

PURPOSE AND NEED FOR ACTION

Valley Forge National Historical Park (NHP) was established by the United States Congress in 1976 to:

educate and inform present and future generations about the sacrifices and achievements of General George Washington and the Continental Army at Valley Forge, and the people, events, and legacy of the American Revolution; preserve the cultural and natural resources that embody and commemorate the Valley Forge experience and the American Revolution; and provide opportunities for enhanced understanding.

The park is nationally significant for its association with the winter 1777-1778 encampment of General George Washington and the Continental Army. It also is significant for the commemorative activities and features developed by the Commonwealth of Pennsylvania when it was a state park, and for its agricultural, industrial, and transportation history and resources.

The park takes its historic preservation mission very seriously. It owns and is responsible for maintaining 78 historic buildings. While many of the historic buildings have high value as interpretive sites, some are not suitable candidates for public interpretation because they represent duplicative interpretive stories (e.g., officers' quarters), because it is not feasible to staff so many different buildings, and/or because they are located in isolated areas of the park.

Sixty-six of the park's historic buildings were built after the encampment and do not relate to the park's principal theme, yet the responsibility for their care and ongoing maintenance remains. Approximately 40% of these buildings are in poor or fair condition. Some of the historic buildings are used for park offices and storage, or as quarters for park staff. While this use keeps the buildings heated and prevents vandalism, the maintenance costs are not fully covered in available budget or in rental fees, resulting in buildings that are not optimally maintained, as well as a net loss in the park budget.

The park also must maintain 72 non-historic buildings. Most are used for park operations or staff quarters, but some are excess to the park's needs. As is the case with the historic buildings used for operations, the maintenance costs are not fully covered in available budget or in rental fees, resulting in buildings that are not optimally maintained, as well as a net loss in the park budget.

36 CFR Part 18 gives the National Park Service (NPS) authority to lease buildings, provided certain criteria are met (see page 1.5, “Determinations for a Lease with Montessori Children’s House of Valley Forge”). The law recognizes that many parks are responsible for maintaining a large portfolio of historic and modern buildings, and that some of these buildings are not necessary or suitable for visitor services or park operations. Exercise of the authority enables a park to work with a community to rehabilitate and keep these buildings in good condition; and may in some cases provide revenue to the park.

At Valley Forge NHP, the NPS identified park buildings that are not necessary to support visitor services or operations, and also identified appropriate and self-sustaining non-park uses for these buildings. The NPS will lease buildings at the David Walker Farmstead (1630 Thomas Road) and the Evans property (1610 Thomas Road) to the Montessori Children’s House of Valley Forge (MCHVF). MCHVF proposes to rehabilitate the David Walker buildings and site and to demolish the Evans buildings in order to establish a pre-school.

This Environmental Assessment/Assessment of Effect (EA/AOE) presents alternatives for the proposed action of rehabilitation. The EA/AOE further analyzes the potential impacts these alternatives would have on the natural, cultural, and human environment. This document has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended; regulations of the Council on Environmental Quality (CEQ) (40 CFR 1508.9); and NPS Director’s Order (DO) #12: *Conservation Planning, Environmental Impact Analysis, and Decision-Making*. This EA/AOE also complies with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

PURPOSE OF AND NEED FOR ACTION

The NPS purpose and need for this project is to preserve the David Walker Farmstead buildings. The MCHVF purpose and need for this project is to establish a facility that is safe, effective, accessible, and appropriate for the education of pre-school children.

PROJECT SITE DESCRIPTION

Valley Forge NHP is located in southeastern Pennsylvania, approximately 18 miles northwest of center city Philadelphia. The Schuylkill River divides the park into northern and southern sections, and Valley Creek further divides the southern section. Valley Forge NHP encompasses over 3,400 acres. The proposed action is confined to 3.55 acres adjoining the southern boundary of the park, near the point at which the Pennsylvania Turnpike crosses over Thomas Road (Figure 1).

The site of the proposed action comprises what is called the David Walker Farmstead and the Evans property. Until 1977, these were distinct, privately owned properties, but have been federal lands since that time. Together, they are referred to as the “project site.”

See Figure 1.

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Additionally, in an area of forest and meadow beyond the immediate project site yet still within Valley Forge NHP, the park will make modifications for stormwater control.

The project site is bounded to the east by Thomas Road and the private residential neighborhood called Glen Hardie; to the south by a wooded area that adjoins the turnpike; to the west by the edge of a former pasture; and to the north by a hedgerow. The site includes a series of buildings that are generally oriented to Thomas Road. From north to south, these are: the David Walker tenant house, the David Walker barn, the David Walker main house, the David Walker root cellar, the Evans house, and the Evans garage.

The David Walker site and the Evans site each are served by a driveway off Thomas Road. On the David Walker site, the driveway extends past the barn to the tenant house. A small parking lot is present between the David Walker main house and the barn. A stone wall in poor repair surrounds the parking lot and also partially encloses a yard behind the house. On the Evans site, the driveway runs past the garage and on to the house, where it widens into a small parking area.

PROJECT BACKGROUND

Previous and Related Planning Studies

Previous and related planning studies have been completed for Valley Forge NHP. These plans were reviewed to provide additional information and guidance for the development of alternatives for rehabilitating structures at the David Walker Farmstead in Valley Forge NHP.

The **Valley Forge National Historical Park General Management Plan** (NPS 1982) was the first planning document produced by the NPS for Valley Forge NHP. The plan outlined existing conditions within the park, future plans for the park, and the potential impact on Valley Forge as a whole. The plan targets the David Walker buildings for adaptive use, and the Evans buildings for park quarters or adaptive use.

The working draft of the **Valley Forge National Historical Park Draft General Management Plan/Environmental Impact Statement** (GMP/EIS) (NPS 2006) is under development by the NPS. This new GMP/EIS will replace the previous plan and will set goals and guidance for Valley Forge NHP in terms of resource management and visitor use and experience while analyzing the impacts of various proposed actions. The plan targets the David Walker Farmstead buildings for adaptive use or leasing and the Evans buildings for demolition.

The Historic Evaluation of Ivy Hollow (Newman, 2005) provides an overview of the history of the site and an assessment of the historic structures on the property. It recommends that the site may be eligible for the national register as representative of the growth of Tredyffrin Township.

The **Valley Forge NHP National Register nomination** (NPS 1986) and **Valley Forge NHP National Register nomination update 100% Draft Submission** (JMA 2005) provide information on the historic significance of Valley Forge NHP. The update nomination identifies significant themes and context for the Valley Forge landscape beyond the military encampment. It also identifies two buildings at the farmstead as contributing elements: the main house and the root cellar. The farmstead landscape contributes to the park's agricultural context.

The **Trout Creek Watershed Restoration and Protection Plan** (The Ratsep Group, Inc. 2004) assesses problems in the Trout Creek Watershed of Tredyffrin Township. The plan also identifies areas where restoration/protection measures would be most beneficial and determines the types of remedies that would be most practical. Township discussions about implementation of restoration and protection projects are on-going. The project site lies within the Trout Creek watershed.

A finding entitled **Determinations for a Lease with the Montessori Children's House of Valley Forge** (NPS, 2005) evaluated potential MCHVF use of the buildings according to criteria established by 36 CFR Part 18, Section 18.4. Based on this analysis, the NPS considers the lease with MCHVF, and the uses authorized, to be appropriate and compatible and consistent with the purposes for which the park was established, and that the terms of the lease will adequately preserve the leased premises. Positive findings were made for each of the following criteria:

- The lease will not result in degradation of the purposes and values of the park area.
- The lease will not deprive the park area of property necessary for appropriate park protection, interpretation, visitor enjoyment or administration of the park area.
- The proposed lease contains such terms and conditions as will assure the leased property will be used for activity and in a manner that are consistent with the purposes established by law for the park area in which the property is located.
- The lease is compatible with the programs of the NPS.
- The lease is for rent at least equal to the fair market value rent of the leased property.
- The proposed activities under the lease are not subject to authorization through a concession contract, commercial use authorization, or similar instrument.
- If the lease is to include historic property, the lease will adequately ensure the preservation of the historic property.

Scoping

The scoping process is initiated at the beginning of a NEPA project to allow agencies and interested parties the opportunity to provide information and identify the range of issues, resources, and alternatives to address in the EA/AOE. Both internal and public

scoping was held to address these elements. At the outset of this document, an Environmental Screening Form was completed to identify issues and resource constraints at the project site. Interested parties were notified of the planning process. A scoping announcement was posted on the park's website, the website of Tredyffrin Township, and the website of MCHVF inviting public comment. Letters were sent to neighbors of the site.

Local government and several agencies were contacted during the planning process, including Tredyffrin Township, the Chester County Conservation District, the Pennsylvania Natural Diversity Index, the Pennsylvania State Historic Preservation Officer, and the U. S. Fish and Wildlife Service. In addition, the following Indian Tribes were contacted: the Oneida Nation of Wisconsin, the Oneida Indian Nation, the Stockbridge-Munsee Community of Wisconsin, and the Delaware Nation. For further scoping and public participation information, see "Chapter 5: Consultation and Coordination" of this document and "Appendix A: Relevant Correspondence."

The Montessori Children's House of Valley Forge

The Montessori Children's House of Valley Forge, Inc. was established as a non-profit, parent-owned corporation in 1964. The school is affiliated with the American Montessori Society. The Board of Directors comprises parents elected from the parent membership. The school serves pre-school through kindergarten, and enrolls 76 children, with plans to grow to 136 children. For forty years, the school occupied space in St. Matthew's Church, located less than a mile from the project site. The church intends to use its space for other purposes in the future, and the school contacted the park about the possibility of rehabilitating the unused David Walker Farmstead structures as a new home.

HISTORY AND SIGNIFICANCE OF VALLEY FORGE NHP

Valley Forge NHP encompasses the site of the 1777-78 winter encampment of the American Continental Army under General George Washington. Although this represents only a brief period of the American Revolution, it marks a significant period in American history. As such, it has become essential to the understanding and commemoration of the founding principles of the United States.

By the time of the encampment most of the land in the area had been cleared for agriculture. Within what is now the park, 18 landowners had established fairly prosperous farms on the choice agricultural soil. Along Valley Creek, an iron works named Valley Forge was established and a small industrial village developed. Upon arrival the soldiers would have found an open, rolling landscape divided into small crop fields and pastures, with a few farmhouses and out buildings.

Although the scale and intensity of the encampment devastated the landscape, the farmers were able to recover quickly. Through the 19th century industry thrived in the villages of Valley Forge and Port Kennedy. In the area that had been the encampment's Grand Parade, quarry operations developed. It was not until the eve of the encampment's hundredth anniversary that citizens began to think about and plan for preservation and commemoration of the encampment.

In December 1877, citizens convened and incorporated as the Centennial and Memorial Association in order to commemorate the centennial of the encampment and preserve Washington's Headquarters. The building was acquired in 1879, restored, and furnished. A rising interest in the Valley Forge story also resulted in the establishment of Pennsylvania's first state park in 1893. Little by little, the Valley Forge Park Commission acquired the lands on which the encampment had taken place, and created a memorial park with monuments and managed landscapes for both commemoration and recreation.

As the country began to celebrate its bicentennial, the park was transferred to the NPS in 1976. Since then the NPS has acquired additional lands and structures, including the project area, which encompasses the David Walker Farmstead and the Evans property.

The park is nationally significant for its association with the winter 1777-1778 encampment of General George Washington and the Continental Army. It also is significant for the commemorative activities and features developed by the Commonwealth of Pennsylvania when it was a state park, and for its agricultural, industrial, and transportation history and resources.

HISTORY AND SIGNIFICANCE OF THE SITE

A farmer named Abijah Stephens owned the property now known as the David Walker Farmstead and the Evans property at the time of the 1777-78 Winter Encampment at Valley Forge. The project site was only a small western sliver of Stephens' 250-acre tract of land. The oldest of the current buildings on the site were not constructed until the 19th century.

The David Walker Farmstead, with its remaining buildings, is one of the few sites in the park that retain some integrity as a farmstead core. However, the reduction in acreage renders it greatly changed from the time in the 19th century when it was a working farm with additional structures, fields, and pasture.

The main house is a large stone dwelling. Although not proven, it may contain a section of a late 18th century core. What remains, however, does not project any semblance of 18th century architecture. The present, five-bay wide, one-room deep main block dates to the mid-19th century, with several smaller additions dating to the 20th century. The dwelling is an amalgam of building campaigns, yet overall it projects the image of the Colonial Revival mode of architecture, which was common throughout the eastern

United States in the early 20th century. The dwelling has been determined to be a contributing building in the draft Valley Forge NHP National Register Nomination Update (2005).

A stone root cellar is located immediately adjacent to the main house. Its entry is partially above ground, with a large, underground chamber. It appears to relate to the mid-19th century construction of the main block of the house. The root cellar possesses integrity as a specialty structure and has been determined to be a contributing feature to the national register significance of the park.

A stone and frame Pennsylvania bank barn is positioned to the west and in back of the house. Its length runs perpendicular to the house. The first known graphic image of it appears in an 1883 atlas, when the property was owned by David Walker. On its north elevation is found a centered earthen bank leading to what was once the threshing floor. The barn's size and configuration is typical of mid to late 19th century barns in the area. The exception to a typical barn form is that this barn lacks the characteristic frame forebay on its south facade. The barn burned in the late 20th century, and this may explain why this feature is missing. It has been determined that the barn does not contribute to the national register significance of the park, due to its loss of integrity.

Attached to the barn is a one-story part frame, part concrete block shed, formerly used as a stable. Its construction materials are 20th-century. The shed does not contribute to the national register significance of the park.

A small one-story frame corn crib is located on the north side of the barn. No documentation has been found to positively date it. It is not considered to contribute to the national register significance of the park.

A small two-story frame house is located north-west of the barn and was used for a farm manager or tenant. It has been modified from its original appearance with the addition of a screened porch. The siding on the cottage is not original, nor is its roofing material. It is likely that the cottage was moved or raised so that a partial basement of concrete block could be constructed beneath it in the 20th century. Due to its loss of integrity, the tenant house is not considered to contribute to the national register significance of the park.

A wagon shed is located north of the main house. It is of frame construction, with the exception of its back wall, which is masonry and part of a wall system enclosing a paved courtyard. The shed is a late 20th-century building that is not eligible for consideration in the national register nomination.

A frame shed is located in the southwest pasture. It has a feeding trough along its back wall and is open ended on the front. It was used by a previous tenant as an alternate shelter for horses. Its materials are 20th-century and its dimensional framing suggests late 20th-century. It is not eligible for consideration in the national register nomination.

On the Evans site is located a stucco covered, concrete block, split level house and garage. These structures were built in 1958 and are do not contribute to the national register significance of the park.

PLANNING ISSUES AND CONCERNS

Planning Issues

During the scoping process, specific considerations and concerns were identified as important to the planning process: preservation of cultural resources, drainage, safety/accessibility/circulation, visual quality, and sustainability. With the purpose and need for the proposed action, these topics guided the development of alternatives and contributed to the selection of impact topics, as identified in the next section.

Preservation of Cultural Resources. The cultural landscape at the David Walker Farmstead and the main house and root cellar are significant cultural resources. Design must avoid not only serious adverse effects to these resources, but also conditions that could impact them in the future. Design must conform to the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

Stormwater Management. The David Walker Farmstead and the adjacent roadways are prone to flooding due to uncontrolled stormwater from the adjacent Pennsylvania Turnpike, although the situation is improved due to the late-2005 removal of fill from the project site. Reconstruction of the turnpike in 2010 will eliminate the discharge of highway runoff onto the project site. Project design should improve the absorption of stormwater.

Safety/Accessibility/Circulation. Traffic volumes, safe and efficient internal vehicular circulation, and the separation of children from vehicles are key concerns. Design must include universal accessibility as well as ensure the safety and circulation of visitors.

Visual Quality. The site is part of the cultural landscape of the park and is highly visible from the interior of the park, including from the National Memorial Arch. It also abuts a residential neighborhood and is bordered by a public road. Design must protect existing views from inappropriate intrusions.

Sustainability. The park owns a number of historic and non-historic buildings for which there is no feasible operational or visitor services use, and which are a drain on the park budget. Alternatives must consider the feasible future of these structures. Additionally, the project site includes existing driveways and parking. Alternatives must maximize reuse of these areas.

Game Animal Hunting. Some neighbors of the project site allow hunting on their properties in order to address issues caused by the abundance of white-tailed deer in

the area. Establishment of a school would increase the safety zone and affect the ability to hunt on some private properties.

Regulatory, Management, and Legislative Concerns

Implementation of the *David Walker Farmstead EA/AOE* would not require any changes to existing legislation or management policies. References to federal and state regulations and guidelines related to this project, as well as the applicable NPS guidelines and Director's Orders are provided below with the descriptions of impact topics.

IMPACT TOPICS

Impact topics are resources of concern that could be affected, either beneficially or adversely, by the alternatives presented in this EA/AOE. They were identified based on the issues raised during scoping; site conditions; federal laws, regulations, and Executive Orders; *NPS Management Policies 2001* (NPS 2000) and Director's Orders; and staff knowledge of the park's resources.

Impact Topics Analyzed in this EA/AOE

Impact topics identified and analyzed in this EA/AOE include geologic resources; soil; topography; air quality; soundscape; visual resources; archeological resources; historic structures; cultural landscapes; safety, accessibility, and circulation; park operations; and game animal hunting. A brief rationale for the selection of each impact topic is provided below, and each impact topic is further discussed in detail in "Chapter 3: Affected Environment" of this document.

Natural Resources

Geologic Resources

NPS Management Policies 2001 (NPS 2000) states, "The Park Service will preserve and protect geologic resources as integral components of park natural systems. As used here, the term 'geologic resources' includes both geologic features and geologic processes." The project site is characterized by one geologic formation: the Ledger. The project site is underlain by a fault nearly parallel to the Pennsylvania Turnpike; the upthrown side is to the north (Commonwealth of Pennsylvania and the Pennsylvania Geological Society 1993). There is no evidence that the fault is currently active, and the most recent activity along this fault occurred during its formation over 150 million years ago (C.G. Wiswall, personal communication). Bedrock outcrops in a few places. In other places, depth to the bedrock is more than 10 feet (USDA 1963).

The site is part of the park's extensive karst landscape. Through time, precipitation and ground water drain through cracks and crevices in the carbonate bedrock, slowly dissolving the rock to form an underground network of conduits that often produce karstic features on the surface, such as sinkholes. Two small sinkholes are present in the meadows uphill from the project site. It is park policy to allow sinkholes to enlarge or contract naturally, unless a sinkhole threatens an important resource.

Because the proposed actions will introduce new development to these geologic resources, geology is analyzed as an impact topic.

Soil

NPS policy is to protect the abundance and diversity of all naturally occurring communities. The *2001 NPS Management Policies* (NPS 2000), NPS DO #77: *Natural Resources Management*, and other NPS and Valley Forge NHP policies provide general direction for the protection of soils. The immediate project site comprises one soil type, the urban land Hagerstown complex with 0-8% slopes (Chester County soil code, "UphB") (USDA 1963). The land uphill of the immediate project site is dominated by Hagerstown soils and has a slope of 3-8%. The deep, well-drained soils are underlain by limestone. The soil is moderately permeable, has moderate available moisture capacity, is productive, and capable of supporting physical development. Because the proposed action introduces new development to this soil, soil is analyzed as an impact topic.

Topography

NPS policy is to protect the abundance and diversity of all naturally occurring communities. The *2001 NPS Management Policies* (NPS 2000), NPS DO #77: *Natural Resources Management*, and other NPS and Valley Forge NHP policies provide general direction for the protection of topography. The project area is slightly concave. The highest area portions are located at the southwest corner (152 feet) and along the northern project area boundary (144 feet). The central portion of the project area ranges in elevation from 138 feet along the western boundary to 130 feet at the intersection of Thomas Road. The proposed action includes physical development that could be guided by existing topographic conditions and may also include cut or fill activities to alter current topography. Because the proposed actions may alter existing conditions, topography is analyzed as an impact topic.

Air Quality

The 1963 Clean Air Act (CAA), as amended, requires land managers to protect air quality. Section 118 of the CAA further requires parks to meet all federal, state, and local air pollution standards, and NPS Management Policies 2001 (NPS 2000) addresses the need to analyze potential impacts to air quality during park planning. Located within Chester and Montgomery counties, Valley Forge NHP sits within the Environmental Protection Agency's Philadelphia-Wilmington-Trenton Severe Ozone Non-attainment Area. The proximity of the Pennsylvania Turnpike and current traffic levels in the project site vicinity contribute to existing air quality conditions. For approximately 40 years, the

MCHVF operated at St. Matthew's United Methodist Church at 600 Walker Road, Tredyffrin Township. Relocation of the proposed Montessori school .7 miles northeast to the proposed project site will not impact regional air quality. However, construction and demolition actions proposed at the project site may have some short-term, negligible impacts to air quality. Therefore, the impact topic of air resources is addressed.

Soundscape

As described in *NPS Management Policies 2001* (NPS 2000) and NPS DO #47: *Sound Preservation and Noise Management*, preservation of natural soundscapes associated with national park units is an important part of the NPS mission. Natural soundscapes exist in the absence of human-caused sound. As defined, natural soundscapes do not exist at the project site or any other location within Valley Forge NHP. The project site is bounded to the north and west by tall grass meadows maintained by Valley Forge NHP staff, and the most commonly heard human-caused sounds from these directions are associated with lawn mowing. The project site is bounded to the east and south by developed land, and the most commonly heard human-caused sounds are associated with the residential properties along Thomas Road and traffic on Thomas Road and the Pennsylvania Turnpike. The park makes an effort to minimize the impact of human-caused sounds, where possible. Any construction associated with implementation of the proposed action alternatives could result in additional, dissonant sounds, but such sounds would be temporary. The project site is unoccupied, and the proposed actions on the project site will result in an increase of human-caused sounds. Sound also was identified by project neighbors as a concern. Therefore, soundscape is analyzed as an impact topic.

Visual Resources

NPS Management Policies 2001 (NPS 2000) notes that the enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks. The Organic Act also states that units of the National Park System are charged with conserving park scenery, along with all the natural and cultural resources which contribute to important views. In the evaluation of visual resources, both the visual character of the site and the quality of the viewshed are analyzed. A viewshed comprises the limits of the visual environment associated with the proposed action including the viewsheds within, into, and out of the site. The project site is within the viewsheds of the National Memorial Arch, Outer Line Drive and privately owned properties located along Thomas Road. The proposed actions would include changes to the buildings and cultural landscape and may alter views within and into the site. Therefore, the impact topic of visual resources is addressed.

Cultural Resources

The NHPA, NEPA, NPS DO #12, and NPS DO #28: *Cultural Resource Management Guidelines* require consideration of impacts on cultural resources either listed on or eligible for listing on the national register.

Archeological Resources

The NPS defines an archeological resource as any material remains or physical evidence of past human life or activities that are of archeological interest, including the record of the effects of human activities on the environment. Archeological resources are capable of revealing scientific or humanistic information through archeological research (DO #28, 67). Valley Forge NHP as a whole is nationally significant for its known archeological resources and its potential to yield important information about historic periods already evident in the park. Known archeological resources associated with prehistory are significant at the state and local levels. The project site is potentially archeologically sensitive. Phase I & II archeological investigation was conducted. No artifacts were recovered that relate to prehistory or 18th century activities within the project site. Artifacts from the early to mid 19th century were found in the yard behind the main house. The archeologists related those artifacts to a probable food preparation and serving function. Because archeological resources are present, the impact topic of archeological resources is analyzed.

Historic Structures

A historic structure is defined by the NPS as “a constructed work, usually immovable by nature or design, consciously created to serve some human act” (DO #28, 113). In order for a structure or building to be listed on or eligible for listing on the national register, it must possess historic integrity of those features necessary to convey its significance, particularly with respect to location, setting, design, feeling, association, workmanship, and materials. The National Register Bulletin #15: *How to Apply the National Register Criteria for Evaluation* (NPS 1990) provides a comprehensive discussion of these characteristics. Valley Forge NHP contains numerous historic buildings and individual structures within its boundaries. Within the immediate project site, the David Walker main house and the root cellar are listed on the national register as contributing resources to the park’s national register significance. The adjacent barn, tenant house, and wagon shed, as well as the Evans house and garage at 1610 Thomas Road, are not contributing resources. Because the two contributing structures are proposed to be rehabilitated, the impact topic of historic structures is analyzed.

Cultural Landscapes

As described in DO #28, a cultural landscape is “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” (DO #28, 87). Cultural landscapes are expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The cultural landscape of Valley Forge NHP is significant as the location of the 1777-78 encampment of the Continental Army, for post-war

commemoration of the encampment beginning in the 19th century, and for associations with agriculture, industry, and transportation. Within the proposed action area, early settlement topography, aspect, and circulation (Thomas Road) exist. All other features from the early settlement period are gone, however. There is no known connection of the project site to the encampment. Of the presumed encampment landscape at the project site, only the elements of topography, aspect, and circulation (Thomas Road) can be considered to retain integrity. Therefore, the site lacks integrity for the early settlement period and the encampment period. The site most strongly represents the post-encampment agricultural landscape, which includes the period of 1778 to 1878. The commemorative period is not reflected at the project site. At the Evans property, the landscape is a typical late 20th-century suburban residence and is not significant.

The proposed action would affect the cultural landscape at the David Walker Farmstead. Thus, the impact topic of cultural landscapes is analyzed.

Safety, Accessibility, and Circulation

The project site is served by Thomas Road, a Tredyffrin Township road. The road serves as a “cut-through” for commuters. It carries a volume of traffic that park neighbors identified as a safety concern during scoping. Establishment of the MCHVF at the project site will add to the volume of traffic and raises concerns for safe ingress and egress to the site, as well as having school children in close proximity to vehicle traffic. Therefore, the impact topic of traffic is analyzed.

Park Operations

Facilities at the project site are not used to house park operations or for visitor services. Law enforcement rangers perform security checks of the property. Maintenance staff service the property as needed, including occasional lawn mowing and repair of vandalism. Work has been performed to remediate serious problems, including partial upgrade of the main house heating system, removal of underground oil and gasoline storage tanks, and removal of a hazardous and non-functional swimming pool and culvert system. The proposed action would result in a change of park operations at the project site. Therefore, the impact topic of park operations is analyzed.

Game Animal Hunting

Legal hunting of game animals (primarily white-tailed deer) occurs on private properties adjacent to Valley Forge NHP, including properties on Thomas Road adjacent to the project site. The presence of a school and playground would result in the establishment of a larger safety zone around the property. According to Pennsylvania hunting regulations (Pennsylvania Game and Wildlife Code, Title 34 Chapter 25), it is unlawful to hunt for, shoot at, trap, take, chase or disturb animals within the safety zone of an occupied structure, school or playground without the permission of the occupants. Hunting within a safety zone is legal if the occupants of the structure have authorized the

hunter and hunting activities. The safety zone for archery hunting and crossbow is defined as within 50 yards of any occupied residence, camp, industrial or commercial building, farm house or farm building. The safety zone for playgrounds, schools, nursery schools or day-care centers for *any* weapon used in hunting is defined as 150 yards. Acknowledgement and establishment of a new 150-yard safety zone would affect hunting in the vicinity of the proposed project. Therefore, the impact topic of hunting is analyzed.

Impact Topics Dismissed from Further Analysis

The following impact topics were initially considered but were dismissed from further analysis because the resource is not present in the project site or because any potential impacts would be negligible. They include vegetation, wildlife and wildlife habitat, surface and ground waters, wetlands, floodplains, prime farmlands, lightscapes, drainage and stormwater management; visitor use and experience, cultural resources (museum objects and ethnographic resources), Indian Trust resources, environmental justice, and energy requirements and conservation potential. A brief rationale for the dismissal of each impact topic is provided below.

Natural Resources

Vegetation

NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. The *2001 NPS Management Policies* (NPS 2000), NPS DO #77: *Natural Resources Management*, and other NPS and Valley Forge NHP policies, provides general direction for the protection of vegetation. Vegetation within Valley Forge NHP is a mix of different forest communities, grassland, cropland, and wetland areas. The project area is bounded to the east by residential properties and Thomas Road; to the north and west by grassland; and to the south by modified successional forest (Podnieszinski et al. 2005). The project site contains managed vegetation including mowed lawn and pasture, planted plots of bamboo, and planted ornamental trees. Because there is little or no native vegetation in the project site and because loss of vegetation in general due to conversion to impervious surface (parking lot expansion and paved yard) is negligible, vegetation is dismissed as an impact topic.

Wildlife and Wildlife Habitat

NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. The *2001 NPS Management Policies* (NPS 2000), NPS DO #77: *Natural Resources Management*, and other NPS and Valley Forge NHP policies provide general direction for the protection of wildlife and wildlife habitat. Wildlife and wildlife habitat at Valley Forge NHP encompasses an abundance of species. The project site consists of a managed landscape, however and does not support unique or important wildlife or provide important wildlife habitat. Some displacement of wildlife is likely to occur due to increased human presence on the site; however, this will affect primarily common wildlife

species that are abundant within the park and is considered negligible. Therefore, wildlife and wildlife habitat is dismissed as an impact topic.

Special Status Species

In addition to NPS policies and management guidelines, the Endangered Species Act of 1973, as amended provides for the protection of rare, threatened, and endangered species (floral and faunal). In a letter dated April 25, 2006, USFWS noted that the proposed project is within the known range of the bog turtle (*Clemmys muhlenbergii*). Park staff provided additional detailed survey information to USFWS, and in an e-mail dated May 16, 2006, USFWS concurred that there are no bog turtles currently on the site. Additionally, a June 12, 2006 letter from the Pennsylvania Department of Conservation and Natural Resources determined that no impacts are likely to plant species of special concern. Therefore, the impact topic of special status species was dismissed. See correspondence in Appendix A for additional information.

Surface and Ground Waters

The 2001 NPS Management Policies (NPS 2000), NPS DO #77: Natural Resources Management, along with the Clean Water Act and other federal, state, and local regulations, provide general direction for the protection of surface and ground waters. There are no perennial or intermittent streams, wetlands, or springs on site. Trout Creek is the closest stream and is located approximately 1,600 feet southeast of the project site. The proposed work will not result in a net increase in water volume, rate or pollutant loads, nor will it modify the overall hydrologic pattern. Therefore, the impact topic of surface and ground waters was dismissed.

Stormwater management was identified as an issue during scoping, due to an existing problem with urban flooding in the vicinity. The project site lies at the bottom of a 180.71-acre sub-watershed of the more than 5,000-acre Trout Creek watershed. Most of the Trout Creek watershed is highly developed, and Trout Creek experiences flash flooding from uncontrolled stormwater runoff. Within the park, the sub-watershed is 3.81% impervious surface, and most stormwater runoff sheet-flows through the meadows and infiltrates into the ground, facilitated by the karst landscape.

The Pennsylvania Turnpike runs adjacent to the site. Consistent with regulations that were in place at the time the turnpike was constructed, the highway discharges all stormwater to local streets and adjacent properties. Stormwater from 14.40 acres of impervious surface from the turnpike's Valley Forge rest stop and from the road itself is discharged into the park. In some storms, this runoff moves through the David Walker Farmstead and then to the adjacent intersection of Thomas and Richards Roads. Both the farmstead and the intersection have experienced urban flooding due to uncontrolled stormwater runoff.

Proposals to manage and mitigate stormwater are presented in Chapter 2: Alternatives / Elements Common to the Action Alternatives.

Wetlands

Executive Order 11990, "Protection of Wetlands," and NPS DO #77-1: *Wetland Protection* defines the NPS goal to maintain and preserve wetland areas. Valley Forge NHP has approximately 70 acres of wetland area within park boundaries. However, there are no wetlands located within the project site or the sub-watershed. The closest wetland area is near the Maurice Stephens House in the park, over one mile away from the project site, and within a different watershed. Therefore, the impact topic of wetlands was dismissed.

Floodplains

Executive Order 11988, "Floodplain Management," and NPS DO #77-2: *Floodplain Management* require an examination of impacts to floodplains and potential risk involved in placing facilities within floodplains. The project site is located approximately 1,500 feet from the floodplains associated with Trout Creek. The project site is located outside the 100- and 500-year floodplain. Therefore, the impact topic of floodplains was dismissed.

Prime Farmlands

Prime farmland is one of several designations made by the U.S. Department of Agriculture to identify important farmlands in the United States. It is important because it contributes to the nation's short- and long-range needs for food and fiber. In general, prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable level of acidity or alkalinity, an acceptable content of salt or sodium, few to no rocks, and permeable soils (designated as prime farmland soils). Urban and developed areas cannot be considered prime farmland. Therefore, the Urban-land Hagerstown silt loam within the project site is not considered prime farmland. Additionally, the project site is not managed as farmland and has been developed. The proposal would result in a minor change in the amount of development on the project site and would not increase the acreage of prime farmland soil that is developed or used for non-agricultural purposes.

The soil west of the project site on which stormwater berms are proposed is part of the Hagerstown series and is considered prime farmland. Since these prime farmland soils are used for non-agricultural purposes and installation of drainage control features will result in no impact to these soils, the impact topic of prime farmland was dismissed.

Lightscape

In accordance with NPS Management Policies 2001 (NPS 2000), the NPS strives to preserve natural, ambient lightscapes, which are natural resources and values that exist in the absence of human-caused light. Valley Forge NHP has no natural lightscape, by definition, because human-caused light is always present in the park and the lightscape conditions at the park are typical of suburban communities near major cities. At the project site, the Valley Forge rest-stop of the Pennsylvania Turnpike and traffic on the turnpike itself are a primary source of light pollution. This light pollution was identified in

the park's internal draft GMP/EIS (NPS 2006) as the single impairment in an otherwise dark sky to the south of the park.

One street lamp is located at the intersection of Thomas Road and Richards Road. Traffic on these roads is a source of light, as well as surrounding residential lighting. Within the park, the National Memorial Arch and the adjacent flag pole contribute point-sources of light pollution because they are illuminated each night throughout the year. On the project site, any additional lighting would be added only within the parking areas (where lights already exist) and along walkways for visitor safety and security. This lighting would be designed with “cut-off” luminaries to limit light to the confines of the site and to eliminate lighting the night sky. Therefore, the impact topic of lightscape management was dismissed.

Cultural Resources

Museum Objects

The NPS defines a museum object as “a material thing possessing functional, aesthetic, cultural, symbolic, and/or scientific value, usually movable by nature or design. Museum objects include prehistoric and historic objects, artifacts, works of art, archival material, and natural history specimens that are part of a museum collection” (DO #28, 137). No museum objects are included as part of the proposed project. Objects discovered at the site will be addressed under the impact topic of “Archeological Resources.” Therefore, the impact topic of museum objects was dismissed.

Visitor Use and Experience

Enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks (NPS 2000). The NPS strives to provide opportunities for forms of enjoyment that are uniquely suited and appropriate to the natural and cultural resources found in parks. The project site has never been used as part of the visitor experience, and no necessary or feasible visitor use of the site has been identified. A mown fire break adjacent to the site is used as trails by visitors, but the change in land use of the project site will not affect the visitor experience. As a result, the impact topic of visitor use and experience was dismissed.

Ethnographic Resources

An ethnographic resource is defined as any “site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it” (DO #28, 157). Ethnographic resources eligible for listing on the national register are traditional cultural properties. No sites, structures, or objects at the project site (or within Valley Forge NHP) have been identified as either ethnographic resources or traditional cultural

properties. Therefore, the impact topic of ethnographic resources was dismissed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) would be followed. See Appendix A for correspondence with interested American Indian tribes.

Section 106 Summary

There are no traditional cultural properties in area of potential effects or its general vicinity. In accordance with the Advisory Council on Historic Preservation's (ACHP) regulations implementing Section 106 of the National Historic Preservation Act (36 CFR 800.4(d)(1)), the determination of effect is ***no historic properties affected***.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian Trust resources from a proposed project or action by U.S. Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian Trust responsibility is a legally enforceable obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal laws with respect to American Indian tribes. There are no known Indian Trust resources in Valley Forge NHP, and the lands comprising the park are not held in trust by the secretary of the interior for the benefit of Indians due to their status as Indians. Therefore, the impact topic of Indian Trust resources was dismissed.

Energy Requirements and Conservation Potential

The CEQ guidelines for implementing NEPA require examination of energy requirements and conservation potential as a possible impact topic in environmental documents. Valley Forge NHP strives to incorporate the principles of sustainable design and development 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 below subscribe to and support the practice of sustainable planning and design in part by addressing underutilized buildings and parking lots and upgrading to an energy efficient HVAC system. The project aims to develop alternatives that meet the purpose and need of the project while maintaining sustainable design. The MCHVF would encourage suppliers and contractors to follow sustainable practices. Any adverse impacts relating to energy use, availability, or conservation would be negligible. Therefore, the impact topic of energy requirements and conservation potential is dismissed.

Environmental Justice

Executive Order 12898, “General 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 the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the EPA, environmental justice is the “...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”

The goal of “fair treatment” is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts. The communities surrounding Valley Forge NHP contain both a minority and low-income population; however, environmental justice is dismissed as an impact topic for the following reasons:

- The park staff solicited public participation as part of the planning process and gave equal consideration to all input from persons regardless of age, race, income status, or other socioeconomic or demographic factors.
- Implementation of the proposed action would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse impacts on any minority or low-income population.
- The impacts associated with implementation of the proposed action would not disproportionately affect any minority or low-income population or community.
- Implementation of the proposed action would not result in any identified effects that would be specific to any minority or low-income community.
- Any impacts to the socioeconomic environment resulting from implementation of the proposed action are negligible to minor in intensity, lasting only as long as construction. In addition, the park staff and planning team do not anticipate the impacts on the socioeconomic environment to appreciably alter the physical and social structure of the nearby communities.