
Chapter Five

Affected Environment

Introduction

Cultural Resources

Socio-Economics

Transportation

Visitor Experience

FIVE



FIVE

Introduction

This environmental assessment analyzes the potential effects of each alternative proposed in the Draft Delaware National Coastal SRS. This chapter describes the baseline environmental conditions in the study area. It is organized by resource topic and describes the resources that could be impacted by the proposed action. Resources examined include historic structures, transportation, socioeconomics, and visitor experience. Resources dismissed from further consideration, including all natural resources, were discussed in chapter one.

Cultural Resources

Historic Structures

Fort Christina State Park

Fort Christina State Park is a two acre rectangular park located adjacent to the Christina River. The northern side of the park which parallels Seventh Street is enclosed by an iron fence with an ornamental gateway. The eastern and western sides of the park are enclosed by an elaborate high brick fence, and the southern edge abuts the Christina River. A heavy concrete bulkhead extends along the river bank except at the southwestern corner, where a section of the original stone outcropping, known as “The Rocks,” the first landing spot and location of a Swedish colony in the New World, has been preserved. The interior of the park includes a stone monument, designed by Swedish sculptor Carl Milles. The monument commemorates the activities of Swedish colonists in the Delaware Valley. The ship at the top of the monument represents the *Kalmar Nyckel*, one of two vessels that brought the first Swedish colonists to America. The site also contains a reconstructed settler’s log cabin, and tree-lined walkways. The log cabin was disassembled from its former farm site and rebuilt at Fort Christina State Park. Researchers concluded, at

the time, that it was built circa 1750. While probably not originally Swedish in origin, it was determined it should be preserved to symbolize the Swedish settlers and their contributions to the nation which included the introduction of log dwellings. The site is mostly surrounded by industrial development.

Fort Christina was also the first permanent white settlement in the Delaware River Valley. Peter Minuit, leader of the expedition of 50 men in two vessels, landed in 1638 at a natural wharf of rocks that jutted into the Minquas Kill which he later named the Christina River in honor of Sweden’s Princess Christina. Near the rocks, Minuit erected Fort Christina to guard the settlement and serve as the administrative and commercial center of the colony. The settlement remained predominately a colony of Swedish descendents even through periods of Dutch (1655-1664) and English (beginning in 1664) control. The Swedish settlement remained the heart of the village that spread along the banks of the Christina and became the city of Wilmington. The park was declared a National Historic Landmark in 1961. Fort Christina is open to the public throughout the year.

Holy Trinity (Old Swedes’) Church

Holy Trinity (Old Swedes’) Church is located one quarter mile northwest of Fort Christina State Park. The approximately 1.5 acre site, comprised of the church, a cemetery, and surrounding buildings and grounds, is enclosed by an iron and brick fence. It is irregularly bounded on the north by Seventh Street, on the east by Church Lane, on the west by business property, and on the south by the Pennsylvania Railroad embankment. Surrounding the site are industrial properties and older homes. Established as a Swedish Lutheran Church, Old Swedes’ was placed under the jurisdiction of the Protestant Episcopal Church in 1791 and is presently owned by the Protestant Episcopal Church Diocese of

Delaware. The church is maintained by the Old Swedes' Foundation, Inc., of Wilmington. The church is rich in objects that date from its origin at the end of the 17th century. The pulpit, carved in 1698, is the oldest known pulpit in the United States. Old Swedes' is an active church with Episcopal Church worship services held every Sunday.

A short distance from the church is the restored Hendrickson House, a Swedish stone dwelling dating from 1690 that has recently been moved to this location from Essington, Pennsylvania. It serves as a house museum and library devoted to Swedish colonial life on the Delaware.

Holy Trinity (Old Swedes') Church was built in 1698 on the site of the first burial ground of the settlement around Fort Christina. Although largely English in architectural design, the church is the oldest surviving church built by and for a Swedish congregation in the Delaware Valley. No other structure is more closely related historically and geographically to the pioneer Swedish settlement on the Christina River, and it has retained its architectural integrity. Although its construction postdates the fall of New Sweden in 1655, the church was built while the Swedish heritage was still a dominant influence on the Delaware. Holy Trinity (Old Swedes') Church is considered a pre-eminent survival of the Swedish settlement on the Delaware. The church was declared a National Historic Landmark in 1961.

The churchyard, which predates the church by 60 years, was used as a burying ground for early settlers of Fort Christina and its community. There are no tombstones in evidence of that early time, but simple initialed rocks in the churchyard are presumed to be of the type used to mark early graves. The oldest legible stone is dated 1718. Holy Trinity (Old Swedes') Church is open to the public throughout the year. The church is one of the oldest

church buildings in the country still in regular use for worship.

New Castle Historic District

New Castle is a well-preserved architectural example of an 18th and early 19th century town in the United States. The large number of well preserved buildings and Green, in an historic setting with almost no modern intrusions, provides a living example of a colonial era town. New Castle, founded by Peter Stuyvesant in 1651 as the seat of New Netherlands government, served as the colonial capital of Delaware until May 1777. The historic district offers a broad range of architectural styles extending from Colonial through the Federal era.

Noteworthy historic buildings in New Castle include the Court House, Town Hall, the Arsenal, the Old Sheriff's Office, the Immanuel Church, the Presbyterian Church, the Academy, Old Library, Dutch House, Amstel House, the George Read, Jr. House, and the Van Leuvenigh House. Historic areas adjacent to the Delaware River within the District include The Strand and Battery Park. Archeological remains of Fort Casimir, the original Dutch Fort built to protect the settlement, are suspected to be within the historic district.

New Castle was declared a National Historic Landmark District in 1967. It is considered one of the finest examples of a well preserved early Delaware settlement with its cobblestone streets, historic buildings, central green, and views of the Delaware River. The numerous historic buildings lavishly illustrate a broad range of architectural history that extends from the Colonial through the Federal eras. Many of the buildings are pre-Revolutionary, and the New Castle Court House is itself a National Historic Landmark.

The designated National Historic Landmark District boundary begins "at the point where the old dyke,

originally built in 1655, empties into the Delaware River, and continuing along the bank of the river to a point directly in line with South Street, north along this line to 3rd Street, then west along 3rd Street to the rear property line of buildings on the north side of Fifth Street, continuing in a straight line across Harmony Street through the far side of the point of beginning.”

Another important site in New Castle, outside the National Historic Landmark District boundary, is Stonum, home of George Read, Sr., the signer of the Declaration of Independence and Continental Congressman from Delaware. His advocacy enabled Delaware to become the first state ratifying the Declaration. Stonum was designated a National Historic Landmark in 1967.

Dover Green

The Dover Green is the public square in central Dover, originally laid out in 1717 by William Penn’s surveyors. The Green is surrounded by many historic buildings including the Old State House, the Kent County Courthouse, and several historic homes, inns and former tavern sites. Although originally devoid of trees, today the green has several mature hardwood trees. The Green is listed on the National Register of Historic Places.

The Green has been important to Delaware since early colonial times. It was the site of early fairs and markets. Craftsmen and artisans such as cabinet makers, shoemakers, carpenters, tailors, and hatters shared the historic Green with government officials and residents, as well as several inns and taverns. In 1776, the Declaration of Independence was read to the public here. It was the soil upon which Delaware’s Continental Regiment was mustered for service in the American Revolution. The Golden Fleece Tavern on the Green is where Delaware ratified the United States Constitution on December 7, 1787, becoming the first of the thirteen former English

Colonies in America to do so.

John Dickinson House

The John Dickinson House, generally known as “Poplar Hall,” is the boyhood home and part-time residence of the American Revolutionary leader. The house is on a plantation located five miles southeast of Dover in Kent County. The property is owned by the state of Delaware, and is open to the public as a house museum managed by the Delaware Division of Historical and Cultural Affairs. The property includes the house, barns, other outbuildings, and gardens.

The John Dickinson House was designated an NHL in 1961 and is considered the structure and farmstead most intimately associated with this great writer of the Revolutionary period. It was built in 1740 by Judge Samuel Dickinson when his son John was eight years old. The house has been re-constructed and is a fine example of an early Georgian residence.

Lombardy Hall

Lombardy Hall was the home of Gunning Bedford, Jr., a delegate to the Continental Convention and signer of the U.S. Constitution. He lived here from 1793 to 1812. The house is located on Concord Pike (U.S. Route 202) in Wilmington. Since 1968, Lombardy Hall has been owned by the Lombardy Hall Foundation, an affiliate of the Wilmington Masonic Order, whose interest in Bedford stems from his having been the first Grand Master of the Delaware Masons. It is currently being used as a Masonic museum and lodge. It was declared a National Historic Landmark in 1974.

Socio-Economics

For the purposes of this study, the socio-economic environment study area is considered to be New Castle and Kent Counties, Delaware.

The United States Census Bureau estimated that the 2006 population of New Castle County was 525,587 persons, or approximately 61 per cent of the entire state of Delaware. The largest city in the county is Wilmington with a 2006 estimated population of 72,826. The city of New Castle had a 2006 estimated population of 4,836 persons. In Kent County, the U.S. Census Bureau estimated a 2006 population of 47,601 persons. Dover, the county's largest city, was estimated to have a 2006 population of 34,735 persons.

In 2000, New Castle County contained 462 manufacturing establishments employing 22,384 workers with an annual payroll of slightly over \$1 billion. Health care led the county in employment with 1,372 establishments employing 33,042 workers with an annual payroll of \$1.25 billion. Accommodations and food services accounted for 16,993 jobs and an annual payroll of \$222.5 million. Kent County reported 76 manufacturing establishments employing 5,789 workers with an annual payroll of \$208.5 million. Health care accounted for 6,460 jobs and an annual payroll of \$186.9 million. Accommodations and food services provided 3,817 jobs with an annual payroll of \$49.9 million.

According to the Delaware Tourism Alliance, New Castle County draws approximately 1.23 million tourists annually, while Kent County was estimated to host over 4.3 million gaming tourists largely visiting Dover Downs in 2003. The 2006 Delaware Travel Barometer, prepared by the Travel Industry Association of America, estimated that out of 8,092,000 person trips to the state, only three percent of Delaware's visitors, versus seven per cent of total visitors in the U.S. visited historic sites.

Transportation

The project area is served by a variety of transportation systems. Major automobile routes through the study area are I-95 and I-495 connecting Wilmington, Delaware to Philadelphia, Pennsylvania; I-295 that connects Delaware to New Jersey; and Route 1 connecting New Castle, Delaware to Dover, Delaware. Most of the major and local roads in the area are able to accommodate current traffic volume, although congestion may occur during commuting hours. The study area is also served by Amtrak, the Southeastern Pennsylvania Transportation Authority (SEPTA) with service from Philadelphia, and the Delaware Transit Corporation (DART), a local bus service serving the state.

Visitor Experience

The historic sites in the study area considered in this Special Resource Study are already destinations for local, state and regional out-of-state visitors. The publicly-owned historic sites considered for potential designation as a unit of the national park system are open to the public throughout the year. Tourism statistics were not available for all sites, but visitation numbers from July 2007 to June 2008 were available for a few. Additionally, a number of events occur at the New Castle Historic District, Holy Trinity (Old Swedes') Church, the John Dickinson Plantation and other historic areas throughout the year.

Resource:	Visits between July 2007-June 2008
John Dickinson Plantation	9,003
Old New Castle Court House	13,721
Zwaanendael Museum	17,203
*Delaware State Archives	14,096

* The Delaware State Archives in Dover has experienced an average of 14,096 visitors a year since its opening in December, 2003.

Chapter Six

Environmental Consequences

Introduction

Methodology

National Historic Preservation Act of 1966, as amended, Section 106

NPS Director's Order 28, Cultural Resource Management

Cultural Resources

Visitor Use

Transportation

Socioeconomics

Visitor Experience

Section 106 Summary By Alternative

Summary of Impacts by Alternative

**X
T
S**



SIX

Introduction

This chapter describes the potential environmental and socioeconomic consequences (also called impacts) of implementing the no action and action alternatives presented in chapter four. The overall methodology for assessing impacts is presented below. It is organized by resource topic, and provides a standardized comparison between alternatives based on the most relevant impact topics described in chapter one. In accordance with NEPA, impacts are described in terms of context, intensity, duration, and cumulative impacts. Because this document is intended to comply with Section 106 of the NHPA, the analysis of impacts to cultural resources contains an assessment of effect.

Methodology

As required by NEPA, potential impacts are described in terms of type, context, duration, and level of intensity. These terms are defined below. Overall, these impact analyses and conclusions were based on the review of existing literature, information provided by on-site experts and other agencies, professional judgment, knowledge and insight.

Type of Impact

Impacts can be beneficial or adverse. Beneficial impacts would improve resource conditions while adverse impacts would deplete or negatively alter resources.

Context

Context is the setting within which an impact occurs and can be site specific, local, or region-wide. Site-specific impacts would occur at the location of the action, local impacts would occur within the general vicinity of the project area, and region-wide impacts would extend beyond the study area's boundaries.

Intensity

Impact intensity is the degree to which a resource would be adversely affected. Because level of intensity definitions (negligible, minor, moderate, major) varies by resource, separate definitions are provided for each impact topic analyzed. The criteria that were used to rate the intensity of the impacts for each resource topic is presented below under "impact thresholds". Beneficial impacts do not receive intensity definitions.

Duration

Duration is a measure of the time period over which the effects of an impact persist. The duration of impacts can be either short-term or long-term. A short-term impact would be temporary in duration and would be associated with construction. Depending on the resource, impacts would last as long as construction was taking place. Long-term impacts last beyond the construction period, and the resources may not resume their pre-construction conditions for a longer period of time following construction. Impact duration for each resource is unique to that resource and is presented for each resource topic.

Direct and Indirect Impacts

Director's Order #12 requires that direct and indirect impacts be considered, but not specifically identified. A direct impact is caused by an action and occurs at the same time and place. An indirect impact of an action occurs later in time or farther removed in distance, but is reasonably foreseeable.

Cumulative Impacts

The Council on Environmental Quality regulations, which implements NEPA, requires assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other



past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR 1508.7).

In order to determine if the proposed alternatives would result in cumulative impacts it was necessary to identify other ongoing or reasonably foreseeable future projects at the study area and, if applicable, the surrounding region. No reasonably foreseeable future development is known that would have impacts on the sites or their resources in the study area. There are no proposed NPS projects, or projects by others, with the potential to result in cumulative impacts on the resources analyzed in this study.

Impacts to Cultural Resources and Section 106 of the National Historic Preservation Act (NHPA)

Impacts to cultural resources are described in terms of type, context, duration, and intensity, which is consistent with the Council on Environmental Quality regulations for implementing the National Environmental Policy Act. However, the impact analysis is also intended to comply with the requirements of Section 106 of the NHPA, as amended (16 USC 470 et seq.). In accordance with the Advisory Council for Historic Preservation’s regulations implementing Section 106 (36 CFR 800), impacts to historic structures were identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that were either listed on or eligible for listing on the National Register of Historic Places; (3) applying the criteria of adverse effect to affected cultural resources either listed on or eligible for listing on the national register; and (4) considering ways to avoid, minimize or mitigate adverse effects.

Under the regulations of the Advisory Council for Historic Preservation a determination of either adverse effect or no adverse effect must also be made for affected National Register eligible cultural resources. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion on the National Register (e.g., diminishing the integrity of the resource’s location, design, setting, materials, workmanship, feeling, or association). Adverse effects also include reasonably foreseeable effects caused by the action alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, Assessment of Adverse Effects). A determination of no adverse effect means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion on the National Register. If there are no impacts to cultural resources, the determination is no historic properties affected on cultural resources.

Council on Environmental Quality regulations and NPS Director’s Order 12 also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g. reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation only under the National Environmental Policy Act. It does not suggest that the level of effect as defined by Section 106 would be similarly reduced. Although adverse effects under Section 106 could be mitigated, the effect would remain adverse.

An assessment of effect for purposes of Section 106 of NHPA is included in the Section 106 Summary for historic structures and an overall Section 106 summary for each alternative is included at the end of this chapter. The overall summary is an assessment of the effect of the

undertaking on cultural resources, based on the criteria of effect and adverse effect found in the Advisory Council for Historic Preservation's regulations.

The cultural resource management policies of the NPS are derived from several historic preservation and other laws, proclamations, Executive Orders, and regulations. Two primary mandates include the NHPA and NPS Director's Order #28. Taken collectively, they provide the NPS with the authority and responsibility for managing cultural resources within units of the NPS so that those resources will be preserved unimpaired for future generations. Cultural resource management for this project will be carried out in a manner consistent with legislative and regulatory provisions, and with implementing policies and procedures.

National Historic Preservation Act of 1966, as amended, Section 106

Section 106 of the NHPA requires federal agencies to consider the impacts of their proposals on historic properties, and to provide state and tribal historic preservation officers and, as appropriate, the Advisory Council for Historic Preservation, and the public reasonable opportunity to review and comment on these actions.

The NPS maintains an active relationship with the Delaware State Historic Preservation Officer (DE SHPO) regarding cultural resource issues and has notified the DE SHPO regarding the initiation of this study and the intention of using this document for compliance with Section 106.

NPS Director's Order 28, Cultural Resource Management

NPS DO 28 requires the NPS to protect and manage cultural resources in its custody through a comprehensive program of research, planning, and stewardship and in accordance with the policies and principles contained within the NPS Management Policies, 2006. The Order also requires the NPS to comply with the requirements described in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and with the Nationwide Programmatic Agreement for Section 106, Compliance among the Advisory Council for Historic Preservation the National Conference of State Historic Preservation Officers, and the NPS.

The NPS manages its cultural resources by conducting research to identify, evaluate, document and register them, and sets priorities for stewardship to ensure resources are protected, preserved, maintained and made available for public understanding and enjoyment. The NPS consults and coordinates with outside entities where appropriate regarding cultural resource management.

Cultural Resources Historic Structures

Impact Intensity Definitions Negligible

Impact is at the lowest levels of detection, barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be no adverse effect.

Minor

Impact is measurable but would not be noticeable to visitors and would not affect the character-defining features of a National



Register of Historic Places eligible or listed structure. For purposes of Section 106, the determination of effect would be no adverse effect.

Moderate

Impact would affect a character-defining feature(s) of a structure but would not diminish the integrity of the structure to the extent that its National Register of Historic Places eligibility is jeopardized. For purposes of Section 106, the determination of effect would be no adverse effect.

Major

Impact would alter a character-defining feature(s) of a structure, potentially diminishing the integrity of the structure to the extent that it is no longer eligible for the National Register of Historic Places. For purposes of Section 106, the determination of effect would likely be adverse effect, and a Section 106 agreement document (MOA or PA) would be executed between the NPS, SHPO and other appropriate parties.

Beneficial impacts are described but are not assigned intensity levels.

Impacts of Alternative A: No Action

Impact Analysis

Under Alternative A, current management and maintenance of historic structures would continue. Historical and cultural resources located on private lands within the project area include Holy Trinity (Old Swedes') Church, numerous sites in the New Castle

Historic Landmark District, the Stonum House, and Lombardy Hall. Under the no action alternative, these sites would continue to receive some protection from landowner stewardship. Each site designated as an NHL would retain its status and current management would continue. No direct impacts on the structures are anticipated assuming there would be no modification or demolition of historic properties. No major funding would likely be made toward stabilization or restoration. Historic structures on private lands may receive beneficial impacts by limiting public access thereby preventing damage from increased visitor use and inadvertent damage by human trespassing and vandalism.

Public education and interpretation of cultural resources would continue at current levels resulting in no likely expansion of the public's awareness of the historic properties.

Most public land management agencies such as Fort Christina State Park, publicly owned sites including the New Castle Court House in the New Castle NHL District, the John Dickinson Home, and Dover Green, are mandated to protect cultural resources to the extent possible consistent with their mission. Many of the historic structures on public lands have retained their physical integrity. Some of these sites are NHLs and have been undergoing refurbishment work. The ability of land management agencies to maintain and protect cultural resources would continue to be limited by funding and staffing levels.

Cumulative Impacts

As noted in the methodology section in this chapter, there are no proposed projects or activities with the potential to contribute to cumulative impacts on historic structures. Therefore, there are no cumulative impacts.

Section 106 Summary

For the purposes of Section 106, the implementation of Alternative A would result in a determination of no historic properties affected for cultural resources - historic structures.

Conclusion

Alternative A would result in no impacts to cultural resources - historic structures and would result in a determination of no affect on historic properties for purposes of Section 106. There would be no cumulative effects from past, present and reasonably foreseeable future actions.

Impacts of Alternative B: National Historical Park

Impact Analysis

Under Alternative B, NPS would provide additional funds and staff to further protect and interpret the cultural resources included in this alternative. Partnerships between public agencies, private organizations, and individuals would be established to inventory, protect, and access cultural resources.

Visitor usage and associated use from visitor traffic is likely to increase with this alternative compared with the no action alternative, however, continuing maintenance would offset any impacts.

Partnerships established with private organizations and individuals could allow better public access to privately-owned historic sites such as Holy Trinity (Old Swedes') Church, some structures in the New Castle NHL District, the Stonum House, and Lombardy Hall. Additional public access may provide opportunities for more public interpretation and education of cultural resources within the study area. This could result in increased public knowledge and change in behavior to

encourage protection of resources, resulting in beneficial impacts in the long-term.

Cumulative Impacts

As noted in the methodology section in this chapter, there are no proposed projects or activities with the potential to contribute to cumulative impacts on historic structures. Therefore, there are no cumulative impacts.

Section 106 Summary

For the purposes of Section 106, the implementation of Alternative B would result in a determination of no adverse effect on cultural resources-historic structures. There would be no ground clearing with this alternative. Any affects on historic structures would likely be beneficial including improved maintenance and treatments of historic structures through improved funding and staffing. No direct changes or modifications to the structures would occur with the exception of potential interior rehabilitation of a historic building for visitor services. This rehabilitation work would be done consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

Conclusion

Alternative B would result in beneficial impacts to historic structures and would result in a determination of no adverse effect for purposes of Section 106. As noted in the methodology section in this chapter, there are no proposed projects or activities with the potential to contribute to cumulative impacts on cultural resources-historic structures. There would be no cumulative effects from past, present and reasonably foreseeable future actions.



Impacts of Alternative C: National Historic Site

Impact Analysis

Under Alternative C, the NPS would provide additional funds and staff to further protect and interpret the cultural resources at Fort Christina State Park and Holy Trinity (Old Swedes') Church. Partnerships between other public agencies, private organizations, and individuals would be established to inventory, protect, and access cultural resources.

Visitor usage and associated use from visitor traffic is likely to increase with this alternative compared with the no action alternative, however, continuing maintenance would offset any impacts.

Additional public access opportunities may provide opportunities for more public interpretation and education for Fort Christina and Old Swedes' Church. This could result in increased public knowledge that may encourage protection of resources, resulting in beneficial impacts in the long-term.

Cumulative Impacts

As noted in the methodology section in this chapter, there are no proposed projects or activities with the potential to contribute to cumulative impacts on historic structures. Therefore, there are no cumulative impacts.

Section 106 Summary

For the purposes of Section 106, the implementation of Alternative C would result in a determination of no adverse effect on historic structures. There would be no ground clearing with this alternative. Any effects on historic structures would likely be beneficial including improved maintenance and treatments of historic structures through improved funding and staffing.

Conclusion

Alternative C would result in beneficial impacts to historic structures and would result in a determination of no adverse effect for purposes of Section 106. There would be no cumulative effects from past, present and reasonably foreseeable future actions.

Visitor Use Transportation

Impact Intensity Definitions Negligible

Traffic would not be affected, or the effects would be at the lower levels of detection and would not have an appreciable effect on traffic flow. There would be no changes in the level of service.

Minor

The effect would be detectable, but would be of a magnitude that would not have an appreciable effect on traffic flow. There would be no noticeable changes in the traffic congestion or level of service. If mitigation was needed to offset adverse effects, it would be simple and most likely successful.

Moderate

The effects would be readily apparent, and would result in a substantial change in traffic flow patterns, congestion, and/or level of service, in a manner noticeable to the public. Mitigation would be necessary to offset adverse effects and would likely be successful.

Major

The effects would be severe or beneficial, readily apparent, and would result in a substantial change in traffic flow in a manner noticeable to the public and markedly different from the current traffic flow patterns and level of service. Mitigation measures to offset adverse effects would be needed and extensive, and their success would not be guaranteed.

Beneficial impacts are described, but are not assigned intensity levels.

Impacts of Alternative A: No Action

Impact Analysis

Under the no action alternative, Congress would not establish a unit of the national park system in Delaware. Current visitation to the sites, traffic volume and patterns would continue. Current trends in the number of visitors and traffic would continue. Current programs and policies of existing federal, state, county and non-profit conservation organizations would remain in place. Alternative A would not have an impact on transportation.

Cumulative Impacts

As noted in the methodology section in this chapter, there are no proposed projects or activities with the potential to contribute to cumulative impacts to transportation. Therefore, there are no impacts.

Conclusion

Under Alternative A, there would be no impacts on transportation.

Impacts of Alternative B: National Historical Park

Impact Analysis

Under Alternative B, a congressionally designated National Historical Park would potentially be established. A future management plan connecting the sites would be created. Since the proposed sites are spread through two counties in the state, visitors may stop at one or more of the sites. Visitors would be arriving from multiple locations so traffic would not be directed along a particular route. Traffic impacts resulting from this alternative would be limited to low numbers of additional trips generated by low visitation. The increase in automobile traffic would be minimal, but there would be no changes in level of service and no increases in traffic congestion. Alternative B would have negligible impacts on transportation.

Cumulative Impacts

As noted in the methodology section in this chapter, there are no proposed projects with the potential to contribute to cumulative impacts to transportation. Therefore, there are negligible impacts.

Conclusion

Alternative B would result in negligible impacts on transportation.

Impacts of Alternative C: National Historic Site

Impact Analysis

Under Alternative C, Fort Christina and Holy Trinity (Old Swedes') Church property would potentially become a congressionally designated unit of the national park system. Impacts would be similar to Alternative B but on



a smaller scale, as two sites would be designated instead of six. Alternative C would have minimal impacts on transportation, but there would be no changes in level of service and no increases in traffic congestion.

Cumulative Impacts: As noted in the methodology section in this chapter, there are no proposed projects with the potential to contribute to cumulative impacts to transportation. Therefore, there are negligible impacts.

Conclusion

Alternative C would result in negligible impacts on transportation.

Socio-economics

Impact Intensity Definitions Negligible

Socioeconomic conditions would not be affected or would be at low levels of detection. The change would be so small that it would not be of any measurable or perceptible consequence.

Minor

The effect on socioeconomic conditions would be small but measurable and would affect a small portion of the population. The change would be small and localized and of little consequence to the communities.

Moderate

The effect on socioeconomic conditions would be readily apparent, likely long-term, and widespread. The change would be measurable and of consequence to the community.

Major

The effect of the socioeconomic conditions would be readily apparent, long-term, and would cause substantial changes to the social economic conditions and park operations in the vicinity. The change would be measurable and result in a permanent consequence to the community.

Beneficial impacts are described but are not assigned intensity levels.

Impacts of Alternative A: No Action

Impact Analysis: Under this alternative, services provided at the sites would continue at the same levels. The number of employees at the various historic sites included in this study would not change. No new direct impacts on the regional economy would occur with this alternative.

Cumulative Impacts

As noted in the methodology section in this chapter, there are no proposed projects or activities with the potential to contribute to cumulative impacts to socioeconomics. Therefore, there are no cumulative impacts.

Conclusion

Alternative A would result in no direct or cumulative impacts on socioeconomics.

Impacts of Alternative B: National Historical Park

Impact Analysis

This alternative may increase the number of recreational



visitors to the region based on improved interpretation of the sites and the potential designation of national park status. The additional visitors and NPS staff would contribute to the local economy by purchasing various goods and services, including food, gasoline, and lodging. To the extent that such expenditures are recycled into the local economy, a multiplier effect would occur. Overall, beneficial impacts on the local economy would be expected.

Cumulative Impacts

The additional recreational traffic stimulated by creation of the National Historical Park would contribute to the regional economy. National Historical Park designation may contribute to the revitalization of some areas such as Fort Christina and Holy Trinity (Old Swedes') Church over time.

Conclusion

Alternative B would result in beneficial impacts to socioeconomics and may have a positive effect on the regional economy.

Impacts of Alternative C: National Historic Site

Impact Analysis

Impacts would be similar to Alternative B but on a smaller scale, as two sites would be designated instead of six. Alternative C is also expected to have beneficial impacts on the local economy.

Cumulative Impacts

The cumulative impacts expected in Alternative B would be similar for this alternative, but to a lesser extent, as there are fewer sites.

Conclusion

Alternative C would result in beneficial impacts to socioeconomics and may have a positive effect on the regional economy, but less than Alternative B.

Visitor Experience

Impact Intensity Definitions

Negligible

Visitors would not be affected, or changes in visitor use and/or experience would be below or at the level of detection. Visitors would not likely be aware of the effects associated with the alternative.

Minor

Changes in visitor use and/or experiences would be detectable, although the changes would not be noticeable to visitors.

Moderate

Changes in visitor use and/or experience would be readily apparent and likely long term. Visitors would be aware of the effects associated with the alternative and would likely be able to express an opinion about the changes.

Major

Changes in visitor use and/or experience would be readily apparent, severely adverse, and have important, long-term consequences. Visitors would be aware of the effects associated with the alternative and would likely express a strong opinion about the changes.

Beneficial impacts are described, but are



not assigned intensity levels.

Impacts of Alternative A: No Action

Impact Analysis

Under Alternative A, the NPS would take no action in the study area. At the sites available to the public, existing programs and interpretive opportunities would continue. Public use and enjoyment of the historic structures would continue to be limited at private landowner sites such as Holy Trinity (Old Swedes') Church, some sites in New Castle Historic District, the Stonum House, and Lombardy Hall. Without additional visitor programs or services, visitation would likely remain at current levels.

Cumulative Impacts

As noted in the methodology section in this chapter, there are no proposed projects or activities with the potential to contribute to cumulative impacts on visitor experience. Therefore, there are no cumulative impacts.

Conclusion

Under Alternative A there would be no direct or cumulative impacts on visitor experience.

Impacts of Alternative B: National Historical Park

Impact Analysis

Actions proposed under Alternative B would provide an enhanced visitor experience as partnerships between the NPS and public and private stakeholders would create additional opportunities to interpret major themes associated with early Swedish, Dutch, and English settlements and the birth of our nation. Public use and

enjoyment would be increased by exhibits, displays, tours, and NPS interpretive staffing.

Visitation rates are likely to increase at historic sites with this alternative compared with the no action alternative, but visitation is not expected to exceed the capacity sites can currently manage. National Historical Park designation would provide greater recognition of, and access to, historic sites and it may provide increased opportunities for public use and enjoyment at the sites included in this study.

Increased visitation may result in increased public knowledge and change in behavior to encourage protection of resources, resulting in beneficial impacts over time. Actions associated with Alternative B would likely result in enhanced visitor experience and increased visitor satisfaction.

Cumulative Impacts

As noted in the methodology section of this chapter, there are no proposed projects or activities with the potential to contribute to cumulative impacts on visitor experience. Therefore, there are no cumulative impacts.

Conclusion

Alternative B would likely increase visitor experience and visitor satisfaction from the proposed project. There would be beneficial effects from these future actions.

Impacts of Alternative C: National Historic Site

Impact Analysis

Under Alternative C the NPS would partner with the Old Swedes Foundation and the state of Delaware at Fort Christina. Actions associated with this alternative would provide similar experiences and opportunities to that in

Alternative B, but on a smaller scale. Partnerships with the NPS would provide additional interpretation and educational opportunities. Visitation may be increased, but to a lesser degree than Alternative B.

Visitation rates are likely to increase at Fort Christina and at Holy Trinity (Old Swedes') Church with this alternative compared with the no action alternative. National Historic Site designation would provide greater recognition of and access to historic sites, and it would provide increased opportunities for public use and enjoyment at these sites. Increased visitation may result in increased public knowledge and change in behavior to encourage protection of resources, resulting in beneficial impacts in the long-term. Partnerships between NPS and public and private stakeholders would create opportunities to interpret the theme of early Swedish settlements. Public use and enjoyment would be increased by exhibits, displays, tours, and NPS interpretive staffing.

Cumulative Impacts

As noted in the methodology section in this chapter, there are no proposed projects or activities with the potential to contribute to cumulative impacts on visitor experience. Therefore, there are no cumulative impacts.

Conclusion

Alternative C would likely increase visitor experience and visitor satisfaction from the proposed project, but to a lesser extent than Alternative B. There would be beneficial effects from future actions.

Section 106 Summary by Alternative

Alternative A: No Action

Alternative A, which maintains current management practices without NPS involvement, would result in a determination of no affect on historic properties. These resources would continue to be managed to retain their eligibility for listing on the National Register.

Alternative B: National Historical Park

Alternative B would create a partnership between the NPS and state agencies, local governments, and others to promote conservation and interpretation efforts at several sites throughout Delaware. No direct changes or modifications to the structures would occur with the exception of interior rehabilitation of a building for visitor services. This rehabilitation would be done consistent with the Secretary's Standards for the Treatment of Historic Properties. This alternative would have a no adverse effect determination on cultural resources-historic structures.

Alternative C: National Historic Site

Alternative C would create a partnership between the NPS and state agencies, local governments, and others to promote conservation and interpretation efforts at Holy Trinity (Old Swedes') Church and Fort Christina. Similar actions would occur under this alternative as those proposed with Alternative B, but on a smaller scale. This alternative would have a no adverse effect determination on historic structures.



Summary of Impacts by Alternative

Alternative A: No Action

Alternative A would maintain current conditions at the sites selected for analysis in this SRS. The NPS would not partner with local and state agencies or other entities and management would continue with no change.

For Section 106, a determination of no adverse effect is anticipated for cultural resources-historic structures.

Alternative A would have no impacts to cultural resources-historic structures, transportation, socioeconomics or visitor experience.

Alternative B: National Historic Park

With Alternative B, the NPS would partner with agencies and organizations to provide additional support to various sites in Delaware associated with Swedish, Dutch and English Settlements and the birth of our nation.

For Section 106, a determination of no adverse effect is anticipated for cultural resources-historic structures.

Alternative B would have negligible impacts to transportation and beneficial impacts to historic structures, socioeconomics and visitor experience.

Alternative C: National Historic Site

Actions and impacts associated with Alternative C would be similar to Alternative B, but would only happen with Fort Christina and Holy Trinity (Old Swedes') Church and would focus on Swedish heritage.

For Section 106, a determination of no adverse effect is anticipated for cultural resources-historic structures.

Alternative C would have negligible impacts to transportation and beneficial impacts to historic structures, socioeconomics and visitor experience, but to a lesser extent than Alternative B.

