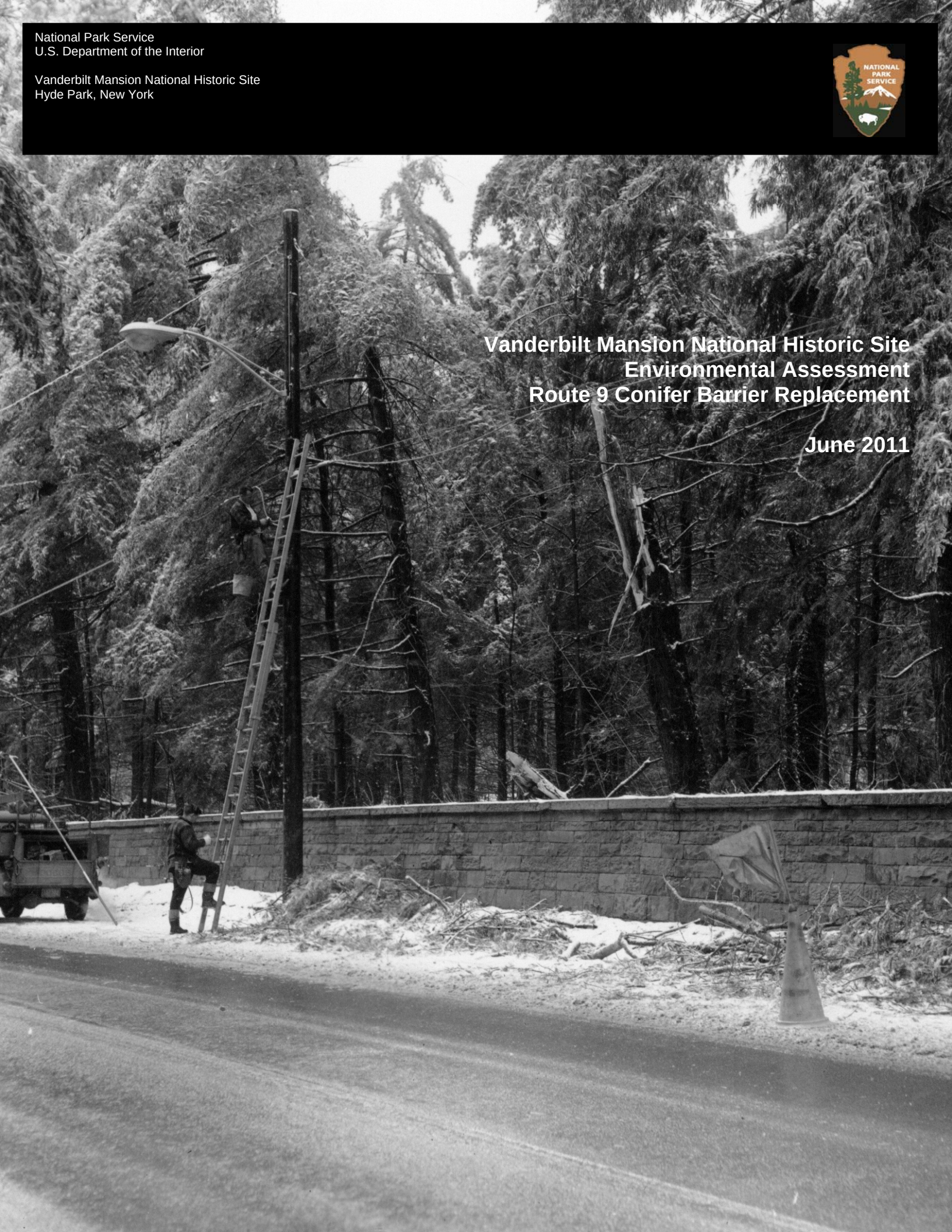
National Park Service
U.S. Department of the Interior

Vanderbilt Mansion National Historic Site
Hyde Park, New York



Vanderbilt Mansion National Historic Site
Environmental Assessment
Route 9 Conifer Barrier Replacement

June 2011

SUMMARY

The National Park Service (NPS) proposes to remove and replace approximately 462 pine and hemlock trees present within the conifer barrier located along U.S. Route 9 at Vanderbilt Mansion National Historic Site in Hyde Park, New York.

This project is aimed at addressing the deteriorated conifer barrier located along U.S. Route 9 (Albany Post Road). In order to assess the location, type, condition and status of each tree within the conifer barrier, the NPS prepared an existing conditions report. The existing conditions report documents that the tree conditions in the overall conifer barrier are fair to poor. The project area contains 312 pine and hemlock with a high or severe level of risk utilizing a risk rating assessment protocol that is based on the USDA Forest Service Community Tree Risk Rating System. This represents 67.53 percent of the inventoried trees in the project area. (NPS, 2010a). There are several risks posed by tree failure in this area of the park, including trees falling onto U.S. Route 9, a major transportation route. Falling trees could also damage power lines and the historic ashlar masonry wall.

In historical parks, such as the Vanderbilt Mansion National Historic Site, NPS often strives to maintain the landscape in accordance with a particular treatment date, which provides a reference to guide treatment efforts by identifying a time during the period of significance when the landscape reached its height of development and when it best reflected the characteristics for which it is significant (NPS, 2009a). The conifer barrier was originally planted by Vanderbilt to create a visual barrier between the estate and the road, and to create an enclosure for open areas on the grounds (NPS, 2009a). Currently, the age and size of the trees have resulted in the loss of most of the lower limbs, which reduces their screening capability. Therefore, the barrier is no longer serving its intended purpose.

The purpose of the proposed project is to improve public safety and restore the cultural landscape in a way that protects the park's resources and values and that enhances visitor enjoyment and interpretation of the park. This conifer barrier replacement is needed because the physical deterioration of the trees within the barrier has created public safety concerns, and the historic integrity of the barrier has degraded, which has resulted in an inaccurate portrayal of the historic landscape to the public.

This Environmental Assessment (EA) analyzed Alternative A - no action, Alternative B - complete barrier removal and replacement (Preferred Alternative) and Alternative C - partial barrier removal and replacement, and their impacts on the environment in accordance with the National Environmental Policy Act (NEPA). The Preferred Alternative includes the complete removal and replacement of approximately 462 pine and hemlock trees located within the conifer barrier located along U.S. Route 9. All trees within the project area would be harvested and either utilized as lumber or chipped and removed from the site. Stumps would be cut flush with existing grade. The removal action is anticipated to take place during the winter months

when the ground is frozen. After harvest, Eastern white pine (*Pinus strobus*), Western hemlock (*Tsuga heterophylla*) or a compatible species based on arborist and landscape architect recommendations would be planted in the following spring or fall. The planting stock could range from bare root stock up to 2 inch stems and would be designed to replicate the original pine barrier planted by Vanderbilt in the early 1900s.

Impacts of the proposed alternatives were assessed in accordance with NEPA and the NPS Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making, which requires that impacts to park resources be analyzed in terms of their context, duration, and intensity. Several impact topics have been dismissed from further analysis because the proposed action alternatives would result in negligible to no impacts to those resources. No major impacts are anticipated as a result of this project.

Note to Reviewers and Respondents:
If you wish to comment on the EA, you may mail comments directly via U.S. Post or submit them electronically. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we would be able to do so.

Mailed comments can be sent to:
Ms. Sarah Olson, Superintendent
Vanderbilt Mansion National Historic Site
U.S. Route 9 Conifer Replacement
4097 Albany Post Road
Hyde Park, New York 12538

Comments can also be submitted on-line by following the appropriate links at:
http://parkplanning.nps.gov/VAMA

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CHAPTER 1 PURPOSE AND NEED

INTRODUCTION

The National Park Service (NPS) has prepared this Environmental Assessment (EA) to evaluate a range of alternatives to improve public safety in a manner that enhances visitor experience while preserving the cultural landscape of the Vanderbilt Mansion National Historic Site. The Vanderbilt Mansion National Historic Site (VAMA, the "park") is proposing to replace the majority of the existing 6.75 acre conifer barrier located along U.S. Route 9 (also known as Albany Post Road). The location of the Park within the region is shown on Figure 1. The location of the park boundaries and the project area are depicted on Figure 2.

Figure 1: Location Map

Environmental Assessment

This EA is intended to analyze the preferred alternative, the no action alternative and other reasonable alternatives, as appropriate, and their impacts on the environment. This EA has been prepared in accordance with the National Environmental Policy Act of 1969, as amended (NEPA) and the Director's Order #12, Conservation Planning, Environmental Impact Analysis, and Decision Making (DO-12, 2001), and accompanying DO-12 handbook.

Figure 2: Hyde Park USGS Quadrangle

Environmental Assessment

This project is aimed at addressing the deteriorated conifer barrier located along U.S. Route 9 (Albany Post Road), depicted on the aerial photograph (see Figure 3). The main concern of the NPS is that many of the trees within the barrier are in poor condition and pose a safety hazard.

In order to assess the location, type, condition and status of each tree within the conifer barrier, the NPS prepared an existing conditions report. The existing conditions report documents that the tree conditions in the overall conifer barrier are described as fair to poor. The project area contains 312 pine and hemlock with a high or severe level of risk utilizing a risk rating assessment protocol that is based on the USDA Forest Service Community Tree Risk Rating System. This represents 67.53 percent of the inventoried trees in the project area. (NPS, 2010a). Trees with high to severe risk ratings have defects that cannot be cost effectively or practically treated and these defects indicate that a tree is failing, is in immediate danger of failing, or has already partially failed. If failure occurs, the tree or large tree limbs could fall, causing unacceptable levels of risk.

There are several risks posed by falling trees in this area of the park. Some trees are at risk of falling across U.S. Route 9, a major transportation route (see photograph 1). Due to their height, the majority of the trees within the barrier would have the potential to fall onto U.S. Route 9 in the event of tree failure. Trees that fall onto U.S. Route 9 could strike passing pedestrians or motorists, block traffic lanes or cause vehicular accidents.

Figure 3: Aerial Map

Environmental Assessment

As shown in photograph 1, overhead power lines are located along U.S. Route 9, increasing the risk for local power outages and dangerous downed power lines. It has been estimated that tree damage is responsible for 20 to 50 percent of all unplanned power outages (Paoulos and Camp, 2009). Any downed power lines would also pose an electric shock risk to motorists, park neighbors, visitors and staff.

Photograph 1: View of the conifer barrier trees leaning over U.S. Route 9 (Albany Post Road).

The boundary of the park on U.S. Route 9 is lined by an ashlar masonry wall with the conifer barrier behind it. Any tree failure would have the potential to damage these walls, which are contributing elements and character-defining features of the cultural landscape at VAMA.

Together, these hazards create unacceptable risk to human safety and property. To reduce these hazards in recent years, NPS has removed approximately 200 hazard trees since 2005. There are several factors that indicate that the hazard tree removal approach is not acceptable for the continuing management of the barrier by the NPS. First of all, the timing of tree failures is impossible to accurately predict because many tree defects can be latent and unobservable. In addition, a significant hazard tree removal backlog could occur since the park hazard tree removal staffing is limited to one arborist and a helper. Finally, investigations of the risk posed by tree failures on power lines have indicated that hazard tree removals are not reliable for reducing those risks (Guggenmoos 2003).

An example of the unpredictable nature of tree failure is a recent white pine tree fall on the adjacent St. James Church property. This tree had no observable defects and would not have been expected to fail based on a visual observation. This indicates that the resulting overall risk of tree failure remains high even after the removal of visually hazardous trees.

The secondary purpose of the project is to restore the cultural landscape in this area of the park. In historical parks, such as the Vanderbilt Mansion National Historic Site, NPS often strives to maintain the landscape in accordance with a particular treatment date, which provides a reference to guide treatment efforts by identifying a time during the period of significance when the landscape reached its height of development and when it best reflected the characteristics for which it is significant (NPS, 2009a). The Cultural Landscape Treatment Plan recommended that the landscape be managed to preserve the character as it had developed through 1938, the year Frederick Vanderbilt died and the end of the period of significance.

Historic visual relationships are essential in establishing the historic scene as well as conveying the compositional principles of picturesque landscape design (NPS, 2009a). The conifer barrier was intended as a screen between the estate and the roadway. Currently, the age and size of the trees has resulted in the loss of most of the lower limbs, which permits the highway to be visible from the estate (as shown in photograph 2). In its present condition, the conifer stand no longer serves its intended purpose.

Photograph 2: The loss of low limbs and the decline and death of conifers have created several large gaps in the barrier.

PROJECT BACKGROUND AND HISTORY

Reflecting his lifelong interest in botany and trees, after he acquired the property in 1895, Vanderbilt implemented a variety of landscape changes, including creation of an extensive screen tree planting along U.S. Route 9 (Albany Post Road) on the eastern boundary of the property (NPS, 2010c). This conifer barrier was "intended as a screen to block views in and out of the property and increase the sense of privacy of the estate (NPS, 2010c)." As reported in the 2010 General Management Plan and Environmental Impact Statement, this designed landscape feature has deteriorated in recent years due to "the loss of trees and inadequate maintenance (NPS, 2010c)."

SITE DESCRIPTION

Vanderbilt Mansion National Historic Site is part of the Roosevelt-Vanderbilt National Historic Sites (ROVA) located in Hyde Park, New York. The Franklin D. Roosevelt National Historic Site, the Eleanor Roosevelt National Historic Site and the Vanderbilt Mansion National Historic Site were all established under separate legislation but are combined into a single administrative unit. VAMA includes 212 acres along the Hudson River.

The project area is approximately 6.75 acres situated on the east boundary of the VAMA and adjacent to U.S. Route 9 (Albany Post Road), a heavily used two-lane highway. The narrow stand is composed exclusively of Eastern white pine (*Pinus strobus*) and Eastern hemlock (*Tsuga canadensis*) and contains 462 trees. The project area is depicted on the aerial photograph, Figure 3. Adjacent to the conifer stand on the west side of the study area lies part of the park's large expanse of mowed lawn. Further west is the visitor center, mansion and formal gardens.

PURPOSE OF THE ACTION

Based on the discussion above, the purpose of the proposed project is to improve public safety in a way that protects the park's resources and values and that:

- Restores the cultural landscape; and
- Enhances visitor enjoyment and interpretation of the park.

NEED FOR THE ACTION

The pine barrier replacement is needed because:

- The declining pine barrier has created public safety concerns and diminished overall visitor enjoyment; and
- The historic integrity of the cultural landscape is deteriorating; which is impacting visitor use and experience.

HISTORY AND SIGNIFICANCE OF THE PARK

Vanderbilt Mansion National Historic Site is part of the Roosevelt-Vanderbilt National Historic Sites located in Hyde Park, New York. The Franklin D. Roosevelt National Historic Site, the Eleanor Roosevelt National Historic Site and the Vanderbilt Mansion National Historic Site were all established under separate legislation but are combined into a single administrative unit. Together, the Roosevelt-Vanderbilt National Historic Sites include over 1,100 acres of land.

The purpose of the Vanderbilt Mansion National Historic Site "is to preserve and interpret the country estate of Frederick W. and Louise Vanderbilt as a premier example of an "American country place," illustrating important economic, social, and cultural developments resulting from America's industrialization following the Civil War" (NPS, 2010c).

The site is a superb example of country-place design, with its centerpiece 50-room Beaux-Arts–style mansion surrounded by one of the most outstanding Hudson River picturesque landscapes remaining today. Developed with one of the country's first industrial fortunes, the property represents the domestic ideal of the elite class in late 19th-Century America. It provides a context for studying estate life and the social stratification of the period and a glimpse into the world of the American elite prior to the Depression and World War II. The property's legacy as a celebrated landscape was among the factors that prompted Franklin D. Roosevelt to direct the designation of the national historic site in 1940 (NPS, 2010c).

ESTABLISHMENT

President Roosevelt designated the Vanderbilt Mansion property as a national historic site on December 18, 1940. The NPS administers 212 acres of the former 684-acre country place.

APPLICABLE LAWS, POLICIES AND PLANS

The NPS is governed by laws, regulations, and management policies, and must adhere to these before, during, and following any management action.

National Environmental Policy Act, 1969, as amended

The NEPA was passed by Congress in 1969 and took effect on January 1, 1970. This legislation established this country's environmental policies, including the goal of achieving productive harmony between human beings and the physical environment for present and future generations. It provided the tools to implement these goals by requiring that every federal agency prepare an in-depth study of the impacts of "major federal actions having a significant effect on the environment" and alternatives to those actions. It also required that each agency make that information an integral part of its decisions. NEPA also requires that agencies make a diligent effort to involve the interested members of the public before they make decisions affecting the environment.

NEPA is implemented through regulations of the CEQ [40 CFR 1500-1508]. The NPS has in turn adopted procedures to comply with the act and the CEQ regulations, as found in DO-12: Conservation Planning, Environmental Impact Analysis, and Decision Making (NPS 2001) and its accompanying handbook. This document was prepared in accordance with these regulations.

National Historic Preservation Act, as amended through 2000 (16 U.S.C. 470)

The NHPA of 1966, as amended through 2000, protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act established affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable

opportunity to comment. A historic property is any "prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places" (36 CFR 800.16). The historic preservation review process mandated by Section 106 is outlined in regulations issued by ACHP. Revised regulations, "Protection of Historic Properties" (36 CFR Part 800), became effective January 11, 2001.

NPS Organic Act of 1916

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of Interior and the NPS to manage units "to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations" (16 USC § 1). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that NPS must conduct its actions in a manner that will ensure no "derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress" (16 USC 1a-1). Despite these mandates, the Organic Act and its amendments afford the NPS latitude when making resource decisions that balance resource preservation and visitor recreation.

Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on Park resources and values. However, the NPS has discretion to allow impacts on Park resources and values when necessary and appropriate to fulfill the purposes of a Park (NPS 2006a sec. 1.4.3). While some actions and activities cause impacts, the NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (NPS 2006). The Organic Act prohibits actions that permanently impair Park resources unless a law directly and specifically allows for the actions (16 USC 1a-1). An action constitutes an impairment when its impacts "harm the integrity of Park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values" (NPS 2006). To determine impairment, the NPS must evaluate "the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts" (NPS 2006).

NPS MANAGEMENT POLICIES

The NPS *Management Policies* 2006 (NPS 2006a) is the basic NPS-wide policy document, adherence to which is mandatory unless specifically waived or modified by the NPS director or certain departmental officials, including the U.S. secretary of interior. Actions covered under this EA are in part guided by these management policies. Sections which are particularly relevant to this project are as follows:

Section 1.4: The Prohibition on Impairment of Park Resources and Values

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of Interior and the NPS to manage units "to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and

by such a means as will leave them unimpaired for the enjoyment of future generations" (16 USC § 1). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that NPS must conduct its actions in a manner that will ensure no "derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress" (16 USC 1a-1).

NPS Management Policies 2006, Section 1.4.4, explains the prohibition on impairment of park resources and values:

> While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the Nation Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

The NPS has discretion to allow impacts on Park resources and values when necessary and appropriate to fulfill the purposes of a Park (NPS 2006 sec. 1.4.3). However, the NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (NPS 2006 sec 1.4.3). An action constitutes an impairment when its impacts "harm the integrity of Park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values" (NPS 2006 sec 1.4.5). To determine impairment, the NPS must evaluate "the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts" (NPS 2006 sec 1.4.5). A determination on impairment for the preferred alternative evaluated in this plan/EA is provided in Appendix C.

Section 4.4.24 – Management of Natural Landscapes

NPS will allow natural landscapes disturbed by natural phenomena to recover naturally unless manipulation is necessary to (1) mitigate for excessive disturbance caused by past human effects, (2) preserve cultural and historic resources as appropriate based on park planning documents, or (3) protect park developments or the safety of people.

Where necessary to preserve and protect the desired condition of specific cultural resources and landscapes, plants and plant communities generally will be managed to reflect the character of the landscape that prevailed during the historic period. An individual tree or shrub that has become hazardous will be removed and may be replaced (NPS, 2006a).

Section 5.3.1 – Protection and Preservation of Cultural Resources

The NPS will employ the most effective concepts, techniques, and equipment to protect cultural resources against deterioration, environmental impacts, and other threats without compromising the integrity of the resources (NPS 2006a).

Section 8.2.5.1 – Visitor Safety
The NPS strives to protect human life and provide for injury-free visits. As a result, the NPS will apply nationally accepted safety codes and standards to prevent injuries or recognizable threats to visitor safety and will reduce or remove known hazards (NPS 2006a).

Director's Orders
Director's Orders supplement and may amend NPS Management Policies. The Director's Orders (DO) which are particularly relevant to this project are as follows:

Director's Order 28: Cultural Resources Management
DO-28 requires the NPS to protect and manage cultural resources in its custody through effective research, planning, and stewardship and in accordance with the policies and principles contained in the NPS Management Policies. It also indicates the NPS would comply with the substantive and procedural requirements described in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the 2008 Programmatic Agreement between the NPS, the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers. The Cultural Resource Management Guideline further implements the NPS Management Policies and contains park management standards and other requirements with which park managers must comply in carrying out their responsibilities. It outlines requirements for research, planning, and stewardship of cultural resources, compliance with Section 106 of the National Historic Preservation Act, as well as the management of archeological resources, cultural landscapes, historic and prehistoric structures, museum objects, and ethnographic resources.

Directors Order 50C: Public Risk Management Program
DO-50c emphasizes the prevention of visitor incidents by providing guidelines for establishing a risk management process, while still preserving natural and cultural resources. Consideration for visitor safety will be built into the planning and design process for NPS facilities. This DO directs the NPS to inspect and update all pre-existing visitor use facilities to meet life safety codes and other state and national safety standards.

GENERAL MANAGEMENT PLAN
The planning process for the General Management Plan has been completed and a current approved plan is in place for the Roosevelt-Vanderbilt park units. The preferred alternative presented in the General Management Plan and Environmental Impact Statement indicates that the proposed resource management efforts would focus on the landscape, aimed specifically at rehabilitating existing features while following contemporary best practices for land management within select areas. The plan established strategies to improve visitor experience and enhance public use of the park, while ensuring the long term protection of the park's significant resources. The plan indicates that the forests would be actively managed to restore historic character.

CULTURAL LANDSCAPE PROGRAM

During the past 20 years cultural landscapes have become an integral component in historic preservation both in the United States and abroad. In the NPS, this field has grown rapidly since the establishment of policy in 1988 that formally identified cultural landscapes as a type of cultural resource in the system. These policies recognize the importance of considering both built and natural features and the dynamics inherent in natural processes and continued use.

The Park Cultural Landscapes Program provides direction and demonstrates high quality preservation practice regarding cultural park landscapes in the National Park System. The variety of cultural landscapes in the system range from carriage roads to battlefields, designed gardens to vernacular homesteads, industrial complexes to summer estates. The program is a Servicewide effort of people in parks, support offices, centers, and partnerships dedicated to a mission of protection and preservation of cultural landscapes in the National Park System for the enjoyment of present and future generations.

To strengthen the capacity of parks to preserve and manage their cultural landscapes, in 1992 the NPS established the Olmsted Center for Landscape Preservation. As the only NPS Center for cultural landscape preservation, training and technology development, Olmsted Center staff works in partnership with national parks, universities, government agencies, and private nonprofit organizations with specialized skills to provide sustainable landscape preservation assistance. In 2009, the Olmsted Center completed a Cultural Landscape Treatment Plan for Vanderbilt Mansion National Historic Site, and this plan recommends the replacement of the conifer screen (NPS, 2009a).

SCOPING PROCESS AND PUBLIC PARTICIPATION

Scoping refers to the process used to gather information from the public and interested agencies to define project issues, alternatives, and data needs. Internal scoping typically includes a multidisciplinary team of NPS personnel along with interested federal, state and local agency representatives. External scoping is the process used to gather public input and may include scoping sessions, direct mailings, newsletters, ads, or open houses.

Agency scoping was initiated by the park staff. On September 28, 2009, VAMA sent a letter to the New York State Office of Parks, Recreation and Historic Preservation to solicit information on whether the archeological survey should be considered a component of the overall landscape restoration project. On December 28, 2009, VAMA sent a letter to the New York State Department of Environmental Conservation to identify any potential permitting requirements for the project. On September 20, 2010, VAMA sent a letter to the New York State Department of Environmental Conservation New York Natural Heritage Program to begin consultation and coordination under Section 7 of the Endangered Species Act for the project.

On July 5, 2010, a multidisciplinary project team held a meeting to develop alternatives that would meet the purpose and need of this project. During this meeting, potential issues and possible impacts were identified, feasible alternatives were discussed and the existing site conditions were reviewed in the field.

The NPS initiated formal external scoping for this project. A public notice announcing the project was issued on the NPS Planning Environment and Public Comment (PEPC) website. A press release was issued on August 12, 2010 announcing a public scoping session. On August 16, articles announcing the public scoping meeting and inviting public comments were published in the Kingston Freeman and the Poughkeepsie Journal. A public scoping session was held at the park on August 19, 2010.

ISSUES AND IMPACT TOPICS

Issues describe problems or concerns associated with current impacts from environmental conditions or current operations, as well as problems that may arise from the implementation of an alternative. The following issues were identified during the project planning by internal and external scoping.

Balancing the Need to Improve Public Safety and Restore the Cultural Landscape While Minimizing Impacts to Sensitive Resources. While the condition of the pine barrier has deteriorated to the point where public safety due to tree fall is a consideration, and it is no longer serving as a barrier between the roadway and the historic site, the NPS is concerned with the impacts to the existing forest habitat and the scenic resources. The issue was how to improve public safety and restore the cultural landscape while minimizing the impacts to the identified sensitive resources.

IMPACT TOPICS ANALYZED IN THIS EA

The following impact topics are discussed in the Affected Environment chapter and analyzed in the Environmental Consequences chapter. These topics are resources of concern that could be beneficially or adversely affected by the actions proposed under each alternative and are developed to ensure that the alternatives are evaluated and compared based on the most relevant topics. These impact topics were identified based on the following: issues raised during scoping, federal laws, regulations, executive orders, NPS *2006 Management Policies*, and NPS knowledge of limited or easily impacted resources. A brief rationale for the selection of each impact topic is given below, as well as the rationale for dismissing specific topics from further consideration.

Vegetation – The action alternatives include the removal and replacement of approximately 6.7 acres of forest within the park, which would impact all the existing vegetation in this area. The approximate limits of the planted white pine, hemlock and other hardwood species within the conifer barrier are shown on Figure 4. Some of the larger trees to the east of the circular drive in front of the mansion are currently being managed as individual specimen trees. These trees are not proposed for removal as part of the barrier replacement.

The New York Natural Heritage Program has identified several natural communities within the park that are locally rare. This includes a 63 acre mature oak, tulip tree and beech forest community at the park. Many large specimen trees, such as an over 100 year old ginkgo tree, are present within the park. No impact to this locally rare mature forest or to any of the large specimen trees would occur under the action alternatives. However, based on the magnitude of

the proposed removals under the action alternatives, this impact topic was carried forward for further analysis.

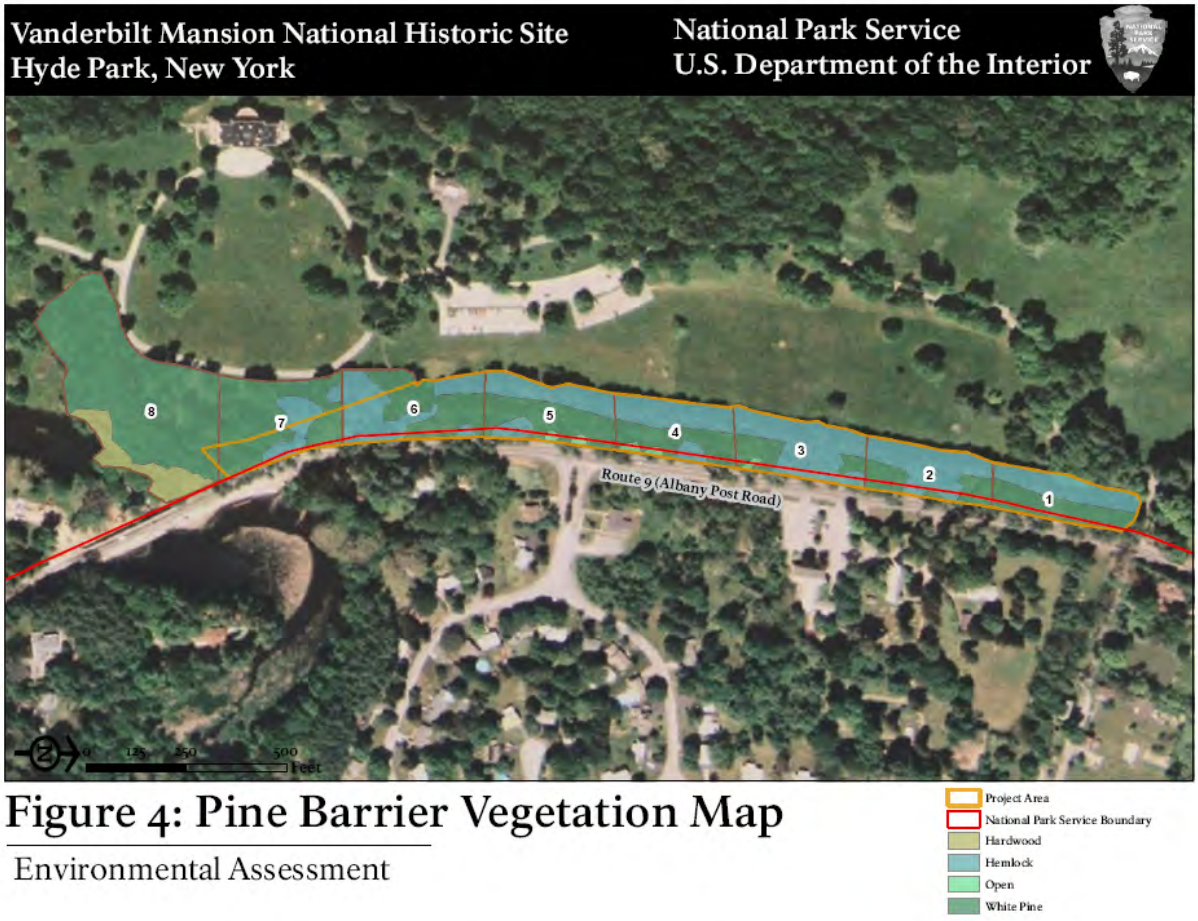


Figure 4: Pine Barrier Vegetation Map

Environmental Assessment

Cultural Resources – The 1966 National Historic Preservation Act, as amended, NEPA, the 1916 NPS Organic Act, NPS Management Policies 2006 and other NPS guidelines require consideration of cultural resource impacts. Cultural Resources include cultural landscapes, archeological resources, historic structures and districts, ethnographic resources and museum collections. The Vanderbilt Mansion National Historic Site protects a historic legacy. The site is a premier example of an American country estate, containing a 54-room Beaux-Arts style mansion, formal gardens and one of the most outstanding picturesque views of the Hudson River remaining today.

Impacts to the cultural landscape and archeological resources may occur under all alternatives. Therefore, these cultural resource impact areas were carried forward and are discussed in the impact analysis section. Historic structures, ethnographic resources and museum collections have been dismissed from further evaluation in this EA. Reasoning for the dismissal of each of the select cultural resources impact topics are provided in the impact topics dismissed section below.

Visitor Use and Experience - The no action alternative has the potential to impact visitor experience based on the current deteriorating aesthetic appearance and functionality of the pine barrier. Under the action alternatives, the project may have a negative impact on visitor use and experience due to noise from the tree cutting and removal. Visitor experience may also be impacted during and immediately following the tree removal activities based on the complete removal of the barrier and replacement with smaller trees. The action alternatives have the potential to have a positive impact on visitor use and experience post construction by restoring the historical integrity of the barrier. Based on these potential impacts, this impact topic was carried forward for further analysis in this EA.

Human Health and Safety – Potential impacts to human health and safety would occur under all alternatives. The no action alternative would have a negative impact on human health and safety from the continuing risk of trees falling onto the adjacent U.S. Route 9. The action alternatives would have a positive impact on public health and safety by reducing the tree fall risk. Based on these potential impacts, this impact topic was carried forward for further analysis in this EA.

IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

The following impact topics were eliminated from further analysis in this EA. A brief rationale for dismissal is provided for each topic. With mitigation, potential impacts to these resources would be negligible or less, and localized.

Geology, Topography and Soils –The surficial geology of the park is mainly bedrock as the parent and underlying materials. The northern section of the park has lacustrine sand as the parent material and quartz sand as the underlying material. A small area of the park in the north and western sections contains lacustrine delta as the parent material with sand and gravel as the underlying material (Sechler et al. *after* Cadwell and Dineen 1987).

As shown on Figure 5 and from USDA Soil Survey data for Duchess County, the soil types found within the project area includes the following soil map units: Nassau-Cardigan complex, hilly, very rocky (NwD); Hoosic gravelly loam, nearly level (HsA); and Hoosic-urban land complex, nearly level (HuA). While impacts to the native soils would occur during the tree removal and replacement, the impacts would be expected to be short term and negligible when considering the incorporation of the specified erosion and siltation mitigation measures. No impacts to the geology or topography of the site would be expected under either alternative. Based on the negligible, short term impacts expected on the soils and the lack of impacts to site geology, this impact topic was dismissed.

Wetlands – In accordance with NPS Director's Order 77-1 which implements Executive Order 11990, NPS is required to avoid impacting wetlands whenever there is a practical alternative. As shown on Figure 6, no wetlands are located directly within the project area. A pond is located over 150 feet south of the project area. This wetland would be protected from any potential water quality impacts due to erosion and siltation with the incorporation of soil mitigation measures. Based on the lack of impact to wetlands under either alternative, this impact topic was dismissed.

Floodplains – In compliance with Executive Order 11988, it is NPS policy to preserve floodplain values and minimize potentially hazardous conditions associated with flooding (NPS, 2002). As shown on Figure 7, the project area is located outside of the Federal Emergency Management Agency (FEMA) designated 100-year floodplain of the Hudson River. Director's Order 77: Floodplain Management (NPS, 2002) indicates that a Statement of Findings would only be required when locating structures in a floodplain or when impacts to natural floodplain values would occur. Since neither of the identified alternatives support development in the floodplain or impact natural floodplain values, this topic has been dismissed from further evaluation.

Scenic Resources (Aesthetic and Viewshed) – The VAMA contains extensive scenic resources, including one of the most outstanding picturesque views of the Hudson River remaining today. Although the Hudson River viewshed would not be impacted by either alternative, both of the proposed alternatives have the potential to impact visual and aesthetic resources in the project area. However, since scenic resources are a major component of the visitor use and experience, this topic has been analyzed under visitor use and experience and has been dismissed as a separate impact topic.

Water Quality – VAMA is located within the New York Coastal Zone Management Area and therefore requires coordination with the New York State Department of State (NYSDOS) Division of Coastal Resources under the Coastal Zone Management Act. It is anticipated that the NPS would prepare a negative determination, indicating no impacts would occur to the coastal zone as a result of this project. The NPS would provide the following documentation to NYSDOS Division of Coastal Resources at least 90 days prior to implementation of the preferred alternative:

- a brief statement indicating whether a proposed activity will be undertaken in a manner consistent to the maximum extent practicable with the State's coastal policies; this will be based on an evaluation of relevant CMP policies;
- a detailed description of the activity, its associated facilities, and their coastal impacts; and
- comprehensive data and information to support the consistency statement.

The vegetated corridors along lakes, streams, rivers, marshes or shoreline are know as riparian buffers which function to stabilize shorelines and stream banks, filter pollutants, reduce volume of storm water runoff and provide habitat for wildlife. The project area is a minimum of 150 feet from Crum Elbow Creek. No impacts to the riparian corridor of the Hudson River or Crum Elbow Creek would occur as a result of this project. As discussed previously, Crum Elbow Creek would be protected from erosion and siltation with the use of stormwater best management practices. Based on the implementation of the proposed BMPs and the expected negative determination for impacts to the coastal zone, the action alternatives would not be expected to impact water quality in the Hudson River, Crum Elbow Creek, or impact the designated coastal zone. No impacts to water quality would be expected under the no action alternative. Since no impacts to water quality are expected under any of the alternatives, this impact topic has been dismissed from further evaluation.

Figure 5: SSURGO Soil Survey Map

Environmental Assessment

Figure 6: Wetland & Stream Map

Environmental Assessment

Figure 7: Floodplains Map

Environmental Assessment

Wildlife – Due in part to the varied habitat types available, VAMA contains a diverse assemblage of animal species. The park includes wetlands, forests, and riparian corridors. The existing conditions plan report indicates that while the conifer barrier appears from a distance to be a "natural stand" of conifers, it functions biologically as a managed landscape or a monoculture in the majority of the project area (NPS, 2010a). Therefore, the habitat value for wildlife in the conifer barrier would be expected to be less than for other forested habitats within the park.

According to the Annual Breeding Landbird Survey Report, red-eyed vireo, wood thrush, and northern cardinal were the most commonly detected species in the park (NPS, 2010b). Small mammals such as mice, voles and shrews have also been documented in the park, all of which were identified as common species in eastern New York State (Steadman, 1991). Various common salamanders, frogs, turtles and snakes are also present within VAMA (NPS, 1992a).

Because refuges for any displaced wildlife species would be available in other areas of the park, negligible impacts to native wildlife would be expected under any of the alternatives. Further, since no impacts to aquatic resources would occur, no amphibian breeding habitat would be impacted. As discussed in the section below, no impacts to any rare, threatened or endangered wildlife are expected. Based on these conclusions, this impact topic has been dismissed.

Rare, Threatened, and Endangered Species

State Rare, Threatened or Endangered Species - According to the New York State Natural Heritage Program, Dutchess County is within the known or historic range of the multiple state endangered or threatened wildlife. During surveys for reptiles, amphibians and birds conducted at the park, none of these state listed species were identified (NPS, 1992a; Faccio, 2007).

According to the New York State Department of Environmental Conservation, there is an old or potential record for woodland agrimony (*Agrimonia rostellata*) in the vicinity of the project area from 1949. However, this species was not documented at the park during recent vegetation inventory or mapping projects (Sechler et al., 2009).

Federally Threatened or Endangered Species - According to the New York Natural Heritage Program, Dutchess County is within the known or historic range of the following federally endangered, threatened, or candidate species:

- **Indiana bat (*Myotis sodalis*), federally endangered -** According to the U.S. Fish and Wildlife Service (USFWS), summering Indiana bats typically day roost under exfoliating bark of trees in riparian, bottomland, and upland forests. Roost trees are most often snags with variable amounts of exfoliating bark, which allow bats to roost between the bark and bole of the tree. However, live shag-barked trees (e.g. *Carya ovata*) are also used, as well as some trees with cavities and crevices. Other species documented to be used for diurnal roosts include maple (*Acer* spp.) hickory (*Carya* spp.), ash (*Fraxinus* spp.), oak (*Quercus* spp.), elm (*Ulmus* spp.), pine (*Pinus* spp.), and hemlock (*Tsuga canadensis*) (USFWS, 2006). A survey for *M. Sodalis* conducted in the project area concluded that the project area was unlikely to provide habitat for the species (Johnson, 2010).

- **Bog turtle (*Glyptemys muhlenbergii*), federally threatened -** A herpetological survey conducted in 1991 did not documented bog turtle, and habitat which would support bog turtle does not exist at the park (NPS, 1992a).

- **New England cottontail (*Sylvilagus transitionalis*), candidate species** – The presence of the New England cottontail was not detected during park mammal surveys (Steadman, 1991, Gilbert, et al., 2007).

An important component of the preservation of species under the Endangered Species Act is the designation of critical habitat for threatened and endangered species. Critical habitat areas are designated geographic locations occupied by a threatened or endangered species which contain those physical or biological features essential to the conservation of the species. It may also include areas outside the geographical area occupied by the species when it has been determined that such areas are essential for the conservation of the species. There is no designated critical habitat within the park for any federally listed species. Based on the lack of critical habitat within the park and the opinion of the park natural resource specialist that no impact to federal or state rare, threatened or endangered species would be expected under either of the alternatives, this topic was dismissed from further analysis in this EA.

NPS sent coordination requests to the New York State Department of Environmental Conservation (NYSDEC) on December 28, 2009 and September 20, 2010. A copy of the consultation letters are provided in Appendix A.

Historic Structures – The alternatives evaluated would not directly impact the historic structures on the property, but could impact the viewshed of such structures. Because impacts to the viewshed associated with the historic structures, as well as potential mitigation, will be addressed under Cultural Landscapes, the separate topic of historic structures was dismissed as an impact topic in this document.

Ethnographic Resources - Ethnographic resources are the cultural and natural features of a park that are of traditional significance to traditionally associated peoples. There are no ethnographic resources present within the project area (NPS, 2011a). Because no known ethnographic resources would be affected by the proposed actions and because mitigations would be in place to protect any human remains, funerary objects, sacred objects, or objects of cultural patrimony inadvertently discovered, ethnographic resources have been dismissed as an impact topic.

Transportation and Traffic – Access to most of the park would be available under all alternatives. None of the park roadways, bikeways or paths would be closed. Only the 6.7 acre forested area, an area rarely accessed by visitors, would be closed. There is the potential for short term lane closures on U.S. Route 9 during the tree removals directly adjacent to the roadways. These closures would be planned during off-peak hours to minimize the disturbance to traffic flow. Transportation and traffic would be impacted by the no action alternative due to the potential for tree falls onto the roadway. Any resulting closures of the roadways after a tree fall would be expected to be short term. Because the resulting negative impacts on

transportation and traffic under any of the alternatives would be short term and minor in intensity, this impact topic was dismissed from further analysis in this EA.

Land Use – The Vanderbilt Mansion National Historic Site is administered by the NPS. The park provides a variety of activities including tours of the mansion and associated structures along with hiking and bike trails. No changes in land use would occur under either alternative. Since no impacts to land use would occur under any of the alternatives, this impact topic has been dismissed.

Socioeconomics – While the action alternatives would be expected to have a beneficial impact on employment and on the local tax base, these impacts would not likely be noticeable, and would only occur during the construction phase of the project. The no action alternative would be expected to have no socioeconomic impacts. Since no adverse socioeconomic impacts are expected, this impact topic was dismissed.

Park Management and Operations - The proposed actions would result in impacts to park operations and maintenance that would not affect operating costs or staffing. During implementation of either of the action alternatives, short term increases in staff involvement for managing contractors would occur. After the replanting, some long term staff involvement to establish the stand would occur. The no action alternative would impact park operations since continuing maintenance and removal of trees within the pine barrier would be necessary. Overall, no net increase or decrease of park management or operations would be expected to occur under any of the proposed alternatives; therefore, this impact topic was dismissed from further analysis.

CHAPTER 2: ALTERNATIVES

INTRODUCTION

NEPA requires that federal agencies explore a range of reasonable alternatives. The alternatives under consideration must include the "no action" alternative as prescribed by 40 CFR 1502.14. Project alternatives may originate from the proponent agency, local government officials, members of the public at public meetings, or during the early stages of project development. Alternatives may also be developed in response to comments from coordinating or cooperating agencies. The alternatives analyzed in this document, in accordance with NEPA, are the result of design scoping, internal scoping and public scoping. These alternatives meet the management objectives of the park while also meeting the purpose and need for the proposed action. Project alternatives that were considered but failed to meet the purpose and need for the project, created unnecessary adverse resource impacts or conflicted with the management of the Park or its resources were dismissed from further analysis.

For this EA, the NPS evaluated the three alternatives described below. The alternatives dismissed from consideration are described in the subsection entitled "Alternatives Considered but Dismissed," following this discussion.

ALTERNATIVE A: NO ACTION

The no action alternative is the current management of site. Under this alternative, the stand would continue its recent trend of decline. Only trees that fall or die would be considered for removal. The project area contains 312 pine and hemlock with a high or severe level of risk utilizing a risk rating assessment protocol that is based on the USDA Forest Service Community Tree Risk Rating System. This represents 67.53 percent of the inventoried trees in the project area. Trees with high to severe risk ratings have defects that cannot be cost effectively or practically treated and these defects indicate that a tree is failing, is in immediate danger of failing, or has already partially failed. If failure occurs, the tree or large tree limbs could fall.

This is the management strategy currently implemented for the barrier. Under this approach, approximately 200 hazard trees have been removed by NPS since 2005. As described in the purpose and need chapter the timing of tree failures is impossible to accurately predict because many tree defects can be latent and unobservable. In addition, a significant hazard tree removal backlog could occur since the park hazard tree removal staffing is limited to one arborist and a helper.

The trees remaining in the project area under this alternative, along with their risk ratings, are shown in Figure 8. The photographs following Figure 8 show the existing conditions in the project area.

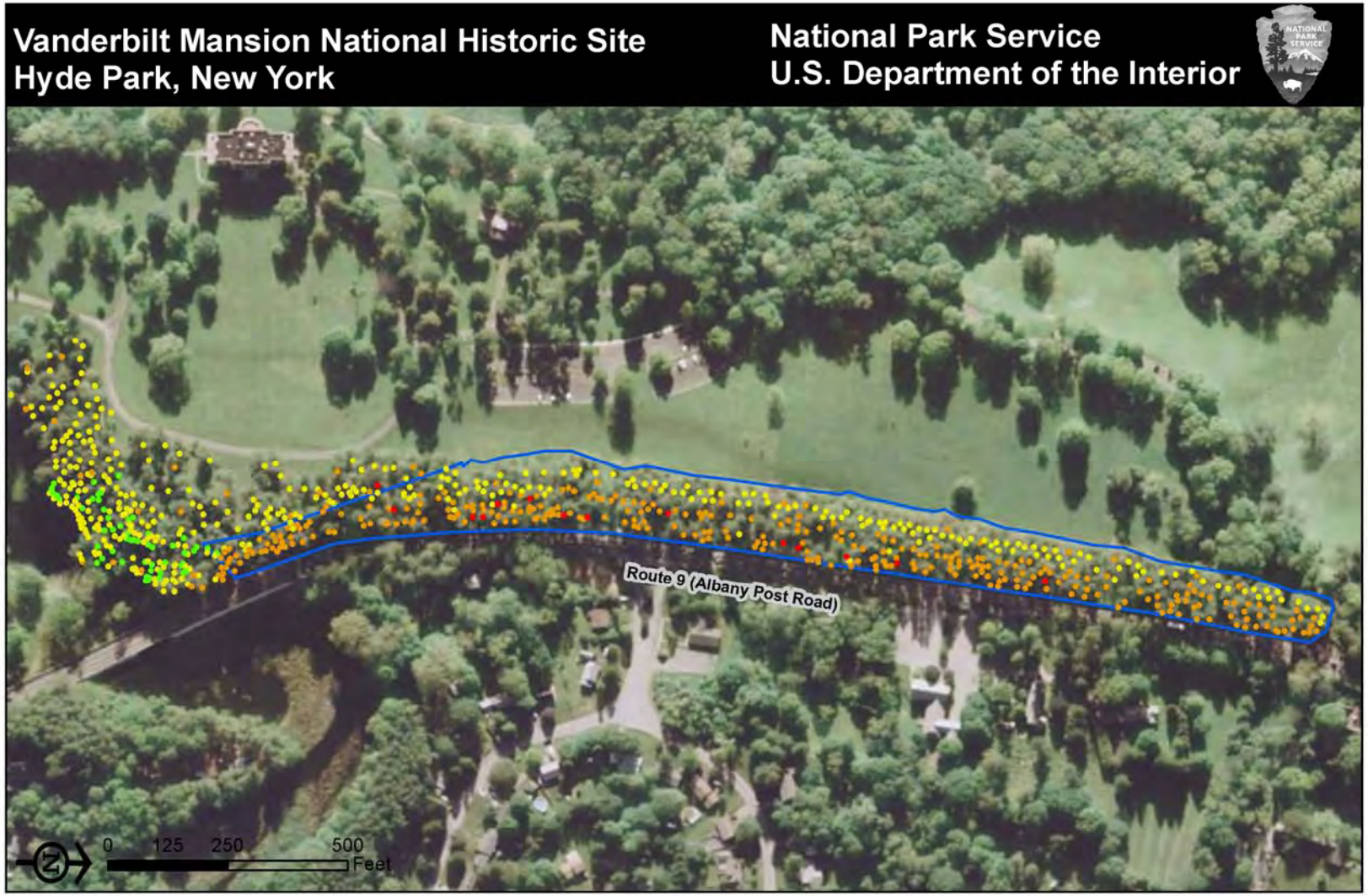
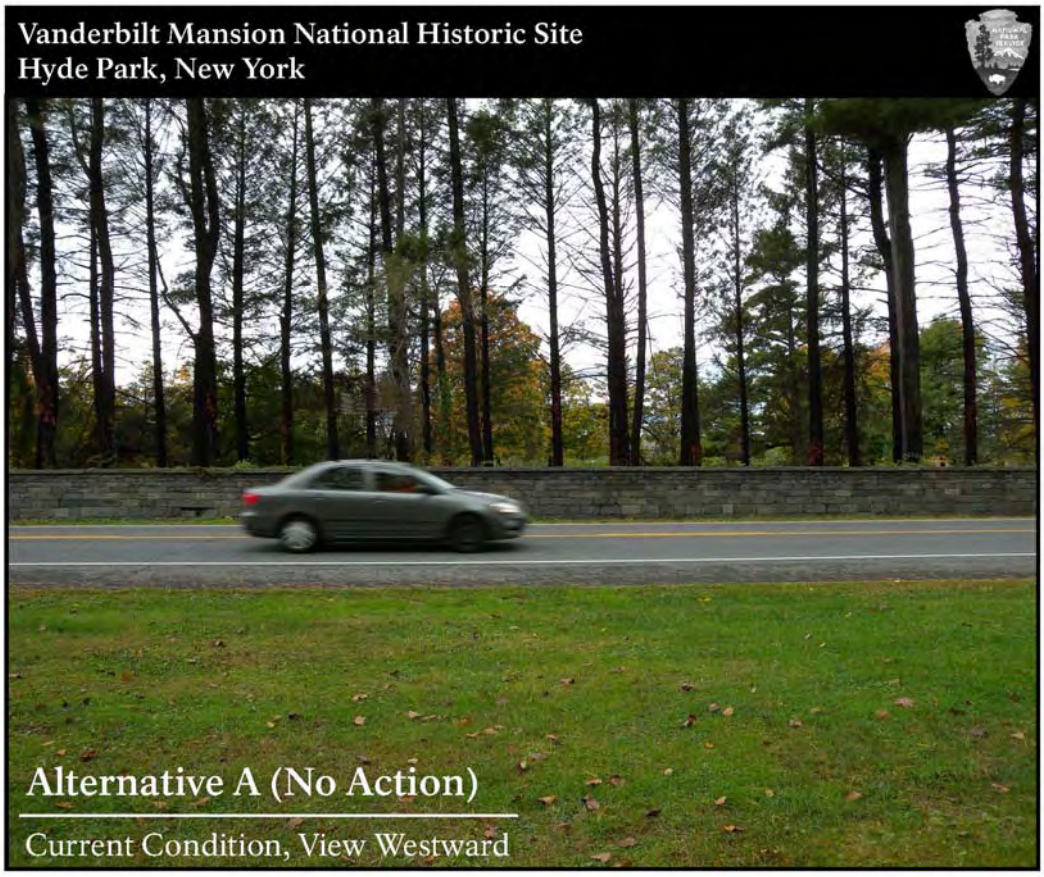


Figure 8: Alternative A

No Action


Vanderbilt Mansion National Historic Site
Hyde Park, New York
Alternative A (No Action)
Current Condition, View Eastward


Vanderbilt Mansion National Historic Site
Hyde Park, New York
Alternative A (No Action)
Current Condition, View Westward