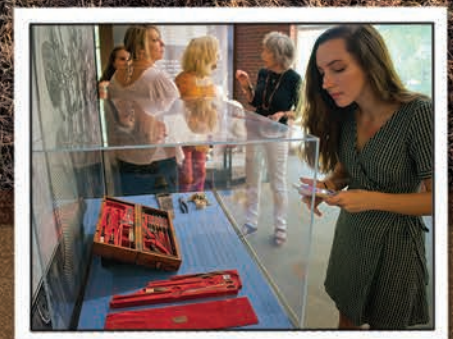




# RESOURCE STEWARDSHIP STRATEGY SUMMARY

FREDERICKSBURG AND SPOTSYLVANIA NATIONAL MILITARY PARK  
VIRGINIA





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# INTRODUCTION

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## PURPOSE OF A RESOURCE STEWARDSHIP STRATEGY

A resource stewardship strategy (RSS) is a strategic plan intended to help park managers achieve and maintain desired resource conditions over time (see NPS *Management Policies 2006* [§2.3.2]). As part of a park's planning portfolio, a resource stewardship strategy serves as a bridge between the park's foundation document, other plans, and everyday management of its natural and cultural resources.

More specifically, a resource stewardship strategy is a dynamic planning tool used to set stewardship goals and track progress in achieving and maintaining desired natural and cultural resource conditions. All resource stewardship goals and activities should be based on science, law, NPS management policies, and the long-term public interest.

Essentially, a resource stewardship strategy establishes a framework and a coordinated process for

1. evaluating and summarizing existing information about priority park resources (including key issues, stressors, and threats),
2. using science, scholarship, and traditional knowledge to establish stewardship goals for priority resources,
3. integrating natural and cultural resource management to achieve stewardship goals, and
4. determining what stewardship activities are needed to get us “from where we are to where we want to be.”

This information provides a basis for making informed resource management decisions for specific project proposals and for developing and revising annual work plans over time.

A resource stewardship strategy is not a static document or one-time effort. Rather, it is a dynamic framework that should be routinely updated as conditions change; new issues, stressors, or threats are identified; and activities are accomplished. A resource stewardship strategy is reviewed by NPS subject-matter experts and decision makers; however, it is not a publicly reviewed decision document.

The RSS process also provides an opportunity for a park to take an integrated approach to resource management by capitalizing on overlapping opportunities among and within disciplines, identifying stewardship activities that benefit multiple resources, or addressing larger parkwide issues. Taking an integrated approach can result in more effective stewardship for resources through the use of science, scholarship, research, policy, interpretation, and direct management.

## INTENT OF THIS SUMMARY DOCUMENT

This summary document is intended to provide readers with a snapshot of the resource stewardship strategy for Fredericksburg and Spotsylvania National Military Park. For the sake of simplification and abbreviation, this unit of the national park system will also be referred to as “the park” or FRSP in this document. The document serves as a communication tool that complements the dynamic and evolving RSS desktop application that is actively used for resource management. This summary is not intended to describe all of the elements in the resource stewardship strategy, but instead focuses on those components of the strategy that are essential for communicating information about the park’s plan to address key management issues and seize opportunities for those resources identified as priority natural and cultural resources.

This document includes a summary of key issues, stressors, and threats affecting park resources; brief descriptions of the park’s priority resources and their components; stewardship goals for priority resources and stewardship activities determined to be high priorities for the next 3 to 5 years. The document concludes with a brief description of future RSS implementation.

It is important to remember that implementation of the resource stewardship strategy is an ongoing process, with necessary updates and revisions occurring as resource and management conditions change and stewardship activities are carried out.



## BRIEF DESCRIPTION OF FREDERICKSBURG AND SPOTSYLVANIA NATIONAL MILITARY PARK

*This brief description of the park was adapted from the park's foundation document, which was approved in 2015.*

Fredericksburg and Spotsylvania National Military Park (established as Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park) commemorates and interprets four major battles of the American Civil War: Fredericksburg, Chancellorsville, the Wilderness, and Spotsylvania Court House. Located midway between Washington, DC, and Richmond, Virginia, along the Rappahannock River, the Fredericksburg area became the most fought-over ground of the war, resulting in more than 100,000 casualties and devastation to the local communities.

The park was authorized by an Act of Congress on February 14, 1927 (44 Stat. 1091). By Executive Order 6166 in 1933, the park was transferred from the War Department to the Department of the Interior to be administered by the National Park Service (NPS). The Fredericksburg National Cemetery, which is also administered by the National Park Service, was established in 1865 to honor the federal soldiers who died in the service of their country. As defined by the 2015 foundation document, the purposes of Fredericksburg and Spotsylvania National Military Park are:

- Preserve and protect the cultural resources associated with the Civil War battlefields of Fredericksburg, Chancellorsville, the Wilderness, and Spotsylvania Court House.
- Interpret and commemorate the battlefields and related sites in the larger context of the Civil War and American history, including the causes and consequences of the war and its effect on the American people, especially on the American South.
- Manage natural resources to preserve the setting and environment in order to support visitor understanding and appreciation of the battlefields and related sites.

### Battle of Fredericksburg

The Union Army commanded by Gen. Ambrose E. Burnside arrived on Stafford Heights overlooking Fredericksburg in mid-November 1862. Not until December 11, however, did the Federals cross the Rappahannock River. By that time, Confederate Gen. Robert E. Lee's forces were firmly posted on the high ground west of the city. On December 13, Burnside ordered two attacks. An assault led by Union Gen. George G. Meade against Gen. Thomas "Stonewall" Jackson's corps at Prospect Hill achieved temporary success before Confederate reserves drove the Federals back to their original position. The second attack was launched against the heart of Lee's defenses at Marye's Heights west of Fredericksburg. Confederate artillery on the heights and infantry behind a stone wall slaughtered the Union soldiers. When the day ended, Lee had won his most one-sided victory of the war.

### Battle of Chancellorsville

Following the Fredericksburg debacle, President Abraham Lincoln replaced Burnside with Gen. Joseph Hooker. On April 27, 1863, the new commander marched most of his army upstream, crossed the Rappahannock and Rapidan rivers at various fords, and within three days was at the Chancellorsville crossroads. Lee discovered this threat to his position and rushed westward, prompting Hooker to abandon the initiative and establish a defensive line, which was vulnerable on the right flank. Jackson exploited this weakness on May 2 by leading his corps on a risky 12-mile march around the Union army and destroying Hooker's right in a spectacular surprise attack. The day ended tragically for the Confederates when Jackson was unwittingly shot and mortally wounded by his own troops. For three more days, Lee pressed his advantage and eventually drove the Federals back across the river.

## Battle of the Wilderness

The first of a year's worth of sustained combat between Lee and Union Gen. Ulysses S. Grant took place in the dense thickets and tangled undergrowth of the Wilderness on May 5–6, 1864. Along the Orange Turnpike, the armies grappled to a bloody stalemate over two days. To the south, on the Orange Plank Road, the Federals almost crushed Confederate Gen. A.P. Hill's troops on May 5, only to be thrown back by a dramatic counterattack the next day. Tactically, the battle was a draw, but Grant broke the stalemate by marching his army south toward Spotsylvania Court House.

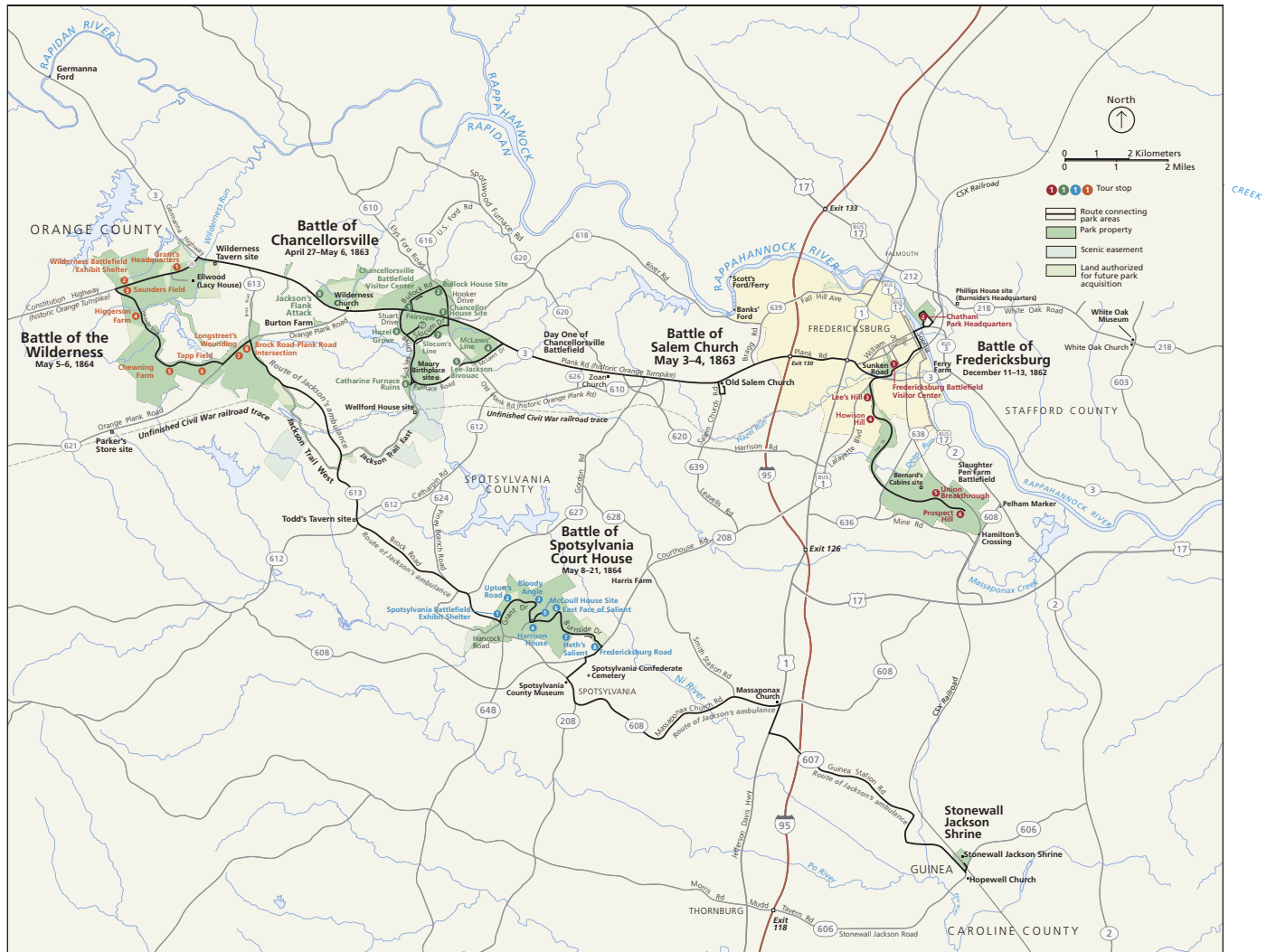
## Battle of Spotsylvania Court House

On the night of May 8, 1864, both armies raced for the vital intersection at Spotsylvania Court House that controlled the shortest route to Richmond. Lee arrived first, entrenched, and successfully withstood a series of Union attacks. On the morning of May 12, two Federal corps charged from the woods opposite a vulnerable section of the Confederate line known as the "Mule Shoe Salient." Thanks in part to thick fog and wet Confederate powder, the initial Union advance overwhelmed the Southerners. Confederate reinforcements counterattacked, and for the next 20 hours this sector witnessed the most intense hand-to-hand combat of the war. The site of this desperate fighting came to be called the "Bloody Angle" and earned Lee enough time to build new earthworks, which he held until Grant sidled south once again on May 21.

The park today encompasses more than 8,000 acres (3,237 hectares) spread over 145 square miles in four counties and one independent city. The park preserves, protects, and interprets the cultural resources of four major battles of the American Civil War. The park features two visitor centers; natural and landscape features; and five historic structures: Chatham, Ellwood, Salem Church, Innis House, and the plantation outbuilding at Guinea Station where General Jackson died.



Figure 1. Map of Fredericksburg and Spotsylvania National Military Park



## DEVELOPMENT OF THE RESOURCE STEWARDSHIP STRATEGY FOR FREDERICKSBURG AND SPOTSYLVANIA NATIONAL MILITARY PARK

This resource stewardship strategy represents the collaborative efforts of National Park Service (NPS) personnel from the park; the NPS Region Office for Interior Region 1 (RO); the NPS Cultural Resources, Partnerships and Science Directorate (CRPS); the NPS Natural Resource Stewardship and Science Directorate (NRSS); and the NPS Denver Service Center, Planning Division (DSC-P). It is based on information about park resources that was available at the time of RSS development and on the experience and professional judgment of resource specialists.

In developing the resource stewardship strategy, the project team followed a five-step process established by a national NPS working group that formed to provide direction and oversight for RSS efforts nationwide. First, the team gathered and evaluated existing information about park resources to determine the current condition of resources and status of information. Next, they identified and assessed key issues, stressors, and threats that are impacting park resources or could do so in the future. The team then identified priority resources and their components for this resource stewardship strategy. They subsequently set stewardship goals for each priority resource. Finally, the team identified stewardship activities aimed at achieving those goals and prioritized activities to implement within the next 3 to 5 years. The organization of this summary document parallels this RSS development process, which is described in more detail in internal NPS documents, including the RSS Development Guide prepared in 2019. Some key terms that are used throughout this summary document are defined below.



## DEFINITIONS OF KEY TERMS

**Priority Resource:** A cultural or natural resource or value that the National Park Service manages or monitors to maintain a park unit's purpose and significance, to address policy/law mandates, or to address scholarly and scientific research needs or findings.

**Priority Resource Component:** An aspect or attributing resource that is integral to the functionality, importance, or condition of a priority resource and can be managed or monitored practically over the next 5-year horizon. A priority resource component is included, or nested, under the associated priority resources.

**Stewardship Activity:** One or more initiatives that lead to the achievement of a short-term stewardship goal. On its own, a stewardship activity should produce a specific deliverable or outcome. Activities may include assessments, documentation, identification, maintenance, operations, resource protection, thematic studies, cataloging, evaluation, interpretation, planning, training, data recovery, education, inventory, monitoring, research, survey, treatment, restoration, or other types of management.

**Stewardship Goal:** A description of what resource condition or information that managers are working to achieve for a particular priority resource or component. Stewardship goals guide the National Park Service in its aim to enhance information; improve or maintain resource conditions; address issues, stressors, or threats; or achieve other park stewardship needs related to the priority resource such as increasing collaboration with partners or expanding education, interpretation, and other programming.

**Strategy:** A tactical path forward defined through achievable actions that maintain or improve aspects of a priority resource/component. Strategies start with a stewardship goal and include a comprehensive set of activities to achieve that goal. Strategies are logically organized, science/scholarship-based, well documented, and reviewed by subject-matter experts. The typical timeframe for executing a strategy is short term, typically 3 to 5 years depending on a park's needs.





## KEY PARK ISSUES, STRESSORS, AND THREATS

Fredericksburg and Spotsylvania National Military Park faces a variety of issues, stressors, and threats that affect park resources or may potentially affect park resources in the future. These include factors that are related to climate change and those that are unrelated. Key issues are management concerns that directly relate to park resources and their conditions. Stressors are factors that exacerbate change in resource conditions, while threats are immediate or potential factors that may negatively impact park resources in the future but do not currently affect park resources. The identification of key issues, stressors, and threats helped drive the selection of priority resources for this resource stewardship strategy. Furthermore, the National Park Service considered key issues, stressors, and threats when setting stewardship goals for priority resources and when developing and prioritizing stewardship activities that respond to those goals.

Table 1 summarizes key issues, stressors, and threats; their potential implications; and resource types affected. Given the significance of climate change stressors on resources at the park, a brief narrative that elaborates on climate change effects and responses is provided after the table.

**Table 1. Key Issues, Stressors, and Threats; Potential Implications; and Affected Resources**

| ISSUES, STRESSORS, OR THREATS    | POTENTIAL IMPLICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RESOURCE TYPES AFFECTED                                                                                               |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>EXTERNAL LAND DEVELOPMENT</b> | <p>The increasing intensity and extent of rapid external development, including related infrastructure and utility needs—which includes some of nation’s fastest-growing areas—negatively affects multiple park resources through a variety of ways. These impacts include, but are not limited to, changes in numbers of people per square area unit, noise levels, light pollution, changes in hydrological patterns due to the establishment of structures and associated hardened surfaces, traffic patterns, and an overall land use change from a rural or agricultural character to suburban use. Impacts from increasing trends in urban influences have multiple effects, including changing the visitor understanding of intangible resources such as open views and soundscapes (historic features, natural soundscapes, sense of solemnity); deterioration in natural night sky qualities, which affect natural elements that are sensitive to poorly situated lights or excessive light pollution (bats, insects, birds, amphibians); and threats posed to tangible cultural resources (buildings, sites, archeology) from unnatural erosion rates and high water run-off events that are exacerbated by changes in soil structure and stability, related vegetation impacts, and the presence of hardened features such as additional trails, sidewalks and roads.</p> <p>Among those impacted resources includes the historic settings for the battlefields that are located outside of park boundaries. While the park has some ability to respond to the effects from inside the park boundary, it is more difficult to influence or manage for these changes, given the magnitude of the influences from outside the park boundaries.</p> | <p>Archeological resources; cultural landscapes; natural communities; historic views; natural sounds; night skies</p> |

**Table 1. Key Issues, Stressors, and Threats; Potential Implications; and Affected Resources (continued)**

| ISSUES, STRESSORS, OR THREATS                                                           | POTENTIAL IMPLICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RESOURCE TYPES AFFECTED                                                  |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>IMPEDIMENTS TO ACCESS, ORIENTATION, AND CIRCULATION ON ROADS, TRAILS, AND TRACES</b> | <p>Historic roads, traces, and the railroad grade, among other important historic landscape features, are popular with visitors, especially those that remain very visible on the landscape and/or have wayfinding material that enables visitor enjoyment and understanding. However, current levels of use and/or management activities negatively impact the integrity of these resources and constrain the park's ability to safely interpret these resources or maintain them in a way that is representative of historic conditions.</p> <p>Some of these historic routes, as park cultural resources, are also heavily used commuter routes. While these corridors present opportunities for improved interpretation and education, there are well-founded concerns for visitor safety issues that obligate park managers to address them. Related to heavy commuter use are the associated effects of road widening and the establishment of safety features that continue to encroach upon battlefield features and historic landscapes and destabilize in-situ features (e.g., battlefield-era buildings). The associated loss of land to development could obliterate battlefield features, substantially impact historic landscapes, and disrupt the park's efforts to interpret the battle era. Other loss of the historic fabric can be attributed to the transition of open fields to early successional shrubby or forested landscapes.</p> | <p>Across natural and cultural resources</p>                             |
| <b>LIMITED STAFF CAPACITY TO MANAGE HISTORIC STRUCTURES</b>                             | <p>Park funding and staffing levels have not increased commensurately with FRSP's increased land base. Frequently, newly acquired lands include modern buildings and debris, which must be removed to preserve battlefield significance. In other cases, these more contemporary dwellings must be evaluated for inclusion in the National Register of Historic Places (NRHP). The National Park Service also needs to evaluate new land acquisitions for potential access points and development of visitor infrastructure (e.g., parking, trails, interpretive signs). There are limited staff to address additional maintenance needs presented by the acquisitions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Archeological resources; cultural landscapes; historic structures</p> |

Table 1. Key Issues, Stressors, and Threats; Potential Implications; and Affected Resources (continued)

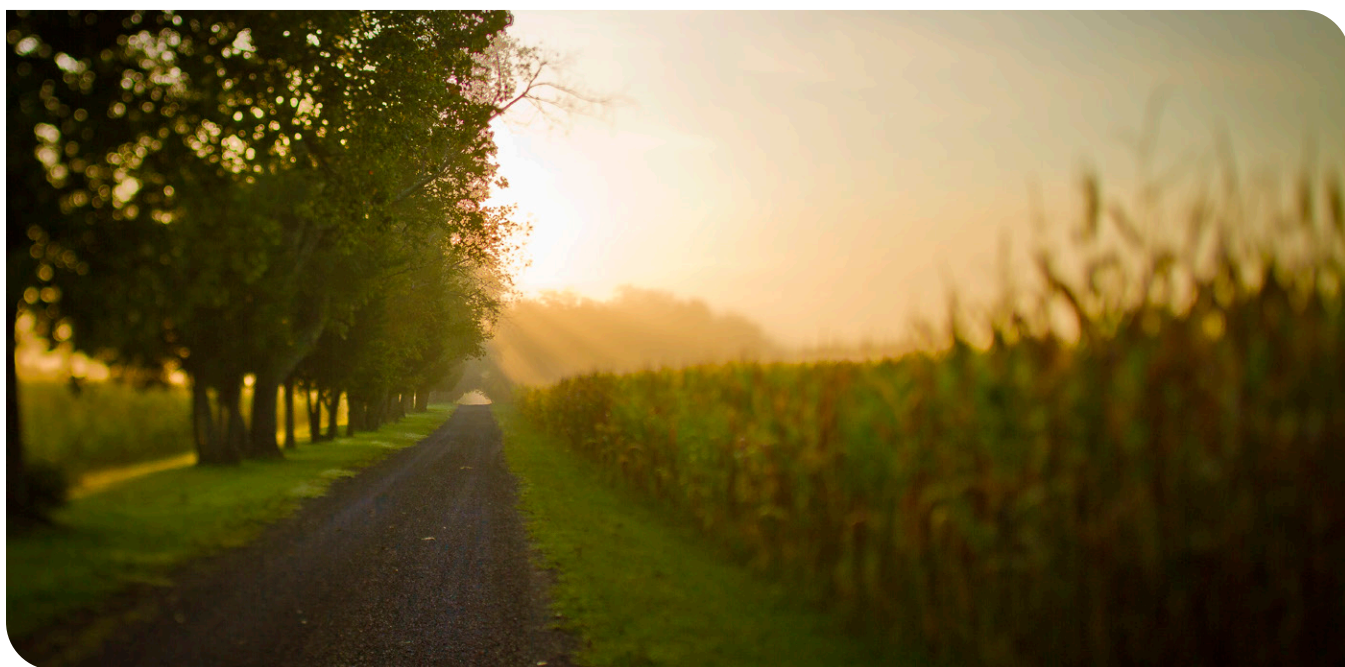
| ISSUES, STRESSORS, OR THREATS                                                 | POTENTIAL IMPLICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | RESOURCE TYPES AFFECTED                                                                                      |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>STORMWATER RUNOFF; INCREASED STORM FREQUENCY AND INTENSITY</b>             | <p>Stormwater runoff and impacts to water quality are interrelated challenges that continue to be influenced by extensive development in urban and suburban areas surrounding the park. This degree of change is amplified by more intense and frequent severe storm events that are related to the effects of climate change.</p> <p>The hydrological impacts described here affect park resources in numerous ways. For cultural resources, the effects are visible through significant erosion to earthworks, rifle pits, and disturbance to other in-situ archeological resources. Additional stream loading due to development and proliferation of nonpermeable surfaces causes heavier soil saturation, which can lead to flooding and higher humidity levels in historic structures.</p> <p>Park natural resources are affected by changing hydrological conditions through exacerbated erosion and sedimentation rates to streams and other water bodies draining the park's watersheds. Streambanks are destabilized as the overly saturated water table contributes to toppling trees and safety hazards and negatively impacts stream quality. Increases in heavy rainfall events also stress undersized infrastructure, such as culverts, which can further damage park resources.</p> <p>Related to stormwater runoff impacts, the use of salt in snow and ice control on local roadways impacts park water quality and stream aquatic life. Highway salt damages historic concrete structures as well.</p> | <p>Archeological resources; cultural landscapes; historic structures; natural communities; water quality</p> |
| <b>INCOMPLETE AND OUT-OF-DATE CULTURAL RESOURCES DOCUMENTATION</b>            | <p>There is a lack of cultural resource personnel at the park, which in turn contributes to cultural resource documentation being incomplete or out of date. Incomplete or inadequate documentation and guidance limits park staff ability to protect and preserve resources.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>Archeological resources; cultural landscapes; historic structures; museum collection and archive</p>      |
| <b>EXCAVATION, LOOTING, AND THEFT OF ARCHEOLOGICAL AND HISTORIC RESOURCES</b> | <p>As of 2015, the park has the highest incidence of archeological looting of parks in region 1. Looting of archeological sites from metal detecting and unlawful digging damages significant battlefield landscape features and is an Archeological Resources Protection Act (ARPA) violation. Expanding regional development, population growth, and enhancements in metal-detector technology have led to more incidents. Limited staffing and capacity for enforcement is also a concern—the park experienced a break-in in late 2019, for example, that targeted museum collection objects.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Archeological resources; cultural landscapes; historic structures; museum collection and archive</p>      |
| <b>EARTHWORK DEGRADATION AND EROSION</b>                                      | <p>Earthworks associated with the battles are primary park resources and damage caused by natural forces (e.g., rain and wind) poses significant risks to them. Foot and motorized vehicle traffic threaten the earthworks as well. Similarly, managing trees that root within and grow near earthworks is an ongoing challenge for park managers.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Archeological resources; cultural landscapes; natural communities</p>                                     |

Table 1. Key Issues, Stressors, and Threats; Potential Implications; and Affected Resources (continued)

| ISSUES, STRESSORS, OR THREATS                       | POTENTIAL IMPLICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | RESOURCE TYPES AFFECTED                                                                                                               |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>EXPANSION OF SOCIAL TRAILS AND OFF-TRAIL USE</b> | The extensive development activity surrounding park boundaries is accompanied by an increased number of social trails into the park and inappropriate uses of park resources. Social trails and off-trail use compact soils and change the vegetation type and structure where use is persistent. Compacted soils and changes to vegetation create conditions for increased erosion rates and rilling on steeper grades within the park and adjacent boundaries. Several areas within the park have also been impacted by unauthorized dirt bike use, which can destroy sensitive plant communities, negatively impact ecological processes, and damage archeological resources.                                                                                                                                                                               | Archeological resources; cultural landscapes; natural communities                                                                     |
| <b>INVASIVE PLANTS</b>                              | <p>Adjacent development activities, park maintenance operations, and visitor use produce disturbed soil conditions that contribute to the proliferation of invasive plants. Invasive plants disrupt natural vegetation communities as well as cultural landscape conditions. In some areas, invasive plants line roadways, blocking vistas experienced by millions of visitors and commuters who pass through the park on state highways. Over time, invasive plant species can compromise important ecological processes by reducing native species richness and altering community structure.</p> <p>In addition, while the impacts of climate change on park resources are uncertain, anticipated changes in temperature and precipitation may lead to expansion of invasive vegetation at park sites and introduce new invasive species to the region.</p> | Across natural and cultural resources                                                                                                 |
| <b>AIR POLLUTION</b>                                | In addition to weathering, air pollution contributes to the deterioration of monuments, memorials, cemetery markers, and other cultural resources made from stone, metal, and paint. Views are sometimes diminished by pollution-caused haze. Natural communities are at risk for harmful effects of nutrient enrichment and acidification from excess pollutant deposition. Ground-level ozone is improving but sometimes reaches levels that can affect breathing for sensitive groups and cause injury to ozone-sensitive plants. Airborne toxic pollutants deposited with rain and snow can accumulate in the food chain and affect both wildlife and human health.                                                                                                                                                                                        | Monuments, cemetery markers, and other cultural resources; historic views; native vegetation; wildlife; museum collection and archive |
| <b>FIELD MANAGEMENT</b>                             | <p>The park manages approximately 1,100 acres (445 hectares) of open fields and maintaining them as “open” landscapes is an important objective for managing the cultural landscape. Some fields are leased for farming, and it is imperative that farmers manage pesticides appropriately.</p> <p>In addition to farming, fields are maintained as open landscapes by bushhogging and sometimes the use of prescribed fire. Timing of both is crucial to minimize impacts to wildlife. Bushhogging and burning are best accomplished from October to mid-April to minimize wildlife impacts.</p>                                                                                                                                                                                                                                                              | Archeological resources; cultural landscapes; historic views; native vegetation; wildlife                                             |

Table 1. Key Issues, Stressors, and Threats; Potential Implications; and Affected Resources (continued)

| ISSUES, STRESSORS, OR THREATS                    | POTENTIAL IMPLICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RESOURCE TYPES AFFECTED                                                                                    |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>INTEGRATED PEST MANAGEMENT</b>                | <p>Integrated pest management (IPM) is a management strategy for the National Park Service that focuses on long-term prevention of pests or their damage through a combination of techniques such as habitat manipulation, modification of cultural practices, and biological control. These practices can be utilized in either a natural resource or cultural resource context. For natural resources, integrated pest management responds to pest issues (animals, plants, etc.) that affect wildlife, vegetation, and aquatic resources. For cultural resources, the focus could be on pests that affect museum collections, such as invertebrate pests and molds that damage textiles, paper archives, and other organic elements, or destabilize architectural features, such as wooden frames in historic structures (e.g., termites). The focus is not necessarily on exotic species of pests; organisms that are native to the local environment can become pests if they reach levels that cause a loss of integrity to important park resources.</p> <p>The park would benefit from the establishment of an on-site IPM coordinator who could assist the park in locating and coordinating the resources (crews, specialists, etc.) and authorization necessary (via NPS Pesticide Use Proposal System) to manage pest issues and implement treatment strategies. An IPM plan would also be beneficial for the park.</p> | Museum collection and archives; historic buildings; forest health; aquatic resources; wildlife; vegetation |
| <b>CLIMATE CHANGE—<br/>Increased Temperature</b> | <p>Pests, pathogens, mold, and invasive species are likely to increase impacts to biotic communities via shifts in species ranges and phenology due to increased temperatures. Increased temperature variability and humidity can also place more demands on heating, ventilation, and air conditioning (HVAC) systems, leading to damage to and deterioration of museum collection objects if HVAC issues arise.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Historic structures; natural communities; museum collection and archive                                    |



## FRSP CLIMATE CHANGE AND PARK RESOURCES

Fredericksburg and Spotsylvania National Military Park has already experienced significant and rapid, human-caused climate change (USGCRP 2017). While the Southeast region has not warmed as rapidly as the rest of the country (referred to as the “warming hole,” Mascioli et al. 2017), mean annual temperatures in FRSP have shown a significant increasing trend since 1970. Recent temperatures are “extremely warm” compared to 20th-century averages (Monahan and Fisichelli 2014). While there have been no significant trends in annual precipitation, warming temperatures increase evaporation demands and can reduce available water for plants, groundwater recharge, and surface flows. These sorts of climate changes frequently act as stress multipliers and exacerbate existing threats to historic structures and cultural landscapes.

The most extreme temperature trend has been in average minimum (overnight) temperatures since 1970, which have increased at an average rate of 0.5 °F per decade (Analyses: NPS Climate Change Response Program [CCRP]). No significant trend in maximum (daytime) temperatures has been observed since 1970. While the average number of extremely hot days (above 95 °F) has not increased in relation to 20th-century averages, a winter warming trend is reflected in the below average number of very cold nights (minimum temperature below 0 °F) since 1990. Average summer temperatures in the most recent decade (2005–2014) exceeded those in the early 1930s (Runkle et al. 2017). Mean annual precipitation increased at an average rate of 0.3 inches per decade since 1895 (Analyses: NPS CCRP). Precipitation has mostly increased in the fall, and summer precipitation since 1980 has decreased. Additionally, there is an upward trend in the annual number of extreme precipitation events (> 2 inches) over the past two decades (1995–2014) (Runkle et al. 2017).

All climate models project warming temperatures by ca. 2040 relative to the 1950–1999 baseline (Analyses: NPS CCRP). Future projections for precipitation are mixed, although most models project total annual precipitation will increase. The Climate Change Response Program produced two divergent and plausible climate futures specific to FRSP for consideration during the RSS process. These included a “Warm Damp” and “Hot Wet” climate future. Under the Warm Damp future, temperature and precipitation increase more modestly compared to the Hot Wet Future.

Specifically, under a Warm Damp climate future, mean annual temperatures are projected to rise 2 °F by 2040, while mean annual precipitation will increase by 1.4 inches (figure 2). Under a Hot Wet climate future, mean annual temperatures are projected to increase 4.9 °F and mean annual precipitation will decrease by 4.1 inches (figure 2). Models also project precipitation may occur during higher-intensity one- or two-day events throughout the Southeast region due to the higher water vapor content of the atmosphere with increasing temperature (USGCRP 2017). Winter, spring, and late summer precipitation is projected to increase in both climate futures. Early summer precipitation is expected to decrease for the Warm Damp climate future and increase for Hot Wet.

A shift of only a couple of degrees from mid-80s (°F) to low 90s can move visitors from a “Caution” to “Extreme Caution” zone according to the National Oceanic and Atmospheric Administration’s Heat Index. With higher temperatures occurring more frequently and over a longer summer season, educating visitors of the dangers of heat and maintaining potable fresh water on-site may become more important for visitor safety. Increases in ozone are also linked to more heat waves (Pyrgou et al. 2018).

For urban trees, heat can be a key driver of forest impacts and insect pest outbreaks (Meineke et al. 2013). Warming temperatures are predicted to increase evapotranspiration, drying forest vegetation, increasing wildfire risk, and reducing streamflow (Ingram 2013). Tree habitat suitability is projected to change, resulting in different species composition (Fisichelli et al. 2015). Longer growing seasons will increase the risk of insect outbreaks and expand the ranges of some species such as scale insects and cankerworm (Ingram 2013; Frank 2014).

Climate change may increase risk from invasive plant species in FRSP. Longer growing seasons and shorter cold snaps may allow invaders to expand into new ranges (Ingram 2013). Undesirable species likely to benefit from climate change include kudzu (*Pueraria lobata*) and privet (*Ligustrum sinense*; *L. vulgare*) (Bradley et al. 2010). Similar to changing tree suitability, climate change is expected to alter the bird community at FRSP; some species currently found there may be extirpated, and new species may colonize (Schuurman and Wu 2018).

These changes have the potential to impact cultural resources through a variety of mechanisms (Rockman et al. 2016). For cultural landscapes, the changing forest composition and increased invasive species may cause the decline of critical vegetation species and degrade viewsheds. Changing precipitation will affect agricultural management.

Museum collection objects, especially those on display, will require additional systems to handle temperature and humidity changes; historic structures subsequently may have stress from designs to accommodate additional system demands. Earthworks and other archeological resources may be impacted by increased site erosion or increased treefall.

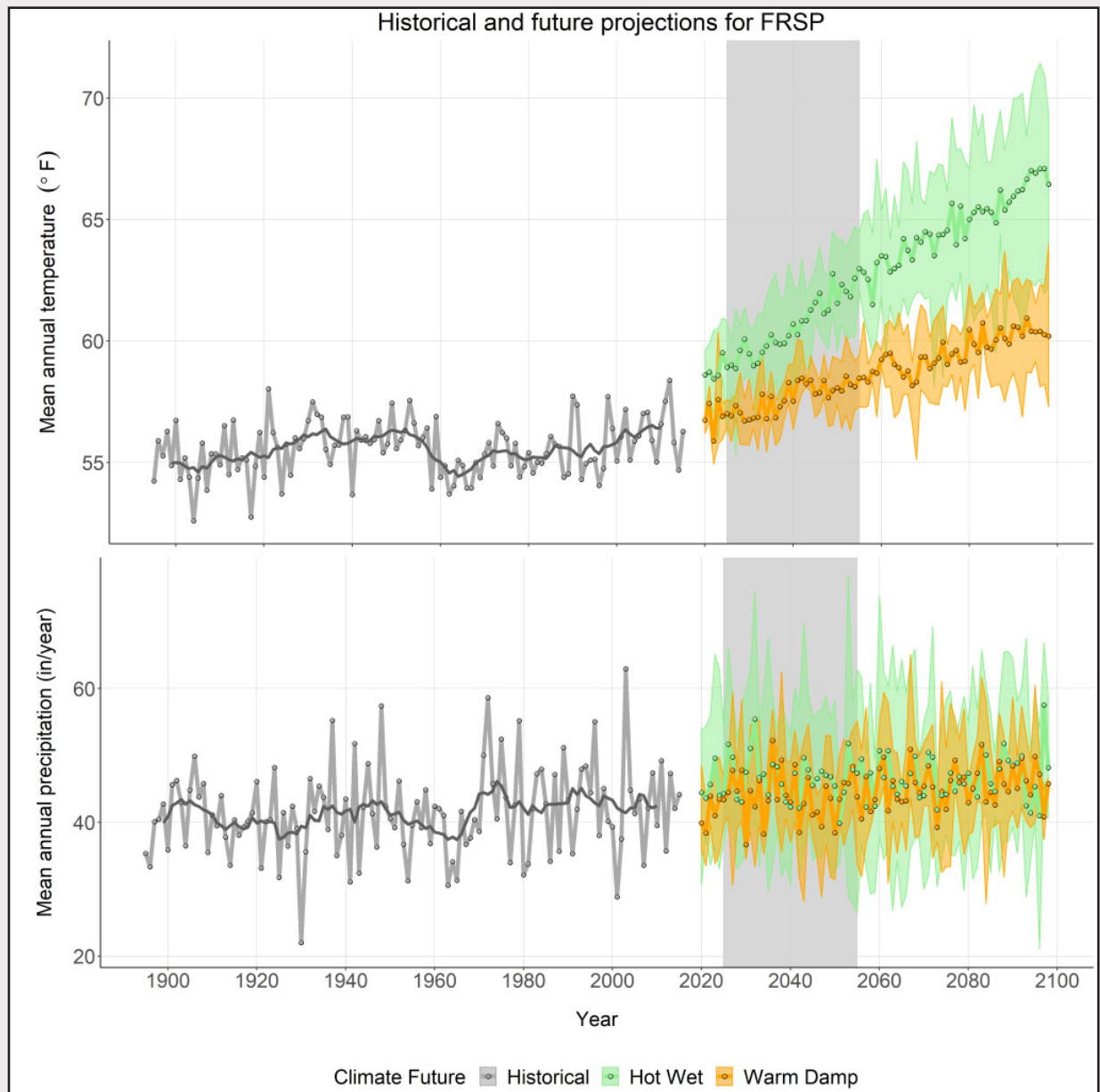


Figure 2. Historical observed data (gray lines; PRISM records from 1895–2017) and future projections (green and orange lines; multivariate adaptive constructed analog downscaling for global climate model projections from 2020–2099) for annual mean temperature and precipitation in Fredericksburg and Spotsylvania National Military Park. The dark gray line running through the historical time series is the 10-year running average. The green and orange lines represent the means of global climate models grouped into Warm Damp and Hot Wet climate futures; green and orange shaded areas represent the minimum-maximum range of each climate future. Gray shaded area represents the future time period 2025–2055, used to average future changes from the historical baseline.



# PRIORITY RESOURCES AND COMPONENTS

Priority resources drive the entire RSS process by focusing attention on those park resources that are critical and could most benefit from management direction within the next 3 to 5 years. Typically, the priority resources for a resource stewardship strategy may include those that are defined in a foundation document as fundamental or other important resources, as well as additional resources that park staff believes are necessary to maintain the park's purpose and significance, address policy or legal mandates, or address scholarly and scientific research needs. Certain priority resources are standalone, while others may be subdivided into one or more components. The identification of priority resources and components guides the development of stewardship goals and activities in subsequent steps of RSS development. Parsing out the components of each priority resource helps resource managers tailor these goals and activities to more directly target the resource condition or understanding of its constituent parts. Collectively, this component-level stewardship works to improve the condition or understanding of the broader, "umbrella" priority resource.





Table 2 includes a list of priority resources and their components for the FRSP resource stewardship strategy. Each priority resource is described in greater detail in a summary narrative that follows the table.

**Table 2. Priority Resources and Their Components**

| PRIORITY RESOURCE                     | COMPONENT(S)                                                                                                                                                                                                                                    |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ARCHEOLOGICAL RESOURCES               | <ul style="list-style-type: none"> <li>- Battlefield Archeological Resources</li> <li>- Non-battle-related Archeological Resources</li> </ul>                                                                                                   |
| CULTURAL LANDSCAPES                   | <ul style="list-style-type: none"> <li>- Battlefields and Civil War-era Landscapes</li> <li>- Commemorative Landscapes</li> <li>- Historic Designed Landscapes</li> </ul>                                                                       |
| EARTHWORKS                            | <ul style="list-style-type: none"> <li>- Open-Field Earthworks</li> <li>- Woodland Earthworks</li> </ul>                                                                                                                                        |
| ETHNOGRAPHIC RESOURCES                | <ul style="list-style-type: none"> <li>- No components identified</li> </ul>                                                                                                                                                                    |
| HISTORIC STRUCTURES                   | <ul style="list-style-type: none"> <li>- Administrative Structures</li> <li>- Outdoor Exhibits</li> </ul>                                                                                                                                       |
| MUSEUM COLLECTION AND ARCHIVE         | <ul style="list-style-type: none"> <li>- Archives</li> <li>- Archeological Collections</li> <li>- Historical Objects</li> <li>- Natural History Specimens</li> </ul>                                                                            |
| NATURAL RESOURCES                     | <ul style="list-style-type: none"> <li>- Forests</li> <li>- Grasslands/Meadows</li> <li>- Open Lands</li> <li>- Rare Native Vegetation</li> <li>- Streams</li> <li>- Wetlands<sup>1</sup></li> <li>- Wildlife and Species of Concern</li> </ul> |
| PARK SETTING                          | <ul style="list-style-type: none"> <li>- Historic Views</li> <li>- Natural Sounds</li> <li>- Night Skies</li> </ul>                                                                                                                             |
| PARKWIDE AND CROSS-BOUNDARY RESOURCES | <ul style="list-style-type: none"> <li>- No components identified</li> </ul>                                                                                                                                                                    |

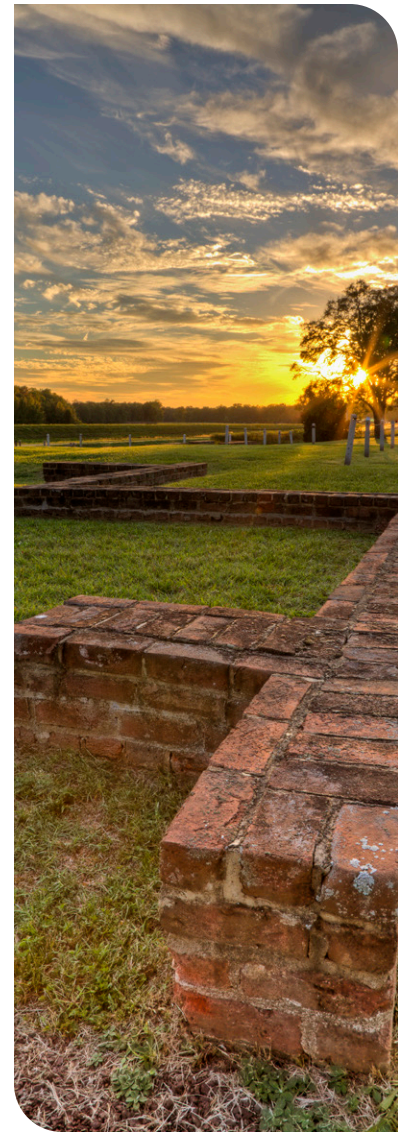
1. Although wetlands were identified as a component of the Natural Resources priority resource, stewardship goals and activities that pertain to wetlands are nested under overlapping components such as forests and grasslands/meadows.

## PRIORITY RESOURCE SUMMARIES

### ARCHEOLOGICAL RESOURCES

Archeological resources are preserved throughout each of Fredericksburg and Spotsylvania National Military Park's four battlefield units. The remains of logworks, earthworks, and gun emplacements associated with the battles of Fredericksburg, Chancellorsville, the Wilderness, and Spotsylvania Court House are among the primary cultural resources of the park. These archeological sites document the actions of the combatants, from individuals to companies to corps to entire armies, and are essential to current and future understanding of the battles. In addition to resources from the Civil War era, the park also contains archeological resources that predate the war. These include artifacts associated with American Indians and people who were enslaved.

The park's archeological overview and assessment was completed in 2006. This document helped influence an updated National Register of Historic Places (NRHP) listing (completed in 2019) and expanded the park's period of significance. The national register listing, like many conducted in the region, does not call out specific archeological sites. Park staff believe that less than 5% of the park's total acreage has been intensively surveyed for archeological resources. The National Park Service recently switched from the Archeological Sites Management Information System (ASMIS) to the Cultural Resources Information System for Archeological Resources (CRIS-AR). The transition to the new system remains a work in progress, and the park is unable to access CRIS-AR to upload and update information. Before this switch, the Archeological Sites Management Information System recorded that there were 139 archeological sites, with 103 of them being in good condition. Currently, 10 archeological sites are included in the Facility Management Software System (FMSS), which is roughly 5–10% of the known sites located within the park. Updating the archeological overview and assessment and developing an archeological study concerning the living quarters of other occupants on certain landscapes are priorities for the park staff.

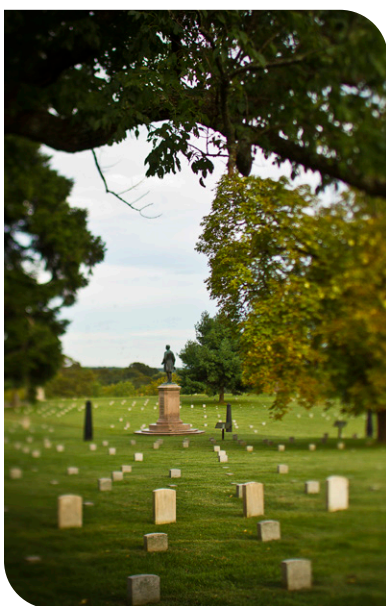




## CULTURAL LANDSCAPES

The assemblage of battlefields, historic landscapes, and related sites at the park commemorate major Civil War events that occurred between December 1862 and May 1864, providing an outstanding opportunity for visitors to learn about the social, political, and military aspects of the war over time. The sites and the associated events represent the transformation of the war into a conflagration that affected soldiers, civilians, and entire communities. They illustrate the progression of the war, from great Confederate successes under General Lee and significant Union defeats to the start of the final campaign that would lead to the surrender of Lee's forces at Appomattox Court House and victory for the Union Army under General Grant. Individually, the battles have their own significance. Remnant and recreated patterns of forests and fields, woodlots, homesteads, fences and fence lines, and tree lines contribute to the battlefield landscape and are integral to understanding the battles themselves.

In 2019, the park's NRHP listing was updated, resulting in the expansion of the park's period of significance from 1861–1865 to 1768–1965. With this alteration, more landscapes are now considered culturally significant and fundamental to the park. These include commemorative landscapes, where visitors can come to contemplate the loss of life that took place during the Civil War and historic designed landscapes associated with the park's early development. Cultural landscape reports have been completed for three park properties—Ellwood (2010), Chancellorsville Battlefield (2018), and Chatham (2019); however, these represent only 30% of the park's cultural landscapes. Two new cultural landscape reports, one for Wilderness Battlefield and one for Fredericksburg National Cemetery, are being produced as of June 2021. Currently, 50% of the park's cultural landscapes have a cultural landscape inventory, including Ellwood (2011), Sunken Road (2011), Fredericksburg National Cemetery (2011), Chatham (2017), and Chancellorsville Battlefield (2019). Five out of the 10 cultural landscapes have a condition assessment, with 20% being reported in good condition (Chancellorsville Battlefield and Sunken Road) and 30% being in fair condition (Chatham, Ellwood, and Fredericksburg National Cemetery). Park staff would like for key terrain, obstacles, cover and concealment, observation points, and avenues of approach or retreat (KOCOA) analysis to be included in future cultural landscape reports and cultural landscape inventories so the next national register update can include this defining information. This analysis would help park staff better understand the natural and cultural features of the park and how they relate to the four battles.



## EARTHWORKS

Fredericksburg and Spotsylvania National Military Park is home to 32 earthen fortifications spread out across 41.7 miles. As of 2015, six of the 32 fortifications are listed as being in good condition, 18 as being in fair condition, and eight as being in poor condition. Park staff have noted that they have difficulty preventing large trees from growing on earthworks. In the past, when the trees have fallen, large root ball holes have appeared in the earthworks, reflecting significant damage to the fortifications. Other threats to the earthworks include erosion from natural forces (primarily wind and water) and impacts from visitor use activities, including foot tracks and unauthorized excavations. Park staff are interested in developing an earthworks management plan to help identify effective preservation treatments for the earthen fortifications.



## ETHNOGRAPHIC RESOURCES

Fredericksburg and Spotsylvania National Military Park contains numerous resources that are significant to cultural groups. Park staff are keenly interested in expanding their understanding of these resources and developing better relationships with these groups. The park is affiliated with two federally recognized tribes—the Pamunkey Indian Tribe and the Catawba Indian Nation. Tribes with such recognition were contacted through letters in 2015, 2019, and 2020. There is a need to better understand which groups have cultural affiliations with the park and to identify park resources that possess significance. This can be accomplished through an affiliation study. The two consulting tribes provide advance guidance on their preferred protocols in the event of inadvertent discoveries of cultural items.

To date, the park has not conducted a formal ethnographic overview and assessment. The park would benefit from the creation of such an assessment as it would allow the park to expand its knowledge concerning American Indians and other affiliated groups. The park also has a unique relationship with the congregation of the Salem Church, which has been practicing traditions associated with the historic structure throughout generations. The park should recognize that this group is an ethnographic resource to the park as they aid in preserving and managing the historic structure alongside the park.

## HISTORIC STRUCTURES

Fredericksburg and Spotsylvania National Military Park contains nationally significant historic properties present at the time of the battles. These include structures of Chatham used by the Union Army as headquarters and hospital; the rural plantation of Ellwood used by the Union Army as headquarters and by both sides as a hospital; Salem Church, a shelter for civilian refugees from Fredericksburg in 1862 and a focal point of battle in 1863; the Innis House and Sunken Road; and the plantation remnant at Guinea Station, containing the outbuilding in which confederate Gen. Stonewall Jackson died in 1863 with far-reaching consequences for the Confederacy. Historic structures that were present during the time of the battles are fundamental resources for the park because of their various historic roles in the war.

When the park's NRHP listing was updated in 2019, the number of contributing historic structures nearly doubled, from 26 to 43. A total of 96 structures are listed in Facility Management Software System, with 78 reported as being in "good" condition. The park has completed 12 historic structure reports; however, many of these reports are between 30 and 50 years old and are likely outdated. Therefore, following the review and prioritization of structures within the park, park staff would like to complete historic structure reports for prioritized properties. Park staff would also like to update the List of Classified Structures in accordance with the updated national register listing.





## MUSEUM COLLECTION AND ARCHIVE

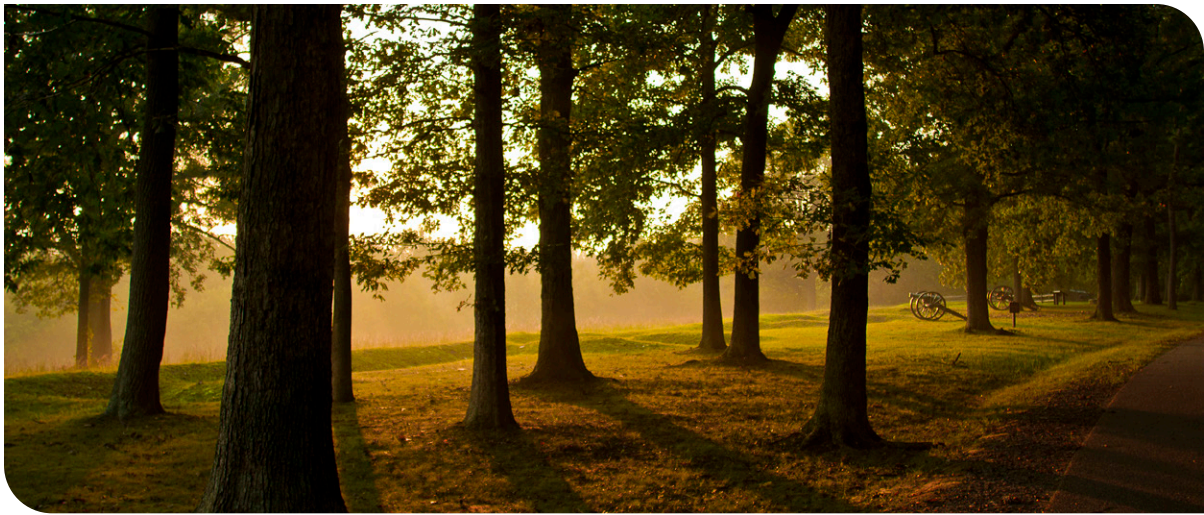
Fredericksburg and Spotsylvania National Military Park's museum collection consists of historic materials that include archeological materials recovered from the battlefield and historic sites, archival and historic items related to commemorative events and memorialization (such as Civil War Sesquicentennial and the Fredericksburg National Cemetery), and historic buildings and structures (such as authenticated furnishings and representative samples of original fabric). Materials are also related to the local impact of the Civil War (such as people who were enslaved), military service (such as diaries, uniforms, and weapons), park development (such as private land and public space), and natural history specimens as a result of permitted activity. The museum collection includes 485,867 items in total, encompassing the areas of history, archeology, art, biology, and archives.

Fifty percent of museum baseline documents are considered to be complete and up to date. These documents include the collections management plan (2009), the security survey (2016), the fire protection survey (2016), and the scope of collections statement (2020). Documents that are considered to be outdated or incomplete include the collection storage plan (2002), the emergency operations plan (2009), an archival survey draft (2014), and a material specific collections condition survey (1998). None of these documents are available on the Integrated Resource Management Applications (IRMA). Nineteen percent of the museum's collection has been cataloged, and this percentage is expected to improve as the archeological collection is in the midst of being cataloged and rehoused. This process is expected to be completed in 2021, as the archeological collection currently has a catalog backlog of 39,526 items. Approximately 93% of accession files and deaccessioned records are complete, and 93% of cataloged records are complete in the Interior Collection Management System. As of 2020, a deaccession survey is being conducted to determine what should remain in the collection and what may be deaccessioned. Approximately 70% of the museum collection is reported as being in good condition.

## NATURAL RESOURCES

Among the purposes identified in the FRSP foundation document (2015), there is an objective to "manage natural resources to preserve the setting and environment in order to support visitor understanding and appreciation of the battlefields and related sites." The park is situated directly on the Atlantic Seaboard Fall Line (Fall Line), an escarpment where the Piedmont and Atlantic Coastal Plain physiogeographic provinces meet in the eastern United States (US), and separates the tidally influenced lower portions of many Atlantic slope river systems from nontidal upland river reaches. The Fall Line is a geomorphic break in slope where the harder geologic substrates of the Piedmont physiographic province meet the Atlantic Coastal Plain. The general environment in which the park is located supports an eastern North American riparian and woodland habitat in divergent substrates found along the Fall Line and lies on the Rappahannock and York River basins of central Virginia. The intermingling of the soil and vegetation types found here provide habitat for a wide variety of wildlife within the rolling wooded plateaus and water features found throughout the park.

The park currently manages approximately 8,000 acres (3,237 hectares) of land, and the majority of that area is forested. The park's natural resources provide visitors with both an educational opportunity to conceptualize the battlefield events and recreational open space opportunities in an area that is increasingly urbanized.



## Forests

The general forest type where the park is located is temperate deciduous forest, occurring in the mid-latitudes of the eastern United States. Once occupying approximately 990,000 square miles, these expansive forests were once commonly populated by oaks, chestnuts, and hickories and provided important sources of food and shelter for people and wildlife. During the 18th and 19th centuries, extensive changes occurred to these forested expanses as large swaths of vegetation were cleared for agriculture, timber, fuelwood, and urban expansion. In the early 1900s, chestnut blight was introduced and quickly spread throughout forests of the eastern United States, and by the 1950s, nearly all American chestnuts within their native range were dead.

The forest patterns observed at present reflect past land uses and environmental changes in successional stages and prevailing precipitation patterns. Forest vegetation communities, from early succession grass/scrub vegetation communities and pine forests to climax communities of oak-hickory forests, are visible throughout the park lands. Typical tree species in mature hardwood forests may include oaks, hickories, red maple, sweetgum, and yellow poplar. Subcanopy trees consist of dogwood, red cedar, tupelo, mountain laurel, and sassafras. Shrub species include blackberries, poison ivy, and American hazelnut. Virginia pine and shortleaf pine are established in areas that were recently cultivated or pastured. The vegetation of Chatham ranges from mixed hardwood forests to landscaped formal gardens to farm fields. Above Chatham Lane, there are predominantly grassy meadows lined with cedar hedgerows. The steeply sloping portion of the site contains primarily deciduous hardwoods, including yellow poplar, hickory elm, and dogwood. A dense ground cover consists mainly of honeysuckle, greenbrier, arrowwoods, and blueberries. Repeated disturbances in the woodlands have presented opportunities for invasive plant species to establish and alter the forest subcanopy, and their ecological characteristics (germination rates, generalized pollination strategies, lack of diseases or herbivores, etc.) complicate resource management efforts to re-establish and maintain native plant assemblages.

## Open Lands

The term “open lands” within the park context refers to the approximately 1,100 acres (445 hectares) of park land that is managed through either agricultural special use permits or park resource management practices that are intended to maintain significant historical viewsheds and key landscapes. The agricultural special use permits assist park managers with maintaining rural agricultural scenes to protect battlefield visual resources. The permits are designed to foster agricultural practices that conserve soil, protect streams and groundwater, control exotic plant species, and avoid toxic contamination from chemical applications that are otherwise customarily used to maximize agricultural production. Areas under agricultural leases that implement more intensive agricultural practices include the production of crops, such as corn and soybeans, in areas that historically produced wheat or tobacco, though the crop composition may seasonally vary. Maintained screened areas and hedgerows of evergreens, such as cedars, border areas of cropland.

## Grasslands/Meadows

Grasslands and meadows are a category of open lands that are not as intensively cultivated and may include fields of herbaceous dominated vegetation that is allowed to grow to a height of between 20 and 30 inches before being managed through bushhogging. Though there are overlapping characteristics and management practices that overlap with “open lands,” these areas might comprise both native and exotic grasses and forbs with scattered shrubs. Some areas tend to be dense stands of cool-season, sod-forming grasses, such as meadow ryegrass and orchard grass, and are managed primarily as hayfields. The park’s natural resource staff additionally maintain open meadows of predominantly native warm-season grasses, such as switchgrass, purpletop tridens, big bluestem, Indiangrass, broomsedge bluestem, and beaked panicgrass that are associated with various herbaceous species. Maintenance of these native grassland meadows, accomplished primarily through bushhogging, is intended to provide habitat (nesting, foraging) for at-risk grassland and shrubland birds, which are declining throughout their range in the mid-Atlantic region.

## Rare Native Vegetation

The portion of Virginia where the park is located has been greatly altered through human activities such as clearing for agriculture, logging, and, more recently, commercial and residential development. This history of land use has resulted in a current landscape dominated by secondary forests, fields, agricultural crop lands, and urban and suburban development. Vegetation communities were mapped by the Virginia Natural Heritage program in 2008 and updated in 2012.

Twenty-one vegetation classes were used to map the park’s vegetation. Of those, 10 are considered to be natural communities as defined in the Natural Communities of Virginia, and seven of those are categorized as exemplary and rare native vegetation community occurrences. To be considered an exemplary occurrence, vegetation stands should meet specific criteria for size, condition, and landscape context. Regardless of their status as “exemplary” or not, rare native vegetation communities remain remarkably important for their ecosystem services as habitat for declining or globally rare animals and plants and for their educational and interpretive value. Because of their small size and isolated hydrology, these vegetation communities, and especially the wetlands, are vulnerable to development and secondary impacts of siltation, nonnative species invasions, and hydrological disturbances from both inside and outside of park lands. The rare vegetation types are also recognized by the park’s state partners as significant natural areas and are prioritized for resource management protection.

Three forested wetland communities meet the “exemplary” criteria and are identified as: Coastal Plain/Piedmont Seepage Swamp, Coastal Plain Depression Wetland (Red Maple – Sweetgum – Willow Oak Type), and Non-Riverine Saturated Forest. One example of Coastal Plain Depression Wetland (Red Maple – Sweetgum – Willow Oak Type) is in the Wilderness Battlefield, in the vicinity of Hamilton’s Thicket, which is an area recognized both for its interpretive and education value as well as significant natural habitat by state partners. These habitat types provide important breeding habitat for amphibians and support an assemblage of important vertebrate species, including the carpenter frog, rice rat, and Louisiana waterthrush.

The Wilderness Battlefield also contains an exemplary occurrence of Coastal Plain/Piedmont Acidic Seepage Swamp. The occurrence found here has an excellent landscape context surrounded by intact, undisturbed forest, with few exotic species. Smaller examples of this swamp community type are also known from the Fredericksburg Battlefield and are described as having intact hydrology with representative species composition and are additionally surrounded by development and near roads.

A large, particularly mature example of Non-Riverine Saturated Forest in the Fredericksburg Battlefield meets the criteria to be considered an exemplary occurrence. Compared to other known occurrences of Non-Riverine Saturated Forest, it is a very large example with mature hydrophytic oaks and is representative of the association in terms of species composition. However, it has some evidence of hydrologic alterations and is bisected by a railroad and bounded by a park road and areas converted to agriculture.

Other vegetation types that may not fall under the “exemplary” category are still considered rare vegetation types and are prioritized as communities with high resource conservation and management value to the park. Of note are beaver wetland complexes located in the Spotsylvania Courthouse, Fredericksburg, Wilderness, and Chancellorsville units; Coastal Plain/Piedmont swamp forest (mixed oak-red maple type) occurring at Chancellorsville and Spotsylvania Court House; Eastern White Pine – Hardwood forest occurring in the Wilderness unit; and Piedmont – Mountain Floodplain forests at the Chatham unit. Small areas of Mesic Mixed Hardwood forest occur in the Wilderness, Spotsylvania Courthouse, and Chancellorsville units. Additionally, Virginia pine forests are documented as more common during the time of the Civil War than their current distribution throughout the park. Today, the most extensive stands of this successional forest type are found in the Spotsylvania area of the park. In addition to the cultural values affiliated with this forest type, it also provides habitat that supports rare populations of birds and mammals. However, monitoring data indicate that this forest type is rapidly succeeding to hardwood forest with American beech, American ash, and American holly dominating the understory.

## **Streams**

The park lands lie within the watersheds of the Rappahannock and York River basins of central Virginia, and more specifically, within the Rapidan, Rappahannock, and Mattaponi River subbasins. The Fall Line divides the park units and separates the tidally influenced lower portions of many Atlantic slope river systems from nontidal upland river reaches. During the Colonial era, the Fall Line served as a physical barrier to upstream boat navigation and led to the establishment of many US East Coast cities, including Fredericksburg, at these locations where cargo was transferred to overland forms of transportation. The Fall Line also serves as a biogeographic transition point between the slow moving, brackish, and large river aquatic habitats of the Atlantic Coastal Plain and the swifter, smaller, and rockier aquatic habitats of the upper river reaches. The NPS Inventory and Monitoring Program (Mid-Atlantic Network or MIDN) currently implements periodic monitoring and reporting of key elements within the park’s streams (i.e., vital signs). These include monitoring of water quality and benthic macroinvertebrate assemblages.

The park’s natural resource condition assessment (updated 2016) describes that more than 80% of the stream riparian areas within the park lands are buffered with forested riparian vegetation and are in generally good condition, though there are some opportunities for riparian restoration overall. Streams that are buffered by riparian vegetation are able to maintain ecological condition and are essential to mitigating events like flash flooding or other occurrences that generate erosion and affect water quality and stream dynamics. However, the condition of riparian features within the park can be negatively impacted by changes to land use outside of the park (as riparian areas and their ecological functions are diminished) that intensify flash flooding and other runoff events and hardened surfaces proliferate with increased human density.

The vegetation that characterizes the streams and associated riparian areas falls mostly within the Coastal Plain/Piedmont forest types of classifications. Riparian vegetation communities include: successional river birch-red maple floodplain forests (disturbed forest on seasonally flooded alluvial floodplains and stream terraces); Coastal Plain/Piedmont small stream floodplain forest (deciduous forest on seasonally flooded alluvial floodplains of small streams); and Coastal Plain/Piedmont acidic seepage swamp (groundwater-saturated stream bottoms), which often occurs at headwaters and seeping toeslopes and are not generally subject to seasonal flooding. Common ecological characteristics among most riparian forest types include association with acidic soils, and upper vegetative canopies dominated by red maple, tulip trees, and oak species and poison ivy and Ilex species (holly) in the shrub layer. Depending on the morphology and soil porosity of the lower forest stratum as well as the length of exposure to seasonal flooding, the herbaceous layers can vary from dense associations of flowering plants to compositions of flood-tolerant graminoid and lilioid species of sedges, rushes, and lilies as well as mosses and ferns.

## **Wetlands (includes Vernal Pools)**

The park's vegetation classification survey delineates six wetlands types, three of which overlap the stream riparian types previously described. A significant acreage of the park lands contains concentrations of wetlands delineated as "palustrine forested" and "palustrine emergent" wetlands, which are generally inland, nontidal wetlands and are commonly referred to as marshes, swamps, bogs, fens, and floodplains. "Palustrine emergent wetlands" indicates wetlands that tend to be persistent on the landscape. Within this group of wetlands, there are three types that are further described as having a relatively restricted range and are considered wetlands of conservation significance because of their rarity and the ecological services they provide. Because of the isolated nature of their associated hydrological systems, these wetlands are vulnerable to development and the secondary impacts of siltation, nonnative species invasions, and hydrological disturbances. Vernal pools, another type of wetland, are seasonal depressional wetlands that are covered by shallow water for variable periods from winter to spring and may be completely dry for most of the summer and fall. Given the correlation of where amphibian breeding patterns have been observed by park resource specialists, the potential for vernal pools exist over the extent of the park lands.

## **Wildlife and Species of Concern**

The diversity of vegetation communities described here provide habitat for a wide variety of native wildlife species. Because of their overall habitat heterogeneity, structural diversity, and access to water resources, forested habitats tend to display high species diversity for birds as well as provide favorable habitat for southern flying squirrels and white-tailed deer. Mature hardwood stands provide very important habitat for bats, especially bat species of conservation concern. Open lands, particularly those that are less intensively cultivated or are managed for natural values (warm season grasslands), provide suitable habitat and foraging opportunities for grasslands species of birds such as grasshopper sparrows, bobolinks, and bobwhite quail as well as reptiles such as skinks and fence lizards. Stream habitats provide important habitat for several species of fish; the Mid-Atlantic Network reports that FRSP contains the highest total number of native fish species of any of the parks within the Mid-Atlantic Network, including several species of darters, dace, chubs, and minnows. This high degree of fish diversity may be due to park's location on the Fall Line. The waters that are oriented on the Atlantic Coastal Plains side of the Fall Line connect the fish assemblages found there to the ocean environments that are required to complete their life cycles, including American eel and lamprey.

The correlating riparian zones provide cover and habitat for beaver, woodchucks, warblers, waterthrushes, and reptile species such as northern water snakes and northern copperheads. The wetland habitats and associated vegetation provide diverse habitat for wetland waterfowl, meadow jumping mice, and several turtle species. The extent of vernal wetlands throughout the park lands in a mosaic of habitat types correlates well with the diverse assemblage of amphibians found here. About 26 species of amphibians are known to the park, representing about 85% of the amphibian species reported for the Piedmont and Atlantic Coastal Plain of Virginia. These amphibian species use vernal wetlands or streams for breeding and include northern green frog, carpenter frog, American toads, spring peepers, and eastern gray treefrogs. Other amphibian species include the marbled salamander, red spotted newt, two-lined salamanders, three-lined salamanders, northern red salamanders, and dusky salamanders. In addition, two species of terrestrial woodland salamanders (red-backed salamander and white-spotted slimy salamander) are found in low numbers at the park.



## PARK SETTING

As outlined in the park's 2015 foundation document, Fredericksburg and Spotsylvania National Military Park's purpose includes "...to preserve the setting and environment in order to support the visitor understanding and appreciation of the battlefields and related sites." Geography, topography, views, and various landscape features help visitors understand why this area became the focal point for four major Civil War battlefields: Wilderness, Spotsylvania, Fredericksburg, and Chancellorsville. Natural sounds, light, and the lack of modern visual intrusions provide the setting for visitors to understand and appreciate the battles and the Civil War and offer opportunities for quiet reflection and contemplation. These sites are geographically separated by miles of suburban development and agricultural lands, which presents challenges for fulfilling the park's purpose.

The park is located in Virginia's urban corridor, which includes lands between suburban Washington, DC, and Richmond. Part of Virginia's Piedmont, the park begins along the banks of the Rappahannock River in Fredericksburg and includes the dense woods of the Wilderness to the west and Guinea Station to the south. Fredericksburg's location midway between the Union and Confederate capital caused it to be a battleground. The rivers that flow east served as both obstacles and protectors. The ridges bordering the rivers served as defensive lines and platforms for artillery. The city's location at the Atlantic Seaboard Fall Line caused it to be an industrial center served by a network of transportation lines that proved vital to the armies.

The Fredericksburg Battlefield is located partly within the historic City of Fredericksburg along the Rappahannock River. The Chancellorsville Battlefield is located in a landscape that is generally wooded with cleared areas of farmland. Roads of various time periods pass through the landscape, with the largest being the four-lane Virginia State Route 3, which follows the path of the historic Orange Turnpike and Orange Plank Road. The Wilderness Battlefield is located in a combination of woodland and hilly farmland. Mid-20th-century houses stand along Virginia State Route 20, and the battlefield nearly surrounds the 1970s-era Lake Wilderness subdivision. The Spotsylvania Court House Battlefield is located in a landscape that is characterized by cleared farm lands with their associated buildings.

## PARKWIDE AND CROSS-BOUNDARY RESOURCES

In the FRSP resource stewardship strategy, this category is intended to include stewardship goals and activities that address multiple resources and/or require cross-boundary collaboration because of the larger, landscape-scale nature of resources and their stressors. In addition to the in-park, or resource-specific management needs that are inherent to resource management, FRSP staff also strive for a stewardship approach that is more holistic, regional or cross-boundary, and proactive. The wide-ranging and complex effects of climate change on park resources is one prime example of an issue that demands such an approach. Park staff are also interested in using geographic information system (GIS) data to improve their understanding of the park's cultural and natural resources. How the park will acquire that data still needs to be determined.





# STEWARDSHIP GOALS

Stewardship goals are essential to the RSS process because they articulate what managers are working to achieve for a park's natural and cultural resources and provide both the framework to structure activities later in the RSS process and the time frame needed to reach them. Long-term goals are defined as those that park staff wish to accomplish in a 10- to 20-year time frame. Short-term goals are those that are attainable in a 3- to 5-year time frame.

*Stewardship goals focus on*

1. improving quality and/or completeness of current resource information and documentation of one or multiple priority resources;
2. improving or maintaining the conditions of one or multiple priority resources;
3. reducing issues, stressors, or threats that are adversely affecting priority resources; or
4. addressing other management needs for resource stewardship, such as increasing collaboration with associated American Indian tribes, building new partnerships, or expanding education and interpretation related to the park's priority resources.

An important consideration in establishing goals is to determine the appropriate level of knowledge and information and the desired condition for each priority resource and component. Long-term stewardship goals typically bear a strong relationship to broad, qualitative direction for resource management that are set forth in legal mandates, NPS mandates, or established park management documents. Short-term goals tier off long-term goals and set more specific targets for resource management. Short-term goals help drive the development of stewardship activities.

The RSS project team identified a wide array of stewardship goals, based upon the current and desired status of information and resource conditions, as well as key issues, stressors, and threats, and other management considerations. Long-term and short-term goals are also included in the RSS desktop application, in addition to this summary document (tables 3a to 3i).

In developing stewardship goals, the RSS project team chose different approaches for cultural and natural resources. All of the long-term and short-term cultural resources goals align with the larger priority resource. In contrast, all of the natural resources long-term and short-term goals align with specific natural resource priority resource components. This distinction between natural resources and cultural resources goals is called out in the first column heading of each table.



**Table 3a. Long-Term and Short-Term Stewardship Goals for Priority Resource—Archeological Resources**

| PRIORITY RESOURCE       | LONG-TERM GOAL                                                                                                                                                                       | SHORT-TERM GOALS                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ARCHEOLOGICAL RESOURCES | The park has up-to-date information that provides direction for the research and protection of archeological resources and informs park management, maintenance, and interpretation. | <ul style="list-style-type: none"> <li>- The park's archeological overview and assessment has been updated and shared with NPS staff and contractors and cooperators as appropriate.</li> <li>- The number of archeological sites that need state site forms is better understood.</li> <li>- Park staff have access to information that reflects current scholarship on the lifeways and living spaces of American Indians and people who were enslaved.</li> </ul> |

**Table 3b. Long-Term and Short-Term Stewardship Goals for Priority Resource—Cultural Landscapes**

| PRIORITY RESOURCE   | LONG-TERM GOAL                                                                                                                                                                                 | SHORT-TERM GOALS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CULTURAL LANDSCAPES | Management of the park's cultural landscapes is guided by up-to-date treatment documents, appropriate compliance review, and informed maintenance and reflects the latest historical research. | <ul style="list-style-type: none"> <li>- The cultural landscape report for the Wilderness Battlefield has been completed and includes a chapter on treatment recommendations.</li> <li>- Cultural landscape inventories have been completed for additional battlefield and Civil-War-era landscapes.</li> <li>- Battlefield landscapes most in need of KOCOA (key terrain, observation and fields of fire, cover and concealment, obstacles, and avenues of approach/ withdrawal) analysis have been identified.</li> <li>- The cultural landscape report for Fredericksburg National Cemetery has been completed and includes a chapter on treatment recommendations.</li> <li>- The condition of Fredericksburg National Cemetery is improved and its rating in the cultural landscapes inventory database has been elevated from "fair" to "good."</li> <li>- Cultural landscape inventories are completed for identified national register-significant historic designed (non-battlefield) landscapes, as appropriate.</li> <li>- Cultural landscapes are managed to mitigate the adverse effects of external threats.</li> </ul> |

**Table 3c. Long-Term and Short-Term Stewardship Goals for Priority Resource—Earthworks**

| PRIORITY RESOURCE | LONG-TERM GOAL                                                                                                                                          | SHORT-TERM GOALS                                                                                                                                                             |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EARTHWORKS        | The park's collection of earthen fortifications is preserved, protected, and maintained to evoke and interpret conditions during the periods of battle. | <ul style="list-style-type: none"> <li>- A park-specific earthworks management plan that contains management guidance and treatment recommendations is developed.</li> </ul> |

**Table 3d. Long-Term and Short-Term Stewardship Goals for Priority Resource—Ethnographic Resources**

| PRIORITY RESOURCE             | LONG-TERM GOAL                                                                                                                               | SHORT-TERM GOALS                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ETHNOGRAPHIC RESOURCES</b> | Understanding of the park’s broad population of traditionally associated peoples, historical groups, and affiliated communities is improved. | <ul style="list-style-type: none"> <li>- Baseline documentation, including an ethnographic overview and assessment, is completed to enhance understanding and fill data gaps regarding the park’s ethnographic resources.</li> <li>- Park staff have access to information that reflects current scholarship on the lifeways and living spaces of American Indians and people who were enslaved and is shared by descendant communities and tribes when they wish.</li> </ul> |

**Table 3e. Long-Term and Short-Term Stewardship Goals for Priority Resource—Historic Structures**

| PRIORITY RESOURCE          | LONG-TERM GOAL                                                                                                                                                                                                                                                                            | SHORT-TERM GOALS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HISTORIC STRUCTURES</b> | Inventory and documentation of historic structures are up to date, meet the standards of Section 110 of the National Historic Preservation Act, and are recorded in relevant resource management databases. National Register of Historic Places documentation is updated every 20 years. | <ul style="list-style-type: none"> <li>- More baseline documents, including updated historic structure reports and a parkwide historic resource study, have been completed.</li> <li>- Relevant data for structures has been recorded in the Cultural Resources Information System for historic structures (CRIS-HS) and uploaded into IRMA.</li> <li>- Work needed to raise the overall condition of structures in CRIS-HS has been identified.</li> <li>- Condition of prioritized structures in CRIS-HS is improved to good.</li> </ul> |

**Table 3f. Long-Term and Short-Term Stewardship Goals for Priority Resource—Museum Collection and Archive**

| PRIORITY RESOURCE                    | LONG-TERM GOAL                                                                                                  | SHORT-TERM GOALS                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MUSEUM COLLECTION AND ARCHIVE</b> | All museum collection records are maintained, accessioned, and cataloged per NPS standards.                     | <ul style="list-style-type: none"> <li>- Core documents are updated and completed as defined by annual museum reporting requirements.</li> <li>- Records for accessioning, annual reporting, cataloging, deaccessioning, loans, and photography are maintained and kept up to date, and gaps from past records are identified and addressed.</li> </ul> |
| <b>MUSEUM COLLECTION AND ARCHIVE</b> | Museum collection preservation is improved and maintained in accordance with the NPS Museum Management Program. | <ul style="list-style-type: none"> <li>- Threats to museum collection records and objects are identified and mitigated.</li> </ul>                                                                                                                                                                                                                      |
| <b>MUSEUM COLLECTION AND ARCHIVE</b> | Accessibility of the museum collection is improved for education, interpretation, and public research.          | <ul style="list-style-type: none"> <li>- High-quality images or scans of museum collection objects are captured.</li> <li>- Partnerships to benefit museum collections and public access are built.</li> </ul>                                                                                                                                          |

**Table 3g. Long-Term and Short-Term Stewardship Goals for Priority Resource—Natural Resources**

| COMPONENT                              | LONG-TERM GOAL                                                                                                                            | SHORT-TERM GOALS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FORESTS</b>                         | Forest habitats are managed to preserve and restore a healthy, diverse, and naturally regenerating forest ecosystem.                      | <ul style="list-style-type: none"> <li>- Park staff have increased understanding of the status and trends of forest conditions, including regeneration, invasive species, and wildlife habitat.</li> <li>- Management actions to promote healthy forests are developed.</li> <li>- Staff capacity to prioritize invasive species management is increased.</li> </ul>                                                                                                                                                                                                                                     |
| <b>GRASSLANDS/ MEADOWS</b>             | Grassland and meadow habitats are managed both to promote wildlife habitat and to evoke the historic scene.                               | <ul style="list-style-type: none"> <li>- Grassland bird habitat is promoted, and metrics are developed to assess the health and condition of grassland and meadow habitats.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>OPEN LANDS</b>                      | Open landscape systems in the park are managed through integrated (cultural resources, natural resources) management strategies.          | <ul style="list-style-type: none"> <li>- Management strategies, including longer-term schedules that integrate available tools and include prescribed fire and mechanical methods for maintaining open lands compatible with the historic scene, are developed.</li> </ul>                                                                                                                                                                                                                                                                                                                               |
| <b>RARE NATIVE VEGETATION</b>          | Forest habitat patterns and ecological functions are maintained to the extent practical, while recognizing the impacts of climate change. | <ul style="list-style-type: none"> <li>- Rare native plant assemblages are protected through appropriate management practices (e.g., identifying/mapping, prescribed fire, plantings).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>STREAMS</b>                         | Streams and riparian areas are managed to promote healthy aquatic habitats with diverse fish and invertebrate assemblages.                | <ul style="list-style-type: none"> <li>- The park has an increased understanding of the ecological condition and physical habitat of aquatic systems to support management decisions.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>WILDLIFE AND SPECIES OF CONCERN</b> | Habitat for wildlife and species of concern is protected and promoted.                                                                    | <ul style="list-style-type: none"> <li>- Mature hardwood forest habitats (standing dead and snags) for bat populations are protected and promoted, including threatened and endangered (T&amp;E) species.</li> <li>- Protection and management strategies are developed to maintain and improve park habitats that are recognized by state partners as significant natural areas.</li> <li>- Information regarding species of special concern is identified and made available to park staff to facilitate informed management decisions for future visitor and resource management projects.</li> </ul> |

**Table 3h. Long-Term and Short-Term Stewardship Goals for Priority Resource—Park Setting**

| COMPONENT             | LONG-TERM GOAL                                                                                                                                                                                                                            | SHORT-TERM GOALS                                                                                                                                                                                                                                                                                                                         |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HISTORIC VIEWS</b> | The park setting, including historic views, night skies, and natural sounds both within and across park boundaries, is improved, monitored, and protected using partnerships for cooperative conservation of the battlefield's character. | <ul style="list-style-type: none"> <li>- Historic views are inventoried and assessed over time to monitor changes in condition and shared with visitors to understand their importance.</li> <li>- Intrusions and changes to historic views are minimized both within the park and externally through community partnerships.</li> </ul> |
| <b>NATURAL SOUNDS</b> | The park setting, including historic views, night skies, and natural sounds both within and across park boundaries, is improved, monitored, and protected using partnerships for cooperative conservation of the battlefield's character. | <ul style="list-style-type: none"> <li>- Condition of the park's acoustic resource is identified and characterized.</li> <li>- Noise from visitor-based and park activities is reduced; noise from external sources is reduced through partnerships with neighboring communities and other entities.</li> </ul>                          |
| <b>NIGHT SKIES</b>    | The park setting, including historic views, night skies, and natural sounds both within and across park boundaries, is improved, monitored, and protected using partnerships for cooperative conservation of the battlefield's character. | <ul style="list-style-type: none"> <li>- Current night sky conditions are characterized and understood.</li> <li>- Anthropogenic light from park operations and neighbors/nearby communities is reduced.</li> </ul>                                                                                                                      |

**Table 3i. Long-Term and Short-Term Stewardship Goals for Priority Resource—Parkwide and Cross-Boundary Resources**

| PRIORITY RESOURCE                            | LONG-TERM GOAL                                                                                                                                                                  | SHORT-TERM GOALS                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PARKWIDE AND CROSS-BOUNDARY RESOURCES</b> | Cross-boundary resources are managed through regional partnerships.                                                                                                             | <ul style="list-style-type: none"> <li>- The park collaborates with external agency partners to benefit the park's cultural and natural resources.</li> </ul>                                                                                                                                                                                                                                                                   |
| <b>PARKWIDE AND CROSS-BOUNDARY RESOURCES</b> | The park has up-to-date information that provides direction for the research and protection of parkwide resources and informs park management, maintenance, and interpretation. | <ul style="list-style-type: none"> <li>- The park has an improved understanding of its cultural and natural resources using geospatial (GIS) data.</li> <li>- The park characterizes climate change trends and implications for priority resources, including system-wide conditions affecting natural and cultural resources (e.g., drought, longer periods of high temperatures, more frequent or intense storms).</li> </ul> |





# HIGH-PRIORITY STEWARDSHIP ACTIVITIES

Stewardship activities represent the primary product of the RSS development process, providing the park with a roadmap for investing both human and financial resources in the stewardship of natural and cultural resources. They are logically organized, based on science and/or scholarship, well documented and reviewed by subject-matter experts. Activities are aimed at achieving short-term goals and may also strive to reduce stressors on priority resources and components.

The RSS project team identified a wide array of management activities to consider over the next 3- to 5-year horizon. Whenever possible, activities were designed with integrated resource stewardship in mind, both in terms of their potential to improve the condition or understanding of multiple resources and/or their potential for efficient deployment through the integrated efforts of multiple staff. In addition, many of the activities developed include components that involve partnerships or coordination with regional NPS staff. The park made an effort to consider and document integrated resource management efforts within these activities and will seek to carry them out as described.

While the RSS desktop application includes all of the activities identified for each priority resource component, the following table presents only those activities that park staff determined to be high priority in the next 3 to 5 years, along with associated short-term goals. The team considered a variety of factors when determining priorities, including feasibility and impact of the management activity, urgency, potential funding opportunities, and sequencing in relation to other activities. Medium and low priority activities are still valuable approaches for achieving resource objectives, but they are generally less urgent or represent secondary approaches. Many of the medium and low priority activities may rise to the level of high priority in the coming years, as stewardship activities are implemented, stewardship goals are achieved, and resource conditions change over time. The full list of activities can be found in appendix A.

Tables 4a to 4i include each priority resource or component, short-term stewardship goals, and high-priority activities identified by park staff.

**Table 4a. High-Priority Stewardship Activities for Priority Resource—Archeological Resources**

| PRIORITY RESOURCE       | SHORT-TERM STEWARDSHIP GOAL                                                                                                                                 | HIGH-PRIORITY STEWARDSHIP ACTIVITIES                                                                                                                                                                                                          |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ARCHEOLOGICAL RESOURCES | The park’s archeological overview and assessment has been updated and shared with NPS staff and contractors and cooperators as appropriate.                 | <ul style="list-style-type: none"><li>- Digitize the current archeological overview and assessment.</li><li>- Prepare a Project Management Information System (PMIS) statement to update the archeological overview and assessment.</li></ul> |
| ARCHEOLOGICAL RESOURCES | The number of archeological sites that need state site forms is better understood.                                                                          | <ul style="list-style-type: none"><li>- No high-priority activities identified.</li></ul>                                                                                                                                                     |
| ARCHEOLOGICAL RESOURCES | Park staff have access to information that reflects current scholarship on the lifeways and living spaces of American Indians and people who were enslaved. | <ul style="list-style-type: none"><li>- Expand consultation with descendant communities and tribes to acquire information to inform management.</li></ul>                                                                                     |

**Table 4b. High-Priority Stewardship Activities for Priority Resource—Cultural Landscapes**

| PRIORITY RESOURCE   | SHORT-TERM STEWARDSHIP GOAL                                                                                                                                                                      | HIGH-PRIORITY STEWARDSHIP ACTIVITIES                                                                                                                                                                                                                                                                                                                                             |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CULTURAL LANDSCAPES | The cultural landscape report for the Wilderness Battlefield has been completed and includes a chapter on treatment recommendations.                                                             | <ul style="list-style-type: none"> <li>- No high-priority activities identified.</li> </ul>                                                                                                                                                                                                                                                                                      |
| CULTURAL LANDSCAPES | Cultural landscape inventories (CLIs) have been completed for additional battlefield and Civil-War-era landscapes.                                                                               | <ul style="list-style-type: none"> <li>- Pursue the development of cultural landscape inventories for the Fredericksburg, Chancellorsville, Wilderness, and Spotsylvania Court House Battlefields and for the Stonewall Jackson Death Site.</li> </ul>                                                                                                                           |
| CULTURAL LANDSCAPES | Battlefield landscapes most in need of KOCOAs (key terrain, observation and fields of fire, cover and concealment, obstacles, and avenues of approach/withdrawal) analysis have been identified. | <ul style="list-style-type: none"> <li>- No high-priority activities identified.</li> </ul>                                                                                                                                                                                                                                                                                      |
| CULTURAL LANDSCAPES | The cultural landscape report for Fredericksburg National Cemetery has been completed and includes a chapter on treatment recommendations.                                                       | <ul style="list-style-type: none"> <li>- Pursue completion of the Fredericksburg National Cemetery Cultural Landscape Report by adding a treatment and recommendations chapter.</li> </ul>                                                                                                                                                                                       |
| CULTURAL LANDSCAPES | The condition of Fredericksburg National Cemetery is improved and its rating in the CLI database has been elevated from “fair” to “good.”                                                        | <ul style="list-style-type: none"> <li>- Prioritize the Fredericksburg National Cemetery landscape needs and update PMIS.</li> </ul>                                                                                                                                                                                                                                             |
| CULTURAL LANDSCAPES | Cultural landscape inventories are completed for identified national register-significant historic designed (non-battlefield) landscapes, as appropriate.                                        | <ul style="list-style-type: none"> <li>- No high-priority activities identified.</li> </ul>                                                                                                                                                                                                                                                                                      |
| CULTURAL LANDSCAPES | Cultural landscapes are managed to mitigate the adverse effects of external threats.                                                                                                             | <ul style="list-style-type: none"> <li>- Continue to engage with communities and Virginia Department of Transportation in long-range transportation planning; for instance regarding Routes 3 and 20, but also outside the context of specific project proposals.</li> <li>- Pursue funding for development of traffic and circulation analysis to inform management.</li> </ul> |

**Table 4c. High-Priority Stewardship Activities for Priority Resource—Earthworks**

| PRIORITY RESOURCE | SHORT-TERM STEWARDSHIP GOAL                                                                                              | HIGH-PRIORITY STEWARDSHIP ACTIVITIES                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EARTHWORKS        | A park-specific earthworks management plan that contains management guidance and treatment recommendations is developed. | <ul style="list-style-type: none"> <li>- Prepare a PMIS statement to develop an earthworks management plan for the park that will include monitoring protocols and treatment recommendations.</li> <li>- Once funded, develop an earthworks management plan.</li> <li>- Implement treatment recommendations from the earthworks management plan, once it has been completed. Assess earthworks that are currently open to public access that may be candidates for closure.</li> </ul> |

**Table 4d. High-Priority Stewardship Activities for Priority Resource—Ethnographic Resources**

| PRIORITY RESOURCE             | SHORT-TERM STEWARDSHIP GOAL                                                                                                                                                                                                   | HIGH-PRIORITY STEWARDSHIP ACTIVITIES                                                                                                                                                                                                                                         |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ETHNOGRAPHIC RESOURCES</b> | Baseline documentation, including an ethnographic overview and assessment, is completed to enhance understanding and fill data gaps regarding the park's ethnographic resources.                                              | <ul style="list-style-type: none"> <li>- Prepare a PMIS statement to develop a cultural affiliation study to better understand communities and populations that are associated with the park and the significance they ascribe to park lands and resources.</li> </ul>       |
| <b>ETHNOGRAPHIC RESOURCES</b> | Park staff have access to information that reflects current scholarship on the lifeways and living spaces of American Indians and people who were enslaved and is shared by descendant communities and tribes when they wish. | <ul style="list-style-type: none"> <li>- Prepare a PMIS statements to develop an ethnographic study on American Indian history within the park.</li> <li>- Prepare a PMIS statement to develop an ethnographic study on African American history within the park.</li> </ul> |

**Table 4e. High-Priority Stewardship Activities for Priority Resource—Historic Structures**

| PRIORITY RESOURCE          | SHORT-TERM STEWARDSHIP GOAL                                                                                                                                                                                    | HIGH-PRIORITY STEWARDSHIP ACTIVITIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HISTORIC STRUCTURES</b> | More baseline documents, including updated historic structure reports and a parkwide historic resource study, have been completed.                                                                             | <ul style="list-style-type: none"> <li>- Prioritize the park's baseline documentation needs for historic structures needs and update PMIS.</li> <li>- Prepare a PMIS statement to update the treatment sections (i.e., part 2) of existing historic structure reports.</li> <li>- Continue to conduct primary research, with the goal of finding and compiling new information/materials that can aid in preparation of baseline documents in the future (for example, compile building files information in one location).</li> <li>- Prepare a PMIS statement to develop a parkwide historic resource study.</li> </ul> |
| <b>HISTORIC STRUCTURES</b> | Relevant data for structures has been recorded in the Cultural Resources Information System for historic structures (CRIS-HS) and uploaded into the Integrated Resource Management Applications (IRMA) portal. | <ul style="list-style-type: none"> <li>- No high-priority activities identified.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>HISTORIC STRUCTURES</b> | Work needed to raise the overall condition of structures in CRIS-HS has been identified.                                                                                                                       | <ul style="list-style-type: none"> <li>- Identify work needed to raise the overall condition of historic structures at the park.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>HISTORIC STRUCTURES</b> | Condition of prioritized structures in CRIS-HS is improved to good.                                                                                                                                            | <ul style="list-style-type: none"> <li>- Develop and agree upon criteria for prioritizing the historic structure needs. Prioritize needs based on significance of resources, compliance needs, and other factors.</li> <li>- Review condition assessments in CRIS-HS and prioritize the park's historic structure needs for treatment and update PMIS.</li> </ul>                                                                                                                                                                                                                                                         |

**Table 4f. High-Priority Stewardship Activities for Priority Resource—Museum Collection and Archive**

| PRIORITY RESOURCE             | SHORT-TERM STEWARDSHIP GOAL                                                                                                                                                                 | HIGH-PRIORITY STEWARDSHIP ACTIVITIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MUSEUM COLLECTION AND ARCHIVE | Core documents are updated and completed as defined by annual museum reporting requirements.                                                                                                | <ul style="list-style-type: none"> <li>- Prepare a PMIS statement to complete a museum facility protection plan.</li> <li>- Prepare a PMIS statement to develop a museum housekeeping plan or secure funding through other means.</li> <li>- Prepare a PMIS statement to complete an integrated pest management plan or secure funding through other means.</li> <li>- Assess the furnishings at the Stonewall Jackson Death Site to determine whether a historic furnishing plan is needed.</li> </ul> |
| MUSEUM COLLECTION AND ARCHIVE | Records for accessioning, annual reporting, cataloging, deaccessioning, loans, and photography are maintained and kept up to date, and gaps from past records are identified and addressed. | <ul style="list-style-type: none"> <li>- Complete current accessioning/cataloging of backlogged archeological artifacts.</li> <li>- Complete current accessioning and cataloging of backlogged archival collection, including the production of finding aids.</li> <li>- Complete an inventory of all natural resource collections and documentation for the park and ensure that collections are reflected in NPSpecies.</li> </ul>                                                                    |
| MUSEUM COLLECTION AND ARCHIVE | Threats to museum collection records and objects are identified and mitigated.                                                                                                              | <ul style="list-style-type: none"> <li>- Improve and continue ongoing preservation of museum collection items in line with standards.</li> </ul>                                                                                                                                                                                                                                                                                                                                                        |
| MUSEUM COLLECTION AND ARCHIVE | High-quality images or scans of museum collection objects are captured.                                                                                                                     | <ul style="list-style-type: none"> <li>- No high-priority activities identified.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                             |
| MUSEUM COLLECTION AND ARCHIVE | Partnerships to benefit museum collections and public access are built.                                                                                                                     | <ul style="list-style-type: none"> <li>- Continue the partnership with the local university to create preservation quality scans of archives and a digital history project.</li> </ul>                                                                                                                                                                                                                                                                                                                  |

**Table 4g. High-Priority Stewardship Activities for Priority Resource—Natural Resources**

| COMPONENT                             | SHORT-TERM STEWARDSHIP GOAL                                                                                                                                                                                            | HIGH-PRIORITY STEWARDSHIP ACTIVITIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FORESTS                               | Park staff have increased understanding of the status and trends of forest conditions including regeneration, invasive species, and wildlife habitat.                                                                  | - No high-priority activities identified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| FORESTS                               | Management actions to promote healthy forests are developed.                                                                                                                                                           | - No high-priority activities identified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| FORESTS                               | Staff capacity to prioritize invasive species management is increased.                                                                                                                                                 | - No high-priority activities identified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| GRASSLANDS/<br>MEADOWS                | Grassland bird habitat is promoted, and metrics are developed to assess the health and condition of grassland and meadow habitats.                                                                                     | - Develop interim schedule and standard operating procedures for bushhogging and burning operations to benefit wildlife (October through mid-April) (leading up to developing a field management plan).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| OPEN LANDS                            | Management strategies, including longer-term schedules that integrate available tools and include prescribed fire and mechanical methods for maintaining open lands compatible with the historic scene, are developed. | <ul style="list-style-type: none"> <li>- Review management direction, the park's internal management zoning structure, and desired conditions described in the park's general management plan, and identify opportunities for revision and/or improvement (working toward the long term).</li> <li>- Review and evaluate current open lands management practices to determine if their implementation meets goals for integrated management of cultural landscape, habitat, etc., and identify opportunities for improvement (e.g., the fire management plan).</li> <li>- Review current status and potential future changes to special use permits to determine if management goals are being met (e.g., pesticide/herbicide practices, cropping systems, rotations), and develop interim strategies for how the park would respond to potential changes in special use permits.</li> <li>- Develop interim schedule and/or standard operating procedure(s) for open lands management leading up to the development of a field management plan (e.g., bushhogging and burning operations to benefit wildlife [October through mid-April]).</li> </ul> |
| RARE NATIVE<br>VEGETATION             | Rare native plant assemblages are protected through appropriate management practices (e.g., identifying/mapping, prescribed fire, plantings).                                                                          | - No high-priority activities identified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| STREAMS                               | The park has an increased understanding of the ecological condition and physical habitat of aquatic systems to support management decisions.                                                                           | - No high-priority activities identified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| WILDLIFE AND<br>SPECIES OF<br>CONCERN | Mature hardwood forest habitats (standing dead and snags) for bat populations are protected and promoted, including threatened and endangered (T&E) species.                                                           | - No high-priority activities identified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| WILDLIFE AND<br>SPECIES OF<br>CONCERN | Protection and management strategies are developed to maintain and improve park habitats that are recognized by state partners as significant natural areas.                                                           | - No high-priority activities identified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

Table 4g. High-Priority Stewardship Activities for Priority Resource—Natural Resources (continued)

| COMPONENT                              | SHORT-TERM STEWARDSHIP GOAL                                                                                                                                                                      | HIGH-PRIORITY STEWARDSHIP ACTIVITIES      |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b>WILDLIFE AND SPECIES OF CONCERN</b> | Information regarding species of special concern is identified and made available to park staff to facilitate informed management decisions for future visitor and resource management projects. | - No high-priority activities identified. |

Table 4h. High-Priority Stewardship Activities for Priority Resource—Park Setting

| COMPONENT             | SHORT-TERM STEWARDSHIP GOAL                                                                                                                                           | HIGH-PRIORITY STEWARDSHIP ACTIVITIES      |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b>HISTORIC VIEWS</b> | Historic views are inventoried and assessed over time to monitor changes in condition and shared with visitors to understand their importance.                        | - No high-priority activities identified. |
| <b>HISTORIC VIEWS</b> | Intrusions and changes to historic views are minimized both within the park and externally through community partnerships.                                            | - No high-priority activities identified. |
| <b>NATURAL SOUNDS</b> | Condition of the park's acoustic resource is identified and characterized.                                                                                            | - No high-priority activities identified. |
| <b>NATURAL SOUNDS</b> | Noise from visitor-based and park activities is reduced; noise from external sources is reduced through partnerships with neighboring communities and other entities. | - No high-priority activities identified. |
| <b>NIGHT SKIES</b>    | Current night sky conditions are characterized and understood.                                                                                                        | - No high-priority activities identified. |
| <b>NIGHT SKIES</b>    | Anthropogenic light from park operations, neighbors/nearby communities is reduced.                                                                                    | - No high-priority activities identified. |

Table 4i. High-Priority Stewardship Activities for Priority Resource—Parkwide and Cross-Boundary Resources

| PRIORITY RESOURCE                            | SHORT-TERM STEWARDSHIP GOAL                                                                                                                                                                                                                            | HIGH-PRIORITY STEWARDSHIP ACTIVITIES                                                                                                          |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PARKWIDE AND CROSS-BOUNDARY RESOURCES</b> | The park has an improved understanding of its cultural and natural resources using geospatial (GIS) data.                                                                                                                                              | - Develop a strategy for meeting the park's geospatial needs (e.g., working in partnership with region, in-house GIS specialist, contractor). |
| <b>PARKWIDE AND CROSS-BOUNDARY RESOURCES</b> | The park collaborates with external agency partners to benefit the park's cultural and natural resources.                                                                                                                                              | - No high-priority activities identified.                                                                                                     |
| <b>PARKWIDE AND CROSS-BOUNDARY RESOURCES</b> | The park characterizes climate change trends and implications for priority resources, including system-wide conditions affecting natural and cultural resources (e.g., drought, longer periods of high temperatures, more frequent or intense storms). | - No high-priority activities identified.                                                                                                     |

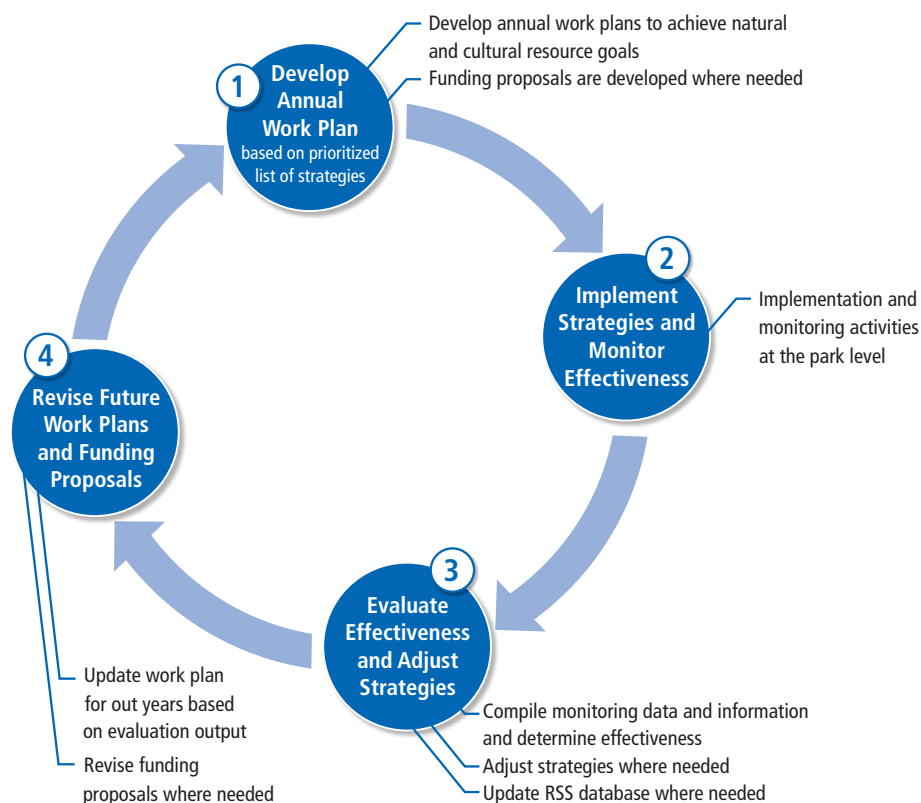


# ONGOING IMPLEMENTATION OF THE RESOURCE STEWARDSHIP STRATEGY

The stewardship goals, activities, and other pertinent information of the resource stewardship strategy is managed and updated regularly using the RSS desktop application. This information will assist resource managers in determining what, how, when, and where resource management occurs in the park and will assist the park's resource management staff in developing annual work plans. These work plans will be an important planning tool for park staff to determine what they will be able to realistically tackle over the coming years.

Long-term implementation of the resource stewardship strategy includes park managers monitoring resource information and conditions in order to evaluate the effectiveness of resource stewardship strategies over time. Regular monitoring of RSS progress will provide park managers an opportunity to evaluate whether the stewardship activities are making progress towards identified goals and consider whether adjustments are needed. See figure 3 for more information on the cyclical nature of this process. In addition, routine communication with the public is another important aspect of the implementation process. These outreach efforts are intended to improve public awareness about the science and strategies used to protect the park's diverse resources and values over time.

Figure 3. RSS Implementation Process



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## APPENDIX A: FREDERICKSBURG AND SPOTSYLVANIA NATIONAL MILITARY PARK COMPREHENSIVE LIST OF STEWARDSHIP STRATEGIES AND RESPECTIVE PRIORITIES

| PRIORITY RESOURCE       | LONG-TERM GOAL                                                                                                                                                                                 | SHORT-TERM GOAL                                                                                                                                             | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ARCHEOLOGICAL RESOURCES | The park has up-to-date information that provides direction for the research and protection of archeological resources and informs park management, maintenance, and interpretation.           | The park's archeological overview and assessment has been updated and shared with NPS staff and contractors and cooperators as appropriate.                 | <ul style="list-style-type: none"> <li>- Digitize the current archeological overview and assessment. (High)</li> <li>- Prepare a Project Management Information System (PMIS) statement to update the archeological overview and assessment. (High)</li> <li>- Review the current archeological overview and assessment to determine what updates are necessary. (Medium)</li> </ul>                                                                                                                                               |
| ARCHEOLOGICAL RESOURCES | The park has up-to-date information that provides direction for the research and protection of archeological resources and informs park management, maintenance, and interpretation.           | The number of archeological sites that need state site forms is better understood.                                                                          | <ul style="list-style-type: none"> <li>- Develop a PMIS statement to evaluate and update accuracy of Cultural Resources Information System for Archeological Resources (CRIS-AR) data using the four phases of CADRE (CRIS-AR Archeology Data Reliability Evaluation). (Medium)</li> <li>- Once funding has been secured, evaluate and improve accuracy of CRIS-AR data using the four phases of CADRE. (Low)</li> </ul>                                                                                                           |
| ARCHEOLOGICAL RESOURCES | The park has up-to-date information that provides direction for the research and protection of archeological resources and informs park management, maintenance, and interpretation.           | Park staff have access to information that reflects current scholarship on the lifeways and living spaces of American Indians and people who were enslaved. | <ul style="list-style-type: none"> <li>- Expand consultation with descendant communities and tribes to acquire information to inform management. (High)</li> <li>- Review existing archeological information and data to identify potential areas for archeological study regarding living quarters of former inhabitants (e.g., people who were enslaved). (Medium)</li> <li>- Prepare a PMIS statement to develop archeological studies for the living quarters of former inhabitants on certain landscapes. (Medium)</li> </ul> |
| CULTURAL LANDSCAPES     | Management of the park's cultural landscapes is guided by up-to-date treatment documents, appropriate compliance review, and informed maintenance and reflects the latest historical research. | The cultural landscape report (CLR) for the Wilderness Battlefield has been completed and includes a chapter on treatment recommendations.                  | <ul style="list-style-type: none"> <li>- Pursue completion of the Wilderness Battlefield Cultural Landscape Report by developing a treatment and recommendations chapter. (Medium)</li> </ul>                                                                                                                                                                                                                                                                                                                                      |
| CULTURAL LANDSCAPES     | Management of the park's cultural landscapes is guided by up-to-date treatment documents, appropriate compliance review, and informed maintenance and reflects the latest historical research. | Cultural landscape inventories (CLIs) have been completed for additions battlefield and Civil War-era landscapes.                                           | <ul style="list-style-type: none"> <li>- Pursue the development of cultural landscape inventories for the Fredericksburg, Chancellorsville, Wilderness, and Spotsylvania Court House Battlefields and for the Stonewall Jackson Death Site. (High)</li> </ul>                                                                                                                                                                                                                                                                      |

| PRIORITY RESOURCE   | LONG-TERM GOAL                                                                                                                                                                                 | SHORT-TERM GOAL                                                                                                                                                                                 | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CULTURAL LANDSCAPES | Management of the park's cultural landscapes is guided by up-to-date treatment documents, appropriate compliance review, and informed maintenance and reflects the latest historical research. | Battlefield landscapes most in need of KOCOA analysis (key terrain, observation and fields of fire, cover and concealment, obstacles, and avenues of approach/withdrawal) have been identified. | <ul style="list-style-type: none"> <li>- Coordinate with American Battlefield Protection Program or other relevant partners to review status of existing KOCOA analysis (investigate what the park has) and evaluate whether additional analysis could benefit management. (Medium)</li> <li>- If appropriate, pursue the development of a KOCOA analysis of the Fredericksburg, Chancellorsville, Wilderness and Spotsylvania Court House Battlefields. Prioritize areas to focus analysis. (Low)</li> </ul> |
| CULTURAL LANDSCAPES | Management of the park's cultural landscapes is guided by up-to-date treatment documents, appropriate compliance review, and informed maintenance and reflects the latest historical research. | The cultural landscape report for Fredericksburg National Cemetery has been completed and includes a chapter on treatment recommendations.                                                      | <ul style="list-style-type: none"> <li>- Pursue completion of the Fredericksburg National Cemetery Cultural Landscape Report by adding a treatment and recommendations chapter. (High)</li> </ul>                                                                                                                                                                                                                                                                                                             |
| CULTURAL LANDSCAPES | Management of the park's cultural landscapes is guided by up-to-date treatment documents, appropriate compliance review, and informed maintenance and reflects the latest historical research. | The condition of Fredericksburg National Cemetery is improved, and its rating in the CLI database has been elevated from "fair" to "good."                                                      | <ul style="list-style-type: none"> <li>- Prioritize the Fredericksburg National Cemetery landscape needs and update PMIS. (High)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   |
| CULTURAL LANDSCAPES | Management of the park's cultural landscapes is guided by up-to-date treatment documents, appropriate compliance review, and informed maintenance and reflects the latest historical research. | Cultural landscape inventories are completed for identified national register-significant historic designed (non-battlefield) landscapes, as appropriate.                                       | <ul style="list-style-type: none"> <li>- Pursue the development of cultural landscape inventories for nationally significant historic designed landscapes, as appropriate (e.g., early park development, road network). (Medium)</li> <li>- Continue to gather and compile historical information that can be shared with Olmsted Center or other partners for use in future cultural landscape inventories. (Medium)</li> </ul>                                                                              |
| CULTURAL LANDSCAPES | Management of the park's cultural landscapes is guided by up-to-date treatment documents, appropriate compliance review, and informed maintenance and reflects the latest historical research. | Cultural landscapes are managed to mitigate the adverse effects of external threats.                                                                                                            | <ul style="list-style-type: none"> <li>- Continue to engage with communities and VDOT in long-range transportation planning; for instance regarding Routes 3 and 20, but also outside the context of specific project proposals. (High)</li> <li>- Pursue funding for the development of traffic and circulation analysis to inform management. (High)</li> </ul>                                                                                                                                             |

| PRIORITY RESOURCE             | LONG-TERM GOAL                                                                                                                                          | SHORT-TERM GOAL                                                                                                                                                                                                               | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EARTHWORKS</b>             | The park's collection of earthen fortifications is preserved, protected, and maintained to evoke and interpret conditions during the periods of battle. | A park-specific earthworks management plan that contains management guidance and treatment recommendations is developed.                                                                                                      | <ul style="list-style-type: none"> <li>- Prepare a PMIS statement to develop and earthworks management plan for the park that will include monitoring protocols and treatment recommendations. (High)</li> <li>- Once funded, develop an earthworks management plan. (High)</li> <li>- Implement treatment recommendations from the earthworks management plan once it has been completed. Assess earthworks that are currently open to public access that may be candidates for closure. (High)</li> </ul> |
| <b>ETHNOGRAPHIC RESOURCES</b> | Understanding of the park's broad population of traditionally associated peoples, historical groups, and affiliated communities is improved.            | Baseline documentation, including an ethnographic overview and assessment, is completed to enhance understanding and fill data gaps regarding the park's ethnographic resources.                                              | <ul style="list-style-type: none"> <li>- Prepare a PMIS statement to develop a cultural affiliation study to better understand communities and populations that are associated with the park and the significance they ascribe to park lands and resources. (High)</li> <li>- Prepare a PMIS statement to develop an ethnographic overview and assessment. (Medium)</li> </ul>                                                                                                                              |
| <b>ETHNOGRAPHIC RESOURCES</b> | Understanding of the park's broad population of traditionally associated peoples, historical groups, and affiliated communities is improved.            | Park staff have access to information that reflects current scholarship on the lifeways and living spaces of American Indians and people who were enslaved and is shared by descendant communities and tribes when they wish. | <ul style="list-style-type: none"> <li>- Prepare PMIS statements to develop an ethnographic study on American Indian history within the park. (High)</li> <li>- Prepare a PMIS statement to develop an ethnographic study on African American history within the park. (High)</li> </ul>                                                                                                                                                                                                                    |

| PRIORITY RESOURCE          | LONG-TERM GOAL                                                                                                                                                                                                                                                                                          | SHORT-TERM GOAL                                                                                                                                                                                                | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HISTORIC STRUCTURES</b> | Inventory and documentation of historic structures are up to date, meet the standards of Section 110 of the National Historic Preservation Act (NHPA), and are recorded in relevant resource management databases. National Register of Historic Places (NRHP) documentation is updated every 20 years. | More baseline documents, including updated historic structure reports and a parkwide historic resource study, have been completed.                                                                             | <ul style="list-style-type: none"> <li>- Prioritize the park's baseline documentation needs for historic structure needs and update PMIS. (High)</li> <li>- Prepare a PMIS statement to update the treatment sections (i.e., part 2) of existing historic structure reports. (High)</li> <li>- Continue to conduct primary research with the goal of finding and compiling new information/materials that can aid in preparation of baseline documents in the future (for example, compile building files information in one location). (High)</li> <li>- Prepare a PMIS statement to develop a parkwide historic resource study. (High)</li> <li>- Prepare a PMIS statement to develop a historic structure report for the Fredericksburg Battlefield Visitor Center (review PMIS statement). (Medium)</li> <li>- Work with historic architects (when historic structure reports are prepared) to identify character-defining features and elements that should be acquired into the museum collection as representative samples (for example, if they are removed for repair). (Medium)</li> <li>- Prepare a PMIS statement to develop a historic structure report for the Innis House (PMIS statement needed). Keep in mind the Historic Preservation Training Center did a historic structure assessment report in 2019. (Low)</li> <li>- Prepare a PMIS statement to develop a historic structure report for the Fredericksburg National Cemetery Lodge. (Low)</li> <li>- Update Part 1 documentation for the Chatham Historic Structure Report. (Low)</li> </ul> |
| <b>HISTORIC STRUCTURES</b> | Inventory and documentation of historic structures are up to date, meet the standards of Section 110 of the NHPA, and are recorded in relevant resource management databases. NRHP documentation is updated every 20 years.                                                                             | Relevant data for structures has been recorded in the Cultural Resources Information System for historic structures (CRIS-HS) and uploaded into the Integrated Resource Management Applications (IRMA) portal. | <ul style="list-style-type: none"> <li>- Update CRIS-HS to reflect findings of the national register update. (Low)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| PRIORITY RESOURCE                    | LONG-TERM GOAL                                                                                                                                                                                                              | SHORT-TERM GOAL                                                                              | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HISTORIC STRUCTURES</b>           | Inventory and documentation of historic structures are up to date, meet the standards of Section 110 of the NHPA, and are recorded in relevant resource management databases. NRHP documentation is updated every 20 years. | Work needed to raise the overall condition of structures in CRIS-HS has been identified.     | <ul style="list-style-type: none"> <li>- Identify work needed to raise the overall condition of historic structures at the park. (High)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>HISTORIC STRUCTURES</b>           | Inventory and documentation of historic structures are up to date, meet the standards of Section 110 of the NHPA, and are recorded in relevant resource management databases. NRHP documentation is updated every 20 years. | Condition of prioritized structures in CRIS-HS is improved to good.                          | <ul style="list-style-type: none"> <li>- Develop and agree upon criteria for prioritizing the historic structure needs. Prioritize needs based on significance of resources, compliance needs, and other factors. (High)</li> <li>- Review condition assessments in CRIS-HS and prioritize the park's historic structure needs for treatment and update PMIS. (High)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>MUSEUM COLLECTION AND ARCHIVE</b> | All museum collection records are maintained, accessioned, and cataloged per NPS standards.                                                                                                                                 | Core documents are updated and completed as defined by annual museum reporting requirements. | <ul style="list-style-type: none"> <li>- Prepare a PMIS statement to complete a museum facility protection plan. (High)</li> <li>- Prepare a PMIS statement to develop a museum housekeeping plan or secure funding through other means. (High)</li> <li>- Prepare a PMIS statement to complete an integrated pest management plan or secure funding through other means. (High)</li> <li>- Assess the furnishings at the Jackson Death Site to determine whether a historic furnishing plan is needed. (High)</li> <li>- Implement recommendations from plans above. Incorporate any related protocols. Author any necessary standard operating procedures related to collection preservation and protection. (Result of implementing the plans above.) (Medium)</li> <li>- Review and, if necessary, revise the scope of collections statement every 5 years (last revised in 2020). (Low)</li> <li>- Write a PMIS statement for a new collections management plan when recommendations are completed for the current plan. (Low)</li> </ul> |

| PRIORITY RESOURCE             | LONG-TERM GOAL                                                                                                  | SHORT-TERM GOAL                                                                                                                                                                             | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MUSEUM COLLECTION AND ARCHIVE | All museum collection records are maintained, accessioned, and cataloged per NPS standards.                     | Records for accessioning, annual reporting, cataloging, deaccessioning, loans, and photography are maintained and kept up to date, and gaps from past records are identified and addressed. | <ul style="list-style-type: none"> <li>- Complete current accessioning/cataloging of backlogged archeological artifacts. (High)</li> <li>- Complete current accessioning and cataloging of backlogged archival collection. (High)</li> <li>- Complete an inventory of all natural resource collections and documentation for the park and ensure that collections are reflect in NPSpecies. (High)</li> <li>- Complete deaccession and disposition effort started in 2019. Follow it through to completion. (Medium)</li> <li>- Ensure curation and cataloging is part of the scope of work whenever archeological testing is needed and for permit requests regarding natural history collections. (Medium)</li> <li>- Complete a board of survey (DI-103) for objects missing more than 30 days every 6 months. (Low)</li> </ul> |
| MUSEUM COLLECTION AND ARCHIVE | Museum collection preservation is improved and maintained in accordance with the NPS Museum Management Program. | Threats to museum collection records and objects are identified and mitigated.                                                                                                              | <ul style="list-style-type: none"> <li>- Improve and continue ongoing preservation of museum collection items in line with standards. (High)</li> <li>- Complete the rehousing of archeological artifacts. (Medium)</li> <li>- Secure funding for collection condition surveys by object type. (Medium)</li> <li>- Prepare a PMIS statement to seek funding for subsequent treatment recommendations. (Medium)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                          |
| MUSEUM COLLECTION AND ARCHIVE | Accessibility of the museum collection is improved for education, interpretation, and public research.          | High-quality images or scans of museum collection objects are captured.                                                                                                                     | <ul style="list-style-type: none"> <li>- Capture images and scans. Ensure digitization standards are met. (Medium)</li> <li>- Upload images of objects to the park website and NPGallery using a combination of methods as appropriate (e.g., partnerships, in-house staff, contracts). (Low)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| MUSEUM COLLECTION AND ARCHIVE | Accessibility of the museum collection is improved for education, interpretation, and public research.          | Partnerships to benefit museum collections and public access are built.                                                                                                                     | <ul style="list-style-type: none"> <li>- Continue the partnership with the local university to create preservation quality scans of archives and a digital history project. (High)</li> <li>- Explore new partnerships to assist with digitization and accessibility efforts. (Note: See if possibilities exist beyond current university agreement). (Low)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| PRIORITY RESOURCE                    | LONG-TERM GOAL                                                                                                       | SHORT-TERM GOAL                                                                                                                                        | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NATURAL RESOURCES—FORESTS            | Forest habitats are managed to preserve and restore a healthy, diverse, and naturally regenerating forest ecosystem. | Park staff have increased understanding of the status and trends of forest conditions, including regeneration, invasive species, and wildlife habitat. | <ul style="list-style-type: none"> <li>- Establish Deer Count Protocol and perform regular deer counts to establish baseline data. (Medium)</li> <li>- Assess need for deer management planning. (Inventory and Monitoring Division has the vegetation data that facilitates assessment of the impacts of deer on vegetation.) (Medium)</li> <li>- Submit a technical assistance request (TAR) regional request for wildlife bio report/analysis of deer count data. (Low)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| NATURAL RESOURCES—FORESTS            | Forest habitats are managed to preserve and restore a healthy, diverse, and naturally regenerating forest ecosystem. | Management actions to promote healthy forests are developed.                                                                                           | <ul style="list-style-type: none"> <li>- Continue reviewing land ownership and zoning around areas of conservation interest (e.g., Hamilton's thicket, Stonewall Jackson Death Site wetland, Spotsylvania's Virginia pine stands, cultural meadows) and identify local conservancies, landowners, and municipalities that may assist in their protection. (Medium)</li> <li>- Evaluate and develop management strategies based on Eastern Forest Condition and management in Eastern NPS Units report. (Medium)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| NATURAL RESOURCES—FORESTS            | Forest habitats are managed to preserve and restore a healthy, diverse, and naturally regenerating forest ecosystem. | Staff capacity to prioritize invasive species management is increased.                                                                                 | <ul style="list-style-type: none"> <li>- Identify partners (e.g., other regional parks, the Student Conservation Association, American Conservation Experience, AmeriCorps, Potomac Appalachian Trail Corps, or other volunteers) who can assist with invasive species control and expand staff capacity to manage. (Medium)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| NATURAL RESOURCES—GRASSLANDS/MEADOWS | Grassland and meadow habitats are managed both to promote wildlife habitat and to evoke the historic scene.          | Grassland bird habitat is promoted, and metrics are developed to assess the health and condition of grassland and meadow habitats.                     | <ul style="list-style-type: none"> <li>- Develop interim schedule and standard operating procedure(s) for bushhogging and burning operations to benefit wildlife (October through mid-April) (leading up to developing a field management plan). (High)</li> <li>- Explore integrated management strategies/treatments for grasslands and meadows that would provide practicable benefits to natural resources (e.g., bobwhite quail habitat) and cultural landscape preservation. (Medium)</li> <li>- In partnership with Inventory and Monitoring Division, continue ongoing bird monitoring project at Spotsylvania. (Medium)</li> <li>- Develop monitoring metrics for species of concern (e.g., birds) that would contribute information toward land management and its ecology (e.g., grasslands, open lands, forests, wetlands). (Medium)</li> <li>- Develop and maintain partnerships to collect bird monitoring data. (Low)</li> <li>- Take stock of existing partnerships and ongoing management activities for grasslands and meadows. (Low)</li> </ul> |

| PRIORITY RESOURCE                                    | LONG-TERM GOAL                                                                                                                            | SHORT-TERM GOAL                                                                                                                                                                                                        | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>NATURAL RESOURCES—<br/>OPEN LANDS</b>             | Open landscape systems in the park are managed through integrated (cultural resources, natural resources) management strategies.          | Management strategies, including longer-term schedules that integrate available tools and include prescribed fire and mechanical methods for maintaining open lands compatible with the historic scene, are developed. | <ul style="list-style-type: none"> <li>- Review management direction, the park's internal management zoning structure, and desired conditions described in the park's general management plan and identify opportunities for revision and/or improvement (working toward the long term). (High)</li> <li>- Review and evaluate current open lands management practices to determine if their implementation meets goals for integrated management of cultural landscape, habitat, etc., and identify opportunities for improvement (e.g., the fire management plan). (High)</li> <li>- Review current status and potential future changes to special use permits to determine if management goals are being met (e.g., pesticide/herbicide practices, cropping systems, rotations), and develop interim strategies for how the park would respond to potential changes in special use permits. (High)</li> <li>- Develop interim schedule and/or standard operating procedure(s) for open lands management leading up to the development of a field management plan (e.g., bushhogging and burning operations to benefit wildlife (October through mid-April)). (High)</li> </ul> |
| <b>NATURAL RESOURCES—<br/>RARE NATIVE VEGETATION</b> | Forest habitat patterns and ecological functions are maintained to the extent practical, while recognizing the impacts of climate change. | Rare native plant assemblages are protected through appropriate management practices (e.g., identifying/mapping, prescribed fire, plantings).                                                                          | <ul style="list-style-type: none"> <li>- Protect and promote habitats recognized by state partners as significant natural areas (e.g., Hamilton's Thicket, Little Hunting Run). (Medium)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| PRIORITY RESOURCE                                 | LONG-TERM GOAL                                                                                                             | SHORT-TERM GOAL                                                                                                                                                                                  | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| NATURAL RESOURCES—STREAMS                         | Streams and riparian areas are managed to promote healthy aquatic habitats with diverse fish and invertebrate assemblages. | The park has an increased understanding of the ecological condition and physical habitat of aquatic systems to support management decisions.                                                     | <ul style="list-style-type: none"> <li>- Conduct a parkwide assessment of stream riparian condition. (Medium)</li> <li>- Consistent with CLR recommendations, identify areas where vegetated riparian buffers can be created along streams within the park. (Medium)</li> <li>- Create inventory of stream crossing and culvert conditions. (Medium)</li> <li>- Identify areas with rapidly changing stream morphology and develop strategies to monitor and mitigate. (Medium)</li> <li>- Submit a TAR to the Natural Resource Stewardship and Science Directorate (NRSS), Water Resources Division (WRD), or other appropriate partners, to determine rules, methodology, and coordination to remove remnants of dam at Ashton Farm and restore stream and riparian to more natural-functioning conditions. (Medium)</li> <li>- Work with IMD partners to increase understanding of stream health conditions. (Medium)</li> </ul> |
| NATURAL RESOURCES—WILDLIFE AND SPECIES OF CONCERN | Habitat for wildlife and species of concern is protected and promoted.                                                     | Mature hardwood forest habitats (standing dead and snags) for bat populations are protected and promoted, including threatened and endangered (T&E) species.                                     | <ul style="list-style-type: none"> <li>- Review park policies to conserve and promote bat habitats (and other habitats of concern) when managing vegetation (e.g., activities such as clearing trees). This would include protecting mature hardwood forest and standing dead trees and snags for bat populations. (Low)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| NATURAL RESOURCES—WILDLIFE AND SPECIES OF CONCERN | Habitat for wildlife and species of concern is protected and promoted.                                                     | Protection and management strategies are developed to maintain and improved park habitats that are recognized by state partners as significant natural areas.                                    | <ul style="list-style-type: none"> <li>- Develop management strategies, including the potential use of prescribed fire, to promote unique habitat (i.e., habitat that has good ecological integrity such as important habitat, mature hardwood forests, riparian wetlands, unique areas). (Medium)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| NATURAL RESOURCES—WILDLIFE AND SPECIES OF CONCERN | Habitat for wildlife and species of concern is protected and promoted.                                                     | Information regarding species of special concern is identified and made available to park staff to facilitate informed management decisions for future visitor and resource management projects. | <ul style="list-style-type: none"> <li>- Identify and prioritize needs for spatial information that would inform management, including identifying strategies to meet park needs for GIS support. (Medium)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| PRIORITY RESOURCE               | LONG-TERM GOAL                                                                                                                                                                                                                            | SHORT-TERM GOAL                                                                                                                                | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| PARK SETTING—<br>HISTORIC VIEWS | The park setting, including historic views, night skies, and natural sounds both within and across park boundaries, is improved, monitored, and protected using partnerships for cooperative conservation of the battlefield's character. | Historic views are inventoried and assessed over time to monitor changes in condition and shared with visitors to understand their importance. | <ul style="list-style-type: none"> <li>- Submit a technical assistance request to the Air Resource Division (ARD) Visual Resources Program to conduct a visual resource inventory using the NPS ARD process to establish baseline condition of selected views by documenting scenic quality and view importance. (Medium)</li> <li>- Identify historic views and vistas important to the park purpose and visitor values for the visual resource inventory, particularly from the park to the City of Fredericksburg and of adjacent rural agricultural landscapes, Virginia Piedmont, Rappahannock River, and as informed by cultural landscape inventories and cultural landscape reports. (Medium)</li> <li>- Conduct a visual resource inventory using the NPS ARD process to establish the baseline condition of selected views by documenting scenic quality and view importance. (Medium)</li> <li>- Conduct visual impact assessment of proposed development projects' (solar, cell towers, etc.) impact to views. (Low)</li> <li>- To monitor changes to historic views condition over time, repeat visual resource inventory as landscape changes are observed. (Low)</li> <li>- Include images from the visual resource inventory on the photo gallery on the park's website with important historic views chosen for the visual resource inventory. (Describes changes over time—compares historic photos with recent imagery.) (Low)</li> </ul> |
| PARK SETTING—<br>HISTORIC VIEWS | The park setting, including historic views, night skies, and natural sounds both within and across park boundaries, is improved, monitored, and protected using partnerships for cooperative conservation of the battlefield's character. | Intrusions and changes to historic views are minimized both within the park and externally through community partnerships.                     | <ul style="list-style-type: none"> <li>- Build/maintain partnerships with state and local governments and agencies, park neighbors, and other stakeholders to develop an understanding of shared visual values and educate about historic view protection. (Low)</li> <li>- In partnership with stakeholders, establish best practices and/or design guidelines for adjacent landowners and inholders. (Low)</li> <li>- Develop a park partner action strategy/land conservation plan, including the protection of battlefield landscapes, historic views, natural communities, and other resources impacted from external development, as cross-boundary issues for collaboration. (Low)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| PRIORITY RESOURCE                           | LONG-TERM GOAL                                                                                                                                                                                                                            | SHORT-TERM GOAL                                                                                                                                                       | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>PARK SETTING—<br/>NATURAL<br/>SOUNDS</b> | The park setting, including historic views, night skies, and natural sounds both within and across park boundaries, is improved, monitored, and protected using partnerships for cooperative conservation of the battlefield's character. | Condition of the park's acoustic resource is identified and characterized.                                                                                            | <ul style="list-style-type: none"> <li>- Collect baseline ambient acoustic data (submit a TAR to NSNSD). (Medium)</li> <li>- Submit a TAR to NSNSD to obtain a copy of updated acoustic modeling of unit. (NSNSD can carry out.) (Low)</li> <li>- Make a programmatic noise reduction plan to consider deleterious effects of noise when assessing impacts to cultural resources and developing management alternatives. (Low)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>PARK SETTING—<br/>NATURAL<br/>SOUNDS</b> | The park setting, including historic views, night skies, and natural sounds both within and across park boundaries, is improved, monitored, and protected using partnerships for cooperative conservation of the battlefield's character. | Noise from visitor-based and park activities is reduced; noise from external sources is reduced through partnerships with neighboring communities and other entities. | <ul style="list-style-type: none"> <li>- Consider quieter technology when making purchases and negotiating contracts with concessionaires and contractors (e.g., when road construction occurs, minimize noise level of backup beepers on large trucks to improve soundscape). (Low)</li> <li>- Minimize the use of leaf blowers, chainsaws, and other mechanical equipment. Consider products that accomplish the same task (non-power tools, brooms, rakes, electric chainsaws). (Low)</li> <li>- Replace and retrofit park infrastructure to options that reduce noise (shielding, muffling, replacement). (Low)</li> <li>- Limit hours of operation for power equipment and vehicles to protect dawn, dusk, and nighttime quiet, and interpretive activities. (Low)</li> <li>- Identify and enforce "quiet zones" (maps, signs, interpretation). (Low)</li> <li>- Establish lines of communication networks with local, state, and federal agencies to maintain awareness of actions that may impact soundscapes (e.g., Federal Highway Administration transportation planning, state department of transportation). (Low)</li> <li>- Celebrate intrinsic natural/cultural sounds by adding sound information to existing interpretive media (e.g., website, displays, signage). (Low)</li> <li>- Develop and implement sound-oriented interpretive and education programs such as quiet walks, natural/cultural sounds brochures, interactive exhibits, and waysides. (Low)</li> <li>- Create library of natural and cultural sounds of interest using focal, high-quality recordings, or retrieve previously collected sounds. (Low)</li> </ul> |

| PRIORITY RESOURCE                                         | LONG-TERM GOAL                                                                                                                                                                                                                            | SHORT-TERM GOAL                                                                                           | STEWARDSHIP ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PARK SETTING—<br/>NIGHT SKIES</b>                      | The park setting, including historic views, night skies, and natural sounds both within and across park boundaries, is improved, monitored, and protected using partnerships for cooperative conservation of the battlefield's character. | Current night sky conditions are characterized and understood.                                            | <ul style="list-style-type: none"> <li>- Document the current night sky conditions; obtain a measurement of skyglow. These measurements are made with the Natural Sounds and Night Skies Division (NSNSD) all sky calibrated camera. (NSNSD Technical Assistance Request). (Medium)</li> <li>- Coordinate with NSNSD to obtain geospatial maps of predicted sky conditions for the park and adjacent lands. (Low)</li> <li>- Determine presence of species of management concern that utilize park resources and identify how they are impaired by disrupted nocturnal environment (e.g., fireflies, bats, migrating birds). Methods vary across species. Use literature surveys to assess likely impacts and develop a research plan to fill critical data gaps. (Low)</li> </ul>      |
| <b>PARK SETTING—<br/>NIGHT SKIES</b>                      | The park setting, including historic views, night skies, and natural sounds both within and across park boundaries, is improved, monitored, and protected using partnerships for cooperative conservation of the battlefield's character. | Anthropogenic light from park operations, neighbors/nearby communities is reduced.                        | <ul style="list-style-type: none"> <li>- Inventory current lighting within the park and establish a lighting management plan. (Medium)</li> <li>- After identifying areas with light pollution, prioritize groups to work with to reduce excessive lighting that occurs from outside of the park boundary. Begin making connections (e.g., develop a partner action strategy) and help partners understand that light trespass diminishes historical context and opportunities for astrotourism and impacts natural resources. (Low)</li> <li>- Promote night sky friendly lighting ordinances that protect night sky quality. (Low)</li> <li>- Explore possibilities for park night sky interpretive programming (can use local astronomy orgs or NSNSD for support). (Low)</li> </ul> |
| <b>PARKWIDE<br/>AND CROSS-<br/>BOUNDARY<br/>RESOURCES</b> | The park has up-to-date information that provides direction for the research and protection of parkwide resources and informs park management, maintenance, and interpretation.                                                           | The park has an improved understanding of its cultural and natural resources using geospatial (GIS) data. | <ul style="list-style-type: none"> <li>- Develop a strategy for meeting the park's geospatial needs (e.g., working in partnership with region, in-house GIS specialist, contractor). (High)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>PARKWIDE<br/>AND CROSS-<br/>BOUNDARY<br/>RESOURCES</b> | Cross-boundary resources are managed through regional partnerships.                                                                                                                                                                       | The park collaborates with external agency partners to benefit the park's cultural and natural resources. | <ul style="list-style-type: none"> <li>- Identify or renew existing partnerships that would expand the park's capacity to respond to cross-boundary resource affecting park priority resources. (Medium)</li> <li>- Coordinate with existing partners to promote management of shared land resources. (Medium)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| PRIORITY RESOURCE                            | LONG-TERM GOAL                                                                                                                                                                  | SHORT-TERM GOAL                                                                                                                                                                                                                                            | STEWARDSHIP ACTIVITY                                                                                                                                                                     |
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| <b>PARKWIDE AND CROSS-BOUNDARY RESOURCES</b> | The park has up-to-date information that provides direction for the research and protection of parkwide resources and informs park management, maintenance, and interpretation. | The park characterizes climate change trends and implications for priority resources, including system-wide conditions affecting natural and cultural resources (e.g., drought, longer periods of high temperatures, and more frequent or intense storms). | <ul style="list-style-type: none"> <li>- Identify opportunities to work with the regional office and other parks on a multiple battlefield vulnerability assessment. (Medium)</li> </ul> |

## CONTACT INFORMATION

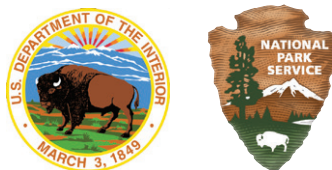
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For more information about the Resource Stewardship Strategy for Fredericksburg and Spotsylvania National Military Park, contact:

Superintendent  
Fredericksburg and Spotsylvania National Military Park  
120 Chatham Lane  
Fredericksburg, VA 22405

[FRSP\\_superintendent@nps.gov](mailto:FRSP_superintendent@nps.gov)





As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under US administration.

# RSS

RESOURCE STEWARDSHIP STRATEGIES



BRIDGING SCIENCE AND MANAGEMENT FOR TODAY AND TOMORROW