ Visual Setting Important ☐ Not Important]
☐ High Potential Site or Segment ☐ Not High Potential Site or Segment
☐ Historic Property (NRHP-listed) [☐ Visual Setting Important ☐ Not Important]
☐ Site ☐ District ☐ Landmark ☐ Structure ☐ Object
☐ National Historic Landmark ☐ National Historic Site ☐ Traditional Cultural Property
☐ Historic Property (NRHP-eligible) [☐ Visual Setting Important ☐ Not Important]
☐ Identified Cultural Landscape
☐ National Heritage Area
☐ Cultural Resource (not-evaluated for, or listed on NRHP)
☐ Traditional Cultural Property (not evaluated for, or listed on NRHP; but identified by cultural group)
☐ Other

Resource Identification No.: _____ Resource Name: _____
Describe:

Other

☐ Park entrance [☐ Major ☐ Minor] ☐ Day use area (picnic area, visitor center, etc.)
☐ Day/night use area (lodge, cabin, campground) ☐ Other

Describe:

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Figure 2. View Importance Form, Front Page

NPS Scenery Conservation Program

View Importance Form

VIEWED LANDSCAPE DESCRIPTION			
Designated Scenic Components within Viewed Landscape (Choose all that apply)			
☐ National Scenic or Recreation Trail		☐ National Scenic Byway/Road	
☐ National Park	☐ National Monument	☐ National Rec. Area	☐ Wilderness Area
☐ Wild & Scenic River	☐ National Nat. Landmark	☐ National Seashore	☐ Component(s) not present
☐ Other			
Describe:			
Designated Historic/Cultural Components within Viewed Landscape (Choose all that apply)			
☐ Historic Property (NRHP-listed): ☐ Site ☐ District ☐ Landmark ☐ Structure ☐ Object			
☐ National Historic Landmark ☐ National Historic Site ☐ Traditional Cultural Property			
☐ Identified Cultural Landscape ☐ National Heritage Area			
☐ Historic Property (NRHP-eligible)	☐ National Historic Trail	☐ Other	
☐ Traditional Cultural Property (not evaluated for, or listed on NRHP; but identified by cultural group)		☐ Component(s) not present	
Resource Identification No.:		Resource Name:	
Describe:			
Non-Designated Components within Viewed Landscape (Choose One)			
☐ Nationally/regionally significant scenic, historic, cultural, or scientific feature or landmark		☐ Component(s) are not present	
Describe:			

VIEW IMPORTANCE						
Importance Factors	Rating	Rationale				
Viewpoint Importance						
Publicity						
Facilities and management						
Interpretive Services						
Viewpoint Total						
Viewed Landscape Importance						
Publicity						
Specially Designated Areas						
Interpretive Themes						
Viewed Landscape Total						
Viewer Concern						
Daily Visitation						
View Duration						
Viewer Sensitivity						
Viewer Concern Total						
VIEW IMPORTANCE TOTAL						
VIEW IMPORTANCE RATING		☐5 (9-15)	☐4 (16-23)	☐3 (24-30)	☐2 (31-38)	☐1 (39-45)

SCENIC INVENTORY RATINGS	Scenic Quality	View Importance	SCENIC INVENTORY VALUE (from SIV matrix)	

Figure 3. View Importance Form, Back Page

Viewpoint and Viewed Landscape Description

In many instances, the viewpoint for an important Park Service view is itself a scenic, historic, or cultural resource area or property, and views from these types of viewpoints may be particularly sensitive for both visual and historic/cultural reasons. As shown in Figure 2, information collected about the viewpoint identifies whether the location is associated with designated scenic or historic cultural features or locations, such as National Scenic or Historic Trails, designated scenic overlooks, historic properties, cultural landscapes, or other specially designated areas. Detailed information about historic and cultural elements in the view is recorded, including specific information about the type of historic/cultural element, its designation, and identification numbers that tie in directly to cultural resource information systems in use at the Park Service. This portion of the form was designed in collaboration with Park Service cultural resource experts in order to ensure that the appropriate data were collected and appropriate terminology was used.

Similar information is identified about the viewed landscape so that it is clear whether the view—whether inside or outside the park—includes special features or designations that are important to the park and its visitors. The visible presence of these elements in the viewed landscape adds to view importance. It should be noted that the presence of non-designated historic and cultural elements in the viewed landscape is also recorded.

View Importance Rating

Viewpoint Importance

Viewpoint importance assesses the extent to which the viewpoint is publicized and managed for visitors. The rating system assumes that to have the highest importance rating, the viewpoint must

- Be extensively publicized, especially for its scenic views, in Park Service or external communications and media (e.g., hiking guides, web sites, movies).
- Have facilities that have been added or are planned for the viewpoint area to enhance the visitor experience; and
- Have a high level of interpretive services that contribute to the visitors' enjoyment of scenic, historical, cultural, scientific or other Park Service values of the unit.

The metric reflecting use of the viewpoint for interpretive purposes includes historical and cultural values, and the publication metric, while highlighting scenic values, is not limited to scenic values; thus the viewpoint importance rating includes both scenic and historic/cultural values.

Viewed Landscape Importance

Viewed landscape importance assesses the extent to which the elements in the viewed landscape are publicized and used for interpretation. The assessment also evaluates the importance of special designations such as Wilderness or historic sites within the view. The viewed landscape rating system assumes that to have the highest level of importance, the viewed landscape must

- Be extensively publicized, especially for its scenic qualities, in Park Service or external communications or media (e.g. hiking guides, web sites);
- Consist of all or mostly specially designated areas, or nationally/regionally significant scenic, historic, cultural, or scientific features or landmarks (e.g., wilderness areas, cultural landscapes); and
- Strongly illustrate the Park Service unit's scenic character or important interpretive themes and/or be connected to the unit's goal for visitor experience.

Similarly to the viewpoint importance rating, historic and cultural elements and values are included in the viewed landscape rating, so it is not limited to scenic quality-related values.

Viewer Concern

The viewer concern component of the View Importance Assessment is roughly analogous to the Visual Resource Management sensitivity analysis and the Scenery Management System constituent analysis, in that it captures the level of concern that viewers have for the view. The evaluation of viewer concern relies primarily on the knowledge and professional judgment of Park Service staff, based on their knowledge of visitor characteristics, habits, and preferences, and supplemented by Park Service surveys and other studies of visitor use. The rating system assumes that to have the highest level of viewer concern,

- The viewpoint must have a high level of visitation in relation to other viewpoints in the park;
- Viewers generally spend an extended period of time at the viewpoint; and

- Most visitors would be unusually sensitive to potential changes in a view because they are seeking views of natural character or historic significance.

Two of the three viewer concern measures are "resource neutral," i.e., visitation levels and view duration are independent of the type of resource in view. The third measure explicitly includes the visual experience of a historic setting as a reason for increasing viewer concern for a view. An example of this situation would be visitors walking a historic trail expecting to recreate the visual experience of the original trail users; these persons would be expected to be much more sensitive to visual intrusions than more casual visitors.

VRI Historic and Cultural Values Integration Summary

In recognition of the major role that historic and cultural resources play in the scenic experience of Park Service visitors, and the importance of the visual experience of historic and cultural resources to Park Service interpretive and other visitor experience management goals, the Park Service VRI incorporates historic and cultural elements and values throughout the inventory process. Most importantly, the Park Service VRI incorporates values not directly associated with scenic quality through the View Importance Assessment, and these values contribute fully one-half of the Scenic Inventory Value for views. Historic and cultural elements, where present either at the viewpoint or within the viewed landscape, or when shown to be important to Park Service visitors or to Park Service interpretive goals, can contribute substantially to view importance. In addition to view importance, historic and cultural elements can contribute to scenic quality

through the scenic character integrity, vividness, and harmony components of the Scenic Quality Assessment.

The Park Service VRI not only provides opportunities for integration of historic and cultural resource elements and values into the scenic resource inventory process, it also provides the detailed implementation guidance and relatively straightforward metrics that facilitate the practical work required to successfully achieve integration. Without practical guidance and metrics, it is very difficult to achieve consistency in inventory results.

Another important aspect of integrating historic and cultural resource elements and values into the VRI is good documentation of the actual historic and cultural elements within the view, through both the Landscape Description process and the View Importance Assessment. A relatively complete accounting and description of historic and cultural elements within the view helps ensure that they are more fully and accurately accounted for when assessing the Scenic Inventory Value for the view. Collecting data compatible with Park Service cultural resource work practices and information systems helps improve the utility of the data collected for the later steps in the inventory process, and also establishes a sound foundation for future efforts involving integration of scenic and historic/cultural resources.

Results and Conclusion

VRI Implementation Results and Development Status

At the time of this writing, VRIs has been undertaken at 18 Park Service units, several of which are primarily historic and cultural units or have significant historic/cultural elements. Many of these units are faced with potentially significant scenic impacts from utility-scale renewable energy or transmission facility development beyond park boundaries. VRI inventories have been undertaken at the following Park Service units:

- Agate Fossil Beds National Monument
- Captain John Smith Chesapeake National Historic Trail
- Catoctin Mountain Park
- Chaco Culture National Historical Park
- Chattahoochee River National Recreation Area
- Chimney Rock National Historic Site
- Death Valley National Park
- Delaware Water Gap National Recreation Area
- Gates of the Arctic National Park and Preserve
- Grand Canyon-Parashant National Monument
- Homestead National Monument of America
- Joshua Tree National Park
- Mojave National Preserve
- Monocacy National Battlefield
- Petrified Forest National Park
- Potomac Heritage National Scenic Trail
- Redwood National and State Parks

- Scotts Bluff National Monument

Several additional inventories are planned. Results so far indicate that Park Service staff and volunteers have used the VRI methodology to successfully capture scenic, historic, cultural and other values of views, and that with training, the VRI approach is understandable to and implementable by Park Service staff and volunteers who are neither visual nor cultural resource experts.

Revisions to the Park Service VRI have been made based on lessons learned in early inventories. Key lessons learned in the course of conducting VRIs at Park Service units with important historical features are that within the VRI, the landscape character of the viewed landscape should be defined by what is currently visible in the view, rather than its historical landscape character; and also that visible historic elements must be treated differently in some cases than modern-day elements. For example, at Chaco Culture National Historic Park, during the historic period of use, the occupied part of Chaco Canyon consisted of small clusters of buildings surrounded by agricultural lands; however, there is currently little visible evidence of the historical land use except numerous and visually impressive ruins of ancient structures. Currently, the viewed landscape is dominated by natural-appearing scrublands and forest, with bare canyon walls. Many, if not most visitors have no knowledge of the past appearance of the canyon, and judge the scenic quality of the view based on its current appearance. In terms of scenic quality, the landscape character is *Natural/Natural Appearing*. Accordingly, in the original application of the VRI, the obviously human-made structures would be considered as non-conforming elements, and the scenic quality rating would be lowered as a result. However,

given that these ruins are an expected element of the park landscape, and indeed are the primary reason for the park's existence, in the revised VRI approach, the ruins are not considered non-conforming elements, nor is the scenic quality rating penalized for the "dilapidated" condition of the historic structures, which obviously are not intended to be seen in their original, functional form. The historical importance of these structures and their contribution to visitor experience and the park's interpretive goals is instead captured as part of the View Importance Assessment.

Current VRI development activities include refinements to the database mapping and reporting capabilities, and development of comprehensive documentation and training materials. Work is also underway to incorporate VRI results into various Park Service planning efforts, as described in Meyer and Sullivan (2016).

Conclusion

This article examined the degree to which federal agencies' scenic inventory processes integrate historic and cultural resources. The Bureau of Land Management and the Forest Service have developed scenic inventory processes that reflect the agencies' missions and visual resource management objectives, and the types of landscapes administered by the agencies. These existing inventory processes vary in the degree and methods by which they incorporate historic and cultural elements and values.

The National Park Service has developed its VRI process in response to concerns arising from potential scenic impacts from renewable energy, electric transmission, and other types of

development on lands and waters near Park Service units. Like the Bureau of Land Management Visual Resource Management program and the Forest Service Scenery Management System, the design of the Park Service VRI reflects the Park Service mission and its management objectives. Because historic and cultural resources are essential to the scenic experience of Park Service visitors, the Park Service VRI incorporates historic and cultural elements and values throughout the scenic resource inventory process, and provides practical guidance and metrics for successful integration of historic and cultural concerns into the inventory. VRI inventories have been conducted at a variety of Park Service units, and have demonstrated that the Park Service VRI can be used successfully to capture historic and cultural resource information and incorporate it into the assessment of scenic values of views.

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