



## Introduction

In October 2006, the Secretary of the Interior was authorized by Congress through the “Delaware National Coastal Special Resources Study Act of 2006” (Public Law 109-338) to conduct a Special Resource Study of the Delaware National Coastal Area in the state of Delaware. This report constitutes the results of the study undertaken by a multi-disciplinary staff of the Northeast Regional Office of the National Park Service (NPS).

The purpose of this study is to determine whether specific natural and cultural resources or areas in Delaware are nationally significant, suitable and feasible to qualify for potential congressional designation as a unit of the national park system. The study identifies resources of national significance and evaluates whether they meet the criteria for new areas of the national park system.

The 391 units comprising the present national park system are cumulative expressions of a single national heritage. Potential additions to the system should, therefore, contribute in their own special way to one that fully represents the broad spectrum of natural and cultural resources that characterize our nation. The NPS is responsible for conducting professional studies of potential additions to the national park system when specifically authorized by an Act of Congress, and for determining eligibility of the resources.

Several laws outline criteria for potential units of the national park system. To receive a favorable recommendation from the NPS, a proposed addition to the national park system must (1) possess nationally significant natural or cultural resources; (2) be a suitable addition to the system; (3) be a feasible addition to the system; and (4) require direct NPS management instead of alternative protection by other public agencies or the private sector. These criteria are designed to ensure that the national park system includes only the most

outstanding examples of the nation’s natural and cultural resources. They also recognize that there are other alternatives, short of designation as a unit of the national park system, for preserving the nation’s outstanding resources.

An area or resource may be considered nationally significant if it is an outstanding example of a particular type of resource; possesses exceptional value or quality in illustrating or interpreting the natural or cultural themes of our nation’s heritage; offers superlative opportunities for public enjoyment, or for scientific study; and retains a high degree of integrity as a true, accurate, and relatively unspoiled example of a resource. National significance for cultural resources is evaluated by applying the National Historic Landmarks’ process contained in 36 Code of Federal Regulations (CFR), Part 65.

An area may be considered suitable for potential addition to the national park system if it represents a natural or cultural resource type that is not already adequately represented in the system, or is not comparably represented and protected for public enjoyment by other federal agencies; tribal, state, or local governments; or the private sector. The suitability evaluation, therefore, is not limited solely to units of the national park system, but includes evaluation of all comparable resource types protected by others.

Suitability is determined on a case-by-case basis by comparing the resources being studied to other comparably managed areas representing the same resource type, while considering differences or similarities in the character, quality, quantity, or combination of resource values. The suitability analysis also addresses rarity of the resources; interpretive and educational potential; and similar resources already protected in the national park system, and in other public or private ownership. The comparison results in a determination of whether the



potential new area would expand, enhance, or duplicate resource protection or visitor use opportunities found in other comparably managed areas.

To be feasible as a new unit of the national park system, an area must be of sufficient size and appropriate configuration to ensure sustainable resource protection and visitor enjoyment (taking into account current and potential impacts from sources beyond its boundaries), and be capable of efficient administration by the NPS at a reasonable cost. In evaluating feasibility, the Service considers a variety of factors, such as: size; boundary configurations; current and potential uses of the study area and surrounding lands; land ownership patterns; public enjoyment potential; costs associated with acquisition, development, restoration, and operation; access; current and potential threats to the resources; existing degradation of resources; staffing requirements; local planning and zoning for the study area; the level of local and general public support; and the economic/socioeconomic impacts of designation as a unit of the national park system. The evaluation also considers the ability of the NPS to undertake new management responsibilities in light of current and projected constraints on funding and personnel.

There are many excellent examples of the successful management of important natural and cultural resources by other public agencies, private conservation organizations, and individuals. Most notably, state park systems provide for protection of natural and cultural resources throughout the nation and offer outstanding recreational experiences. The NPS applauds these accomplishments, and actively encourages the expansion of conservation activities by state, local, and private entities, and by other federal agencies. Unless direct NPS management of a studied area is identified as the clearly superior alternative, the Service will recommend that one or more of these other entities assume a lead management

role, and that the area not be recommended as a potential unit of the national park system.

Studies evaluate an appropriate range of management alternatives and identify which alternative or combination of alternatives would be most effective and efficient in protecting significant resources and providing opportunities for appropriate public enjoyment. Alternatives to NPS management are not normally developed for study areas that fail to meet any one of the four criteria for inclusion listed above, particularly the “national significance” criterion.

In cases where a study area’s resources meet criteria for national significance, but do not meet other criteria for inclusion in the national park system, the Service may instead recommend an alternative status, such as “affiliated” area. To be eligible for “affiliated area” status, the area’s resources must:

- 1) meet the same standards for national significance that apply to units of the national park system;
- 2) require some special recognition or technical assistance beyond what is available through existing NPS programs;
- 3) be managed in accordance with the policies and standards that apply to units of the national park system; and
- 4) be assured of sustained resource protection, as documented in a formal agreement between the NPS and the non-federal management entity. Congressionally authorized affiliated areas may be entitled to limited financial and technical assistance from the NPS.

Designation as a National Heritage Area is another option that may be recommended. Heritage areas are distinctive landscapes that do not have the same criteria for designation as units of the national park system. Either of these two alternatives would recognize an area’s

importance to the nation without requiring or implying management by the NPS.

This Special Resource Study and Environmental Assessment (EA) analyzes two “action alternatives” and the “no action alternative.” The EA has been prepared in accordance with the National Environmental Policy Act of 1969, as amended (NEPA), the implementing regulations of the Council on Environmental Quality (40 CFR 1500-1508.9) and NPS Director’s Order #12: Conservation Planning, Environmental Impact Analysis and Decision-Making (DO-12) and accompanying Handbook (2001). This EA is also intended to fulfill any applicable requirements of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), and has been prepared in accordance with the implementing regulations of the Advisory Council for Historic Preservation (36 CFR Part 800) and NPS Director’s Order #28: Cultural Resources Management (DO-28) and accompanying Handbook.

## Study Area

Delaware is the second smallest state in the United States—comprising 1,982 square miles. It is 96 miles long and the width varies from nine to 35 miles. There are three counties: New Castle, Kent and Sussex. The Delaware National Coastal Special Resource study area comprises predominately coastal regions, but other sites in the state were also given consideration, such as the historic Odessa district, and the revolutionary sites associated with Newark such as Cooch’s Bridge.

The coastal region that was studied includes land from the shore of the Delaware River and the Bay to a line created by Route 13 as the western boundary, which runs from the city of Wilmington to the Maryland border.



## Study Process

Public Law 109-338 provides that the Special Resource Study shall evaluate sites along the coastal region of the state of Delaware that relate to:

- 1) the history of indigenous peoples, which would explore the history of Native American tribes of Delaware, such as the Nanticoke and Lenni Lenape;
- 2) the colonization and establishment of the frontier, which would chronicle the first European settlers in the Valley who built fortifications for the protection of settlers, such as Fort Christina;
- 3) the founding of a nation, which would document the contributions of Delaware to the development of our constitutional republic;
- 4) industrial development, which would investigate the exploitation of water power in Delaware with the mill development on the Brandywine River;
- 5) transportation, which would explore how water served as the main transportation link, connecting Colonial Delaware with England, Europe, and other colonies;
- 6) coastal defense, which would document the collection of fortifications spaced along the river and bay from Fort Delaware on Pea Patch Island to Fort Miles near Lewes;
- 7) the last stop to freedom, which would detail the role Delaware has played in the history of the Underground Railroad network; and
- 8) the coastal environment, which would examine natural resources of Delaware that provide resource-based recreational opportunities such as crabbing, fishing, swimming, and boating.

Studies that involve multiple themes require analyses of extensive resources relating to each theme. The study team performed an initial reconnaissance analysis of collective or individual resources relating to each theme

(see appendix) to provide an early reading as to whether the resources would meet the national significance and suitability criteria required for further investigation.

During the reconnaissance process, study team members conducted extensive on-site visits in Delaware to resources related to each theme and researched relevant literature to ascertain the likelihood of affirmative findings required by the national significance and suitability criteria. A number of themes were found to lack the potential for further consideration because the resources associated with them would not be likely to meet one or both of these necessary initial criteria for potential designation as a unit of the national park system. These findings are summarized in chapter three of this report. The study team also considered whether the entire collection of resources related to all of the themes could potentially meet the criteria, but concluded that every state has a collection of resources that together are important to the state's history and contribute to the portions of the national story. Such assemblages of themes and resources are often more conducive for consideration as heritage areas, not discrete units of the national park system.

The reconnaissance analysis disclosed that resources related to two of the themes:

- 1) the colonization and establishment of the frontier, which would chronicle the first European settlers in the Delaware Valley who built fortifications for the protection of settlers, such as Fort Christina; and,
- 2) the founding of a nation, which would document the contributions of Delaware to the development of our constitutional republic, were likely to meet the national significance and suitability criteria. These two themes and their related resources became the primary focus of the study and were further explored for their potential to meet all of the required criteria.

A description of the history and resources associated with these two themes constitutes the relevant analysis to this special resource study and they are further described and evaluated in chapters two and three.

The study team also undertook an expansive public involvement process including: public scoping meetings, meetings with interested individuals and organizations and affected property owners, a series of meetings to discuss potential concepts and preliminary findings of national significance and suitability, and public meetings on the study's preliminary alternatives. These were conducted in each of the three counties of Delaware and involved private individuals and representatives of state and local governments and interested non-governmental organizations. Public and stakeholder involvement for this study was coordinated by the study team with assistance from staff of Senator Carper's office, the Delaware Department of Natural Resources and Environmental Control (DNREC), and the Delaware Division of Historical and Cultural Affairs.

A series of formal public meetings were held to provide the public with opportunities to participate in the study. Public scoping meetings were held on October 9, 2007 in Milford, Delaware and October 10, 2007 in New Castle, Delaware. Stakeholder meetings were held on July 10, 2008 for the Wilmington Area, New Castle, Dover and Lewes. Additional public meetings were held on September 23, 2008 in Dover, and September 25, 2008 in New Castle to solicit input on the preliminary alternatives included in this report. Meetings with affected property owners were conducted on September 12, 2008.

During scoping, the study team contacted federal and state agencies with jurisdiction and/or special expertise and informed them of the proposed study to request information and identify potential issues. Formal consultation was initiated with the U.S. Fish and

Wildlife Service (USF&WS), the National Oceanic and Atmospheric Administration (NOAA), Native American Graves Protection and Repatriation Act (NAGPRA) Director, the federally recognized American Indian tribe, and the state of Delaware Division of Historical and Cultural Affairs. These agencies will continue to have the opportunity to comment on the study prior to completion.

## Previous Efforts to Establish a National Park in Delaware and Existing Federal Interests

Delaware is comprised of a diverse collection of resources, many of which are protected by either the federal government through the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers, or by state and local governments or non-profit organizations.

While there are currently no units of the national park system located in the state of Delaware, there have been discussions over the past seven decades to consider designating a unit. The most recent of these discussions was initiated by Delaware Senator Thomas R. Carper in 2002 and 2003. A committee of knowledgeable citizens was formed to nominate potential resources for consideration. The result was a proposal for a national coastal heritage park involving an array of natural and historic resources. The proposal provided the basis for the legislation introduced by Senator Carper which, when it became Public Law 109-338, provided the direction to the National Park Service to conduct this special resource study.

The proposal, released in 2004, included 12 sites recommended for inclusion as part of the coastal heritage park. The overriding theme that connected these sites was that by exploring coastal Delaware a visitor would experience the coastal American landscape and understand its role in the development of the nation.

These sites were located in all three counties in Delaware under eight separate themes. The park was proposed to be structured much like a series of bicycle wheels, each with a hub and spokes. The hubs would be interpretive centers located strategically along the coast line. These hubs would provide the visitor with a comprehensive look at the themes most prevalent in the surrounding area. The spokes would be the connectors to the attractions and sites that make up the wheel.

Under the proposal, four interpretive facilities would provide the necessary historical context and direct people to the many existing attractions that could help visitors understand and appreciate the entire breadth of experiences along Delaware’s coastal region. Visitors would disperse from the hubs to their destinations along existing roads, transit lines, bikeways and land and water trails.

Earlier efforts at developing a national park unit included:

- In the 1930s the Civilian Conservation Corps began to develop an area of freshwater wetlands in southwestern Sussex County. The intention was to designate this area as a national park. Instead, the area known as Trap Pond was later authorized as one of Delaware’s first state parks in 1951.
- In the 1960s a proposal was submitted for the NPS to assume management of Delaware’s beaches. The area to be designated as a national seashore included the coastal region from Cape Henlopen to the Maryland shore. Studies

determined that the state was well suited to continue managing the beaches and improving the outdoor recreation areas, and the initiative was dropped.

- In the early 1990s there was a proposal to have the NPS study the Great Cypress Swamp in Sussex County as a possible national park unit. During an early meeting in the region, there was much opposition by local landowners and the project did not move forward.

### **Bombay Hook National Wildlife Refuge**

Administered by the U.S. Fish and Wildlife Service, the refuge comprises 15,978 acres, approximately four-fifths of which is tidal salt marsh. The refuge has one of the largest expanses of nearly unaltered tidal salt marsh in the mid-Atlantic region. It also includes 1,100 acres of impounded fresh water pools, brushy and timbered swamps, agricultural lands, and timbered and grassy upland. The general terrain is flat and less than ten feet above sea level.

While the refuge is home and stopping place for a wide variety of birds, mammals, and reptiles, the most popularly recognized species utilizing the refuge are eagles, deer, and vast flocks of migrating waterfowl and shorebirds. Its location on the Delaware Bay provides Bombay Hook the ideal habitat to provide major resting and feeding grounds for hundreds of thousands of migrating shorebirds. The annual shorebird flight from wintering grounds in South America to their nesting grounds above the Arctic Circle, coincides precisely with the egg-laying activities of horseshoe crabs along the bay shores.

Bombay Hook was established in 1937 as a link in the chain of refuges that extends from Canada to the Gulf of Mexico. The value and importance of Bombay Hook for the protection and conservation of waterfowl has increased greatly over the years, primarily due to the



Aerial view of Bombay Hook National Wildlife Refuge. NPS photo.

loss of extensive surrounding marshland to urban and industrial development.

### **Prime Hook National Wildlife Refuge**

Also administered by the U.S. Fish and Wildlife Service, the refuge was established in 1963 under the authority of the Migratory Bird Conservation Act for use as an inviolate sanctuary, or any other management purpose, expressly for migratory birds. It is located on the west shore of Delaware Bay, approximately 22 miles southeast of Dover, the state capital, and 64 miles southeast of Wilmington, Delaware.

The refuge is considered to have one of the best existing wetland habitat areas along the Atlantic Coast. The intensively managed freshwater impoundments have become important stop-over sites for spring and fall migrating shorebirds and wading birds. Endangered and threatened species management activities provide

habitat for the Delmarva fox squirrel, nesting bald eagles and migrating peregrine falcons. Neotropical land birds passing through utilize the refuge's upland forested habitat during the fall and spring. The refuge's 10,000 acres are a diverse landscape featuring freshwater and salt marshes, woodlands, grasslands, scrub-brush habitats, ponds, bottomland forested areas, a seven-mile long creek, and agricultural lands. These cover types provide habitat for approximately 267 species of birds, 35 species of reptiles and amphibians, and 36 different mammals.

Public use at Prime Hook provides compatible wildlife-oriented recreational opportunities. Since the signing of the National Wildlife Refuge System Improvement Act of 1997, appropriate public uses of the refuge system include six major wildlife-dependent recreational uses including: hunting, fishing, wildlife observation, photography, environmental education, and environmental interpretation.

## Captain John Smith Chesapeake National Historic Trail

Administered by the NPS, The Captain John Smith Chesapeake National Historic Trail was authorized by Congress in 2006 so that visitors to the Chesapeake Bay could understand the significance of English Captain John Smith’s explorations, the rich history of Native American cultures, and of the bay itself from that period to modern time. The trail follows the path of Smith’s journeys along the Chesapeake and its tributaries, and is America’s first national water trail.

The Nanticoke River Water Trail in Delaware is a connecting gateway to the Chesapeake Bay Gateways Network, an NPS program that ties together Chesapeake Bay sites for protection and interpretation. In cooperation with the state of Maryland, a partnership has been forged to protect the unique, ecological resources and agricultural economy of the Nanticoke River watershed.

## White Clay Creek National Wild and Scenic River

In October 2000, Congress designated 190 miles of White Clay Creek in Pennsylvania and Delaware, and its tributaries, as a National Wild and Scenic River. White Clay Creek is the only National Wild and Scenic River protected in its entirety. National Wild and Scenic River designation encourages the appropriate development of land that can coexist with the river. This federal designation helps to preserve watershed features that enhance water quality, natural resources and the overall quality of life. The approach takes into account changing land uses and the effects they can have on river habitat.

The watershed includes mature forest, open field, wetland, and river ecosystems, a variety of habitats that gives the watershed its rich diversity that includes: 33



White Clay Creek National Wild and Scenic River. NPS photo.

species of small mammals, 21 species of fish, and 27 species of reptiles and amphibians, and over 90 species of breeding birds. White Clay Creek is a major trout fishing stream, with both Pennsylvania and Delaware annually stocking rainbow and brown trout.

## National Register of Historic Places

At this writing, there are 530 sites listed on the National Register of Historic Places in the state of Delaware. The NPS administers the National Register of Historic Places. Areas of significance that were identified included architecture, commerce, conservation, education, engineering, industry, invention, landscape architecture, sciences, urban planning, and industrial architecture.

## National Historic Landmarks

The NPS administers the National Historic Landmarks (NHL) program. There are 12 NHLs in Delaware. Six of these were designated in the 1960s and five in the 1970s. One was designated in the past five years, Howard High School in Wilmington, a landmark related to the civil





rights struggle. Ten are located in New Castle County and two in Kent County. There are currently no NHLs designated in Sussex County. Four of Delaware's NHLs are houses of signers of the Declaration of Independence or the U.S. Constitution. There is one NHL district and that is located in old New Castle.

Sites are designated National Historic Landmarks when they meet the criteria of national significance as defined by the Secretary of Interior's Standards for the Treatment of Historic Properties. This criterion is the same that is used for determining significance for potential units of the national park system. The NHL Program has provided grants and technical assistance to further protect Delaware's valuable historic resources.

### **Other NPS Assistance**

The NPS has enjoyed lengthy and collaborative natural and cultural resource protection relationships with the governments, organizations, and citizens of Delaware. NPS-administered Federal Land and Water Conservation Fund grants have preserved significant amounts of open space and provided recreation areas in the state. NPS Rivers, Trails and Conservation Assistance staff have provided technical assistance for trails and recreational developments to many governments and organizations throughout Delaware. Recent NPS technical assistance has focused on an effort to develop a Northern Delaware Heritage Area, and an initiative to create a Brandywine River Heritage Corridor.

## **Study Issues and Impact Topics Dismissed and Retained for Analysis**

### **Topics Selected for Detailed Analysis in the Environmental Assessment (EA)**

In meetings conducted during the study, many participants expressed comments or potential concerns that covered a broad range of topics. Concerns were expressed about potential increased traffic and congestion and the need for protection of archeological sites. Possible themes were stressed and sites were suggested including, respectively, the Underground Railroad, lighthouses, a light ship, reconstruction of Fort Christina, Fort Delaware, and possible locations of a potential visitor center. Some participants expressed the desire that sites in all three counties of the state be included in a potential national park. In all meetings, the public expressed strong support for the establishment of a unit of the national park system in Delaware. For the purposes of conducting the environmental assessment, a number of impact topics have been retained, while others have been dismissed.

### **Impact Topics Retained for Analysis**

The impact topics selected for detailed analysis in this EA include:

#### **Cultural Resources:**

Historic Structures

#### **Visitor Use:**

Socioeconomics

Transportation

Visitor Experience

Chapter five describes the affected environment for each impact topic retained and analyzed and chapter six presents the potential impacts of implementing the alternatives.

## Impact Topics Dismissed from Detailed Analysis

During the study process, several impact topics were initially considered and then dismissed from detailed analysis from the study's EA. A brief rationale for the dismissal of each impact topic is provided below.

### Wetlands

The Clean Water Act, Executive Order 11990 ("Protection of Wetlands"), NPS Management Policies 2006, DO-12, and Director's Order #77-1: Wetland Protection and accompanying Wetland Procedural Manual, (2002) (DO-77-1) requires federal agencies to examine the impacts of their actions to wetlands as well as their protection. There is the possibility that wetlands exist within the study site. However, impacts to wetlands are not expected under either action alternative as there would be no construction or actions associated with the designation of a national park that would cause impacts to wetlands. Therefore, wetlands were dismissed from further analysis.

### Floodplains

Executive Order 11988 ("Floodplain Management"), NPS Management Policies 2006, DO-12, and Decision-making, and Director's Order #77-2: Floodplain Management and accompanying Procedural Manual (2003) (DO-77-2) requires federal agencies to examine the impacts of their actions to floodplains and the potential risk involved in placing facilities within floodplains. Sections of the project along coastal Delaware are within the 100-year flood plain. Since there are no actions associated with the designation of a

national park that would impact floodplains, this topic was dismissed from further analysis.

### Water Quality

The Clean Water Act and NPS Management Policies 2006, NPS DO#77: National Resources Management provide direction for the protection of surface and ground waters. Of the proposed sites, Fort Christina and New Castle are adjacent to bodies of water. There are no actions associated with the congressional designation of a national park that would have an impact on water quality. No construction is associated with the proposed actions and uses would not change from what they currently are. Therefore, water quality was dismissed from further analysis.

### Wild and Scenic Rivers

Nationally designated Wild and Scenic Rivers are rivers that must be free flowing and possess an "outstandingly remarkable" geologic, historic, cultural, natural or recreational resource. White Clay Creek, a nationally designated Wild and Scenic River, is located in the northwest section of the state and is outside the study area. There are no Wild and Scenic rivers in the study area. Therefore, Wild and Scenic Rivers were dismissed from further analysis.

### Threatened and Endangered Species

Section 7 of the Endangered Species Act (16 USC 1531 et seq.), as amended (ESA), and NPS Management Policies 2006, requires an examination of impacts on all federally-listed threatened or endangered species. Correspondence with the U.S. Fish and Wildlife Service verified there are no proposed or federally listed endangered or threatened species known to exist within the project impact area. Therefore, threatened and endangered species were dismissed from further analysis.



## Air Quality

The 1963 Clean Air Act, as amended (42 United States Code (USC 7401 et seq.) and NPS Management Policies 2006 requires that federal land managers have a responsibility to protect air quality-related values from adverse air pollution impacts. Air quality is typically affected by the creation of significant stationary point sources of emissions. No point sources of pollution are expected to be created or affected by the designation of a national park. The number of additional vehicles traveling to the sites potentially attaining a national park designation is not expected to be significant. No measurable changes in mobile source emissions would result from the proposed alternatives. In addition, the state of Delaware is a non-attainment area. The Clean Air Act and Amendments of 1990 define a “non-attainment area” as a locality where air pollution levels persistently exceed National Ambient Air Quality Standards or that contributes to ambient air quality in a nearby area that fails to meet standards. Therefore, the impact topic of air quality was dismissed from further analysis.

## Prime and Unique Farmlands

In August 1980, the Council on Environmental Quality directed that federal agencies assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture’s Natural Resources Conservation Service as prime or unique (Council on Environmental Quality, 1980). Under the Farmland Protection Policy Act (7 USC 4201), prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion (7 USC 4201(c)(1)(A)). Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, fruits, and vegetables (7 USC

4201(c)(1)(B)). None of the proposed alternatives have actions that would impact prime and unique farmland and the alternatives are not going to change the way the land is used. Therefore, prime and unique farmland was dismissed as an impact topic.

## Cultural Resources

The National Historic Preservation Act of 1966, as amended (16 USC 470 et seq.); the National Environmental Policy Act of 1969 (42 USC 4321 et seq.); NPS Director’s Order #28: Cultural Resource Management Guideline (NPS 1998), NPS Director’s Order #28A: Archeology, NPS Management Policies 2006, and NPS Director’s Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-making and its accompanying handbook (NPS 2001a) require the consideration of impacts on cultural resources, and in particular, resources listed in or eligible for listing in the National Register of Historic Places.

## Archeology

Although archeological testing has not been conducted, the presence of archeological resources in the study area is likely, as it contains significant historic sites. Archeological resources in the study area would not be disturbed as there are no actions proposed with the congressional designation of a national park that would impact the resources. Therefore, archeological resources were dismissed from further analysis.

No known archeological resources would be impacted within the area of potential effects. In accordance with the Advisory Council on Historic Preservation’s (ACHP) regulations implementing Section 106 of the National Historic Preservation Act, the determination of effect is no historic properties affected. Any future archaeological discoveries on any sites that become part of the national park system will be treated in accordance with Director’s Order #28A, Archeology.

## Cultural Landscapes

According to the NPS Cultural Resource Management Guideline (DO #28), a cultural landscape is defined as “a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.” (NPS 1998).

Several of the sites proposed for designation as a national park are NHLs. Although a cultural landscape inventory has not been conducted for the study area, none of the proposed alternatives have actions that would impact cultural landscapes and the designation of a national park would not change the landscapes for any of the sites. Therefore, cultural landscapes were dismissed from further analysis.

There are no known cultural landscapes associated with the area of potential effects. In accordance with the Advisory Council on Historic Preservation’s (ACHP) regulations implementing Section 106 of the NHPA, the determination of effect is no historic properties will be affected. Any future cultural landscape discoveries on sites that become part of the national park system will be treated in accordance with DO # 28.

## Indian Trust Resources

Executive Order 13175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of Interior agencies be explicitly addressed in environmental documents. One Indian Tribe traditionally associated with the area has been contacted. The NAGPRA Director and the Delaware Tribe of Indians have been contacted regarding this project and are consulting parties. Neither party has responded to correspondence. At this time, no Indian Trust Resources have been identified in the study area and there are no actions associated with the alternatives that would impact Indian Trust resources. Therefore, Indian Trust Resources were dismissed from further analysis.

## Sacred Sites

Executive Order 13007 requires consultation with Indian tribes and religious representatives on the access, use, and protection of sacred sites. The Delaware Tribe of Indians and the NAGPRA Director have been contacted regarding this study and are consulting parties. At this time, no Sacred Sites have been identified and none of the proposed alternatives have actions that would impact sacred sites. Therefore, Sacred Sites were dismissed as an impact topic. Should any sacred sites be discovered in the future on properties that become part of the national park system, they will be treated in accordance with Director’s Order # 28.

## Ethnography

Director’s Order # 28 provides cultural resource management guidelines for ethnographic resources. The sites in the study area share a theme of early European settlement, emphasizing early Dutch, Swedish and English settlement. These sites are being evaluated for potential congressional designation as a national park. None of the proposed alternatives have actions that would negatively impact ethnographic resources and the alternatives are not going to change the significance of the sites. Therefore, ethnography was dismissed as an impact topic. Any future information regarding ethnographic resources associated with sites that become part of the national park system will be treated in accordance with Director’s Order # 28.

## Low Income and Minority Populations and Environmental Justice

Executive Order 12898 (“Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”) requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

Low income and minority populations are located near Fort Christina. However, the action alternatives would not have any disproportionate health or environmental effects on minorities or low-income populations or communities. Therefore, the impact topic of low income or minority populations and environmental justice was dismissed from further analysis.

Energy Requirements and Conservation Potential CEQ guidelines for implementing NEPA require examination of energy requirements and conservation potential as a possible impact topic in environmental documents. Principles of sustainable design and development should be incorporated into all facilities and park operations. The objectives of sustainability are to design structures to minimize adverse impacts on natural and cultural values; to reflect their environmental setting; to maintain and encourage biodiversity; to construct and retrofit facilities using energy efficient materials and building techniques; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use.

Essentially, sustainability is living within the environment with the least impact on the environment. The action alternatives presented in this document subscribe to and support the practice of sustainable planning and design in part by utilizing and supporting existing resources. No new construction is associated with this study. The proposed action aims to develop alternatives that meet the purpose and need of the project while maintaining sustainable practices. Consequently, adverse impacts relating to energy use, availability, or conservation would be negligible. Therefore, the impact topic of energy requirements and conservation potential was dismissed.

## Climate Change

There is emerging scientific consensus that climate change is occurring due to release of greenhouse gases (mainly carbon dioxide, methane, and nitrous oxide) that are trapping heat in the atmosphere and raising the planet's temperature. According to the United Nations Intergovernmental Panel on Climate Change, there is a 90% probability that climate change is mainly due to human activities. Climate change is projected to accelerate in the future, but the extent depends on our ability to reduce greenhouse gas emissions.

Long-term management of existing resources would not result in impacts that contribute to climate change. There may be a negligible contribution to greenhouse gas emissions as a result of increased vehicle emissions from visitors. Based on the research to date, there is no evidence that climate change effects occur at a local or even regional scale; therefore, any negligible greenhouse gas emissions resulting from the number of vehicles would not contribute to climate change in the study area or Delaware, and would not likely contribute to cumulative impacts on global climate change. A more likely scenario is the potential for long-term climate changes to impact the study site and how they would be managed. The potential effects of future climate change on the study site will be considered and management decisions will be re-evaluated as more information becomes available. Therefore, the impact topic of climate change was dismissed from further analysis.

