



# Rock Creek Park

## Preserve Historic Peirce Mill

Environmental Assessment/Assessment of Effect (ROCR 77569)





**U.S. Department of the Interior  
National Park Service**

**Preserve Historic Peirce Mill  
Rock Creek Park  
Environmental Assessment/Assessment of Effect**

**January 2010**

---

**Proposed Action:** Located in the northwest section of Washington, D.C., Rock Creek Park (the park) is a unit of the National Park Service (NPS). It is estimated that the park supports more than two million recreational visits per year. Visitors come to the park for recreational opportunities, as well as educational and interpretive programs (NPS 2005). One of the park's notable interpretive sites is the 19th century Peirce Mill (the mill), the only remaining mill on Rock Creek and the only remaining building in Washington, D.C. that represents this industrial history. Rot in the water wheel shaft damaged mill gears and other working elements of the mill and resulted in cessation of mill operations in 1993. This has prevented the park from interpreting one of its key resources to the public. In order to open the mill and interpret its grounds, the NPS must find a means of appropriately rehabilitating the mill and improving access and circulation throughout the surrounding area. Implementing the NPS preferred alternative would result in minor, short-term, adverse impacts on soils and topography, vegetation, and cultural landscapes; moderate, short-term, adverse impacts on visual resources and operations and management; minor to moderate, short-term, adverse impacts on floodplains and visitor use and experience; negligible, long-term, adverse impacts on floodplains; minor, long-term, adverse impacts on soils and topography, vegetation, and archeological resources; long-term, beneficial impacts on soils and topography, vegetation, cultural landscapes, historic structures, aesthetics and visual resources, visitor use and experience, and park operations and management.

**For Further Information Contact:** Harold Stone  
Project Coordinator  
Rock Creek Park  
(202) 895-6013

**Note to Reviewers and Respondents:**

During the 30-day public review period, if you wish to comment on this Environmental Assessment/Assessment of Effect, you may mail comments to the name and address below or you may post them electronically at <http://parkplanning.nps.gov>. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Superintendent  
Rock Creek Park  
3545 Williamsburg Lane, NW  
Washington, DC 20008

This page intentionally left blank.

# CONTENTS

<b>Contents .....</b>	<b>iii</b>
<b>Figures .....</b>	<b>v</b>
<b>Tables .....</b>	<b>v</b>
<b>Acronyms and Abbreviations.....</b>	<b>vi</b>
<b>Introduction: Purpose and Need.....</b>	<b>1</b>
Purpose and Need for Action.....	2
Study Area Description .....	7
History and Significance of Peirce Mill.....	7
Project Background .....	8
Previous and Related Planning Studies.....	8
Scoping .....	8
Planning Issues and Concerns.....	9
Regulatory Issues and Management Concerns .....	10
Impact Topics Retained for Analysis.....	10
Impact Topics Dismissed from Further Analysis .....	13
<b>Alternatives .....</b>	<b>19</b>
Development of Alternatives .....	19
Alternative A (No-action).....	19
Alternative B (NPS Preferred Alternative).....	20
Alternative C .....	25
Alternative D .....	29
Mitigation Measures of the Action Alternatives .....	30
Soils and Topography .....	30
Vegetation .....	30
Floodplains .....	33
Cultural Resources.....	33
Aesthetics and Visual Resources.....	33
Alternatives Considered but Dismissed from Further Analysis .....	33
Summary of the Alternatives.....	33
Environmentally Preferred Alternative .....	47
<b>Affected Environment &amp; Environmental Consequences.....</b>	<b>55</b>
Methodology for Assessing Impacts .....	55
Type .....	56
Context.....	56
Duration.....	56
Level of Intensity .....	56
Cumulative Impacts.....	57

Cumulative Impacts .....	57
Impairment .....	58
Soils and Topography .....	59
Affected Environment .....	59
Environmental Consequences .....	59
Vegetation .....	63
Affected Environment .....	63
Environmental Consequences .....	64
Floodplains .....	67
Affected Environment .....	67
Environmental Consequences .....	68
Cultural Resources .....	71
Cultural Landscapes .....	72
Affected Environment .....	72
Environmental Consequences .....	75
Historic Structures .....	80
Affected Environment .....	80
Environmental Consequences .....	80
Archeological Resources .....	84
Affected Environment .....	84
Environmental Consequences .....	85
Aesthetics and Visual Resources .....	88
Affected Environment .....	88
Environmental Consequences .....	89
Visitor Use and Experience .....	92
Affected Environment .....	92
Environmental Consequences .....	94
Park Operations and Management .....	97
Affected Environment .....	97
Environmental Consequences .....	98
<b>Consultation and Coordination.....</b>	<b>101</b>
Agency and Public Involvement .....	101
The Scoping Process .....	101
Agency Consultation .....	102
Future Compliance Needs/Permits .....	103
Document review .....	103
<b>References .....</b>	<b>Ref-1</b>
Bibliography .....	Ref-1
List of preparers and Contributors .....	Ref-3
Contributors and Reviewers .....	Ref-3
<b>Appendix A: Relevant Correspondence .....</b>	<b>A-1</b>
<b>Appendix B: Photographs of Existing Conditions: Viewsheds .....</b>	<b>B-1</b>

## FIGURES

<b>Figure No.</b>	<b>Description</b>	<b>Page</b>
1	Site Location .....	3
2	Study Area / Existing Conditions.....	5
3	Alternative B (NPS Preferred Alternative) .....	21
4	Alternative C.....	27
5	Alternative D.....	31
6	Area of Potential Effect .....	73

## TABLES

<b>Table No.</b>	<b>Description</b>	<b>Page</b>
1	Summary of Alternatives .....	34
2	Summary of Environmental Consequences .....	37

# ACRONYMS AND ABBREVIATIONS

**ADA** – Americans with Disabilities Act  
**Advisory Council** – Advisory Council on Historic Preservation  
**APE** – Area of Potential Effect  
**CEQ** – Council on Environmental Quality  
**CFA** - Commission of Fine Arts  
**CLR** – cultural landscape report  
**DDOT** – District of Columbia Department of Transportation  
**DO** – Director’s Order  
**EA/AoE** – Environmental Assessment/Assessment of Effect  
**EPA** – Environmental Protection Agency  
**FEMA** – Federal Emergency Management Agency  
**GMP/EIS** – General Management Plan/Environmental Impact Statement  
**the mill** – Peirce Mill  
**MOA** – memorandum of agreement  
**National Register** – National Register of Historic Places  
**NCPC** – National Capital Planning Commission  
**NEPA** – National Environmental Policy Act  
**NGVD29** – National Geodetic Vertical Datum of 1929  
**NHPA** – National Historic Preservation Act  
**NPS** – the National Park Service  
**NRCS** – Natural Resource Conservation Service  
**the park** – Rock Creek Park  
**ROD** – **Record of Decision**  
**HPO** – District of Columbia Historic Preservation Office  
**SOF** – statement of findings  
**Tilden Street** – Tilden  
**USFWS** – U.S. Fish and Wildlife Service



# 1

## **INTRODUCTION: PURPOSE AND NEED**

Located in the northwest quadrant of Washington, D.C., Rock Creek Park (the park) is a unit of the National Park Service (NPS) (Figure 1). The 1890 legislation that established the park states that the area is to be “perpetually dedicated and set apart as a public park or pleasure ground for the benefit and enjoyment of the people of the United States.” It specifies that the park is to “provide for the preservation from injury or spoliation of all timber, animals, or curiosities within said park, and their retention in their natural condition, as nearly as possible.” It is estimated that the park supports more than two million recreational visits per year. Visitors come to the park for recreational opportunities, as well as educational and interpretive programs (NPS 2005). One of the park’s notable interpretive sites is the 19th century Peirce Mill (the mill), the only remaining mill on Rock Creek and the only remaining building in Washington, D.C. that represents this industrial history. Rot in the water wheel shaft damaged mill gears and other working elements of the mill and resulted in cessation of mill operations in 1993. This has prevented the park from fully interpreting one of its key resources. In order to open the mill and interpret its grounds, the NPS must find a means of appropriately rehabilitating the mill and improving access and circulation throughout the surrounding area. The study area considered for the proposed action includes the mill, the adjacent parking lot located between the mill and the barn, the Grove 1 parking lot, the system of pedestrian paths and trails that provide access through the site, the surrounding lawn, and the former orchard area (Figure 2). Visitor parking, safety, and access to the site are also considered in the alternatives presented in the document. The park’s multiuse trail is not included in the study area, nor is the trail a part of any of the proposed alternatives.

This Environmental Assessment/Assessment of Effect (EA/AoE) evaluates four alternatives including an NPS preferred alternative for the proposed action. 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 AND NEED FOR ACTION**

The purpose of the proposed action is to rehabilitate and reopen the historic mill as an operating water-powered mill that will meet the interpretive and educational missions of the park. It will conserve the historic resources associated with the mill and its surroundings as specified in the park's record of decision (ROD) for the general management plan/environmental impact statement (GMP/EIS) on June 6, 2007. The rehabilitation will be informed by the 2009 Peirce Mill Complex Cultural Landscape Report (CLR) and will be accomplished in a manner that protects the historic fabric of the mill to the maximum extent possible and improves safe movement of and accessibility by visitors throughout the site.

Action is needed at this time to correct defects and improve the structural integrity of the mill, repair internal and external elements of the mill, and protect it against future damage.

Over the last 15 years, the NPS and the Friends of Peirce Mill have taken steps to improve the structural stability of the mill and repair the mill machinery. These repair projects included repairs to the historic windows and include repairs to the structural joist at the 1<sup>st</sup> floor. Despite these efforts, some of the internal and external elements of the mill are still not suitable for regular visitor use or do not reflect the historic appearance of the mill. In addition, over the years, regular flooding and the seasonal temperature changes have caused damage to the mill. Appropriate protection measures needed at the site include appropriate environmental controls and security systems, as required by NPS policy (NPS 2006). These systems would not only protect the structure, but meet NPS guidelines for visitor facilities. These controls would include fire suppression and/or heat detection and a heating/ventilation system. In some cases, these systems must be designed to be compatible or paired with each other. For example, certain fire suppression systems cannot be subjected to freezing temperatures. The security system would need to provide appropriate levels of monitoring when the mill is closed.

Access improvements to the site are needed to enhance public safety, provide universal accessibility, and restore the historic context at the site.

Currently, the parking lot located between the mill and the barn occupies much of the historic landscape. During the active historic era of the mill operation, this area between the barn and the mill was used as a staging area for transportation of grain as well as other items. Not only does the current use disrupt the historic landscape, but it takes up space that could be used for pedestrian circulation and educational programs. If the NPS is to reopen the mill, there is a need to relocate existing parking without losing parking capacity at the site. The existing pedestrian trails at the mill require visitors to access the park's multiuse trail system to efficiently tour the site. As a result, pedestrians must share the trails with bicyclists traveling past the mill. Other pedestrian walkways at the mill are not compliant with the Americans with Disabilities Act (ADA). These conditions present a potential safety hazard and do not allow for appropriate access into or around the mill. To avoid these conditions, many visitors walk across the maintained lawns around the mill, creating social trails that result in erosion and compaction. Therefore, there is a need to enhance the trail system around the mill to provide safe and appropriate access.

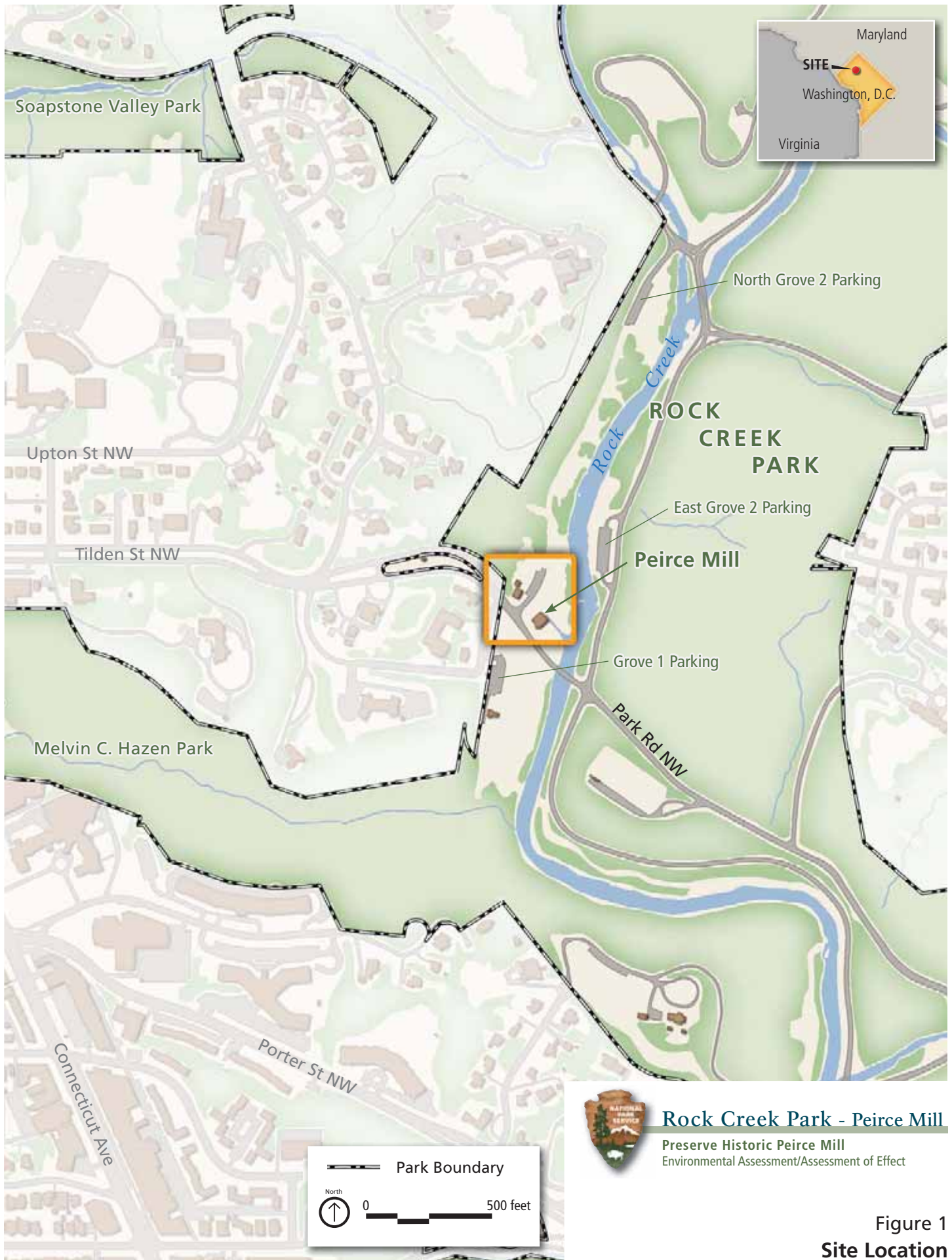


Figure 1  
Site Location

This page intentionally left blank.





**Rock Creek Park - Peirce Mill**  
Preserve Historic Peirce Mill  
Environmental Assessment/Assessment of Effect

Figure 2  
Study Area/Existing Conditions





## **STUDY AREA DESCRIPTION**

The mill is located in the southern portion of the park, U.S. Reservation 339, situated on the northwest bank of the creek immediately north of Tilden Street. The entire complex covers over 20 acres (see Figure 1). The historic core of the complex is the area immediately surrounding the mill structure and includes the mill, the barn, millrace, and the landscape immediately surrounding these resources (NPS 2009).

The study area considered for the proposed action includes the mill, the adjacent parking lot, the Grove 1 parking lot, the system of pedestrian paths and trails that provide access through the site, and the surrounding lawn (see Figure 2). Parking lots adjacent to the study area (north Grove 2 and east Grove 2) are also considered in the alternatives presented in the document. The adjacent portion of the park's multiuse trail system is not included in the study area, nor is the trail a part of any of the alternatives.

## **HISTORY AND SIGNIFICANCE OF PEIRCE MILL**

Rock Creek Park was established in 1890 as an area to be “perpetually dedicated and set apart as a public park or pleasure ground for the benefit and enjoyment of the people of the United States.” It specifies that the park is to “provide for the preservation from injury or spoliation of all timber, animals, or curiosities within said park, and their retention in their natural condition, as nearly as possible.” This direction forms the basis for planning and management of park resources (NPS 2005). The recently adopted GMP for the park establishes a direction for the management of the mill and its surrounding area. The management framework for Peirce Mill contained in the GMP and affirmed in the 2007 ROD is to “(R)ehabilitate the Peirce Mill complex to focus on the history of milling and land use in the area. This would expand on the already completed rehabilitation of the Peirce Mill Barn” (NPS 2007).

The mill is individually listed as a structure in the National Register of Historic Places (National Register) with its period of significance dating from its construction during the 1820's and is a contributing resource to the Rock Creek Park Historic District (NPS 1969, 1991). Agriculture and commerce are noted as the areas of significance. The mill was additionally recognized for its significant contribution to the “cultural heritage and visual beauty of the District of Columbia” (NPS 1969). The park's extensive history and significance and the role of Peirce Mill in that history are described in the Rock Creek Park Historic District National Register nomination (NPS 1991). The nomination focused on nine major areas of significance, and the district was officially listed in the National Register in 1991. Peirce Mill is singled out in two areas in the National Register nomination and listing. The park's significance in industry is directly tied to the mill, as it is the sole remaining mill of a formerly flourishing industry on Rock Creek. The district's significance in architecture recognizes the mill complex and the Peirce-Klingbe Mansions as important examples of early 19th century stone vernacular construction in Washington, D.C. The mill also has additional architectural importance because of its 1938 restoration by the NPS. The building was an early NPS historic preservation project in Washington, D.C., directed by noted restoration architect Thomas T. Waterman (NPS 1969; NPS 1991). The setting of the mill has been altered many times during its history and the history of the park. Despite these alterations, the setting presents landscape elements related to all phases of its use. These phases include a 19th century industrial landscape, early 20th century picturesque design, and its use as a mid-20th century living history interpretive site. As noted in the 2009 CLR, “This layering of historic land use has resulted in a site which retains limited integrity to any one period of significance, but contains landscape elements that represent the three periods of significance.” The period of significance for the cultural landscape extends from the 1800s to the 1950s.

The area's milling history is interpreted at the mill and its surroundings through an exhibit inside the Peirce Barn, which presents an illustrated history of the mills that once flourished along Rock Creek. A freestanding kiosk near the creek provides a more detailed explanation of the mill's development and the milling activities that were carried on here in the 19th century.

## PROJECT BACKGROUND

Previous and related planning studies have been completed for Rock Creek Park, as well as specific plans for the mill. These plans were reviewed to provide additional information and guidance for the proposed action. The studies used and scoping efforts undertaken are summarized below.

### PREVIOUS AND RELATED PLANNING STUDIES

The *Rock Creek Park and the Rock Creek and Potomac Parkway Final GMP/EIS* (NPS 2005) established the goals and management objectives for the park over the next 15 to 20 years. The GMP/EIS included direction to rehabilitate the mill and the surrounding landscape to provide an improved interpretive and educational experience at the park. This direction led to the development of the archeological study and CLR, discussed below, as well as this EA/AOE. The ROD for the plan was signed in 2007.

*Bold, Rocky, and Picturesque: Archeological Identification and Evaluation Study of Rock Creek Park* (NPS 2008) was developed to identify and document existing archeological resources throughout the park. The study area for this EA/AOE was addressed in this investigation. Although archeological evidence was limited in this area, resources were identified that require future investigation and protection. The findings of this study were used to inform and develop the alternatives presented in this document.

The *Peirce Mill Complex CLR* (NPS 2009) was developed to identify means of meeting the direction of the GMP/EIS for the mill and surrounding area. The development of the CLR included historic research of the property as well as meetings with NPS staff and resource experts and consultants met to develop appropriate treatment plans for the mill. The treatments presented in the CLR were refined into the alternatives presented in this document. Content of the CLR is set in guidelines developed by the NPS and the National Register program administered by the NPS. The intent of the document is to guide the treatment of the landscape surrounding Peirce Mill. It provides a description of the evolution of the landscape and its historic character.

### SCOPING

This project was considered in the Final GMP/EIS for Rock Creek Park released in July 2005. Scoping for that document was begun in 1996 and continued until the Draft GMP/EIS was released in March of 2003. A Record of Decision on the GMP/EIS was issued in June of 2007. The ROD determined that the NPS would "(R)ehabilitate the Peirce Mill complex to focus on the history of milling and land use in the area. This would expand on the already completed rehabilitation of the Peirce Mill Barn" (NPS 2007). Because of the relatively recent decision and in light of the extensive scoping on the GMP/EIS, the NPS determined that additional public scoping would not result in additional or new issues to be addressed as



part of this process. This is in accord with NPS guidance for the preparation of environmental assessments, in which scoping is divided into two processes, internal and external. Internal scoping involves discussion, information collection and issue identification among NPS personnel. External scoping for environmental assessments is only required to involve appropriate federal, state, and local agencies and any affected Indian tribe (NPS 2001). During the development of this proposal the NPS did consult with the Friends of Peirce Mill so that proposed actions and activities could be coordinated and potential concerns incorporated into the planning process.

During the development of this EA/AoE, NPS personnel conducted internal scoping via a value analysis to fully review the options developed from the Cultural Landscape Report for Peirce Mill as well as other foundation documents such as the Cultural Landscape Inventory and the Historic Structures Report for the mill prepared by the Friends of Peirce Mill. Participants in this value analysis included staff from Rock Creek Park, the NPS Denver Service Center, NPS Regional Office representatives, consultants to the NPS, and representatives from the Friends of Peirce Mill. At the value analysis, attendees conducted a Choosing by Advantages session to weigh the different options for the mill and surrounding landscape and to identify the NPS preferred alternative presented in this document. The internal planning team has continued to communicate throughout the development of this document. Additional contact with agencies also was made via letter, including the SHPO; the Advisory Council on Historic Preservation (the Advisory Council); the Environmental Protection Agency (EPA); the U.S. Fish and Wildlife Service (USFWS); the Washington, D.C. Department of the Environment; the District Department of Transportation (DDOT); the National Capital Planning Commission (NCPC); the Commission of Fine Arts (CFA) and the Washington, D.C. Office of Planning. For additional information, see “Chapter 4: Consultation and Coordination” and “Appendix A: Relevant Correspondence.”

## PLANNING ISSUES AND CONCERNS

During the development of the GMP and throughout this specific planning process, specific considerations and concerns were identified as critical to preserving the mill. The following were identified as most important to the planning process: protecting the historic fabric of the mill, presenting the cultural landscape at the mill, and improving accessibility to the mill and across the landscape. Along with the purpose and need for the proposed action, these topics guided the development of alternatives and contributed to the selection of impact topics.

***Protecting the historic fabric of the mill.*** Despite its relatively recent closure and flood damage, the mill still possesses a great deal of historic fabric from its original construction and the circa 1930 renovations performed by the NPS. Any proposals made in this document to further renovate and protect the mill to make it operational and safe for visitors should attempt to protect the existing historic fabric of the mill.

***Presenting the cultural landscape at the mill.*** The landscape around the mill is dominated by the existing parking lot constructed in 1960, and linked by a system of pedestrian paths, and trails. While this has provided direct access to the mill, it has prevented the NPS from presenting the historic context of the surrounding features. Any proposals made in this document should attempt to relocate these structures to allow the NPS to properly present the historic setting at the mill.

***Improving accessibility to the mill and across the landscape.*** Access to the mill is provided by local roads and the park’s multiuse trail. However, access within the mill grounds is limited to the multiuse trail

and a series of pedestrian paths that are not ADA compliant. These circulation routes do not provide appropriate access through the site, nor do they provide access to different vantage points on the landscape. This has led many visitors to develop social trails across the landscape. These trails create tripping hazards and impact the vegetation at the site, leading to soil erosion. Any proposals made in this document should attempt to improve formal access to the mill and across the landscape.

## **REGULATORY ISSUES AND MANAGEMENT CONCERNS**

Based on discussions with NPS staff and planning team members, implementation of the Preserve Historic Peirce Mill EA/AoE is consistent with the General Management Plan and Record of Decision approved in 2007, existing legislation, and NPS policies. Several approvals and reviews would be required prior to construction. These include reviews by the National Capitol Planning Commission (NCPC) and Commission of Fine Arts (CFA), compliance with local sediment control requirements, Section 106 consultations with the District of Columbia SHPO, and consultation with the DDOT concerning the proposed bus turnaround.

## **IMPACT TOPICS RETAINED FOR ANALYSIS**

Impact topics are resources of concern within the project area that could be affected, either beneficially or adversely, by the range of alternatives presented in this EA/AoE. They were identified based on the issues raised during scoping; site conditions; federal laws, regulations, Executive Orders, NPS *Management Policies 2006* (NPS 2006), and Director's Orders; and staff knowledge of the park's resources.

Impact topics identified and analyzed in this EA/AoE are listed below along with a brief rationale for the selection of each impact topic. They include soils and topography, vegetation, floodplains, energy requirements and conservation potential, cultural landscapes, historic structures, archeological resources, aesthetics and visual resources, visitor use and experience, and park operations and management. Each impact topic is further discussed in detail in "Chapter 3: Affected Environment and Environmental Consequences" of this document.

### **Soils and Topography**

NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. NPS *Management Policies 2006* (NPS 2006) and other NPS and park policies provide general direction for the protection of soils. Within the study area, the primary soil type is Codorus-Urban land complex (NRCS 2009). The proposed action includes changes in impervious surface and grading of soils and addresses associated issues arising from the development of social trails. Therefore, the impact topic of soils and topography is addressed.

### **Vegetation**

NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. NPS *Management Policies 2006* (NPS 2006) and other NPS and park policies provide general direction for the protection of vegetation. Much of the vegetation found in the study area consists of invasive tree and shrub species; however, there also are oak, maple, and beech trees populating the wooded areas that line the study area. The proposed action would include the removal of a select area within this wooded portion

of the study area. Although a majority of these woody species are invasive, others are native species. The proposed action also would include the planting of an interpretive orchard and the formalization of several social trails. Therefore, the impact topic of vegetation is addressed.

### **Floodplains**

Executive Order 11988, “Floodplain Management” and NPS DO #77-2: Floodplain Management require an examination of impacts on floodplains and potential risk involved in placing facilities within floodplains (NPS 2003). The park’s position along Rock Creek and near the Potomac River makes floodplain management an important topic. A portion of the proposed action would occur within the 100-year floodplain. Therefore, the impact topic of floodplains is addressed.

### **Energy Requirements and Conservation Potential**

The CEQ guidelines for implementing NEPA require an examination of energy requirements and conservation potential as a possible impact topic in environmental documents. The park 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 presented in this document subscribe to and support the practice of sustainable planning and design in part by maintaining multimodal access to the mill. The proposed action would result in the introduction of new energy consuming equipment in the mill. The park would encourage suppliers and contractors to follow sustainable practices during the construction process. Consequently, there would be beneficial impacts relating to energy use and conservation. Because impacts related to energy use and conservation would be addressed through changes to facilities in the study area, the topic is addressed under park operations and management.

### **Cultural Resources**

The National Historic Preservation Act (NHPA; 16 USC 470 et seq.), NEPA, the NPS Organic Act, NPS Management Policies (NPS 2006), DO #12 (Conservation Planning, Impact Analysis and Decision-making), and NPS-28 (Cultural Resources Management Guideline) require the consideration of impacts on any cultural resources that might be affected. The NHPA specifically requires consideration of impacts on cultural resources either listed in, or eligible to be listed in, the National Register of Historic Places (NRHP). Cultural resources include archeological resources; cultural landscapes, historic structures and districts; ethnographic resources; and museum objects, collections, and archives.

**Cultural Landscapes.** The NPS defines a cultural landscape as a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person exhibiting other cultural or aesthetic values (NPS 2006). The proposed action would occur on the mill’s cultural landscape and result in changes to the landscape and its contributing features. Therefore, the impact topic of cultural landscapes is addressed.

**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). In order for a structure or building to be listed in or eligible for listing in 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 park’s historic structures, buildings, and objects have been assessed in several NPS documents including the 2009 CLR. All of the action alternatives would modify the historic mill through changes to access, structural improvements, or other actions more fully described in the Alternatives B, C, and D; therefore, the impact topic of historic structures is addressed.

**Archeological Resources.** Archeological resources are the material remains of past human activity. These material remains are analyzed using several methods including, but not limited to, scientific tests, oral interviews, and ethnographic data. Limited archeological remains relating to the history of the mill have been identified within the study area. In addition, these remains indicate that additional, unknown resources could exist within the study area. The proposed action could result in changes to the condition of these resources. Therefore, the impact topic of archeological resources is addressed.

### **Aesthetics and Visual Resources**

The Organic Act states that NPS units are charged with conserving park scenery, along with all the natural and cultural resources that contribute to important views. In the evaluation of visual resources, both the visual character and the quality of the viewshed within the study area are considered. A viewshed comprises the limits of the visual environment associated with the proposed action including the viewsheds within, into, and out of the study area. The mill includes a wide variety of viewsheds that are important to the NPS interpretation of the cultural resources, along with views of the creek and other natural resources. The proposed action could result in changes to these viewsheds. Therefore, the impact topic of aesthetics and visual resources is addressed.

### **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 2006). 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 proposed action is meant to enhance the visitor experience, which encompasses interpretation, understanding, enjoyment, safety, and accessibility of the mill. Because the proposed action would result in changes to these conditions, the impact topic of visitor use and experience is addressed.

Safe and efficient access and circulation of all visitors at the mill is important to an enjoyable visitor experience. Site access and circulation also is important to other park visitors traveling along the multiuse trail. In addition to circulation through the site, access to the mill and across the varying terrain is necessary to provide an appropriate visitor experience. The proposed action would result in new access and circulation patterns at the mill. Because these new patterns directly relate to the visitor experience, the impact topic of site access and circulation is addressed under visitor use and experience.

## **Park Operations and Management**

The proposed action would result in changes to park operations and management in and around the mill. These changes would be related to the condition of existing resources and the introduction of new service lines, trails and other features that require a change in operational activity and management of the site. Therefore, the impact topic of park operations and management is addressed.

## **IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS**

The following impact topics were initially considered but dismissed from further analysis because the resource is not present in the project area or because any potential impacts would be no more than negligible to minor. They include prime farmland, geologic resources, wildlife and wildlife habitat, special status species, water quality, wetlands, air quality, soundscapes, lightscares, museum collections, ethnographic resources, Indian trust resources, socioeconomic resources and adjacent lands, and environmental justice. A brief rationale for the dismissal of these impact topics is provided below.

### **Prime Farmland**

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). According to the Natural Resource Conservation Service (NRCS), there are no prime farmland soils within the project area (NRCS 2009). Furthermore, the proposed development of an interpretive orchard at the site does not constitute an agricultural use of the land that would require compliance with this requirement. As a result, the impact topic of prime farmland is dismissed from further analysis.

### **Geologic Resources**

According to NPS *Management Policies 2006*, the NPS will (1) assess the impacts of natural processes and human-related events on geologic resources; (2) maintain and restore the integrity of existing geologic resources; (3) integrate geologic resource management into Service operations and planning; and (4) interpret geologic resources for park visitors. Examples of important geologic resources in parks include geysers and hot springs in geothermal systems; cave and karst systems; canyons and arches in erosional landscapes; sand dunes, moraines, and terraces in depositional landscapes; and dramatic or unusual rock outcrops and formations. Unique geologic features do not exist in the project area, so the action alternatives would not result in impacts on geologic resources. Therefore, the impact topic of geologic resources is dismissed from further analysis.

### **Wildlife and Wildlife Habitat**

NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. NPS *Management Policies 2006*, NPS DO#77: Natural Resources Management, and other NPS and park policies provide general direction for the protection of wildlife and wildlife habitat. During construction there would be a temporary disturbance and displacement of wildlife. The surrounding land, however,

would continue to provide abundant nesting, escape, and protective cover. A few small animals may be forced to relocate to areas outside the project area, but this would not have any long-term adverse effect upon local populations. Wildlife would be expected to reoccupy the project area following construction. Therefore, the impact topic of wildlife and wildlife habitat is dismissed from further analysis.

### **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). Based on a review of park data and the GMP/EIS, there are no known listed species located in the project area (NPS 2005). In a letter dated September 1, 2009, the USFWS acknowledged that no federally listed or proposed threatened or endangered species under their jurisdiction are known to occur within the project area. (A copy of this letter is provided in Appendix A.) As a result, the impact topic of special status species is dismissed from further analysis.

### **Water Quality**

NPS *Management Policies 2006*, 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 groundwater. The proposed action may alter the current drainage patterns at the mill grounds through new parking locations and a proposed bus turnaround and entry drive. However, these changes would be negligible and confined to the grounds. During construction, a Best Management Plan and an approved erosion and sediment control plan would be used to minimize runoff, as required by local requirements and NPS practice. Water used in operation of the mill would be from a city water source and retained in a closed system. Because the excess water is from a closed system and rainwater accumulation, it may contain leaves, mud, and algae. The tailrace area where this debris may accumulate would be cleaned on a periodic basis to allow for efficient operation of the system and to minimize any release of debris. In accomplishing this task, the tailrace is dewatered through evaporation and a compact excavator (such as a Bobcat) is then lowered into the tailrace by crane and the material in the tailrace is scooped out and removed from the site. Therefore, the impact topic of water quality is dismissed from further analysis.

### **Wetlands**

Executive Order 11990, "Protection of Wetlands" and NPS DO #77-1: Wetland Protection define the NPS goal to maintain and preserve wetland areas. Per National Wetland Inventory mapping (USFWS 2009) and field observation, there are no wetlands located within the study area. Additionally, a previous study by the District of Columbia confirms the absence of wetlands in the area (District of Columbia 1997). Therefore, the impact topic of wetlands is dismissed from further analysis.

### **Air Quality**

The Clean Air Act and NPS *Management Policies 2006* require consideration of air quality impacts from NPS projects. Washington, D.C. is listed by the EPA as being in nonattainment of National Ambient Air Quality Standards, as defined in the Clean Air Act, for 8-hour ozone concentrations and particulate matter (EPA 2009). The proposed action would have minimal short-term impacts on air quality. Hauling of material, operating of equipment, and other construction activities could result in temporary increases in vehicle exhaust and emissions. However, these activities would be consistent with other activities that

have and will continue to occur in the immediate area. The increases in emissions that occur during these activities quickly dissipate. Overall, there could be negligible impacts on local air quality; however, such impacts would be short-term, lasting only as long as construction. Therefore, the impact topic of air quality is dismissed from further analysis.

### **Soundscapes**

As described in *NPS Management Policies 2006* 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. The natural, ambient soundscape is the aggregate of all natural sounds that occur in the park beyond the range of sounds that humans can perceive. This sound can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human-caused sounds considered acceptable varies among NPS units, as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas. At the mill, natural soundscapes do not exist because of the sound impacts resulting from the developed nature of the region. Any construction associated with implementation of the proposed action, e.g., the hauling of material or the operation of construction equipment, could result in additional, dissonant sounds, but such sounds would be temporary. Because the area is already developed and supports a variety of activities and traffic, the impact topic of soundscapes is dismissed from further analysis.

### **Lightscaapes**

In accordance with *NPS Management Policies 2006*, the NPS strives to preserve natural, ambient lightscaapes, which are natural resources and values that exist in the absence of human-caused light. Due to its urbanized setting, the current lightscape is already impacted by surrounding developments in Washington, D.C. The park would strive, however, to limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements. All outdoor lighting used would be shielded and focused on the intended subject, so as to minimally contribute to surrounding light sources of the greater Washington, D.C. area. Therefore, the impact topic of lightscaapes is dismissed from further analysis.

### **Museum Collections**

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 pre-contact Native American and historic objects, artifacts, works of art, archival material, and natural history specimens that are part of a museum collection” (NPS 1998a). There are some 100 or more objects associated with the mill in the park’s museum collection. These have been relocated within the mill or moved elsewhere during the period of construction undertaken by the Friends of Peirce Mill. These are historic mill furnishings that would be brought back into the mill when construction is complete: many of the objects and free standing features were acquired by the NPS in the 1930s to enhance the Waterman restoration of the mill. They would not be adversely affected during construction and would be reinstalled postconstruction. Therefore, the impact topic of museum collections is dismissed from further analysis.

### **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” (NPS 1998a). The park and other NPS staff have researched and determined that there are no known Indian tribes traditionally associated with the lands of the park and no other peoples have traditional associations to park resources; there are no places in the park closely linked with a peoples’ or group’s sense of purpose, existence as a community, or development as ethnically distinctive peoples. Therefore, the impact topic of ethnographic resources is considered but dismissed from further analysis. 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.

### **Indian Trust Resources**

Secretarial Order 3175 requires that any anticipated impacts on 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 Native American tribes. There are no known Indian Trust resources in the study area, 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 is dismissed from further analysis.

### **Socioeconomic Resources and Adjacent Lands**

The proposed action would neither change local and regional land use nor appreciably impact local businesses or other agencies. Implementation of the proposed action could provide a beneficial impact to the economy of the Washington, D.C. area through minimal increases in employment opportunities for the construction workforce and revenues for local businesses and government generated from construction activities and workers. Any increase, however, would be temporary and negligible, lasting only as long as construction. Therefore, the impact topic of socioeconomic resources and adjacent lands is considered but dismissed from further analysis.

### **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. Environmental justice is dismissed as an impact topic for the following reasons:



- 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.



# 2

## ALTERNATIVES

This chapter describes alternatives for preserving historic Peirce Mill. The proposed action was designed to rehabilitate the mill and enhance the surrounding cultural landscape. This EA/AoE examines four alternatives: a no-action alternative (Alternative A) and three action alternatives (Alternative B, C, and D).

### DEVELOPMENT OF ALTERNATIVES

Over the last 15 years, the Friends of Peirce Mill have taken steps to preserve the mill. The group is responsible for recent structural improvements, preservation and rehabilitation of the milling machinery, and removal of the damaged mill wheel. The group also is working closely with the NPS on the currently proposed improvements. These proposed improvements to preserve historic Peirce Mill began during the development of the CLR (NPS 2009). The CLR was developed to document the history and significance of the mill and the surrounding landscape and to develop treatment options for preserving the site. During the development of these options, staff from the park, the NPS National Capital Region, representatives from the District of Columbia State Historic Preservation Office, members of the Friends of Peirce Mill, and consultants to the NPS met to review potential treatments and identify those that met the goals of the NPS and the park's enabling legislation. These treatments were used to develop options for preserving the mill and the surrounding landscape that were presented during a value analysis session in July 2009. During the value analysis, representatives from the park, the NPS National Capital Region, the NPS Denver Service Center, and their consultants reviewed the options and weighed their beneficial attributes using the Choosing by Advantages process. The outcome of this process identified options that were carried forward as alternatives for analysis in this document. The Choosing by Advantages process also allowed the NPS to identify its preferred alternative, presented as Alternative B, in this document.

### ALTERNATIVE A (NO-ACTION)

Under Alternative A, the mill would remain closed to the public. NPS staff, volunteers, and researchers would be able to access the structure for maintenance or research purposes. Because the interior of the mill would remain closed and the mill itself would remain inoperable as a result, enhanced opportunities for interpretation or education would not be available. Interpretation would be limited to the exterior of the mill. The exterior of the structure would continue to lack its water wheel or a fully defined headrace. In addition, there would continue to be no water source available to power the mill. The NPS would continue to work with the Friends of Peirce Mill to maintain the mill and identify future opportunities to open it to the public. The remainder of the site would continue to support recreational activities.

Under Alternative A, current management and operational practices at the site would continue (see Figure 2). Vehicular access would continue to be provided from Tilden Street to the existing parking lot adjacent to the mill. Buses and other large vehicles could stop on Tilden Street and allow passengers to enter the site. Alternatively vehicles could park at the nearby Grove 1 parking lot and allow their passengers to cross Tilden Street to reach the site or use the multiuse trail underpass if needed. Parking at the Grove 2 east and north lots also could be used, and visitors could access the site by pathways leading to the site from those areas.

Onsite, the existing 10-car parking lot would continue to cover much of the landscape between the mill and the barn. There would be a relatively steep grade between the parking lot and the mill that would continue to descend past the mill to the park's multiuse trail. Access from the parking lot to the mill would continue to be provided by the flagstone paver walkway leading from the parking lot and flagstone steps leading down to the front door of the mill as well as to the multiuse trail. Additional access would continue to be available at the north end of the parking lot, where a bluestone path connects to the multiuse trail. The stairs and pathways would not be ADA compliant. Approximately 11,000 square feet of impervious surface would cover the study area, with additional areas in the adjacent Grove 2 north and east parking lots.

Under Alternative A, the mill would remain closed to the public. NPS staff, volunteers, and researchers would be able to access the structure for maintenance or research purposes. Because the interior of the mill would remain closed and the mill itself would remain inoperable as a result, enhanced opportunities for interpretation or education would not be available. Interpretation would be limited to the exterior of the mill. The exterior of the structure would continue to lack its historic appearance, most notably due to the lack of a water wheel or a fully defined headrace. In addition, there would continue to be no water source available to power the mill. The NPS would continue to work with the Friends of Peirce Mill to maintain the mill and identify future opportunities to open it to the public. The remainder of the site would continue to support recreational activities. The NPS would conduct routine maintenance to address these deteriorating as staff time and funding became available.

## **ALTERNATIVE B (NPS PREFERRED ALTERNATIVE)**

Alternative B would include improvements to the mill and its surrounding landscape, as well as parking lot modifications, a new bus drop-off and driveway, pedestrian path and trail reconfigurations, a new comfort station, and in consultation with DDOT installation of traffic calming measures (Figure 3).

At the mill, the stone walls, louvers<sup>1</sup>, and siding would be repaired and repainted, as necessary. The basement door and windows on the south side of the mill would be replaced and backed with water tight fittings to mitigate potential future flooding. These water tight elements would not be visible from the exterior of the building. The west door to the first floor of the mill would be repaired and preserved. Accessible access would be provided to the mill via minor modifications to the mill basement entrance.

The existing headrace would be demolished. In its place, a new headrace would be constructed running northwest from the mill before turning north to follow the original line of the headrace. The new headrace would extend approximately 65 feet following the course of the 1930s era millrace to a depth of 6 feet.

---

<sup>1</sup> A window, blind, or shutter with horizontal or, less often, vertical slats, that are angled to admit light and air, but to keep out rain, direct sunshine, and noise.





**Rock Creek Park - Peirce Mill**

Preserve Historic Peirce Mill  
Environmental Assessment/Assessment of Effect

Figure 3  
**Alternative B**  
(NPS Preferred Alternative)





This would result in the excavation of approximately 390 cubic feet of soil. The excavated soil could be used for construction-related grading activities or spread across other portions of the site. The remainder of the historic line of the headrace would be delineated with a grass path bounded by granite stone edges. This line would run to the north end of the study area.

For the millrace, the water power system would be modified to have a closed-circulation pumping system that would create a water flow sufficient to operate the mill wheel. A portion of the tailrace would be modified to include a water collection pit and water mill sump pumps, which would discharge into the newly constructed headrace. The closed circulation system would have a fill/refill from the city water supply to replenish water during dryer seasons. Once the water has been used to turn the wheel, it would be returned to the sump pit and repumped to the headrace to repeat the circulation process. Excess water in the headrace, from rainfall conditions, would overflow into the tailrace. The sump pit also would include a sludge removal pump, to facilitate the regular cleaning of the mill raceway system. The sludge removal pumps would discharge into the tailrace. The tailrace would be cleaned on an annual basis to remove tree limbs, leaves, mud, algae, and other debris. In accomplishing this task, the tailrace is dewatered through evaporation and a compact excavator (such as a Bobcat) is then lowered into the tailrace by crane and the material in the tailrace is scooped out and removed from the site.

Repairs to the interior of the mill would expand on already completed work undertaken to date by the Friends of Peirce Mill as outlined in the HSR. Within the mill, insulation would be installed in the attic. The wood and stone lintels<sup>2</sup> above the second floor would be repaired as well. The enclosure on the second floor would be replaced to support utility improvements in the building. The original column and beam structural members would be repaired while a supplementary structural system would be replaced to provide improved support and prevent excessive changes to the original members. Pumps in the deep pit adjacent to the flume would be installed in the basement to support the future power supply for a new water wheel. In addition, floor drains and sump pumps would be installed in the basement of the mill to alleviate the effects of high water and minor flooding.

Utility improvements in the building would include service line connections to local water utilities. Water utilities already exist on site, so the connection would require excavation of a new trench from the existing lines to the mill and installing appropriate service lines. A dry pump fire suppression system would be installed in the mill. A fire alarm and security system also would be installed in the mill to meet NPS requirements for protecting historic structures. The fire alarm system would require a new heating and ventilation system to be installed in the mill to provide minimal heat for visitors and protect the new water lines from freezing conditions in the winter. New interior lighting also would be installed in the mill to enhance safety and visibility in the structure. The lighting and other electrical improvements would be supported by a new electrical power feed from the power pole across Tilden Street from the mill.

The existing entrance driveway, parking lot, and pedestrian paths would be demolished. After some grading work, new pedestrian paths and trails would be installed. The primary path would run on the historic road alignment leading to the mill from the Grove 2 parking lot, north of the mill, into the study area. As the path reached the area between the mill and the barn, it would expand into a large gathering space that could be used as a starting point for tours and educational programs focused on interpreting the mill and the mill yard

---

<sup>2</sup> A horizontal block that spans the space between two supports in classical western architecture.

or for visitors to rest and view the site. The trail and meeting space would meet ADA requirements. The new grading at the site would allow the gathering area to sit at a similar elevation as the mill. This would be done to match the historic grade and connect visitors with the structure. New stairs would be constructed to provide access from the gathering area space to Tilden Street and the barn. A new path would provide access from the gathering area to the mill. The path would run along the north side of the mill, connecting to the existing multiuse trail. Another new path would provide access from the multiuse trail to the basement door of the mill. Historically accurate fencing would be used to line the new pedestrian paths to encourage visitors to use the formal circulation system and stay a safe distance from the new headrace. The remaining area abandoned by the old entrance driveway, parking lot, and pedestrian paths would be planted with grasses to match the surrounding landscape.

Bus and handicapped access would be provided to the west of the barn by realigning the existing curbs and pedestrian paths. The realignment would allow for a bus drop-off loop and two handicapped parking spaces to replace the spaces lost from demolition of the old lot. A new pedestrian path would provide access from this area to the barn and the mill yard. At the end of the construction process, additional grading and landscaping would be conducted to minimize views of the bus drop-off from the mill.

To compensate for the loss of onsite parking, nearby parking options would be expanded. In particular, the Grove 1 parking lot off of Shoemaker Street, N.W. would be expanded to add seven standard parking spaces and relocate two handicapped accessible spaces. A new pedestrian path would be constructed to provide direct access from this parking lot to Tilden Street, where visitors could cross the road to reach the site. In coordination with the DDOT traffic calming measures would be added to Tilden Street in the areas before and after the crosswalk to the barn. These measures could include a crosswalk, two humps to slow traffic, and appropriate signage for both.

The existing closed comfort station, adjacent to the barn, would be demolished. The surrounding grounds would be regraded and planted with grasses and select shrubs to enhance the appearance of the historic landscape. Based upon availability of funding, the park would construct a new comfort station northeast of the existing location. The comfort station would be approximately 10 feet by 15 feet in size and ADA accessible.

Restoration of a small part of the historic orchard that was active during the mill's operation would be implemented as part of this alternative. Approximately one-quarter acre of existing woody vegetation would be removed from the northwest area of the study area. This area would be graded and the top soil prepared to support an orchard that would present vegetation similar to the historic orchard on the property. Additional historic studies would identify the appropriate fruit-bearing vegetation, such as apple trees, that were planted at the site and actions to assure appropriate management of trees and their products. These species would be replanted and maintained to develop an interpretive orchard.

The proposed construction activities would be accomplished with small and medium sized construction equipment and machinery that could be stored, staged, and operated onsite during the construction process. The designated staging area would be located between Tilden Street and the Grove 1 parking lot (see Figure 3). Access to the staging area would be gated, and the site would be fenced with a fabric screen and would include geotextile and gravel protection. At the completion of construction, the staging area would be restored using native plant materials. To minimize impacts of construction, an appropriate erosion and sediment control plan would be implemented and best management practices would be used.



This could include the use of silt fences or straw bales to mitigate the impacts these activities would have on the creek and the use of pads beneath construction equipment and machinery to mitigate impacts on vegetation and soils within the site. Overall, Alternative B would result in approximately 8,800 square feet of new surface in the study area some of which would overlay currently surfaced areas of parking and pathway. A portion of the newly surfaced areas would be made up of material designed to be permeable, thus lessening the total area of impervious surface.

## **ALTERNATIVE C**

Alternative C also would include improvements to the mill and its surrounding landscape, as well as parking lot modifications, pedestrian path and trail reconfigurations, a new comfort station, and in consultation with DDOT, traffic calming measures on Tilden Street (Figure 4).

Under Alternative C, the improvements to the mill would be similar to those described under Alternative B. These improvements include:

- Repair the stone walls, louvers, and siding and repaint as necessary
- Add insulation
- Repair the west door to the mill's first floor
- Repair original column and beam structural members while replacing supplementary structural system to provide improved support
- Repair wood and stone lintels above the second floor
- Repair the stair from the first floor to the basement
- Replace enclosure on second floor
- Install floor drains and sump pumps in basement
- Install fire suppression system
- Install water mill pumps
- Provide heating and ventilation system
- Improved electrical power feed
- Install fire alarm and security systems

In addition to these improvements, a retaining wall and patio would be constructed outside the south door of the mill basement. The patio and retaining wall would be designed to protect the structure from floodwaters. This protection would be great enough that new water tight windows and doors would not be necessary. However, the basement door would still be replaced with a new door. Inside the door, a new ramp and stairs would provide access to the basement floor.

The existing stairs that connect the first floor to the basement would be repaired or replaced, depending on the condition of the structures when construction began. In the basement, the floor drains would be replaced. An additional staircase would be installed to provide additional access between the basement and first floor. The stairs between the first and second floor and the stairs to the attic would be replaced. An elevator also would be installed in the mill to provide access between the basement and the second floor.

Alternative C (as depicted on Figure 4) would include a number of the same landscape improvements described under Alternative B, the NPS preferred alternative. These improvements include:

- The demolition of the existing headrace and the construction of a new headrace with extended outline delineated with a grass path and stones
- The demolition of the existing parking lot and pedestrian paths
- Expanding the existing parking lot (Grove 1) off of Shoemaker Street, N.W.
- Installation of historically accurate fencing
- The demolition of the existing comfort station and construction of a new comfort station
- The development of an interpretive orchard
- Grading and landscaping before and after the construction process
- Traffic calming measures on Tilden Street

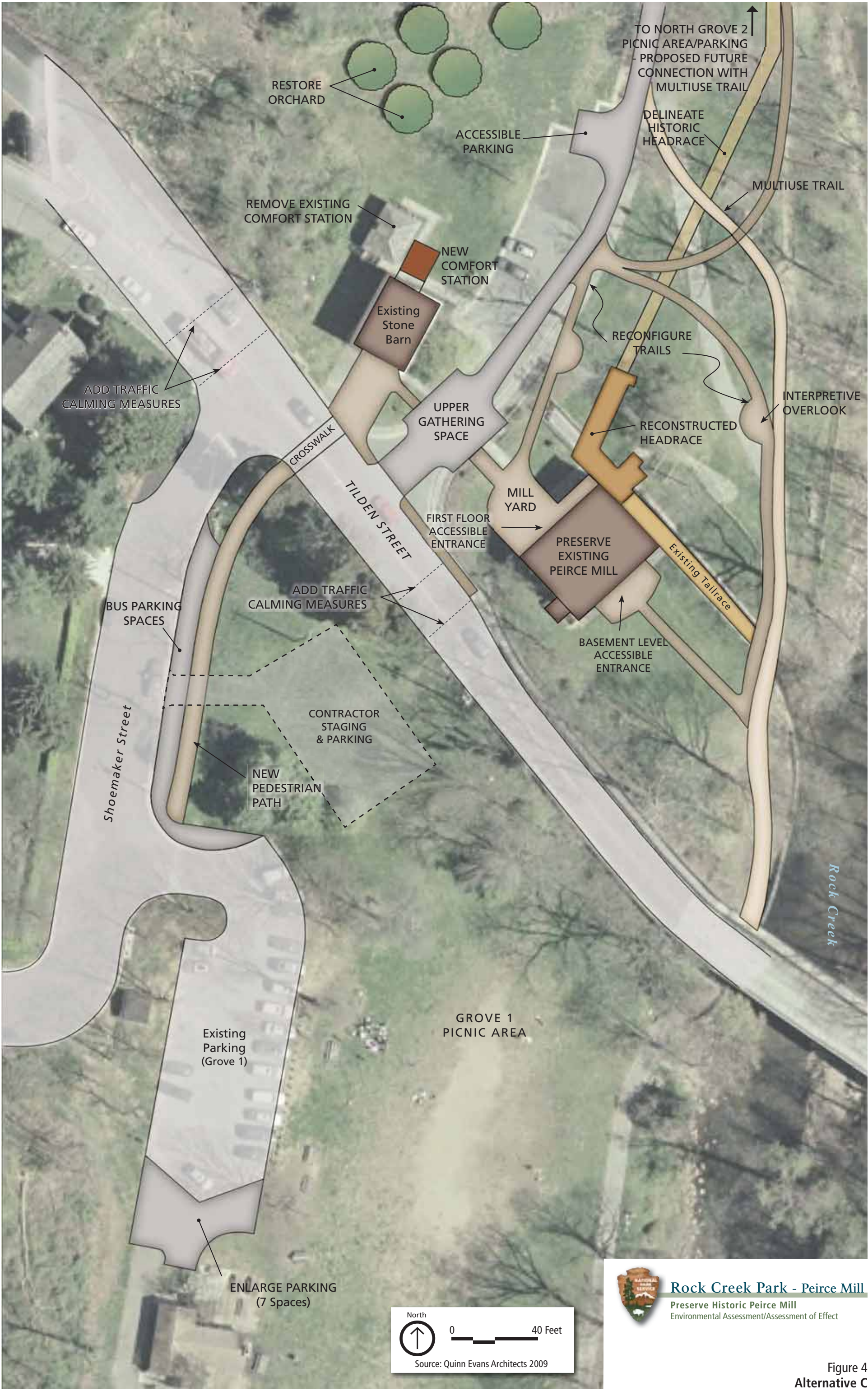
Additional changes would include the installation of a bike trail and handicapped vehicular access running from the Grove 2 parking lot along the historic road alignment leading to a new enlarged gathering space between the mill and the barn. A new pedestrian path would connect this gathering space to the barn and Tilden Street. Another new pedestrian path would provide access from the new handicapped parking spaces to Tilden Street. Two additional pedestrian paths would extend north and south from the new trail to provide access along the river for pedestrians, without conflicting with the existing multiuse trail. Bus parking spaces would be provided along Shoemaker Street with an expansion of the road prism to allow for parallel bus parking. The existing parking area at Grove 1 would be expanded by seven spaces to provide for partial replacement of parking lost between the barn and mill areas.

Under Alternative C, an additional, smaller gathering area would be constructed at grade with the mill. The smaller gathering area would connect to the larger area with a series of new stairs. A new path would run from the smaller gathering area along the mill to the new millrace.

As with Alternative B, the proposed construction activities would be accomplished with small and medium sized construction equipment and machinery that could be stored, staged, and operated onsite during the construction process (see Figure 4). The designated staging area would be located between Tilden Street and the Grove 1 parking lot. The site would be fenced with a fabric screen and would include geotextile and gravel protection. At the completion of construction, the staging area would be restored using native plant materials. The use of appropriate mitigation techniques, such as silt fences or hay bales, would mitigate the impacts these activities would have to the creek. The use of pads beneath construction equipment and machinery would mitigate impacts within the site.

Overall, Alternative C would result in approximately 7,800 square feet of new impervious surface in the study area some of which would overlay currently surfaced areas of parking and pathway. A portion of the newly surfaced areas would be made up of material designed to be permeable, thus lessening the total area of impervious surface.





**Rock Creek Park - Peirce Mill**  
Preserve Historic Peirce Mill  
Environmental Assessment/Assessment of Effect

Figure 4  
Alternative C





## ALTERNATIVE D

Alternative D also would include improvements to the mill and its surrounding landscape, as well as parking lot modifications, pedestrian path and trail reconfigurations, a new comfort station, and in consultation with DDOT, traffic calming measures on Tilden Street (Figure 5).

The improvements to the mill would be the same as those described under Alternative C. These include:

- Repair the stone walls, louvers, and siding and repaint as necessary
- Add insulation
- Repair the west door to the mill's first floor
- Replace the basement door and windows on the south of side of the mill with water tight fixtures
- Restore the first floor of the mill to its historic configuration, with repairs made to existing flooring
- Repair wood and stone lintels above the second floor
- Repair the stair from the first floor to the basement
- Replace enclosure on second floor
- Replace basement floor drains
- Provide water for sprinkler system
- Install water mill pumps
- Improve electrical power feed
- Install fire alarm and security systems

Alternative D would include the same heating and ventilation improvements provided under Alternatives B and C. However, under this alternative, the improvements would include the installation of an air conditioning system to accompany the heating and ventilation improvements. Alternative D would not include the installation of the elevator between the first and second floors.

Alternative D would include a number of the same landscape improvements described under Alternative C (Figure 5). These improvements include:

- The demolition of the existing headrace and the construction of a new headrace with extended outline delineated with a grass path and stones
- The demolition of the existing parking lot and pedestrian paths
- Providing 2 bus drop off areas along Shoemaker Street, N.W. with associated pedestrian path and crosswalk
- Installation of historically accurate fencing
- The demolition of the existing comfort station and construction of a new comfort station
- The development of a historically accurate orchard
- Grading and landscaping before and after the construction process
- Traffic calming on Tilden Street
- Existing parking at Grove 1 would be expanded by 7 parking spaces to partially replace lost parking between the barn and mill areas

Different from Alternative C, Alternative D also would include the installation of a new entrance drive and ADA compliant parking on the west side of the barn. Also, a wide path would be constructed from the north Grove 2 parking lot to the area between the mill and the barn, forming a large gathering area. The gathering area would be connected to the barn and Tilden Street by a new set of stairs. A new path would run from the gathering area to the north side of the mill and continue to the new millrace. Another new path would connect to the new parking west of the barn.

As with Alternatives B and C, the proposed construction activities would be accomplished with small and medium sized construction equipment and machinery that could be stored, staged, and operated onsite during the construction process (see Figure 5). The designated staging area would be located between Tilden Street and the Grove 1 parking lot. The site would be fenced with a fabric screen and would include geotextile and gravel protection. At the completion of construction, the staging area would be restored using native plant materials. The use of appropriate mitigation techniques, such as silt fences or hay bales, would mitigate the impacts these activities would have to the creek. The use of pads beneath construction equipment and machinery would mitigate impacts within the site.

Alternative D would result in approximately 10,700 square feet of new surface in the study area, some of which would overlay currently surfaced areas of parking and pathway. A portion of the newly surfaced areas would be made up of material designed to be permeable, thus lessening the total area of impervious surface.

## **MITIGATION MEASURES OF THE ACTION ALTERNATIVES**

The following mitigation measures shall be incorporated into all action alternatives to minimize impacts to natural and cultural resources in the project area.

### **SOILS AND TOPOGRAPHY**

- Approved erosion and sediment control plan (including use of silt fences and hay bales)
- Use of best management practices (including pads for construction equipment)
- Revegetate disturbed areas using native grasses

### **VEGETATION**

- Approved erosion and sediment control plan (including use of silt fences and hay bales)
- Use of best management practices (including pads for construction equipment)
- Revegetate disturbed areas using native grasses and other native species and species compatible with the historic landscape under NPS Management Policies
- Areas within the drip lines of trees would be flagged or snow-fenced in order to limit the operation of heavy machinery within drip lines





**Rock Creek Park - Peirce Mill**  
Preserve Historic Peirce Mill  
Environmental Assessment/Assessment of Effect

Figure 5  
Alternative D







## **FLOODPLAINS**

- Removal of equipment during potential flood events
- Site grading (protection of building from flood events)
- Installation of waterproof door/window closures, drains, and sump pumps (protection of building from flood events)

## **CULTURAL RESOURCES**

- All work on the Peirce Mill building shall be consistent with the Secretary of the Interior's standards
- Every effort shall be made to minimize hardscaping to retain the agricultural character of the site
- Archeological investigations to determine if resources are present in areas not previously surveyed shall be carried out by the NPS in coordination with the State Archeologist
- All efforts shall be made to screen the bus pull-off area with landscaping to minimize its visual intrusion onto the historic setting
- All plans, including details such as paving materials and locations, are subject to SHPO review

## **AESTHETICS AND VISUAL RESOURCES**

- All work on the Peirce Mill building shall be consistent with the Secretary of the Interior's standards
- Every effort shall be made to minimize hardscaping to retain the agricultural character of the site
- All efforts shall be made to screen the bus pull-off area with landscaping to minimize its visual intrusion onto the historic setting

## **ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS**

During the development of alternatives for the proposed action, several different options were considered for the overall treatment of the mill and the surrounding landscape. These alternatives included different lighting, fire suppression, security systems, and structural repairs to the mill. Alternatives considered but dismissed from further analysis also included varying layouts for proposed trails, pathways, and parking locations. Many of these options were combined and incorporated into the alternatives presented above. Other alternatives were dismissed from further analysis based on their similarity to the alternatives analyzed in this document.

## **SUMMARY OF THE ALTERNATIVES**

Table 1 provides a summary of the alternatives presented above. Table 2 provides a summary of the environmental consequences related to each alternative. A more detailed explanation of the impacts is presented in "Chapter 3: Affected Environment and Environmental Consequences."

<b>Table 1: Summary of Alternatives</b>				
<b>Alternative Element</b>	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Mill Exterior</b>	The structure would continue to lack its water wheel and only the remaining portion of the tail race would be identified.	The exterior of the mill would be repaired and repointed as necessary. The historic headrace would be partially reconstructed and delineated. New basement door would be installed. A new water system would be installed, and a new pump vault and pumps installed to support the future installation of a water wheel.	Same as Alternative B	Same as Alternative B
<b>Mill Interior</b>	The NPS would continue to work with its partners to maintain the mill and identify future opportunities to open it to the public.	A number of historic aspects of the mill interior would be restored, repaired, and/or replaced.	Same as Alternative B. An additional staircase and an elevator would be installed to provide access between the basement and the second floor.	Same as Alternative B.

**Table 1: Summary of Alternatives (continued)**

<b>Alternative Elements</b>	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Trails and Paths</b>	Existing trails and stairs would not be ADA compliant.	Existing pedestrian paths and trails would be demolished. New pedestrian paths and trails would be installed, including a path running from the north Grove 2 parking lot along historic road alignment into the site, expanding into a large gathering area between the mill and barn.	Same as Alternative B. Additional pedestrian paths and trails would be constructed. An additional gathering place also would be constructed.	Same as Alternative B. An additional path would be constructed to lead to an additional gathering area different from the arrangement proposed under Alternative C.
<b>Parking/Bus Drop-off</b>	Current parking locations within and adjacent to the study area would continue to be used.	The existing on-site parking lot would be demolished. Realignment of existing curbs and pedestrian paths would allow for a bus loop and two handicapped parking spaces west of the barn. The Grove 1 parking lot would be expanded to compensate for the loss of on-site parking.	Same as Alternative B, but no bus loop provided. Bus drop off provided on Shoemaker street. Accessible parking along road/limited access path from North Grove 2	Same as Alternative B, but bus parking provided across Tilden street. Accessible parking northwest of barn and bus drop-off on Shoemaker Street.

<b>Table 1: Summary of Alternatives (continued)</b>				
<b>Alternative Elements</b>	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Staging</b>	Not applicable.	Gated and fenced staging area located off of Shoemaker Street, between Tilden Street and Grove 1 parking lot.	Same as Alternative B.	Same as Alternative B.
<b>Meets the Purpose and Need</b>	<b>No.</b> The mill would remain closed, and the site would not support a safe environment capable of supporting the park's interpretive and educational missions.	<b>Yes.</b> The mill would be opened and improvements to the structure and the landscape would provide a safe environment for meeting the park's interpretive and educational missions.	<b>Yes.</b> The mill would be opened and improvements to the structure and the landscape would provide a safe environment for meeting the park's interpretive and educational missions.	<b>Yes.</b> The mill would be opened and improvements to the structure and the landscape would provide a safe environment for meeting the park's interpretive and educational missions.

<b>Table 2: Summary of Environmental Consequences</b>				
	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Soils and Topography</b>	<p>Existing impervious surfaces (11,000 square feet) would remain unchanged and no new development would occur. The continuing use of existing and potential future social trails would result in localized erosion.</p> <p><b>Overall impact:</b> long-term, minor to moderate, adverse with no impairment</p> <p><b>Cumulative impact:</b> long-term, minor, adverse and long-term, beneficial</p>	<p>Short-term impacts would occur as existing impervious surfaces were demolished. In some areas, new impervious surface would be constructed. There would be an increase of 8,800 square feet of impervious surface some of which would be designed to be permeable.</p> <p><b>Overall impact:</b> short-term, minor, adverse; long-term, minor, adverse; and long-term, beneficial with no impairment</p> <p><b>Cumulative impact:</b> long-term, minor, adverse and long-term, beneficial</p>	<p>The location of the impervious structures would be different, but the impact would be the same as Alternative B. There would be an increase of 7,800 square feet of impervious surface some of which would be designed to be permeable.</p> <p>Same as Alternative B.</p> <p>Same as Alternative B.</p>	<p>The location of the impervious structures would be different, but the impact would be the same as Alternative B. There would be an increase of 10,700 square feet of impervious surface some of which would be designed to be permeable.</p> <p>Same as Alternative B.</p> <p>Same as Alternative B.</p>

**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Vegetation</b>	No changes would be made to the existing vegetation at the site. The lawn and ornamental plantings would continue to be maintained, but threatened by social trails. The woody vegetation would remain untouched.	There would be temporary and permanent losses of grasses and shrubs as old impervious surface was removed and new surfaces were relocated and installed. There would be similar impacts related to the extension of the headrace. The development of the orchard would result in the removal of some invasive and native species and the planting of historically accurate vegetation. Some short-term impacts also would occur during the construction process.	The location of the impervious structures would be different, but the impact would be the same as Alternative B.	The location of the impervious structures would be different, but the impact would be the same as Alternative B.



**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Vegetation (continued)</b>	<p><b>Overall impact:</b> long-term, negligible, and adverse</p> <p><b>Cumulative impact:</b> long-term, minor, adverse and long-term, beneficial</p>	<p><b>Overall impact:</b> short-term, minor, adverse; long-term, minor, adverse; long-term, beneficial</p> <p><b>Cumulative impact:</b> long-term, minor, adverse and long-term, beneficial</p>	<p>Same as Alternative B.</p> <p>Same as Alternative B.</p>	<p>Same as Alternative B.</p> <p>Same as Alternative B.</p>
<b>Floodplains</b>	The mill and surrounding parking lots, trails, pedestrian paths, fences, picnic tables, trash cans, and kiosk would remain in the floodplain. The continued erosion related to the social trails would not represent a measurable change to the floodplain.	The change in amount and location of impervious surface would not alter the conveyance of flood waters. The existing closed comfort station would be removed. Social trails would be formalized. Construction equipment and machinery would be stored in the floodplain.	Same as Alternative B.	Same as Alternative B.

**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Floodplains (continued)</b>	<p><b>Overall impact:</b> long-term, negligible, adverse with no impairment</p> <p><b>Cumulative impact:</b> long-term, negligible, adverse</p>	<p><b>Overall impact:</b> short-term, minor, adverse; long-term, negligible, adverse with no impairment</p> <p><b>Cumulative impact:</b> long-term, negligible, adverse</p>	<p>Same as Alternative B.</p> <p>Same as Alternative B.</p>	<p>Same as Alternative B.</p> <p>Same as Alternative B.</p>
<b>Cultural Landscapes</b>	The current location of the entrance drive and parking lot, social trails, and the absence of the full length historic headrace would continue to distort the cultural landscape.	The cultural landscape would be improved through the removal of the non-historic parking lot from the immediate vicinity of the mill, the regrading of the site to its historic grade, and restoration of part of the historic headrace and historic orchard. Construction of the bus drop-off and entry drive would introduce a new element into the landscape, west of the barn.	The cultural landscape would be improved through the removal of the non-historic parking lot from the immediate vicinity of the mill and restoration of the historic headrace and historic orchard.	The cultural landscape would be improved through the removal of the non-historic parking lot from the immediate vicinity of the mill, the regrading of the site to its historic grade, and restoration of the historic headrace and historic orchard. Construction of a new driveway would introduce a new element into the landscape, west of the barn.

**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Cultural Landscapes (continued)</b>	<p><b><i>Overall impact:</i></b> long-term, moderate, adverse with no impairment</p> <p><b><i>Cumulative impact:</i></b> long-term, beneficial and long-term, moderate, adverse</p>	<p><b><i>Overall impact:</i></b> long-term, beneficial; short- term, minor, adverse and long-term, minor, adverse with no impairment</p> <p><b><i>Cumulative impact:</i></b> long-term, beneficial and long-term, minor, adverse</p>	<p><b><i>Overall impact:</i></b> long-term, beneficial; short- term, minor, adverse with no impairment</p> <p><b><i>Cumulative impact:</i></b> long-term, beneficial</p>	<p><b><i>Overall impact:</i></b> long-term, beneficial; short-term, minor, adverse and long-term, minor, adverse with no impairment</p> <p><b><i>Cumulative impact:</i></b> long-term, beneficial and long-term, minor, adverse</p>

**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Historic Structures</b>	The mill would be maintained as funding becomes available; however, there would be no systematic effort to address its continuing deterioration.	Work to repair the exterior components of the mill would result in stabilization of deterioration and restoration of features currently in need of repair or replacement in kind. The interior of the mill would be repaired and improved with increased structural supports. Security and fire suppression systems would be installed, along with new utilities, improved drainage in the basements, and pumps to support the future operation of the water wheel.	Impacts would be the same as those described under Alternative B. Adverse impacts would result from the installation of an elevator and additional stairs.	Impacts would be similar to those described under Alternative B. Construction of an elevator and new staircase would impact historic fabric. The introduction of an air conditioning system to the mill could provide some improved comfort in the building for visitors and employees but would not present the historic structure as it existed during its historic use.

**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Historic Structures (continued)</b>	<p><b><i>Overall impact:</i></b> long-term, moderate, adverse with no impairment</p> <p><b><i>Cumulative impact:</i></b> long- term, beneficial and long-term, moderate, adverse</p>	<p><b><i>Overall impact:</i></b> short-term, minor, adverse and long-term, beneficial with no impairment</p> <p><b><i>Cumulative impact:</i></b> long-term, beneficial</p>	<p><b><i>Overall impact:</i></b> short-term, minor, adverse; long-term, beneficial; and long-term, moderate, adverse with no impairment</p> <p><b><i>Cumulative impact:</i></b> long-term, beneficial and long-term, moderate, adverse</p>	<p><b><i>Overall impact:</i></b> short-term, minor, adverse; long-term, beneficial; and long-term, minor, adverse with no impairment</p> <p><b><i>Cumulative impact:</i></b> long-term, beneficial and long-term, minor, adverse</p>

**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Archeological Resources</b>	No changes would be made to the conditions in which the known and unknown archeological resources within the study area exist. Continued erosion of the landscape eventually could expose and damage these resources.	Most ground disturbance would be confined to the upper layers of the soil horizon and would not impact buried resources. Partial reconstruction of the headrace would result in ground disturbance in deeper levels of the soil. Previous unsurveyed areas would require surveys to be conducted prior to initiating any ground disturbing activities (such as the bus drop-off/new driveway and the interpretive orchard). During construction, known archeological resources would be avoided to the greatest extent possible.	Although the locations of ground disturbing activities may differ slightly, the impacts would be similar to Alternative B.	Although the locations of ground disturbing activities may differ slightly, the impacts would be similar to Alternative B.



**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Archeological Resources (continued)</b>	<p><b>Overall impact:</b> long-term, negligible with no impairment</p> <p><b>Cumulative impact:</b> long-term, beneficial</p>	<p><b>Overall impact:</b> long-term, minor, adverse with no impairment</p> <p><b>Cumulative impact:</b> long- term, beneficial and long-term, minor, adverse</p>	<p>Same as Alternative B.</p> <p>Same as Alternative B.</p>	<p>Same as Alternative B.</p> <p>Same as Alternative B.</p>
<b>Aesthetics and Visual Resources</b>	<p>No changes would be made to the existing views in and around the mill. The recreational appearance would be maintained by the trails through the site.</p> <p><b>Overall impact:</b> long-term, moderate, adverse with no impairment</p>	<p>Improvements would be made to the visual resources in and around the mill, which would provide a visual connection to the historic use of the mill and reduce and repair damage from social trails.</p> <p><b>Overall impact:</b> short-term, moderate, adverse and long-term, beneficial with no impairment</p>	<p>Improvements would be similar to Alternative B. Gathering areas would maintain a visual separation between the barn and the mill. The addition of nonhistoric features (elevator and retaining wall) would detract from the visual experience.</p> <p>Same as Alternative B.</p>	<p>Improvements would be similar to Alternative B.</p> <p>Same as Alternative B.</p>

**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Aesthetics and Visual Resources (continued)</b>	<i><b>Cumulative impact:</b></i> long-term, beneficial	<i><b>Cumulative impact:</b></i> long-term, beneficial	Same as Alternative B.	Same as Alternative B.
<b>Visitor Use and Experience</b>	<p>No change to the visitor use and experience at the mill. Visitors would continue to be able to walk along the exterior of the mill. The limited access to the mill and across the landscape would not provide appropriate interpretive or educational opportunities.</p> <p><i><b>Overall impact:</b></i> long-term, moderate, adverse</p> <p><i><b>Cumulative impact:</b></i> long-term, beneficial</p>	<p>New trails would include a gathering place for interpretive programs and improved movement through the site. The historic connection between the mill and barn would be made more apparent. The mill would be opened to the public and tours would be provided.</p> <p><i><b>Overall impact:</b></i> short-term, minor to moderate, adverse and long-term, beneficial</p> <p><i><b>Cumulative impact:</b></i> long-term, beneficial</p>	<p>Same as Alternative B with different arrangement of trails, pathways, and gathering places. An elevator would provide safe, ADA-compliant access throughout the mill.</p> <p>Same as Alternative B.</p> <p>Same as Alternative B.</p>	<p>Same as Alternative B with different arrangement of trails, pathways, and gathering places. Pathways would present crossing issues and potential visitor use conflict between through bicycle users and pedestrians. Different utilities and security equipment would be installed within the mill.</p> <p>Same as Alternative B.</p> <p>Same as Alternative B.</p>

**Table 2: Summary of Environmental Consequences (continued)**

	<b>Alternative A (No-action)</b>	<b>Alternative B (NPS Preferred Alternative)</b>	<b>Alternative C</b>	<b>Alternative D</b>
<b>Park Operations and Management</b>	<p>No changes would be made to the utility service, access, features or NPS operations at the mill. The mill would remain closed to the public. NPS staff would continue to maintain the site and attempt to identify means of interpreting its history.</p> <p><b>Overall impact:</b> long-term, moderate, adverse</p> <p><b>Cumulative impact:</b> long-term, beneficial</p>	<p>The existing roads and pathways would be replaced with new structures that meet ADA requirements.</p> <p><b>Overall impact:</b> short-term, moderate, adverse and long-term, beneficial</p> <p><b>Cumulative impact:</b> long-term, beneficial</p>	<p>Same as Alternative B with differing layout of some site access.</p> <p>Same as Alternative B.</p> <p>Same as Alternative B.</p>	<p>Same as Alternative B with differing layout of some site access.</p> <p>Same as Alternative B.</p> <p>Same as Alternative B.</p>

## ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with DO #12, the NPS identifies the environmentally preferred alternative in its NEPA documents. The CEQ defines the environmentally preferred alternative as the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. In their Forty Most Asked Questions, CEQ further clarifies the identification of the environmentally preferred alternative, stating "Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources" (Q6a).

Alternative B best protects, preserves, and enhances the natural and cultural resources at the mill while improving the surrounding cultural landscape and repairing and opening the mill. This solution can be accomplished without imposing unnecessary adverse impacts to the historic structure, such as adding elevators or new stairwells proposed in Alternatives C and D. Based on the analysis of environmental consequences of each alternative in Chapter 3 and summarized in Table 2, Alternative B is the environmentally preferred alternative. Alternative B is also the NPS preferred alternative, as it best promotes visitor safety at the site.

## PHOTOGRAPHS OF EXISTING FEATURES

The following photographs are provided to show the reader the existing conditions at the site. Additional information on the existing conditions and the specific impacts associated with each alternative, as defined previously, can be found in the following chapter, “Chapter 3: Existing Conditions and Environmental Consequences.”



Photograph 1. The front (western side) of Peirce Mill. (Source: Quin Evans Architects)



Photograph 2. Back (eastern side) of Peirce Mill. (Source: Quinn Evans Architects)





Photograph 3. Parking lot between Peirce Mill and barn. (Source: Quinn Evans Architects)



Photograph 4. Tilden Street bridge and multiuse trail, facing south. (Source: Quinn Evans Architects)





Photograph 5. Interpretive kiosk and trees north of Peirce Mill. (Source: Quinn Evans Architects)



Photograph 6. Closer view of interpretive kiosk. (Source: Quinn Evans Architects)





Photograph 7. Raised roadbed between Peirce Mill and barn, facing northeast. (Source: Quinn Evans Architects)



Photograph 8. Facing east from Tilden Street with Peirce Mill on the left and Shoemaker Street on the right. (Source: Quinn Evans Architects)



Photograph 9. Closed comfort station adjacent to barn. Visitors are directed to Grove 1 comfort station. (Source: Vanasse Hangen Brustlin, Inc.)



# 3

## **AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES**

Rock Creek Park is located in the northwestern portion of Washington, D.C. It consists primarily of an undeveloped, wooded, valley with some associated tributaries and uplands. The primary landscape feature is Rock Creek, a perennial stream that flows along the length of the park before joining the Potomac River south of the park. The park is completely surrounded by the heavily urbanized metropolitan area of Washington, D.C. (NPS 2005). Photographs of the existing site conditions are located at the end of Chapter 2.

This chapter describes the affected environment and environmental consequences associated with the alternatives presented in “Chapter 2: Alternatives.” It is organized by impact topic, which distills the issues and concerns into distinct subjects for discussion and analysis. The CEQ regulations that implement NEPA require assessment of impacts on the human environment, which includes natural and cultural resources. Resources analyzed include soils and topography, vegetation, floodplains, cultural resources (cultural landscapes, historic structures, and archeology), aesthetics and visual resources, visitor use and experience, and park operations and management. Resources dismissed from further consideration were discussed in “Chapter 1: Introduction: Purpose and Need.”

The CEQ regulations implementing NEPA require consideration of context, intensity, and duration of impacts (direct, indirect, and cumulative) and measures to mitigate impacts. NPS policy also requires that impairment of park resources and values be evaluated in all environmental documents; therefore, impairment is addressed in the “Conclusion” section at the end of each alternative section under each impact topic.

### **METHODOLOGY FOR ASSESSING IMPACTS**

As required by NEPA, potential impacts are described in terms of type (beneficial or adverse), context (site-specific, local, or regional), duration, and level of intensity (negligible, minor, moderate, or major). Both indirect and direct impacts also are described; however, they may not be identified specifically as direct or indirect. These terms are defined below. Overall, these impact analyses and conclusions were based on the review of existing literature and studies, information provided by on-site experts and other government agencies, professional judgments, and park staff insight. The impact analyses presented in this document are intended to comply with both NEPA and Section 106 of the NHPA; therefore, Section 106 summaries for each cultural resource topic also are included.

## TYPE

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

- Beneficial:** A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
- Adverse:** A change that moves the resource away from a desired condition or detracts from its appearance or condition.
- Direct:** An impact that is caused by an action and occurs at the same time and place.
- Indirect:** An impact that is caused by an action but is later in time or farther removed in distance but still reasonably foreseeable.

## CONTEXT

Context is the setting within which an impact occurs and can be site specific, local, parkwide, or regionwide.

- Site-specific:** The impact would affect the project site.
- Local:** The impact would cause an effect outside the study area yet within the park.
- Parkwide:** The impact would affect a greater portion outside the study area yet within the park.
- Regional:** The impact would affect localities, cities, or towns surrounding the park.

## DURATION

Impacts can be either short term or long term. A short-term impact would be temporary in duration and would be associated with the construction process. Depending on the resource, impacts would last as long as construction was taking place, or up to one year after construction is complete. Long-term impacts last beyond the construction period, and the resources may need more than one year postconstruction to resume to their preconstruction condition. If the impact duration is different for a specific resource topic, the duration definitions are provided in the methodology for that impact topic.

- Short-term:** Impacts that occur only during construction or last less than one year.
- Long-term:** Impacts that last longer than one year.

## LEVEL OF INTENSITY

Impact intensity is the degree to which a resource would be adversely affected. Because level of intensity definitions (negligible, minor, moderate, major) vary by resource, separate definitions are provided for each impact topic analyzed. Level of intensity will not be provided for beneficial impacts, as it is not required.



## **CUMULATIVE IMPACTS**

The CEQ regulations that implement NEPA require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as impacts which result when the impact of the proposed action is added to the impacts of other present and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions (40 CFR 1508.7).

Cumulative impacts were determined by combining the impacts of the alternative being considered with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects and plans at Peirce Mill and, if applicable, the surrounding area. The analysis of cumulative impacts was accomplished using four steps:

Step 1 — Identify Resources Affected: fully identify resources affected by any of the alternatives.

Step 2 — Set Boundaries: identify an appropriate spatial and temporal boundary for each resource.

Step 3 — Identify Cumulative Action Scenario: determine which past, present, and reasonably foreseeable future actions to include with each resource.

Step 4 — Cumulative Impacts Analysis: summarize impacts of these other actions (x) plus impacts of the proposed action (y), to arrive at the total cumulative impact (z).

To determine the potential cumulative impacts, existing and anticipated future projects at Peirce Mill and the surrounding area were identified. Potential projects identified as cumulative actions included any planning or development activity currently being implemented or expected to be implemented in the reasonably near future. The projects identified as contributing to cumulative impacts on the resources addressed by this EA/AoE include additional improvements at the mill, the DDOT multiuse trail, and the continued implementation of the park's GMP. These projects are described below.

### **Additional Improvements at the Mill**

The Friends of Peirce Mill have been working with the NPS to preserve the mill for some time. This partnership has resulted in a number of important projects being started for the mill, including the installation of a new roof, structural re-enforcement of the first floor, and the installation of a new pit gear, shaft, and bearing blocks. The group also is working with the park on the proposed improvements so that the mill can be reopened to the public. Once the mill is open, the group would provide volunteer support for many of the interpretive programs. The group also has raised funds for a new water wheel to be installed once the proposed action is complete. These improvements have the potential to impact floodplains, cultural landscapes, historic structures, aesthetics and visual resources, visitor use and experience, and park operations and management.

### **The DDOT Multiuse Trail**

The DDOT, in cooperation with the NPS is proposing several new extensions to the existing multiuse trail system within Rock Creek Park. This includes a formalized extension that will run by the mill. The design, construction, and use of these new trails would be similar to the trails that exist throughout the

region and within the park. This project has the potential to impact soils and topography, vegetation, floodplains, aesthetics and visual resources, and visitor use and experience. This undertaking is independent from actions being taking under the proposal and its alternatives considered in this document. DDOT is preparing a separate environmental assessment for the overall multiuse trail proposal.

### **Continued Implementation of the Park's GMP**

The NPS published the *Rock Creek Park and the Rock Creek and Potomac Parkway Final General Management Plan/Environmental Impact Statement* in 2005. Since that time, the park has followed this guidance document to provide additional educational and recreational opportunities and to protect natural and cultural resources. The guidance provided in the GMP led to the initiation of the planning process for the proposed action in this document. In addition, many other projects of varying sizes and scopes have been initiated and/or completed. These projects have the potential to impact soils and topography, vegetation, floodplains, cultural landscapes, historic structures, archeological resources, aesthetics and visual resources, visitor use and experience, and park operations and management.

### **IMPAIRMENT**

In addition to determining the environmental consequences of the NPS preferred and other alternatives, NPS *Management Policies 2006* and DO #12 require analysis of potential impacts to determine whether actions have the potential for impairment of park resources and values. A fundamental purpose of the NPS, as provided for in its Organic Act (1916) and reaffirmed by the General Authorities Act (1970), as amended in 1978, is a mandate to conserve park resources and values. However, the laws give the NPS management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of the park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirements that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that would otherwise be present for the enjoyment of those resources and values. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified in the park's general management plan or other relevant NPS planning documents as being of significance.

Impairment may result from NPS activities in managing the park, as well as visitor activities or activities undertaken by concessioners, contractors, and others operating in the park. An impairment determination for all impact topics is provided at the end of each alternative section under each impact topic in the "Conclusion" section, with the exception of visitor use and experience and park operations and management, for which no impairment determination is required.

## SOILS AND TOPOGRAPHY

### AFFECTED ENVIRONMENT

NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. NPS *Management Policies 2006* and other NPS and park policies provide general direction for the protection of soils. The study area is dominated by a single soil type, Codorus-Urban land complex. The soil has a high water capacity and is moderately well drained. The soil type has a relatively deep water table (12-24 inches below the surface) and a greater depth to restrictive features (more than 80 inches) (NRCS 2009).

Topography within the study area is relatively flat around the existing parking lot and entrance. From this point, the landscape slopes towards Rock Creek. In most locations, this slope is gentle. These topographic conditions do not reflect the historic condition at the site. Rather, they are the result of a number of road improvements adjacent to the site that raised the road surface near the mill. This resulted in the parking lot and surrounding landscape being modified to meet this elevation.

Impervious surfaces cover approximately 11,000 square feet within the study area and include the entrance road and pedestrian path, parking lots, the path and stairs connecting the entrance road to the mill, and the multiuse trail. These surfaces were intended to provide appropriate access to and through the site. However, visitors to the site have developed social trails across the site, resulting in increasing rates of soil exposure and erosion.

### ENVIRONMENTAL CONSEQUENCES

#### Methodology

Available information on soil and topographic resources potentially impacted in the study area was compiled. Predictions about short- and long-term site impacts were based on a review of existing literature, soil and topographic mapping, and information provided by the NPS and other agencies. The thresholds of change for the intensity of an adverse impact are defined as follows:

- |                    |  |
|--------------------|--|
| <b>Negligible:</b> | Impacts on soil and topographical resources would be below or at the lower levels of detection.  |
| <b>Minor:</b>      | Impacts on soil and topographical resources would be detectable and small. Mitigation may be needed to offset adverse impacts and would be relatively simple to implement and likely be successful.  |
| <b>Moderate:</b>   | Impacts on soil and topographical resources would be readily apparent and result in a change to soils and/or topography over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and likely be successful.  |
| <b>Major:</b>      | Impacts on soil and topographical resources would be readily apparent and would substantially change the character of the soils and/or topography over a large area in and out of the park. Mitigation measures to offset adverse impacts would be needed, extensive, and their success could not be guaranteed. |

## **Impacts of Alternative A**

**Impact Analysis.** Under Alternative A, the existing impervious surfaces would remain unchanged and no new development would occur. Approximately 11,000 square feet of impervious surface exists in the immediate study area, while an additional 6,500 square feet of impervious surface exists in the adjacent Grove 1 parking lot. The existing impervious surface would continue to compact the soil conditions beneath them, minimizing drainage, a long-term, minor, adverse impact. The continued use of existing social trails and the potential development of additional social trails would result in sustained localized erosion and localized soil compaction, a long-term, minor, adverse impact. Minor erosion along these trails would result in small changes to the topography in the area. Over time, continued erosion could result in more extensive changes to the topography along these trails, a long-term, negligible, adverse impact.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on soils and topography in and around the mill. These projects include the DDOT Multiuse Trail and the continued implementation of the park's GMP. The development of the multiuse trail would require grading of undeveloped soils to achieve the necessary topography. In other areas, existing impervious cover may be removed, temporarily exposing soils, so the new trail can be installed. The trail would then be installed, creating development over soils that were previously developed and undeveloped. The impact of these actions would be short-term, minor, and adverse, as well as long-term, minor, and adverse. The continued implementation of the park's GMP could result in the installation of new impervious surfaces, removal of existing impervious surfaces, grading, and changes to vegetation which would have temporary impacts on the soils below. Some of these actions would be designed to improve poor soil or topographic conditions, a long-term beneficial impact. These projects, along with Alternative A, would include both long-term beneficial cumulative impacts, as well as long-term, minor, adverse cumulative impacts on soils and topography.

**Conclusion.** Based on the presence of existing impervious structures and social trails, Alternative A would result in a long-term, minor, adverse impact on soils and topography. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to soils and topography.

## **Impacts of Alternative B (NPS Preferred Alternative)**

**Impact Analysis.** Alternative B would include the demolition of existing impervious structures, the construction of a new headrace, and the installation or modification of trails, paths, parking lots, and the bus drop-off and driveway. These actions would result in approximately 8,800 square feet of new surface in the study area some of which would be designed to be permeable, resulting in a long-term, minor, adverse impact on natural soil conditions. Much of this area would consist of space that had previously been covered with impervious surface.

The construction of the new headrace would include short-term impacts to soils as the existing structure was demolished. This would expose soils that have been covered and compacted by impervious cover. The new headrace would extend the current structure, resulting in a total of 390 cubic feet of soil being

excavated from the site. As the soils were exposed, the use of appropriate erosion and sediment controls, such as silt fences or straw bales, would prevent the long-term loss of soils to wind or water erosion. Once the new structure was constructed, there would be no exposed soils related to the headrace. The previously covered soils would remain compacted and covered. The additional length of the new headrace would increase this impact over a larger area, a long-term, minor, adverse impact.

The demolition of the existing impervious parking lot, pedestrian paths, and comfort station also would result in the exposure of soils that had been covered and compacted. Many of these areas would be covered with new impervious trails and pathways. Other areas would be regraded and planted with native grasses to protect the soil and stabilize natural soil conditions. During the construction process and while the new grasses were taking root, the use of appropriate erosion and sediment controls, such as silt fences and straw bales, would mitigate impacts and help prevent the long-term loss of soils from wind and water exposure. Once construction was complete and the new grasses had taken root, there would be no exposed soils related to the existing or planned impervious surface. Once the construction process was complete, these areas would be regraded and planted with native vegetation to restore natural soil conditions, a long-term beneficial impact.

The removal and installation of impervious surfaces would require fill material to be introduced to the site. In some cases, this soil could be supplied by the excavated soil from the new headrace. Additional soil could be brought in from other locations in the park. The soil is common throughout the region and would not result in different soils being introduced to the site, a long-term, negligible, adverse impact.

The installation of new pedestrian paths and trails would improve circulation through the site. This would reduce the need for visitors to create social trails across the landscape, a long-term beneficial impact. Therefore, once construction was complete, the existing social trails could be removed and the area recontoured to match the surrounding topography and planted with new grasses to recreate natural soil conditions. During this process, appropriate erosion and sediment controls, such as silt fences and straw bales, would mitigate impacts and serve to protect the soils from long-term damage from wind and water exposure.

The development of the orchard would be confined to approximately one quarter acre. The soils and topography in this area have been protected by the vegetation that has developed over the site. The removal of this vegetation would temporarily expose these soils and leave them vulnerable to wind and rain erosion, a short-term adverse impact. The use of appropriate erosion and sediment controls and installation of appropriate ground cover would mitigate this potential impact. The potential addition of new top soil to support the orchard would represent a new soil type in the area, but it would be confined to a small area and would not adversely impact the existing soils. Once the new plants in the orchard had taken root, the soils would be naturally protected. The reintroduction of the orchard would establish a portion of the historic vegetation pattern and would be implemented using historic plant types and planting methods.

During the construction process for the landscape and mill, heavy machinery and equipment would be brought onto the site. The operation and storage of this equipment would result in additional short-term, adverse impacts not associated with the actions described above. These impacts would result in compaction of soils and the potential for increases in exposed soils as heavy equipment was moved across the ground. Additional short-term impacts also would occur as underground utilities, such as water lines,

were extended to the mill. This would involve the temporary exposure of soils surrounding the utility corridors. Once the new lines were installed, the excavated soils could be used to fill the trenches. The use of appropriate erosion and sediment controls described above would minimize these impacts, reducing the short-term, moderate, adverse impact to minor. Once construction was complete, necessary grading and planting of new vegetation would restore natural soil conditions.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on soils and topography in and around the mill. As described under Alternative A, these projects include the DDOT Multiuse Trail and continued implementation of the park's GMP. These projects, along with Alternative B, would have long-term, minor, adverse and long-term, beneficial cumulative impacts on soils and topography.

**Conclusion.** Due to construction activities, the installation of new impervious surfaces, and the formalization of social trails, Alternative B would include a range of impacts on soil and topography: short-term, minor, adverse; long-term, minor, adverse; and long-term, beneficial impacts. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to soils and topography.

### **Impacts of Alternative C**

**Impact Analysis.** Under Alternative C, impacts on soils and topography would be similar to those described in Alternative B. Soils would be disturbed and exposed during construction, a short-term, minor, adverse impact, while social trails would be formalized and the soils beneath stabilized from erosion, a long-term beneficial impact. There would be some difference in the location and size of some of the new impervious surfaces; however, in many cases it would still require the same level of initial disturbance to demolish the existing structures and install new ones. The changes would result in approximately 7,800 square feet of new impervious and designed permeable surface in the study area, a long-term, minor, adverse impact on soils and topography.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on soils and topography in and around the mill. As described under Alternative A, these projects include the DDOT Multiuse Trail, and continued implementation of the park's GMP. These projects, along with Alternative C, would have long-term, minor, adverse and long-term, beneficial cumulative impacts on soils and topography.

**Conclusion.** Due to construction activities, the installation of new impervious surfaces, and the formalization of social trails, Alternative C would result in a range of impacts on soils and topography: short-term, minor, adverse; long-term, minor, adverse; and long-term beneficial impacts. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to soils and topography.



## Impacts of Alternative D

**Impact Analysis.** Under Alternative D, impacts on soils and topography would be similar to those described in Alternative B. Soils would be disturbed and exposed during construction, a short-term, minor, adverse impact, while social trails would be formalized and the soils beneath stabilized from erosion, a long-term beneficial impact. There would be some difference in the location and size of some of the new impervious surfaces; however, in many cases it would still require the same level of initial disturbance to demolish the existing structures and install new ones. The changes would result in approximately 10,700 square feet of new impervious surface in the study area.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on soils and topography in and around the mill. As described under Alternative A, these projects include the DDOT Multiuse Trail and continued implementation of the park's GMP. These projects, along with Alternative D, would have long-term, minor, adverse and long-term beneficial cumulative impacts on soils and topography.

**Conclusion.** Due to construction activities, the installation of new impervious surfaces, and the formalization of social trails, Alternative D would result in a range of impacts on soils and topography: short-term, minor, adverse; long-term, minor, adverse; and long-term beneficial impacts. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to soils and topography.

## VEGETATION

### AFFECTED ENVIRONMENT

The land immediately surrounding the mill and the picnic area at the southern end of the site is covered by turf with informal plantings of ornamental vegetation. Species include black walnut (*Juglans nigra*), eastern red cedar (*Juniperus virginiana*), black locust (*Robinia pseudoacacia*), tulip tree (*Liriodendron tulipifera*), American holly (*Ilex opaca*), white pine (*Pinus strobes*), and flowering dogwood (*Cornus florida*). During the 19th century, the area to the north and west of the mill was planted with fruit trees. Today, patches of forest growth are dominated with invasive growth, but includes a number of native species, namely sugar maple (*Acer saccharum*), tulip tree (*Liriodendron tulipifera*), flowering dogwood (*Cornus florida*), and oak (*Quercus* sp.). Such forest growth has replaced the orchards. Such changes, along with the growth of vegetation along the edge of the creek, have obscured many of the historic views and vistas that once existed on the landscape (NPS 2009).

Due to the presence of several social trails at the site, patches of turf vegetation are missing, thus exposing the soils below.

## ENVIRONMENTAL CONSEQUENCES

### Methodology

Available information on plants and vegetative communities potentially impacted in the study area was compiled for this document. Predictions about short- and long-term site impacts were based on recent studies and previous projects with similar vegetation. The thresholds of change for the intensity of an impact are defined as follows:

- Negligible:** No vegetation would be affected, or some individual plants could be affected as a result of the alternative, but there would be no impact to native species populations. The impacts would be on a small scale.
- Minor:** The alternative would affect some individual plants and also would affect a relatively small portion of that species' population. Mitigation to offset adverse impacts could be required and would likely be successful.
- Moderate:** The alternative would affect some individual plants and would also affect a sizeable segment of the species' population over a relatively large area. Mitigation to offset adverse impacts could be extensive but would likely be successful.
- Major:** The alternative would have a considerable impact on plant populations and affect a relatively large area in and out of the park. Mitigation measures to offset the adverse impacts would be required and extensive, and success of the mitigation measures would not be guaranteed.

### Impacts of Alternative A

**Impact Analysis.** Under Alternative A, there would be no changes made to the existing condition of the vegetative communities at the site. The lawn and ornamental plantings would continue to be maintained through regular NPS landscaping activities. The condition of the lawn would continue to be impacted by the development and regular use of social trails. The lost grasses would be replaced with new plantings when staff and funding were available; however, the conditions would develop again as visitors would continue to walk across the landscape to reach different locations at the site, a long-term, negligible, adverse impact. The condition of the woody communities would remain unchanged. They would continue to form a thick screen along the edges of the site, with a mix of naturally occurring and invasive species.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on vegetation in and around the mill. These projects include the DDOT Multiuse Trail and the continued implementation of the park's GMP. The development of the multiuse trail would require grading of soils and placement of the new trail. Although the trail could be designed to avoid important vegetative communities, there could still be the loss of grasses, shrubs, and some trees along the length of the trail. In some areas, grasses and shrubs could be replanted along the trail after construction was complete. In other areas, however, it would be a permanent loss, a long-term, minor, adverse impact. The continued implementation of the park's GMP would result in new development that could lead to a loss of vegetation, a long-term, minor, adverse impact. These developments would be designed to avoid important vegetative communities as much as possible. The

GMP also instructs the park to work to remove invasive species from the park and replant naturally occurring species, a long-term beneficial impact. These projects, along with Alternative A, would have both long-term, minor, adverse cumulative impacts, as well as long-term, beneficial cumulative impacts on vegetation.

**Conclusion.** Due to the presence of social trails at the site, Alternative A would result in a long-term, negligible, adverse impact on vegetation. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to vegetation.

### **Impacts of Alternative B (NPS Preferred Alternative)**

**Impact Analysis.** Alternative B would include the demolition of existing impervious structures, the construction of a new headrace, and the installation or modification of trails, pedestrian paths, a bus drop-off, and parking lots. The construction of the new headrace would include short-term impacts to the surrounding grasses as the existing structure was demolished. Some of these grasses could be lost as soil was excavated. The new headrace would extend the current structure, resulting in the loss of 390 square feet of grasses, a long-term, minor, adverse impact.

The demolition of the existing impervious parking lot, pedestrian paths, and comfort station also would result in the exposure of areas that had been covered for years. Many of these areas would be covered with new impervious trails and pathways. Other areas would be regraded and planted with native grasses and ornamental shrubs. During the construction process and while the new grasses were taking root, the use of appropriate erosion and sediment controls, such as silt fences and straw bales, would mitigate impacts and help ensure the new vegetation developed successfully.

The installation of the bus drop-off and entry drive to the west of the barn would result in the removal of some small trees and shrubs, a long-term, minor, adverse impact. Once construction is completed, the area would be replanted with native grasses, trees, and shrubs to minimize the visual intrusion of the structure.

The installation of new pathways and trails would improve circulation through the site. This would reduce the need for visitors to create social trails across the landscape. Therefore, once construction was complete, the existing social trails could be removed and the area could be planted with new grasses, a long-term beneficial impact. During this process, appropriate erosion and sediment controls, such as silt fences and straw bales, would mitigate impacts and serve to protect the developing grass seeds.

The development of the interpretive orchard would be confined to one quarter acre. This area currently consists of a mix of invasive and naturally occurring vegetation. The removal of this vegetation would expose the area to new invasive species, a long-term, negligible, adverse impact. Regular monitoring and weeding would be required to prevent the area from being overgrown by invasive vegetation. This effort would continue throughout the development of the orchard to ensure the new plants were able to develop successfully. The reintroduction of the orchard would establish a portion of the historic vegetation pattern

and would be implemented using historic plant types and planting methods and would comply with NPS policies to use native or NPS approved species.

During the construction process for the landscape and mill, heavy machinery and equipment would be brought onto the site. The operation and storage of this equipment would result in additional short-term impacts not associated with the actions described above. These impacts would result in grasses remaining covered for extended periods of time and potentially being lost as equipment was moved across the site. Once construction was complete, additional watering of existing grasses and new plantings would mitigate these impacts. Temporary impacts also would occur as underground utilities, such as water lines, were extended to the mill. This would involve the loss of grasses that cover the proposed utility corridors. Once the new lines were installed, the trenches would be filled and new grasses could be planted. The use of appropriate erosion and sediment controls described above would minimize these impacts. Heavy machinery operation could impact roots of existing trees. In order to mitigate this impact, areas within the drip lines of trees would be flagged or snow-fenced in order to limit the operation of heavy machinery within drip lines.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on vegetation in and around the mill. As described under Alternative A, these projects include the DDOT Multiuse Trail and the continued implementation of the park's GMP. These projects, along with Alternative B, would have both long-term, minor, adverse as well as long-term, beneficial cumulative impacts on vegetation.

**Conclusion.** Alternative B would include the removal of some grasses, shrubs, and small trees, as well as the planting of an interpretive orchard. Construction activities and staging could include compaction and trampling of vegetation. Therefore, Alternative B would result in short-term, minor, adverse; long-term, minor, adverse; and long-term, beneficial impacts on vegetation. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to vegetation.

### **Impacts of Alternative C**

**Impact Analysis.** Under Alternative C, impacts on vegetation would be similar to those described in Alternative B. Vegetation would be disturbed and possibly removed during construction, a short-term, minor, adverse impact, while social trails would be formalized and the impact on existing vegetation minimized, a long-term beneficial impact. There would be some difference in the location and size of some of the new impervious surfaces; however, in many cases it would still require the same level of disturbance and changes in vegetation. The development of the new interpretive orchard would result in the removal of existing vegetation, but it would be replaced with historic plant types, a long-term, negligible, adverse impact.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on vegetation in and around the mill. As described under Alternative A, these projects include the DDOT Multiuse Trail and the continued implementation of the park's GMP.

These projects, along with Alternative C, would have both long-term, minor, adverse as well as long-term, beneficial cumulative impacts on vegetation.

**Conclusion.** Due to the removal and replanting of vegetation at the site, the formalization of social trails, the creation of the interpretive orchard, and construction activities, Alternative C would result in short-term, minor, adverse; long-term, minor, adverse; and long-term, beneficial impacts on vegetation. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to vegetation.

### **Impacts of Alternative D**

**Impact Analysis.** Under Alternative D, impacts on vegetation would be similar to those described in Alternative B. Vegetation would be disturbed and possibly removed during construction, a short-term, minor, adverse impact, while social trails would be formalized and the impact on existing vegetation minimized, a long-term beneficial impact. There would be some difference in the location and size of some of the new impervious surfaces; however, in many cases it would still require the same level of disturbance and changes in vegetation. The development of the new interpretive orchard would result in the removal of existing vegetation, but it would be replaced with historically accurate species, a long-term, negligible, adverse impact.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on vegetation in and around the mill. As described under Alternative A, these projects include the DDOT Multiuse Trail and the continued implementation of the park's GMP. These projects, along with Alternative D, would have both long-term, minor, adverse as well as long-term, beneficial cumulative impacts on vegetation.

**Conclusion.** Due to the removal and replanting of vegetation at the site, the formalization of social trails, the creation of the interpretive orchard, and construction activities, Alternative D would result in short-term, minor, adverse; long-term, minor, adverse; and long-term, beneficial impacts on vegetation. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to vegetation.

## **FLOODPLAINS**

### **AFFECTED ENVIRONMENT**

Based on Federal Emergency Management Administration (FEMA) mapping, much of the study area is located within the 100-year floodplain. A 100-year floodplain is the elevation along a river that has a 1 in 100 chance of experiencing a specific-sized flood, or a flood that will occur once every 100 years. Within this zone, the 100-year floodplain exists at elevations at or below 10 feet relative to the National Geodetic

Vertical Datum of 1929 (NGVD29) (FEMA 1985). This area includes the multiuse trail, the mill, and portions of the surrounding trails and pedestrian paths. Most of the area covered by and surrounding the parking lot is outside the 100-year floodplain, as are the adjacent pedestrian paths and Tilden Street. The nearby parking lots that support the mill (Grove 1, north Grove 2, and east Grove 2) also are outside the 100-year floodplain.

Periodic flooding along Rock Creek is common. The stone wall that separates the creek from the park's multiuse trail provides protection against flood waters to an elevation slightly above the 100-year flood elevation. Despite this protection, historic flooding resulted in long-term damage to the raceway. The flood damage was great enough that the structure was filled and covered. More recent damage has been confined to periodic temporary flooding of the mill basement.

## **ENVIRONMENTAL CONSEQUENCES**

### **Methodology**

The planning team based the impact analysis and conclusions for possible impacts to the 100-year floodplain at Peirce Mill in this document on the review of existing literature and studies, information provided by experts in the NPS and other agencies, park staff insights, and professional judgment. Mapped locations of the 100-year floodplain were compared with locations of proposed development and modifications of existing facilities. Predictions about short- and long-term site impacts were based on previous studies of impacts to the 100-year floodplain from similar projects and recent scientific data. The thresholds of change for the intensity of an impact are defined as follows:

- Negligible:** There would be no change in the ability of a floodplain to convey floodwaters, or its values and functions. Projects would not contribute to enhancing flood events.
- Minor:** Changes in the ability of a floodplain to convey floodwaters, or its values and functions, would be measurable and local. Project would not contribute to the flood. No mitigation would be needed.
- Moderate:** Changes in the ability of a floodplain to convey floodwaters, or its values and functions, would be measurable and local. Project could contribute to the flood. The impact could be mitigated by modification of proposed facilities in floodplains.
- Major:** Changes in the ability of a floodplain to convey floodwaters, or its values and functions, would be measurable and regional. Project would contribute to the flood. The impact could not be mitigated by modification of proposed facilities in the floodplains.

According to NPS DO #77-2: Floodplain Management, a statement of findings (SOF) is required when an action is to occur within a floodplain. The SOF is intended to provide reasoning as to why the proposed site was selected and why less flood-prone alternative sites were rejected. Although the study area is located within the 100-year floodplain, it is exempt from an SOF. This is because, under NPS guidance, actions designed to address historic or archeological structures, sites, or artifacts whose location is integral to their significance do not require an SOF. Such is the case with the historic resources at the mill. Furthermore, foot trails and associated daytime parking facilities in non-high hazard areas do not



require an SOF (NPS 2003). Given the scope of the proposed action and that the mill site is only open during the day, no SOF is included with this document.

### **Impacts of Alternative A**

**Impact Analysis.** Under Alternative A, no changes would be made to the structures within or conditions of the floodplain in the study area. The mill and surrounding parking lots, trails, pathways, fences, picnic tables, trash cans, and kiosk would remain in the floodplain as is, a long-term, negligible, adverse impact. Social trails would remain and can result in a loss or removal of vegetation that may attenuate floodplain behavior.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on floodplains in and around the mill. These projects include the DDOT Multiuse Trail and the continued implementation of the park's GMP. The DDOT multiuse trail would introduce a new structure to the floodplain. The trail would not interfere with flood waters or measurably impact the value of the floodplain, a long-term, negligible, adverse impact. The continued implementation of the park's GMP could result in additional development within the floodplain. In some cases, this would result in improved conditions of the floodplain, a long-term beneficial impact. Existing NPS regulations and other federal policies would prevent any of these developments from resulting in measurable adverse impacts. Therefore, these projects, along with Alternative A, would have a long-term, negligible, adverse cumulative impact on floodplains.

**Conclusion.** No changes would be made to the existing floodplain conditions; therefore, Alternative A would result in a long-term, negligible, adverse impact on floodplains. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to floodplains.

### **Impacts of Alternative B (NPS Preferred Alternative)**

**Impact Analysis.** Under Alternative B, the existing structures in the floodplain would remain. There would be some changes to the location and amount of impervious surfaces within the floodplain. This change would not alter the conveyance of flood waters, a long-term, negligible, adverse impact. The new trails and pedestrian paths would reduce the use of social trails through the site, allowing the NPS to reduce the localized erosion within the floodplain surrounding the mill facility. Social trails can result in a loss or removal of vegetation that may attenuate floodplain behavior. Loss of vegetation can also result in an increase of erosion and stormwater runoff. Minimizing the erosion potential would have a beneficial impact and in turn decrease sedimentation contributions should flooding occur in the area.

Work in the study area would also involve the use and storage of machinery and equipment within the floodplain, a short-term, minor, adverse impact. The equipment and construction materials could be quickly removed if a flood event was anticipated. Once the construction process was complete, this equipment would be removed entirely and the staging area restored.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on floodplains in and around the mill. As described under Alternative A, these projects include the DDOT Multiuse Trail and the continued implementation of the park's GMP. Cumulative impacts also would result from the continued improvements at the mill, including the construction of a new water wheel and the potential for other structures to be placed in the floodplain. None of these structures would alter the ability of the floodplain to convey floodwaters or alter its values and functions, a long-term, negligible, adverse impact. These projects, along with Alternative B, would have a long-term, negligible, adverse cumulative impact on floodplains.

**Conclusion.** Structures would remain in the floodplain, although the location of impervious and designed permeable surfaces (trails, parking lots, entry roads) may change. During construction, equipment would be stored within the floodplain. Overall, Alternative B would result in short-term, minor, adverse and long-term, negligible, long-term, adverse impacts on floodplains. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to floodplains.

### **Impacts of Alternative C**

**Impact Analysis.** Under Alternative C there would be some change in the location and sizes of the new impervious and designed permeable surfaces; however, these changes would not alter the conveyance of flood waters, a long-term, negligible, adverse impact. Construction equipment and machinery would be stored within the floodplain but removed if a flood threat existed, a short-term, minor, adverse impact.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on floodplains in and around the mill. As described under Alternatives A and B, these projects include the additional improvements at the mill, the DDOT Multiuse Trail, and the continued implementation of the park's GMP. These projects, along with Alternative C, would have a long-term, negligible, adverse cumulative impact on floodplains.

**Conclusion.** Structures would remain in the floodplain, although the location of impervious and designed permeable surfaces (trails, parking lots, entry roads) may change. During construction, equipment would be stored within the floodplain. Therefore, Alternative C would result in short-term, minor, adverse and long-term, negligible, adverse impacts on floodplains. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to floodplains.

### **Impacts of Alternative D**

**Impact Analysis.** Under Alternative D, there would be some change in the location and sizes of the new impervious and designed permeable surfaces; however, it would not alter the conveyance of flood waters,

a long-term, negligible, adverse impact. Construction equipment and machinery would be stored within the floodplain but removed if a flood threat existed, a short-term, minor, adverse impact.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on floodplains in and around the mill. As described under Alternatives A and B, these projects include the additional improvements at the mill, the DDOT Multiuse Trail, and the continued implementation of the park's GMP. These projects, along with Alternative D, would have a long-term, negligible, adverse cumulative impact on floodplains.

**Conclusion.** Structures would remain in the floodplain, although the location of impervious and designed permeable surfaces (trails, parking lots, entry roads) may change. During construction, equipment would be stored within the floodplain. Alternative D would result in short-term, minor, adverse and long-term, negligible, adverse impacts on floodplains. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to floodplains.

## CULTURAL RESOURCES

The CEQ regulations that implement NEPA require assessment of impacts on cultural resources as well as natural resources. In this EA/AoE, impacts on cultural resources are described in terms of type, context, duration, and intensity, as defined above, which is consistent with CEQ regulations. These impact analyses are intended, however, to comply with the requirements of both NEPA and Section 106 of the NHPA. In accordance with the Advisory Council's regulations for implementing Section 106 of the NHPA (36 CFR Part 800 Protection of Historic Properties), impacts on cultural resources also 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 in or eligible for listing in the National Register; (3) applying the criteria of adverse effect to affected cultural resources either listed in or eligible for listing in the National Register; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under Advisory Council regulations, a determination of either adverse effect or no adverse effect also must be made for affected, National Register listed or 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 in the National Register, e.g., diminishing the integrity (or the extent to which a resource retains its historic appearance) of the resource's location, setting, design, feeling, association, workmanship, or materials. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR Part 800.5 Assessment of Adverse Effects). A determination of no adverse effect means that there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the National Register.

CEQ regulations and NPS DO #12: Conservation Planning, Environmental Impact Analysis, and Decision-making also call for a discussion 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 under NEPA only. It does not suggest that the level of effect as defined by Section 106 is similarly reduced. Cultural resources are non-renewable resources, and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss in the integrity of the resources that can never be recovered. Therefore, although actions determined to have an adverse effect under Section 106 may be mitigated, the effect remains adverse.

A Section 106 summary is included in the impact analysis sections for cultural resources under the action alternatives. The Section 106 summary is intended to meet the requirements of Section 106 and is an assessment of the effect of the undertaking (implementation of the alternative) on cultural resources, based upon the criteria of effect and the criteria of adverse effect found in the Advisory Council regulations. The area of potential effect (APE) is displayed on Figure 6, and the resources potentially affected by the proposed alternatives are described below.

## **CULTURAL LANDSCAPES**

### **AFFECTED ENVIRONMENT**

The NPS defines a cultural landscape as a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person exhibiting other cultural or aesthetic values (NPS 2006). The mill's cultural landscape extends north from the structure to the intersection of Beach Drive and Broad Branch Road and south beyond the Grove 1 Picnic Area. The core landscape is confined to the area immediately surrounding the mill. This area roughly matches the study area for this document and is the portion of the landscape that would be considered for analysis (see photographs at the end of Chapter 2 and in Appendix B).

The mill's cultural landscape contains numerous contributing features, including the stone mill building and associated structures such as the adjacent barn and springhouse. Within the historic core, the spatial organization is formed by the relatively open area north of the barn, extant tailrace north and east of the mill, south end of the historic road alignment and mature canopy trees, which are within the historic core. Other contributing features of the cultural landscape that are within the study area are Rock Creek, the boulder dam and remnants of the crib dam in the creek, remnant of a ford, Tilden Street, the Tilden Street bridge over Rock Creek and the multiuse trail underpass, cedar trees on Tilden Street across from the barn, the East Grove 2 area, and its stone fireplace at the fire pit.

The mill's historic landscape contains resources related to three historically significant periods of development. From 1800 to 1890, Peirce Mill, as a privately owned milling and agricultural enterprise, contained orchards, transportation routes, pasture land, and agricultural and industrial building clusters. After the transfer of the property for the creation of Rock Creek Park in 1890, the mill was renovated into a picturesque tea house, and the site was used for picnic grounds and equestrian trails from 1891 through 1932. The site was modified extensively between 1934 and 1936 when the landscape underwent alterations as part of a New Deal project to restore the mill and wagon barn to function as a living history museum interpreting 19th century milling activities. That activity continued from 1933 through 1950.





Figure 6  
Area of Potential Effect







The landscape surrounding the mill itself reflects alterations imposed by the building and these different management periods. The tailrace, which leads from the mill wheel, located on the northern façade of the mill, east to the creek dates to the late 1930s. A slight depression in the landscape reveals the more extensive path of the 1936 headrace restoration, which was filled in during the late 1960s. The land immediately surrounding the mill and the picnic area at the southern end of the site is covered by turf with informal plantings of ornamental vegetation. Today, patches of forest growth are dominated by invasive plants but also include a number of native species. Such forest growth has replaced the orchards and has obscured many of the historic views and vistas that once existed on the landscape (NPS 2009).

Along with changes in vegetation, the spatial organization of the landscape has been altered over the years. A portion of the driveway and parking lot is in the approximate location of the non-extant mill yard. The mill yard included the space between the wagon barn west of the mill and the mill itself. The alignment of the mid-19th century road, which connected Peirce Mill to other local mills, is currently used by the multiuse path (NPS 2009).

In addition to covering the historic mill yard, the driveway and parking lot are considerably higher than the area was during the earliest period of significance during the 1820s. According to NPS documentation, this elevation was necessary to meet the elevation of Tilden Street, which has been raised several times to meet changes in the bridge crossing. As a result, the mill appears to lay in a depression (NPS 2009). These conditions do not allow the NPS to present the landscape as it existed during the period of historic significance.

## **ENVIRONMENTAL CONSEQUENCES**

### **Methodology**

For purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

<b>Negligible</b>	Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. An assessment of effect according to Section 106 of the NHPA would result in a determination of no adverse effect.
<b>Minor</b>	Alteration of a pattern(s) or feature(s) of the landscape would not diminish the overall integrity of the landscape. An assessment of effect according to Section 106 of the NHPA would result in a determination of no adverse effect.
<b>Moderate</b>	Alteration of a pattern(s) or feature (s) of the landscape would diminish the overall integrity of the cultural landscape. An assessment of effect according to Section 106 of the NHPA would result in a determination of adverse effect. A memorandum of agreement (MOA) is executed among the NPS and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.

**Major** Alteration of a pattern(s) or feature(s) of the landscape would diminish the overall integrity of the landscape. An assessment of effect according to Section 106 of the NHPA would result in a determination of adverse effect. Measures to minimize or mitigate adverse impacts cannot be agreed upon, and the NPS and applicable state historic or tribal preservation officer and/or Advisory Council are unable to negotiate and execute an MOA in accordance with 36 CFR 800.6(b).

### **Impacts of Alternative A**

**Impact Analysis.** Under Alternative A, the entrance drive and parking lot between the mill and barn would continue to occupy space originally occupied by the mill yard associated with the two structures. This would not represent the historic landscape that had an open yard between the two structures and at the same elevation as the mill. This open space was important as it served transportation and staging operations for the mill. Maintaining this condition would result in a long-term, moderate, adverse impact.

No changes would be made to the current configuration of the trails and pedestrian paths in the study area. This would lead visitors to continue to develop social trails across the site, degrading the historic landscape. The historic landscape would continue to be distorted by the lack of the full length of the historic millrace. The absence of this structure would prevent the landscape from being understood in its historic context, a long-term, moderate, adverse impact.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on cultural landscapes in and around the mill. These projects include the continued implementation of the park's GMP, which would provide further protection and interpretation of the park's cultural resources. This would enhance the overall cultural landscape throughout the park, a long-term, beneficial impact. These projects, along with Alternative A, would have both a long-term, beneficial cumulative impact on cultural landscapes, as well as a long-term, moderate, adverse cumulative impact.

**Conclusion.** The current location of the entrance drive and parking lot, social trails, and the absence of the full historic millrace would continue to impact the cultural landscape. Therefore, Alternative A would result in a long-term, moderate, adverse impact on cultural landscapes. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to cultural landscapes.

### **Impacts of Alternative B (NPS Preferred Alternative)**

**Impact Analysis.** Under Alternative B, the existing parking lot and entrance drive would be removed and replaced with a gathering space at a grade level with the mill. This would remove cars from the immediate setting of the mill and provide a better spatial understanding of the former mill yard. This spatial understanding would be provided in both the area of the gathering space, as well as the grade at which it would be constructed, a long-term, beneficial impact.

The reconfiguration of pathways, trails, and pedestrian paths throughout the mill's setting would create additional site access options, reducing the need for visitors to create social trails. This would allow the NPS to restore the historic landscape without the threat of future degradation from repeated foot traffic off established pathways and trails, a long-term, beneficial impact.

Additional long-term, beneficial impacts would result from changes to the millrace and restoration of an interpretive orchard. The historic landscape would be further improved through the removal of the existing flume and replacement with a more accurate headrace in orientation, supplemented with interpretive treatments (stones) to indicate the original length further north. This would return portions of the landscape to its historic period of operation. The landscape also would be improved through the planting of the interpretive orchard. The orchard would return historically accurate views and activities to the landscape surrounding the mill. The removal of the comfort station would add to this improvement from the historic landscape. Regrading of selected site areas, the new path system as well as the partially reconstructed millrace would help re-establish the historic use patterns within the site.

Construction of the bus drop-off loop and a two handicapped parking spaces to replace the spaces lost from demolition of the old lot would add a new element into the historic scene, a long-term, moderate, adverse impact. This would be mitigated, in part, by establishment of new vegetation planted to screen the area to reduce hard edge visual disturbance, reducing the long-term, moderate, adverse impact to minor. This mitigation would also lessen impacts from the approach views along Tilden Street from the west. Over the years, vistas from the mill have been lost due to successional vegetation growth and invasive species growth. Removal of invasives, as part of the proposal, would aid in the restoration of vistas from the mill, a long-term beneficial impact.

During the construction process, there would be some short-term, adverse impacts to the landscape as equipment and materials were stored onsite and portions of the landscape were disrupted by ground disturbing activities. When not in use, these materials would be stored at the staging area near the Grove 1 parking lot, which is outside the historic core. Trenching for the installation of water lines would have minimal, if any, effect on the existing topography, spatial organization, or land use patterns of the cultural landscape. Once the water lines are installed and the trench is backfilled, the disturbed ground would be restored to its preconstruction contour and condition. Additional grading and landscaping across the site would not materially affect the already substantially altered landscape. These changes, however, could improve drainage conditions that may potentially affect the area's condition in the future.

**Section 106 Summary.** Although short-term construction related impacts are expected, implementation of Alternative B would rehabilitate spatial relationships and landscape features. Views and vistas are among the character-defining features of cultural landscapes. Views are broad and vistas are targeted. The view approaching the Peirce Mill area from the west (down Tilden Street) is one that is important for visitor experience and appreciation of historic setting. Construction of the bus turnaround and its resultant use would impact the view from this Tilden Street approach. In order to mitigate impacts operational use of the turnaround would limit the time and duration of use and general parking would not be permitted in the drop-off lanes. The view would be enhanced by the re-introduction of the orchard planting, which would support the agricultural character of the setting on the western side of the study area. The removal of the parking area between the barn and mill and the changing of the grade to create the mill yard would restore the spatial organization of the cultural landscape. After applying the Advisory Council's regulations 36 CFR 800, the NPS finds that Alternative B would have no adverse effect on cultural landscapes.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on cultural landscapes in and around the mill. These projects include the additional improvements at the mill and the continued implementation of the park's GMP. The improvements at the mill would continue to return the site to its historic condition. This would include the installation of a new water wheel which would provide an important piece of the historic landscape, a long-term, beneficial impact. The continued implementation of the park's GMP would provide further protection and interpretation of the park's cultural resources. This would enhance the overall cultural landscape throughout the park, a long-term, beneficial impact. These projects, along with Alternative B, would have both a long-term, beneficial cumulative impact on cultural landscapes and a long-term, minor, adverse cumulative impact.

**Conclusion.** Alternative B would result in long-term, beneficial impacts, as the cultural landscape would be improved through the removal of the parking lot from the immediate vicinity of the mill, the regrading of the site, the restoration of the historic headrace, and the restoration of the historic orchard. Alternative B also would result in short-term and long-term, minor, adverse impacts on cultural landscapes, as construction equipment would be located in the landscape and a new feature (the bus drop-off) would be introduced. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to cultural landscapes.

### **Impacts of Alternative C**

**Impact Analysis.** Impacts on cultural landscapes would be similar to those of Alternative B, including the removal of the parking lot from the immediate vicinity of the mill and the reconstruction of the historic headrace, long-term, beneficial impacts. The primary difference in this alternative is that two gathering areas, a larger one at the grade of the parking lot and a smaller one at grade with the mill, would be constructed. This would result in a long-term beneficial impact as the parking lot and entry drive would be removed. This could result in an increased public understanding of the spatial connection between the mill and barn, although the area between the mill and barn would still be at different elevations. Construction of the bus parking areas adjacent to Shoemaker Street would not directly intrude on the cultural landscape areas or the views and vistas from the mill area.

**Section 106 Summary.** Although short-term construction related impacts are expected, implementation of Alternative C would partially rehabilitate spatial relationships and landscape features. Views from Grove 2 East area and Beach Drive would be impacted by the proposed expanded pedestrian circulation patterns which extend out from the mill. After applying the Advisory Council's regulations 36 CFR 800, the NPS finds that Alternative C would have no adverse effect on cultural landscapes.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on cultural landscapes in and around the mill. As described under Alternative B, these projects include the additional improvements at the mill and the continued implementation of the park's GMP. These projects, along with Alternative C, would have a long-term, beneficial cumulative impact on cultural landscapes.

**Conclusion.** Long-term, beneficial impacts would result under Alternative C, as the cultural landscape would be improved through the removal of the parking lot from the immediate vicinity of the mill, the reconstruction of the historic headrace, and restoration of the historic orchard. Alternative C would result in short-term, minor, adverse impacts as construction equipment would be temporarily present in the landscape. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to cultural landscapes.

### **Impacts of Alternative D**

**Impact Analysis.** Under this alternative, the long-term, beneficial impacts would be similar to those of Alternative B, including the removal of the parking lot from the immediate vicinity of the mill, reconstruction of the historic headrace and orchard. Additionally, under this alternative a wider path from Grove 2 would be constructed. Development of a wider path from Grove 2 could lessen the development of social trails and would decrease the potential for further disruption of the cultural landscape and setting. Construction of the bus parking areas adjacent to Shoemaker Street would not directly intrude on the cultural landscape areas or the views and vistas from the mill area. The new handicapped accessible parking areas located adjacent to the barn would add a limited visual impact to the area, but generally would not intrude on the views and vistas from the mill site, a long-term, minor, adverse impact.

**Section 106 Summary.** Although short-term construction related impacts are expected, implementation of Alternative D would partially rehabilitate spatial relationships and landscape features. Views from Grove 2 East area and Beach Drive would be impacted by the proposed expanded pedestrian circulation patterns which extend out from the mill. After applying the Advisory Council's regulations 36 CFR 800, the NPS finds that Alternative D would have no adverse effect on cultural landscapes.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on cultural landscapes in and around the mill. As described under Alternative B, these projects include the additional improvements at the mill and the continued implementation of the park's GMP. These projects, along with Alternative D, would have both a long-term, beneficial cumulative impact on cultural landscapes and a long-term, minor, adverse cumulative impact.

**Conclusion.** Long-term, beneficial impacts would result under Alternative D, as the cultural landscape would be improved through the removal of the parking lot from the immediate vicinity of the mill, the reconstruction of the historic headrace, and restoration of the historic orchard. Alternative D also would result in short-term and long-term, minor, adverse impacts as construction equipment would be temporarily present in the landscape and a new driveway and accessible parking would be introduced on the west side of the barn. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to cultural landscapes.

## **HISTORIC STRUCTURES**

### **AFFECTED ENVIRONMENT**

Peirce Mill, listed individually in the National Register in 1969, is the only extant milling structure on Rock Creek within Washington, D.C. (NPS 2008). The stone mill, which retains most of its exterior building fabric, is located on its original foundation on the west bank of Rock Creek. According to a datestone located on its south gable, the building was constructed in 1829. However, some historians believe the mill was actually constructed in 1820. Since its construction, the mill has undergone numerous rehabilitation efforts. As a result, the mill possesses architectural elements from each of its developmental eras. The early 19th century industrial building was constructed as a custom mill, milling grain for local residents. As such, the structure is relatively small in scale compared to area merchant mills which served a larger clientele (NPS 2009).

The mill is reached by a short set of flagstone stairs. The three-bay, two-and one-half story mill is pierced by double-hung, wood sash windows and a central door on the main elevation (west). The rear façade (east) is three and one half stories due its banked construction into the gently sloping western creek edge. The rear façade (east) is three-and-one-half stories due to its banked construction into the gently sloping western creek edge. The gable-roofed building is three bays wide, two rooms deep, with a rectangular floor plan. Peirce Mill has flat stone lintels and sills constructed of large, blue and brown, cut granite, which are irregularly laid. The window openings have unadorned frames with nine-over-six double hung sash, except on the gable ends and the rear basement level. The attic level windows on the gable ends have a six-over-six configuration and the rear basement windows contain wooden louvered screens. The gable of the north façade has been covered in wood cladding. The north façade has a wheel pit on the ground level which dates to the late 1960s renovation of the structure (NPS 2009).

Inside the mill, with the exception of a small office on the second floor, each of the floors consists of only one room. The original exposed timbers and board floors remain, and the walls display the same blue and gray stone seen on the exterior, although portions of it has been covered with a white wash or paint. There is a modern concrete floor in the ground floor. The three floors are accessed by a set of steep stairs near the building's northwest corner; the stairs' date of construction is unknown, but most likely dates to the 1930s. The current milling system consists of authentic milling equipment obtained from other area mills or were fabricated by the Fitz Water Wheel Company in the 1930s. Several wood beams, supported by square wood posts and Lally columns, were added in the 1970s at the ground floor level to help stabilize the building.

Additional historic structures in the APE include the springhouse located west of the mill area in the Tilden Street median, the barn located across the current parking area from the mill, the bridge crossing Rock Creek, the tailrace, and the private residence located at Tilden Street and Shoemaker Street.

### **ENVIRONMENTAL CONSEQUENCES**

#### **Methodology**

For purposes of analyzing potential impacts on historic structures/buildings, the thresholds of change for the intensity of an impact are defined as follows:



- Negligible:** Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. An assessment of effect according to Section 106 of the NHPA would result in a determination of no adverse effect.
- Minor:** Alteration of a character-defining feature(s) would not diminish the overall integrity of the resource. An assessment of effect according to Section 106 of the NHPA would result in a determination of no adverse effect.
- Moderate:** Alteration of a character-defining feature(s) would diminish the overall integrity of the resource. An assessment of effect according to Section 106 of the NHPA would result in a determination of adverse effect. An MOA is executed among the NPS and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.
- Major:** Alteration of a character-defining feature(s) would diminish the overall integrity of the resource. An assessment of effect according to Section 106 of the NHPA would result in a determination of adverse effect. Measures to minimize or mitigate adverse impacts cannot be agreed upon, and the NPS and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute an MOA in accordance with 36 CFR 800.6(b).

### Impacts of Alternative A

**Impact Analysis.** Under Alternative A, no immediate action would be taken to address the continuing deterioration of the mill. Lack of systematic work to repair exterior elements of the building, including windows, doors, lintels, gable, siding and stonework would result in deterioration of historic fabric and may result in eventual damage to the structural elements of the mill, a long-term, moderate, adverse impact. The potential for public visitation would become increasingly difficult in light of deteriorating historic fabric and resulting disrepair. Additionally, fire protection and security improvements would not be undertaken with consequential safety hazards for both park visitors and employees and a risk of harm to the structure through vandalism or loss resulting from fire, a long-term, moderate, adverse impact. The structure would also continue to lack ADA accessibility and be susceptible to impacts resulting from periodic flooding.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on historic structures in and around the mill. The continued implementation of the park's GMP would result in greater protection and interpretation of the park's other historic structures. This would improve the context in which the mill is viewed and interpreted. These projects, along with Alternative A, would have both a long-term, beneficial cumulative impact and a long-term, moderate, adverse impact on historic structures.

**Conclusion.** The mill would be maintained as funding becomes available; however, there would be no systematic effort to address its continuing deterioration; therefore, Alternative A would result in a long-term, moderate, adverse impact on historic structures. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for

enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to historic structures.

### **Impacts of Alternative B (NPS Preferred Alternative)**

**Impact Analysis.** Under this alternative, work to repair the exterior components of the building (windows, doors, stonework, gable end siding) would result in stabilization of deterioration of the resource and restoration of features currently in need of repair or replacement in kind, a long-term beneficial impact.

Additional long-term, beneficial impacts would result from work on the building's interior. Compliance with fire and safety codes would result in the potential for increased use of the building subject to controlled numbers of visitors and duration of visit. Additionally, upgrading of the building to comply with applicable fire and safety codes would improve its resistance to fire and upgrade safety within the building. Work to improve the building's thermal integrity through the installation of insulation in the attic would result in a lessening of dramatic swings in temperature and provide a degree of temperature stability for interior features.

During the construction process, there could be some additional stress placed on the structure. The use of additional supports would prevent a long-term impact to the structure from construction activities. Construction in the vicinity of the barn would also place potential stress on that structure. Mitigation measures and design strategies would be implemented to assure that risk of damage to the structure is lessened. Additionally, drainage provisions would be incorporated in the design of the adjacent bus drop off to assure that the barn is not impacted by potential changes in water flow. No direct effects would be anticipated to other historic structures within the APE

**Section 106 Summary.** Although short-term construction related impacts are expected, implementation of Alternative B would partially rehabilitate the historic mill. After applying the Advisory Council's regulations 36 CFR 800, the NPS finds that Alternative B would have no adverse effect on historic structures.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on historic structures in and around the mill. These projects include the additional improvements at the mill, including the installation of a new water wheel, and the continued implementation of the park's GMP. The continued implementation of the park's GMP would result in greater protection and interpretation of the park's other historic structures. This would improve the context in which the mill is viewed and interpreted, a long-term, beneficial impact. These projects, along with Alternative B, would have a long-term, beneficial cumulative impact on historic structures.

**Conclusion.** Alternative B would result in a long-term, beneficial impact on historic structures through restoration and rehabilitation of the mill's exterior and interior features. Short-term, minor, adverse impacts also would result during construction activities. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other

relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to historic structures.

### **Impacts of Alternative C**

**Impact Analysis.** Long-term, beneficial impacts resulting from this alternative are similar to those in Alternative B. The primary difference on the interior of the structure is the addition of an elevator and an additional staircase to connect the basement and first floor. This would introduce a feature into the present open space of the interior of the building and would modify its historic appearance, a long-term, moderate, adverse impact. In addition, existing staircases would be repaired and reconstructed to meet ADA requirements. This would improve the historic structure without notably detracting from its historic condition.

The addition of a retaining wall and patio between the multiuse path and the mill would add a non-historic visual component to the building in a visible location, a long-term, moderate, adverse impact. While the retaining wall and patio would eliminate the need for new water-tight windows, it should be noted that the current windows in the building are not historic and could be replaced with sympathetic elements if required.

**Section 106 Summary.** The implementation of Alternative C would partially rehabilitate the historic mill; however, non-historic elements would be added to the building in visible locations. After applying the Advisory Council's regulations 36 CFR 800, the NPS finds that Alternative C would have an adverse effect on historic structures.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on historic structures in and around the mill. As described under Alternative B, these projects include the additional improvements at the mill and the continued implementation of the park's GMP. These projects, along with Alternative C, would have both a long-term, beneficial cumulative impact and a long-term, moderate, adverse impact on historic structures.

**Conclusion.** Alternative C would result in a long-term, beneficial impact on historic structures through restoration and rehabilitation of the mill's exterior and interior features. Short-term, minor, adverse impacts also would result during construction activities. Long-term, moderate, adverse impacts also would result due to the introduction of new non-historic features in visible locations in the mill. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to historic structures.

### **Impacts of Alternative D**

**Impact Analysis.** Under Alternative D, the long-term, beneficial impacts of reinforcing the historic structure and installing new utilities and machinery would be the same as Alternative B. The only difference would be the introduction of an air conditioning system as part of the utility improvements. This would represent an additional modern structure in the historic structure, a long-term, minor, adverse impact. The impacts related to installing the system would be included in the installation of other utility

upgrades. Maintaining a cool environment during the hot summer months would provide some additional protection for the historic structure but would not present the conditions in the mill as they existed during its historic use.

**Section 106 Summary.** Although short-term construction-related impacts are expected, implementation of Alternative D would partially rehabilitate the historic mill. After applying the Advisory Council's regulations 36 CFR 800, the NPS finds that Alternative D would have no adverse effect on historic structures.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on historic structures in and around the mill. As described under Alternative B, these projects include the additional improvements at the mill and the continued implementation of the park's GMP. These projects, along with Alternative D, would include both long-term, beneficial cumulative impacts and long-term, minor, adverse impacts on historic structures.

**Conclusion.** Alternative D would result in a long-term, beneficial impact on historic structures through restoration and rehabilitation of the mill's exterior and interior features. Short-term, minor, adverse impacts also would result during construction activities. Long-term, minor, adverse impacts also would result due to the introduction of new non-historic features in the mill. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to historic structures.

## **ARCHEOLOGICAL RESOURCES**

### **AFFECTED ENVIRONMENT**

Between 2003 and 2007, archeological investigations were carried out through much of the park. Prior to this work, limited archeological investigations had been conducted in the park. The work conducted in 2003-2007 targeted previously known sites to assess their archeological integrity and to answer specific questions about what remains. These investigations included the mill which had never been thoroughly investigated despite the extensive grading carried out during the early development period for Rock Creek Park and subsequent grade changes to Tilden Street (NPS 2008).

Archeological investigations recently carried out in the area indicate that "Soil mottling and textural inversion, inclusions of recent artifacts, and artifact inversions (e.g., quartzite flakes found above Pepsi bottle fragments), indicate that the areas immediately surrounding Peirce Mill and on the floodplain to the north and south, have been severely disturbed by flooding and 20th century construction activity (NPS 2008).

Under the recently adopted GMP/EIS, the park has a formalized approach to the conduct of ground disturbing activities. This includes a process to:

- 1) conduct surveys for cultural resources of areas to be disturbed, including trail alignments
- 2) identification of all archeological resources that are discovered during the surveys
- 3) systematic evaluation of each site to determine and document its significance to support its evaluation for National Register eligibility; and determination of eligibility in concert with the SHPO and Advisory Council.

## ENVIRONMENTAL CONSEQUENCES

### Methodology

Archeological resources are the remains of past human activity and records documenting the scientific analysis of the remains (NPS DO #28: Cultural Resource Management Guideline). For purposes of analyzing potential impacts to archeological resources, the thresholds of change for the intensity of an impact are defined as follows:

- Negligible:** Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. An assessment of effect according to Section 106 of the NHPA would result in a determination of no adverse effect.
- Minor:** Disturbance of a site(s) results in little, if any, loss of integrity. An assessment of effect according to Section 106 of the NHPA would result in a determination of no adverse effect.
- Moderate:** Disturbance of a site(s) results in loss of integrity. An assessment of effect according to Section 106 of the NHPA would result in a determination of adverse effect.
- Major:** Loss of a site(s) results in loss of integrity. An assessment of effect according to Section 106 of the NHPA would result in a determination of adverse effect.

### Impacts of Alternative A

**Impact Analysis.** Because there would be no ground disturbing activities associated with Alternative A, there would be little potential for disturbance of presently unknown archeological sites. Continued erosion of the landscape eventually could expose and damage these resources, resulting in a long-term, negligible impact on archeological resources.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on archeological resources in and around the mill. These projects include the continued implementation of the park's GMP. The implementation of projects identified in the GMP would result in the identification of additional resources within the park and provide a better understanding of the context of these resources in the history of the region, a long-term, beneficial impact. These projects, along with Alternative A, would have a long-term, beneficial cumulative impact on archeological resources.

**Conclusion.** As no ground-disturbing activities are associated with Alternative A, the overall impact on archeological resources would be long-term and negligible. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified

in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to archeological resources.

### **Impacts of Alternative B (NPS Preferred Alternative)**

**Impact Analysis.** Under Alternative B, ground disturbance would result from construction activities associated with demolition of existing pathways and parking areas as well as the lowering and regrading of new pathways and associated parking. Prior investigations have already identified the areas selected to be disturbed as having little to no archeological significance. Site specific surveys and clearances would be obtained prior to undertaking any ground disturbing activities. During construction, known archeological resources would be avoided to the greatest extent possible. If archeological resources could not be avoided during construction, the excavation, recordation, and mapping of any substantial cultural remains would be completed prior to construction to ensure that important archeological data that otherwise would be lost is recovered and documented.

Partial reconstruction of the headrace would result in ground disturbance in deeper levels of the soil. Previous archeological investigations (NPS 2008) identified and documented resources in this area. During construction, known archeological resources would be avoided to the greatest extent possible. If archeological resources cannot be avoided during construction, additional excavation, recordation, and mapping of any substantial cultural remains would be completed prior to construction, to ensure that important archeological data that otherwise would be lost is recovered and documented.

Because testing for archeological resources has not been conducted in the area of the proposed bus drop-off and new driveway or orchard locations, a Phase I archeological survey would need to be conducted to determine if intact resources exist, and appropriate mitigations implemented if such resources are discovered.

**Section 106 Summary.** Although ground disturbing activities are expected, implementation of Alternative B would avoid known archeological resources to the greatest extent possible. After applying the Advisory Council's regulations 36 CFR 800, the NPS finds that Alternative B would have no adverse effect on archeological resources.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on archeological resources in and around the mill. These projects include the continued implementation of the park's GMP. These projects would be focused on improving facilities in the park, as well as protecting and interpreting archeological resources, a long-term, beneficial impact. Therefore, these projects, along with Alternative B, would have both long-term, beneficial and long-term, minor, adverse cumulative impacts on archeological resources.

**Conclusion.** Most ground disturbance would be confined to the upper layers of the soil horizon and would not impact buried resources. At the site of the new bus drop-off and interpretive orchard, a Phase I survey would be conducted prior to construction; therefore, Alternative B would result in a long-term, minor, adverse impact on archeological resources. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's



establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to archeological resources.

### **Impacts of Alternative C**

**Impact Analysis.** Under Alternative C, the location and size of some of the ground disturbing activities would be different than those proposed under Alternative B. However, the impact of these actions, related to construction impacts and covering resources with impervious surfaces, would be the same, resulting in a long-term, minor, adverse impact.

**Section 106 Summary.** Although ground disturbing activities are expected, implementation of Alternative B would avoid known archeological resources to the greatest extent possible. After applying the Advisory Council's regulations 36 CFR 800, the NPS finds that Alternative C would have no adverse effect on archeological resources.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on archeological resources in and around the mill. These projects include the continued implementation of the park's GMP. These projects would be focused on improving facilities in the park, as well as protecting and interpreting archeological resources, a long-term, beneficial impact. These projects, along with Alternative C, would have both long-term, beneficial and long-term, minor, adverse cumulative impacts on archeological resources.

**Conclusion.** Most ground disturbance would be confined to the upper layers of the soil horizon and would not impact buried resources. At the site of the new interpretive orchard, a Phase I survey would be conducted prior to construction; therefore, Alternative C would result in a long-term, minor, adverse impact on archeological resources. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to archeological resources.

### **Impacts of Alternative D**

**Impact Analysis.** Under Alternative D, the location and size of some of the ground disturbing activities would be different than those proposed under Alternative B. However, the impact of these actions related to construction impacts and covering resources with impervious surfaces would be the same.

**Section 106 Summary.** Although ground disturbing activities are expected, implementation of Alternative D would avoid known archeological resources to the greatest extent possible. After applying the Advisory Council's regulations 36 CFR 800, the NPS finds that Alternative D would have no adverse effect on archeological resources.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on archeological resources in and around the mill. This would include

the continued implementation of the park's GMP, which would be focused on improving facilities in the park, as well as protecting and interpreting archeological resources, a long-term, beneficial impact. These projects, along with Alternative D, would have both long-term, beneficial and long-term, minor, adverse cumulative impacts on archeological resources.

**Conclusion.** Most ground disturbance would be confined to the upper layers of the soil horizon and would not impact buried resources. At the site of the new driveway and the interpretive orchard, a Phase I survey would be conducted prior to construction; therefore, Alternative D would result in a long-term, minor, adverse impact on archeological resources. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to archeological resources.

## **AESTHETICS AND VISUAL RESOURCES**

### **AFFECTED ENVIRONMENT**

The Organic Act states that NPS units are charged with conserving park scenery, along with all the natural and cultural resources that contribute to important views. In the evaluation of visual resources, both the visual character and the quality of the viewshed within the study area are considered. A viewshed comprises the limits of the visual environment associated with the proposed action including the viewsheds within, into, and out of the study area.

Photographs showing existing viewsheds are provided in Appendix B. Views into the study area exist along points from Tilden Street approaching from the west and the multiuse trail. Approaching the area from the east along Tilden Street or from the Grove 2 east area, the mill is visible amidst the growing levels of vegetation. The adjacent barn and comfort station also are visible from the road. When the parking lot is filled, views further into the site from the roadway are obscured. When the lot is empty, views from Tilden Street extend across the maintained lawn to the multiuse trail and Rock Creek. Seasonal vegetation as well as exotic plants and vines limit views of the creek from outside and inside the site.

From the multiuse trail, detailed views of the mill and remaining millrace exist. The maintained lawn and NPS signs also are visible. When the parking lot is filled, it partially obscures views of the barn and road. When it is empty, the barn, comfort station, and the road are visible. During the late fall and winter months, views of Rock Creek exist along the path.

Within the study area, the barn and comfort station are clearly visible. The road and adjacent parklands also are visible from the parking lot and entrance to the mill. Deeper into the study area, these views become obscured. The multiuse trail and NPS signs also are visible throughout the study area, along with the developing social trails. Traffic along the multiuse path enhances park-like views within the study area but detracts from the historic appearance of the landscape. A set of NPS signs are located in the center of the tree-lined study area, providing information on the mill and upcoming park events. A single

picnic table is located near the signs for visitor use. Beyond these structures, the unpaved path converges with the multiuse trail and provides access out of the study area.

The mill is the dominant visual resource. As noted in the “Historic Structures” section of this document, the mill has gone through several phases of renovations over the years. Different aspects of these phases are evident in the mill’s exterior. However, the lack of a water wheel or extended millrace makes it difficult to visualize the historic conditions in which the mill was operated. The lack of historic visual context is furthered by the limited access inside the mill structure.

## **ENVIRONMENTAL CONSEQUENCES**

### **Methodology**

Available information on viewsheds potentially impacted in the study area was compiled for this document. Where possible, map locations of important areas were compared with locations of proposed developments and modifications of existing facilities. Predictions about short- and long-term site impacts were based on previous projects with similar results. The thresholds of change for the intensity of an impact are defined as follows:

- Negligible:** The visual quality of the site would not be affected or the impacts would be at or below the level of detection, and the changes would be so slight that they would not be of any measurable or perceptible consequence to the visual experience.
- Minor:** Impacts on the visual quality of the site would be detectable, although the impacts would be localized and would be small and of little consequence to the visual experience. Mitigation measures, if needed to offset adverse impacts, would be simple and likely successful.
- Moderate:** Impacts on the visual quality of the site would be readily detectable and localized, with consequences to the visual experience. Mitigation measures, if needed to offset adverse impacts, would be extensive and likely successful.
- Major:** Impacts on the visual quality of the site would be obvious and would have substantial consequences to the visual experience in the region. Extensive mitigation measures would be needed to offset any adverse impacts, and their success would not be guaranteed.

### **Impacts of Alternative A**

**Impact Analysis.** Under Alternative A, no changes would be made to the existing views in and around the mill. The parking lot and surrounding pathways would continue to dominate the views from the road and within the site. This would disrupt many of the historic views of the landscape that the NPS attempts to maintain at the park, a long-term, minor, adverse impact.

Because the mill would remain closed it would not provide the appearance of an active water mill. The limited millrace would further this perception by not providing visual clues as to how the historic mill operated. The lack of historic views would create an appearance of an open landscape maintained for recreational purposes, a long-term, moderate, adverse impact. The recreational appearance would be

enhanced by the limited pathways and trails through the site. This would result in the continued development of social trails, which would erode the landscape, resulting in a long-term, minor, adverse impact.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on aesthetics and visual resources in and around the mill. The implementation of the park's GMP would improve visual resources across the park and the recognition of different sites. This would provide some visual connection between the mill and surrounding NPS sites, a long-term, beneficial impact. Although the existing conditions present under Alternative A would detract from the overall visual experience, the surrounding improvements would have a long-term, beneficial cumulative impact on aesthetics and visual resources in the area.

**Conclusion.** No changes would be made to the viewsheds within the project area. The recreational appearance would minimize the visual experience of this historic site. Therefore, Alternative A would result in a long-term, moderate, adverse impact on visual resources. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to visual resources.

### **Impacts of Alternative B (NPS Preferred Alternative)**

**Impact Analysis.** Under Alternative B, several improvements would be made to the visual resources in and around the mill as well as to the exterior of the structure. These improvements would include the demolition of the existing headrace and the construction of a new headrace. In addition, the remainder of the original outline would be delineated with a grass path lined with stones. Alternative B also would result in improvements to the exterior of the mill that would better reflect the appearance of the mill during its historic use, a long-term, beneficial impact.

The existing parking lots and pathways between the mill and stone barn also would be demolished, a long-term, beneficial impact. They would be replaced by new trails and paths that would improve access through the site, highlighting the historic locations around the mill. The parking lot would be replaced by a large gathering area that would avoid visually separating the mill from the barn, as the parking lot had. This connection would improve the historic views of the property. The improved access and circulation through the site also would reduce the need for social trails. This would allow the NPS to repair the damage these trails have caused to the landscape.

Views of the landscape also would be improved through the development of the orchard. This would open up more of the historic landscape and return historic views from the mill and activities associated with the orchard. The removal of the old comfort station also would improve the landscape by removing a structure that does not relate to the period of significance of the mill and its environs.

Increased parking and bus access adjacent to the site would have no measurable impact on visual resources. Impacts from construction of the new bus access would be mitigated by limiting the time and duration of bus use and prohibiting non-handicapped parking in the bus area. Vegetative screening also

would be planted to further minimize the visual intrusion of the structure. The mill is located along a public street and the surrounding parking lots are regularly used by park visitors. The small increases in use proposed by this alternative would not alter the views into or out of the site.

During the demolition and construction process, views of the mill and surrounding landscape would be impacted by earth disturbance and construction equipment. These impacts would only last through the construction process, as postconstruction plantings would mitigate any construction impacts to the appearance of the site.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on visual resources in and around the mill. These projects include the additional improvements at the mill, the DDOT Multiuse Trail, and continued implementation of the park's GMP. These projects, along with Alternative B, would have a long-term, beneficial cumulative impact on aesthetics and visual resources.

**Conclusion.** Due to the visual intrusion of construction activities, Alternative B would result in short-term, moderate, adverse impacts on aesthetics and visual resources. Long-term, beneficial impacts on aesthetics and visual resources would result from the improved appearance of the mill, removal of visitor support structures from the historic core, and vegetative screening of the new bus drop-off and driveway. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to aesthetics and visual resources.

### **Impacts of Alternative C**

**Impact Analysis.** Under Alternative C, the long-term, beneficial impacts on visual resources would be similar to those described under Alternative B. One of the notable changes would be the construction of a large gathering area in the space that currently supports the parking lot. While the gathering area could support different programs, it would maintain a visual separation between the barn and the mill.

Alternative C also provides a different handicapped and bus parking scheme. As was the case with Alternative B, these changes would not notably alter the views into or out of the site or of the current parking structure and existing vehicular activity adjacent to the site.

The construction of a retaining wall and patio outside the south door of the mill basement would create a different visual experience than what existed historically or under modern management. Sensitive design of the retaining wall and patio would ensure that the elements are similar in scale, size, and massing to the existing building and as visibly unobtrusive as possible. Similarly, the introduction of additional staircases and an elevator inside the mill would create a different visual experience than what existed historically or during recent years under NPS management, a long-term, minor, adverse impact.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on visual resources in and around the mill. These projects include the additional improvements at the mill, the DDOT Multiuse Trail, and continued implementation of the

park's GMP. These projects, along with Alternative C, would have a long-term, beneficial cumulative impact on aesthetics and visual resources.

**Conclusion.** Visual improvements in and around the mill would enhance the visual experience, a long-term, beneficial impact on aesthetics and visual resources. Alternative C also would result in short-term, moderate, adverse impacts on aesthetics and visual resources due to construction activities. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to aesthetics and visual resources.

### **Impacts of Alternative D**

**Impact Analysis.** Under Alternative D, the impacts on visual resources would be similar to those described under Alternative B. On the landscape, the new path leading to the gathering area would be wider. The associated paths also would be laid out differently but would result in improvements to the views into and within the site.

Inside the mill, there would be different utilities than those proposed in Alternative B. The visual impact, however, would continue to be beneficial as the mill would be accessible and return to its historic appearance.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on visual resources in and around the mill. These projects include the additional improvements at the mill, the DDOT Multiuse Trail, and continued implementation of the park's GMP. These projects, along with Alternative D, would have a long-term, beneficial cumulative impact on aesthetics and visual resources.

**Conclusion.** Alternative D would result in short-term, moderate, adverse and long-term, beneficial impacts on aesthetics and visual resources. Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's general management plan or other relevant NPS planning documents as being of significance, there would be no impairment of park resources or values related to aesthetics and visual resources.

## **VISITOR USE AND EXPERIENCE**

### **AFFECTED ENVIRONMENT**

The visitor experience at the mill begins as visitors arrive at the study area. This may occur from Tilden Street or the park's multiuse trail. Reaching the site by automobile or bus from Tilden Street, visitors travel a relatively urban road network to the mill. Several standard NPS signs, as well as the site of the mill and barn, cue the visitor that they have arrived. Access to the study area also is provided by the park's multiuse trail, which provides pedestrian and bicycle access through the length of the park, along



Rock Creek. The multiuse trail passes along the eastern edge of the study area, connecting to one of the unpaved trails and the stairs that run alongside the mill. Because of grade changes or stairs some of the pathways do not meet ADA requirements.

When entering the mill parking area from Tilden Street, visitors pass the mill on the right and the barn and comfort station on the left and enter the parking lot. Additional parking is available at the Grove 1 parking area accessed from Tilden Street and North Grove 2 and East Grove 2 parking lots. North Grove 2 parking is reached from Broad Branch Road, while East Grove 2 is accessed from Beach Drive. The Grove 1 parking lot is connected to the study area via the park's multiuse trail. Access from the Grove 1 parking is also made by means of a direct social trail across the turf area, then across Tilden Street to the mill site. East Grove 2 has a narrow sidewalk along Beach Drive and Tilden Street linking it to the site. From North Grove 2 visitors use the multiuse trail along the historic road alignment.

Upon exiting their vehicles at the mill parking lot, or arriving as pedestrians, visitors walk along flagstone walkways and stairs to reach the mill. Because the mill is closed to the public, visitors can use these walkways to move along the western side of the mill. The walkway terminates at the multiuse trail. Visitors can continue on the path to see more of the mill and the creek but must share the path with bicyclists traveling at relatively high speeds. This creates safety concerns which detract from the visitors' ability to view the mill from the multiuse trail while avoiding collisions with cyclists.

As noted under the "Aesthetics and Visual Resources" section of the document, the lack of a water wheel or extended millrace makes it difficult for some visitors to completely understand how the mill was operated, because an essential external working element of the structure is absent. Interpretive signs are located at the mill site and kiosk and interpretive materials are available at the barn that describes how the intact mill originally functioned when it was in operating condition. Proceeding north of the mill, visitors can continue to walk along the multiuse trail, sharing the road with bicyclists, or take one of the unpaved or social trails across the study area. A set of NPS signs are located in the center of the tree-lined study area, providing information on the mill and upcoming park events. North of the mill, in the direction of the North Grove 2 parking area, picnic tables are located near the signs for visitor use. Beyond these structures, the unpaved trail converges with the multiuse trail and provides access out of the study area.

Visitors arriving on the multiuse trail are provided with a similar experience. However, this experience begins in a more scenic, park-like environment and provides access to the mill and the rest of the study area with limited interference from the busy road. Bicyclists traveling through the site at high speeds can still provide some interference and safety issues for visitors using the multiuse trail to reach the mill or as part of their visit or to obtain a better view of mill features.

Although a comfort station exists at the site, it is not open due to maintenance issues. The closest operating comfort station is located at Grove 1. Visitors must cross Tilden Street or travel along the multiuse trail to reach the Grove 1 comfort station.

## ENVIRONMENTAL CONSEQUENCES

### Methodology

Past interpretive and administrative planning documents provided background on changes to visitor use and experience over time. Anticipated impacts on visitor use and experience were analyzed using information from previous studies. As noted above, visitor use and experience includes visitor enjoyment/satisfaction, site access and circulation, and visitor safety. Based on these findings, the following intensity levels were developed:

- Negligible:** Changes in visitor use and/or experience would be below or at the level of detection. The visitor would not likely be aware of the impacts associated with the alternative.
- Minor:** Changes in visitor use and/or experience would be detectable, although the changes would be slight. The visitor would be slightly aware of the impacts associated with the alternative.
- Moderate:** Changes in visitor use and/or experience would be readily apparent. The visitor would be aware of the impacts 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 and would be severely adverse or exceptionally beneficial. The visitor would be aware of the impacts associated with the alternative and would likely express a strong opinion about the changes.

### Impacts of Alternative A

**Impact Analysis.** Under Alternative A, there would be no change to the visitor use and experience at the mill. Visitors would still park their vehicles onsite, in the middle of the historic landscape. This location would divide the landscape between the barn and the mill, creating an impression that the two structures were independent of one another during their historic use, a long-term, moderate, adverse impact.

From the parking lot, visitors could use the existing paths to walk along the side of the mill or to walk across the site to reach the multiuse trail or the picnic table and informational kiosk. Along the river, visitors would share the multiuse trail with bicyclists and other visitors. Based on the location of the existing structures, the limited pathways on the site, and the high-speed bicycle traffic on the multiuse trail, many visitors would continue to walk across the landscape to reach their destination. This would continue to lead to the development of social trails which would erode the landscape and take away from the desired experience at the site. The continued erosion would lead to greater tripping hazards across the site. Circulation through the site also would continue to be noncompliant with ADA requirements due to grading and stairways along potential routes with no easily accessed alternatives.

Other than the area around the kiosk, the site would lack any appropriate gathering space for educational groups to meet for interpretive programs. Interpretation of the site would be limited to the materials provided at the kiosk. The mill would remain closed to the public, further limiting the interpretive experience at the site. The currently closed comfort station located adjacent to the mill parking lot would remain in place and not available for use by visitors. The closest functioning comfort station would remain adjacent to the Grove 1 parking area.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on visitor use and experience in and around the mill. These projects include the DDOT Multiuse Trail and continued implementation of the park's GMP. The DDOT multiuse trail would provide another form of bicycle and pedestrian access through the area. This would include access to the mill. It also would enhance the recreational opportunities in the area. Finally, the continued implementation of the park's GMP would continue to provide new interpretive and recreational opportunities for visitors throughout the park, while protecting the park's natural and historic resources. These projects, along with Alternative A, would have a long-term, beneficial cumulative impact on visitor use and experience.

**Conclusion.** Alternative A would result in a long-term, moderate, adverse impact on visitor use and experience due to increasing development of social trails, continuation of pedestrian and bicyclist visitor use conflicts, and continuing lack of interpretive opportunities associated with the mill.

### **Impacts of Alternative B (NPS Preferred Alternative)**

**Impact Analysis.** Under Alternative B, the existing parking lot, pathways, and trails would be demolished and new access to the site implemented more in keeping with the flow of activity during the historic use of the site. During the demolition and construction process, access to the site would be limited. Once construction was complete, parking would be provided in existing, adjacent parking lots. Some visitors may prefer the existing parking; however, moving the parking off the site would open up the historic landscape for appropriate, interpretive use. Improved pathways and trails would provide direct access from these adjacent parking lots to the site. These trails also would allow the landscape to be presented to the visitor without the intrusion of the existing parking lot that separates the historic barn from the mill.

The new trail system would include a large gathering space in the location of the current parking lot. This would provide an ideal location for interpretive programs at the site and would more closely correspond to the historic use of the area as a staging ground for mill users. It also would provide a physical connection between the mill and the barn, allowing the visitor to comprehend the relationship between the two structures during the historic period for the area.

The improved trails and pathways also would enhance visitor movement through the site. Visitors would now be able to reach the key historic locations and vistas without creating social trails. Bicycle and pedestrian user conflicts or sharing the multiuse path with bicyclists and other recreational users would be minimized. This would create a safer and more enjoyable environment for visitors. These circulation improvements would provide ADA access throughout the study area.

The existing closed comfort station would be demolished. Contingent upon availability of funding, a new comfort station in addition to the Grove 1 comfort station would be constructed to serve the mill area.

The development of an interpretive orchard would provide a new visitor experience at the site and add to visitor understanding of the historic agricultural use of the area. Visitors would be able to see more of the historic uses that occurred during the mill's active operation, learn about historic agriculture, and appreciate the views that once existed around the mill.

Alternative B also would include opening the mill. Before the mill was open, the outside and inside of the structure would be repaired, cleaned, and repointed, as necessary. The improvements would provide a safer visitor experience and allow the resource be better protected for future visitor appreciation.

Improvements to the mill also would include the demolition of the existing flume and the construction of a new headrace. The remainder of the race would be delineated with a grass path outlined with stones. This would provide visitors with an improved understanding of how water reached the mill, actual milling operations and how the surrounding grounds were used to support the operation.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on visitor use and experience in and around the mill. These projects include the additional improvements at the mill, the DDOT Multiuse Trail, and continued implementation of the park's GMP. These projects, along with Alternative B, would have a long-term, beneficial cumulative impact on visitor use and experience.

**Conclusion.** Alternative B would result in short-term, minor to moderate, adverse impacts associated with construction activities and long-term, beneficial impacts on visitor use and experience resulting from rehabilitation of the mill and its associated landscape.

### **Impacts of Alternative C**

**Impact Analysis.** Under Alternative C, the impacts to visitor use and experience would be similar to those described under Alternative B. Differences would occur through the design of the gathering area, which would be divided into two separate spaces. This would offer opportunities for different programs to be conducted simultaneously. Some visitors would appreciate the increased potential these areas would provide; however, it would prevent some visitors from identifying and experiencing the physical connection between the mill and the barn. Alternative C also would include different trail and pathway layouts to provide access to and from these different gathering areas. Alternative C also uses the multiuse trail for the access route to the accessible parking and serves as a service drive which may pose a safety conflict. Also, the proposed layout of paths creates additional intersections where people walking leisurely and through bicycle riders may conflict. Impacts from Alternative C are similar to those under Alternative B but would have slightly increased adverse impacts to the visitor experience based on potential safety and user conflicts.

Other changes also would occur at the mill. Alternative C would include the development of a retaining wall and patio outside the south basement door of the mill. This area would be constructed for flood protection but could provide some visitors with a place to gather outside the mill. Alternative C also includes additional stairs installed in the mill, along with an elevator. These elements would be added to provide safe, ADA compliant access throughout the mill.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on visitor use and experience in and around the mill. These projects include the additional improvements at the mill, the DDOT Multiuse Trail, and continued implementation of the park's GMP. These projects, along with Alternative C, would have a long-term, beneficial cumulative impact on visitor use and experience.

**Conclusion.** Alternative C would result in short-term, minor to moderate, adverse impacts related to construction activities and long-term, beneficial impacts on visitor use and experience resulting from rehabilitation of the mill and its associated landscape.

### **Impacts of Alternative D**

**Impact Analysis.** Under Alternative D, the impacts to visitor use and experience would be similar to those described under Alternative B. The path leading to the new gathering area and other new pathways would be different but would provide a similar improvement to the visitor access, circulation, safety, and understanding of the site.

Improvements to the mill also would be similar to Alternative B. The primary difference would be type of utilities and security equipment installed in the mill. The introduction of an air conditioning system would provide a more comfortable environment for visitors during the summer months but would not allow the visitor to experience the historic conditions of the mill.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on visitor use and experience in and around the mill. These projects include the additional improvements at the mill, the DDOT Multiuse Trail, and continued implementation of the park's GMP. These projects, along with Alternative D, would have a long-term, beneficial cumulative impact on visitor use and experience.

**Conclusion.** Alternative D would result in short-term, minor to moderate, adverse impacts related to construction activities and long-term, beneficial impacts on visitor use and experience resulting from rehabilitation of the mill and its associated landscape.

## **PARK OPERATIONS AND MANAGEMENT**

### **AFFECTED ENVIRONMENT**

NPS operations within the study area are combined with management of other structures, including the barn, comfort station, multiuse path, and nearby picnic facilities. Regular operations include trash pickup and maintaining the lawn and other plantings. When staff time and funding are available, NPS staff conducts more extensive maintenance activities on the exterior of the mill and the eroded portions of the landscape. The NPS is supported by the Friends of Peirce Mill in maintaining the mill. The group has raised funds and hired contractors to update the physical supports in the mill. Ongoing fundraising efforts are focused on replacing the water wheel and returning the mill to an active part of the park's operations and interpretation.

Safety issues for park staff and the friends group are similar to those posed to visitors, and include vehicular and bicycle traffic and tripping hazards. There are additional tripping hazards inside the mill due to its historic nature, industrial character and as a result of current maintenance needs. The integrity of the structure is great enough to support the weight loads of the existing materials and staff that enter the mill.

The parking lot also is in good condition. The surrounding pathways and stairs also are in good condition. A metal railing lines the stairs to provide support for visitors and to discourage them from getting closer to the mill.

The comfort station at the site is currently closed. Visitors would continue to use the comfort station located in Grove 1.

## ENVIRONMENTAL CONSEQUENCES

### Methodology

Impact analyses are based on the current description of park operations and management presented in this document. This includes the ability to maintain the operations of the park that are the subject of this document. Park operations and management also includes a discussion of appropriate staff to maintain the site and employee safety at the site. The thresholds of change for the intensity of this impact are defined as follows:

- Negligible:** Park operations and management would not be affected, or the impacts would be at low levels of detection and would not have a noticeable impact on operations.
- Minor:** The impact would be detectable but would be of a magnitude that would not have a noticeable impact on park operations and management. If mitigation was needed to offset adverse impacts, it would be simple and likely successful.
- Moderate:** The impacts would be readily apparent and would result in a substantial change in park operations and management in a manner noticeable to staff and the public. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.
- Major:** The impacts would be readily apparent, would result in a substantial change in park operations and management in a manner noticeable to staff and the public, and be markedly different from existing park operations and management. Mitigation measures to offset adverse impacts would be needed, would be extensive, and their success could not be guaranteed.

### Impacts of Alternative A

**Impact Analysis.** Under Alternative A, no changes would be made to park operations and management of the mill. The mill would continue to remain closed to the general public. The structure would be maintained by the NPS as staff and funding were available. The NPS would continue to rely on the Friends of Peirce Mill for support in maintaining the structure. The impact of this maintenance is discussed more thoroughly under the “Historic Structures” section of this document.

The surrounding landscape would be regularly maintained by the NPS. The lawn would be mowed regularly. This would not include regular repairs to the developing social trails across the site. These areas would continue to erode and would receive additional maintenance as staff and funding were available. These developing social trails would continue to pose tripping threats to NPS staff and contractors.



The pathways, parking lots, and trails also would be maintained through regular NPS maintenance. These structures are all in relatively good condition and would undergo new paving and other maintenance on a regular semi-annual cycle. Although these structures are in relatively good condition, many of them are not ADA compliant.

The comfort station would continue to be closed and would require no park maintenance, such as cleaning. Therefore, this structure would have no impact on park operations and management.

NPS staff would continue to post informational materials on the kiosk at the site and would include the history of the mill in other programs in the park, although staff would not be able to provide actual interpretation of the structure.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on operations and management in and around the mill. The continued implementation of the GMP would result in improvements to other structures in the park. It also directs staff on the best means of protecting park resources and enhancing interpretation for the benefit of the public. These projects, along with Alternative A, would have a long-term, beneficial cumulative impact on park operations and management.

**Conclusion.** NPS staff would continue to manage and maintain the site and attempt to identify means of interpreting its history. Therefore, Alternative A would result in a long-term, negligible, adverse impact on park operations and management.

### **Impacts of Alternative B (NPS Preferred Alternative)**

**Impact Analysis.** Under Alternative B, there would be numerous changes made to the operations at the site. The changes to the mill are addressed under the “Historic Structures” section of this document. The existing roads and pathways would be redesigned and replaced. New designs would be in compliance with ADA requirements. Although the construction would be conducted by contractors, NPS staff would be required to maintain construction contracts and enhanced security around the construction site to protect visitors’ safety. The new structures would be placed in more appropriate locations to better meet the needs of the NPS operations. The improved locations of the new site access would reduce the development of social trails across the landscape. This would allow the NPS staff to maintain the landscape and with a decreased risk of future damage. Regular maintenance would still be required to maintain the new site access, pathways and the rehabilitated mill structure.

Maintaining the interpretive orchard would be included in the existing landscaping operations at the site and could potentially be supported by volunteers from the Friends of Peirce Mill.

By opening the mill and reconstructing the headrace, this alternative would allow the NPS staff to enhance interpretation of and education at the site. This would include new tours of the mill, with the assistance of the Friends of Peirce Mill, enhanced interpretation of the mill, and more information on the mill included in parkwide programs and materials.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on operations in and around the mill. These projects include the

additional improvements at the mill and continued implementation of the park's GMP. These projects, along with Alternative B, would have a long-term, beneficial cumulative impact on park operations and management.

**Conclusion.** Alternative B would result in short-term, moderate, adverse and long-term, beneficial impacts on park operations and management.

### **Impacts of Alternative C**

**Impact Analysis.** The impacts under Alternative C would be similar to those described under Alternative B. Despite the different location of some of the site access, the implementation of the alternative would still result in temporary impediments to access and circulation and result with long-term improvements to the way visitors moved about the site and accessed the mill.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on operations in and around the mill. These projects include the additional improvements at the mill and continued implementation of the park's GMP. These projects, along with Alternative C, would have a long-term, beneficial cumulative impact on park operations and management.

**Conclusion.** Alternative C would result in short-term, moderate, adverse and long-term, beneficial impacts on park operations and management.

### **Impacts of Alternative D**

**Impact Analysis.** The impacts under Alternative D would be similar to those described under Alternative B. Despite the different location of some of the site access, the implementation of the alternative would still result in temporary impediments to access and circulation and result with long-term improvements to the way visitors moved about the site and accessed the mill.

**Cumulative Impacts.** Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on operations and management in and around the mill. These projects include the additional improvements at the mill and continued implementation of the park's GMP. These projects, along with Alternative D, would have a long-term, beneficial cumulative impact on park operations and management.

**Conclusion.** Alternative D would result in short-term, moderate, adverse and long-term, beneficial impacts on park operations and management.

# 4

## CONSULTATION AND COORDINATION

The recently completed General Management Plan and Record of Decision for Rock Creek Park (NPS 2005, 2007) included the establishment of management direction for the Peirce Mill complex. The Record of Decision establishes the direction of park management to: “Rehabilitate the Peirce Mill complex to focus on the history of milling and land use in the area. This would expand on the already completed rehabilitation of the Peirce Mill Barn.” The proposal and alternatives considered in this document are natural outgrowths of that decision-making process. This process builds on that previous public and agency consultation process contained in the General Management Plan/EIS and Record of Decision processes. NPS guidance implementing the provisions of NEPA and CEQ regulations requires the NPS to make “diligent” efforts to involve the interested and affected public and government agencies in the NEPA process. This chapter documents the involvement of other agencies and the public for the proposed action, identifies future compliance needs and permits, and summarizes the document review process.

### AGENCY AND PUBLIC INVOLVEMENT

#### THE SCOPING PROCESS

This project was considered in the Final GMP/EIS for Rock Creek Park released in July 2005. Scoping for that document was begun in 1996 and continued until the Draft GMP/EIS was released in March of 2003. A Record of Decision on the GMP/EIS was issued in June of 2007. The ROD determined that the NPS would “(R)ehabitate the Peirce Mill complex to focus on the history of milling and land use in the area. This would expand on the already completed rehabilitation of the Peirce Mill Barn” (NPS 2007). Because of the relatively recent decision and in light of the extensive scoping on the GMP/EIS, the NPS determined that additional public scoping would not result in additional or new issues to be addressed as part of this process. This is in accord with NPS guidance for the preparation of environmental assessments, in which scoping is divided into two processes, internal and external. Internal scoping involves discussion, information collection and issue identification among NPS personnel. External scoping for environmental assessments is only required to involve appropriate federal, state, and local agencies and any affected Indian tribe (NPS 2001). During the development of this proposal the NPS did consult with the Friends of Peirce Mill so that proposed actions and activities could be coordinated and potential concerns incorporated into the planning process.

During the development of this EA/AoE, NPS personnel conducted internal scoping via a value analysis to fully review the options developed from the Cultural Landscape Report for Peirce Mill. Participants in this value analysis included staff from Rock Creek Park, the NPS Denver Service Center, NPS Regional

Office representatives, consultants to the NPS, and representatives from the Friends of Peirce Mill. At the value analysis, attendees conducted a Choosing by Advantages session to weigh the different options for the mill and surrounding landscape and to identify the NPS preferred alternative presented in this document. The internal planning team has continued to communicate throughout the development of this document.

## **AGENCY CONSULTATION**

### **Section 7 Consultation**

A letter initiating consultation under Section 7 of the Endangered Species Act was submitted to the USFWS on August 19, 2009. In a letter dated September 1, 2009, the USFWS responded that, “except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area.”

### **Section 106 Consultation**

On August 19, 2009, the NPS initiated consultation via letter under Section 106 of the National Historic Preservation Act with both the District of Columbia SHPO and the Advisory Council. In a letter dated August 27, 2009, the Advisory Council requested that the NPS notify them if the project would result in an adverse effect under Section 106. In an email dated January 4, 2009, the District of Columbia SHPO endorsed the NPS proposal to rehabilitate Peirce Mill. In order to avoid or minimize potential adverse effects on the mill and its surrounding landscape, they recommended the following mitigation strategies:

- All work on the Peirce Mill building shall be consistent with the Secretary of the Interior’s standards
- Every effort shall be made to minimize hardscaping to retain the agricultural character of the site
- Archeological investigations to determine if resources are present in areas not previously surveyed shall be carried out by the NPS in coordination with the State Archeologist
- All efforts shall be made to screen the bus pull-off area with landscaping to minimize its visual intrusion onto the historic setting
- All plans, including details such as paving materials and locations, are subject to SHPO review

### **Other Agency Consultations**

Additional letters initiating agency consultation and requesting information and the proposed action were sent to the following agencies:

National Capital Planning Commission – August 19, 2009

U.S. Environmental Protection Agency – August 19, 2009

District of Columbia Department of Transportation – August 19, 2009

District of Columbia Office of Planning – August 19, 2009

No responses were received from the Environmental Protection Agency. Consultations are continuing with the National Capital Planning Commission, District of Columbia Office of Planning, and the District of Columbia Department of Transportation.

Copies of all formal correspondence related to agency consultations are included in Appendix A.

### **FUTURE COMPLIANCE NEEDS/PERMITS**

Prior to the implementation of the proposed action, the NPS would obtain appropriate land disturbance permits and abide by local and state erosion and sediment control standards. Additional approvals and reviews would be required prior to construction. These include reviews by the National Capital Planning Commission, Section 106 consultations with the District of Columbia SHPO, and consultation with the DDOT concerning the bus turnaround.

### **DOCUMENT REVIEW**

The EA will be on formal public and agency review for 30 days and has been distributed to a variety of interested individuals, agencies, and organizations. It is also available on the Internet at <<http://parkplanning.nps.gov>>, and hard copies are available at the Rock Creek Park Nature Center, park headquarters, and local libraries.





# REFERENCES

## BIBLIOGRAPHY

District of Columbia, Government of the

- 1997 *The District of Columbia Wetland Conservation Plan*. Washington, D.C.: Department of Consumer and Regulatory Affairs, Water Resources Management Division, Center for Watershed Protection.

Environmental Protection Agency (EPA)

- 2009 *U.S. Environmental Protection Agency Green Book*. Available on the Internet at <<http://www.epa.gov/air/oaqps/greenbk/index.html>>. Accessed on 8/24/2009.

Federal Emergency Management Agency (FEMA)

- 1985 *Flood Insurance Rate Map District of Columbia Washington, D.C. Panel 10 of 30. Community-Panel Number 110001 0010 B*.

National Park Service (NPS)

- 1969 National Register of Historic Places Inventory – Nomination Form: Peirce Mill.
- 1985 *Rock Creek Park: An Administrative History*, by Barry Mackintosh. Washington, D.C.: History Division.
- 1991 National Register of Historic Places Inventory – Nomination Form: Rock Creek Park.
- 1998a Director's Order 28: Cultural Resource Management. Available on the Internet at <<http://home.nps.gov/applications/npspolicy/DOrders.cfm>>.
- 1998b *Peirce Mill Cultural Landscape Inventory*, by Perry C. Wheelock, Nancy J. Brown, and Jennifer G. Hanna. Washington, D.C.
- 2001 Director's Order 12: Environmental Impact Analysis and Handbook. Available on the Internet at <<http://home.nps.gov/applications/npspolicy/DOrders.cfm>>.
- 2003 Director's Order 77-2: Floodplain Management. Available on the Internet at <<http://home.nps.gov/applications/npspolicy/DOrders.cfm>>.
- 2005 *Rock Creek Park and the Rock Creek and Potomac Parkway Final General Management Plan/Environmental Impact Statement*.

- 2006 *NPS Management Policies 2006*. Available on the Internet at:  
<<http://home.nps.gov/applications/npspolicy/index.cfm>>.
- 2007 *Rock Creek Park and the Rock Creek and Potomac Parkway Record of Decision*.
- 2008 *Bold, Rocky, and Picturesque: Archeological Identification and Evaluation Study of Rock Creek Park*. Prepared for the National Park Service by the Louis Berger Group, Volume II.
- 2009 *Peirce Mill Complex Cultural Landscape Report*. Prepared for the National Park Service by Quinn Evans Architects.
- Natural Resource Conservation Service (NRCS)
- 2009 *Soil Survey*. Available on the Internet at <<http://soildatamart.nrcs.usda.gov>>. Accessed on 8/15/2009.
- Quinn Evans Architects
- 2009 *Peirce Mill Schematic Design*.
- U.S. Fish and Wildlife Service (USFWS)
- 2009 *National Wetlands Inventory*. Available on the Internet at  
<<http://www.fws.gov/wetlands/>>. Accessed on 8/15/2009.

## LIST OF PREPARERS AND CONTRIBUTORS

This document was prepared by Vanasse Hangen Brustlin, Inc. with input from staff at Rock Creek Park, the NPS National Capital Regional Office, and the NPS Denver Service Center.

<b>Vanasse Hangen Brustlin, Inc.</b>	
Margaret Beavers	Graphics and GIS analysis
Tracy Hamm	Document preparation
Jake Hoogland	Guidance of NEPA process, document preparation and review, and project management
Scott Smizik (former VHB employee)	Document preparation, natural resource review and analysis
Rita Walsh	Cultural resources review and analysis
Tricia Wingard	Guidance of NEPA process, document review, and project management

## CONTRIBUTORS AND REVIEWERS

<b>Rock Creek Park</b>	
Adrienne Applewhaite-Coleman	(former) Superintendent
Cynthia Cox	Acting Superintendent
Simone Monteleone Moffett	Cultural Resource Specialist
Donald Kirk	Chief of Maintenance
Mike McMahon	Landscape Architect
Harold Stone	ARRA Project Coordinator
Michael Buckler	Environmental Protection Specialist

<b>National Capital Region</b>	
Joel Gorder	Regional Environmental Coordinator
Maureen Joseph	Regional Historical Landscape Architect
Susan Long	Regional Historical Architect
Stephen Potter, PhD	Regional Archeologist
Perry Wheelock	Chief of Cultural Resources

<b>Denver Service Center</b>	
Bonita Mueller	Project Manager
Paul Newman	Project Specialist
Greg Cody	Technical Specialist for Cultural Resources
Paul Wharry	Environmental Protection Specialist



# **APPENDIX A: RELEVANT CORRESPONDENCE**





IN REPLY REFER TO:

# United States Department of the Interior



## NATIONAL PARK SERVICE

National Capital Region

Rock Creek Park

3545 Williamsburg Lane, N.W.

Washington, D.C. 20008-1207

H3015 (NCA-ROCR)

AUG 19 2009

John P. Wolflin, Supervisor  
U.S. Fish and Wildlife Service  
Chesapeake Bay Field Office  
177 Admiral Cochrane Drive  
Annapolis, Maryland 21401

Re: Preserve Historic Peirce Mill Site  
Rock Creek Park, Washington, D.C.  
Environmental Assessment/Assessment of Effect

Dear Mr. Wolflin:

The National Park Service (NPS) has initiated planning to preserve the historic Peirce Mill site in Rock Creek Park. Peirce Mill is a property listed in the National Register of Historic Places. The proposed action would include interior and exterior rehabilitation to the mill, as well as improvements to the surrounding landscape and site. These planned actions are being executed to make the mill operational once again. Plans also include landscape improvements to provide better opportunities for visitor understanding of the site, ADA accessibility to the site, and resolution of circulation issues. Rehabilitation to the mill includes stabilizing the structure and providing appropriate environmental controls and security. Additional landscape improvements include options for relocating parking to provide a more historically accurate landscape.

This letter serves as notification that we have begun the National Environmental Policy Act (NEPA) compliance process and are proposing to have an Environmental Assessment (EA) available for public and regulatory review later this year. This letter also serves as a record that the NPS is initiating informal consultation with your agency pursuant to the requirements of the 1973 Endangered Species Act, as amended, and NPS *Management Policies 2006*. As part of the scoping for this project, we request any information regarding listed or proposed threatened or endangered species or critical habitats that might occur in the project vicinity, and any special management considerations for such species. The project area is depicted on the enclosed Silver Spring, Maryland USGS Quadrangle. We also have obtained and reviewed file information from your agency's web site. We welcome any initial comments you may have regarding the project. Our intent is to address your agency's concerns and incorporate any recommendations into the planning process at the earliest possible time.



If you need any additional information or should you have any questions regarding this project, please feel free to contact me on 202-895-6000.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adrienne A. Coleman', with a long horizontal flourish extending to the right.

Adrienne A. Coleman  
Superintendent, Rock Creek Park

Enclosure



IN REPLY REFER TO:

# United States Department of the Interior



## NATIONAL PARK SERVICE

National Capital Region

Rock Creek Park

3545 Williamsburg Lane, N.W.

Washington, D.C. 20008-1207

H3015 (NCA-ROCR)

AUG 19 2009

John Fowler, Executive Director  
Advisory Council on Historic Preservation  
1100 Pennsylvania Avenue NW, Suite 803  
Old Post Office Building  
Washington, D.C. 20004

Re: Preserve Historic Peirce Mill Site  
Rock Creek Park, Washington, D.C.  
Environmental Assessment/Assessment of Effect

Dear Mr. Fowler:

The National Park Service (NPS) has initiated planning to preserve the historic Peirce Mill site in Rock Creek Park. Peirce Mill is a property listed in the National Register of Historic Places. The proposed action would include interior and exterior rehabilitation to the mill, as well as improvements to the surrounding landscape and site. These planned actions are being executed to make the mill operational once again. Plans also include landscape improvements to provide better opportunities for visitor understanding of the site, ADA accessibility to the site, and resolution of circulation issues. Rehabilitation to the mill includes stabilizing the structure and providing appropriate environmental controls and security. Additional landscape improvements include options for relocating parking to provide a more historically accurate landscape.

In order to comply with the National Environmental Policy Act (NEPA), an Environmental Assessment/Assessment of Effect (EA/AoE) will be completed as part of this plan. The process and documentation required for compliance with NEPA also will be used to comply with Section 106 of the National Historic Preservation Act of 1966, as amended. In accordance with Section 800.8 (3) (c) of the Advisory Council on Historic Preservation's regulations (36 CFR 800), we are notifying your office in advance of the park's intention to use the EA/AoE to meet its obligations under Section 106. The EA/AoE, which will contain an assessment of effect for all cultural resources potentially affected, will be available for your review and comment later this year. We welcome any initial comments you may have regarding the project. Our intent is to address your agency's concerns and incorporate any recommendations into the planning process at the earliest possible time.

If you need additional information or should you have any questions regarding this project, please feel free to contact me on 202-895-6000.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adrienne A. Coleman', with a stylized flourish at the end.

Adrienne A. Coleman  
Superintendent, Rock Creek Park

bcc:

ROCR – SMoffett

NPS-DSC- Paul Wharry

VHB- Tricia Wingard

Rocr.files



# United States Department of the Interior



IN REPLY REFER TO:

## NATIONAL PARK SERVICE

National Capital Region

Rock Creek Park

3545 Williamsburg Lane, N.W.

Washington, D.C. 20008-1207

H3015 (NCA-ROCR)

AUG 19 2009

David Maloney  
District of Columbia Historic Preservation Officer  
Historic Preservation Division, Office of Planning  
2000 14<sup>th</sup> Street, NW, 4th Floor  
Washington, D.C. 20009

Re: Preserve Historic Peirce Mill Site  
Rock Creek Park, Washington, D.C.  
Environmental Assessment/Assessment of Effect

Dear Mr. Maloney:

The National Park Service (NPS) has initiated planning to preserve the historic Peirce Mill site in Rock Creek Park. Peirce Mill is a property listed in the National Register of Historic Places. The proposed action would include interior and exterior rehabilitation to the mill, as well as improvements to the surrounding landscape and site. These planned actions are being executed to make the mill operational once again. Plans also include landscape improvements to provide better opportunities for visitor understanding of the site, ADA accessibility to the site, and resolution of circulation issues. Rehabilitation to the mill includes stabilizing the structure and providing appropriate environmental controls and security. Additional landscape improvements include options for relocating parking to provide a more historically accurate landscape.

In order to comply with the National Environmental Policy Act (NEPA), an Environmental Assessment/Assessment of Effect (EA/AoE) will be completed as part of this plan. The process and documentation required for compliance with NEPA also will be used to comply with Section 106 of the National Historic Preservation Act of 1966, as amended. In accordance with Section 800.8 (3) (c) of the Advisory Council on Historic Preservation's regulations (36 CFR 800), I am notifying your office in advance of the park's intention to use the EA/AoE to meet its obligations under Section 106. The EA/AoE, which will contain an assessment of effect for all cultural resources potentially affected, will be available for your review and comment later this year. We welcome any initial comments you may have regarding the project. Our intent is to address your agency's concerns and incorporate any recommendations into the planning process at the earliest possible time.

If you need additional information or should you have any questions regarding this project, please feel free to contact me on 202-895-6000.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adrienne A. Coleman', with a long horizontal line extending to the right.

Adrienne A. Coleman  
Superintendent, Rock Creek Park

bcc:  
ROCR – SMoffett  
NPS-DSC- Paul Wharry  
VHB- Tricia Wingard  
Rocr.files



# United States Department of the Interior



IN REPLY REFER TO:

NATIONAL PARK SERVICE  
National Capital Region  
Rock Creek Park  
3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008-1207

H3015 (NCA-ROCR)

AUG 19 2009

Marcel Acosta, Executive Director  
National Capital Planning Commission  
401 9th Street, NW  
North Lobby, Suite 500  
Washington D.C. 20004

Re: Preserve Historic Peirce Mill Site  
Rock Creek Park, Washington, D.C.  
Environmental Assessment/Assessment of Effect

Dear Mr. Acosta:

The National Park Service (NPS) has initiated planning to preserve the historic Peirce Mill site in Rock Creek Park. Peirce Mill is a property listed in the National Register of Historic Places. The proposed action would include interior and exterior rehabilitation to the mill, as well as improvements to the surrounding landscape and site. These planned actions are being executed to make the mill operational once again. Plans also include landscape improvements to provide better opportunities for visitor understanding of the site, ADA accessibility to the site, and resolution of circulation issues. Rehabilitation to the mill includes stabilizing the structure and providing appropriate environmental controls and security. Additional landscape improvements include options for relocating parking to provide a more historically accurate landscape.

As we continue to pursue these plans, we have initiated an Environmental Assessment/ Assessment of Effect (EA/AoE) to comply with the National Environmental Policy Act and section 106 of the National Historic Preservation Act of 1966, as amended. Currently, we are proposing to have the EA/AoE available for public and regulatory review later this year. We welcome any initial comments you may have regarding the project. Our intent is to address your agency's concerns and incorporate any recommendations into the planning process at the earliest possible time.

If you need additional information or should you have any questions regarding this project, please feel free to contact me on 202-895-6000.

Sincerely,

Adrienne A. Coleman  
Superintendent, Rock Creek Park



IN REPLY REFER TO:

# United States Department of the Interior



## NATIONAL PARK SERVICE

National Capital Region

Rock Creek Park

3545 Williamsburg Lane, N.W.

Washington, D.C. 20008-1207

H3015 (NCA-ROCR)

AUG 19 2009

Barbara Rudrick  
Environmental Protection Agency  
Region 3  
1650 Arch Street  
Philadelphia, Pennsylvania 19103

Re: Preserve Historic Peirce Mill Site  
Rock Creek Park, Washington, D.C.  
Environmental Assessment/Assessment of Effect

Dear Ms. Rudrick:

The National Park Service (NPS) has initiated planning to preserve the historic Peirce Mill site in Rock Creek Park. Peirce Mill is a property listed in the National Register of Historic Places. The proposed action would include interior and exterior rehabilitation to the mill, as well as improvements to the surrounding landscape and site. These planned actions are being executed to make the mill operational once again. Plans also include landscape improvements to provide better opportunities for visitor understanding of the site, ADA accessibility to the site, and resolution of circulation issues. Rehabilitation to the mill includes stabilizing the structure and providing appropriate environmental controls and security. Additional landscape improvements include options for relocating parking to provide a more historically accurate landscape.

As we continue to pursue these plans, we have initiated an Environmental Assessment/ Assessment of Effect (EA/AoE) to comply with the National Environmental Policy Act and Section 106 of the National Historic Preservation Act of 1966, as amended. Currently, we are proposing to have the EA/AoE available for public and regulatory review later this year. We welcome any initial comments you may have regarding the project. Our intent is to address your agency's concerns and incorporate any recommendations into the planning process at the earliest possible time.

If you need additional information or should you have any questions regarding this project, please feel free to contact me on 202-895-6000.

Sincerely,

Adrienne A. Coleman  
Superintendent, Rock Creek Park





IN REPLY REFER TO:

# United States Department of the Interior



## NATIONAL PARK SERVICE

National Capital Region

Rock Creek Park

3545 Williamsburg Lane, N.W.

Washington, D.C. 20008-1207

H3015 (NCA-ROCR)

AUG 19 2009

Gabe Klein, Director  
District Department of Transportation  
2000 14th Street, NW, 6th Floor  
Washington, D.C. 20009

Re: Preserve Historic Peirce Mill Site  
Rock Creek Park, Washington, D.C.  
Environmental Assessment/Assessment of Effect

Dear Mr. Klein:

The National Park Service (NPS) has initiated planning to preserve the historic Peirce Mill site in Rock Creek Park. Peirce Mill is a property listed in the National Register of Historic Places. The proposed action would include interior and exterior rehabilitation to the mill, as well as improvements to the surrounding landscape and site. These planned actions are being executed to make the mill operational once again. Plans also include landscape improvements to provide better opportunities for visitor understanding of the site, ADA accessibility to the site, and resolution of circulation issues. Rehabilitation to the mill includes stabilizing the structure and providing appropriate environmental controls and security. Additional landscape improvements include options for relocating parking to provide a more historically accurate landscape.

As we continue to pursue these plans, we have initiated an Environmental Assessment/ Assessment of Effect (EA/AoE) to comply with the National Environmental Policy Act and Section 106 of the National Historic Preservation Act of 1966, as amended. Currently, we are proposing to have the EA/AoE available for public and regulatory review later this year. We also welcome any initial comments you may have regarding the project. Our intent is to address your agency's concerns and incorporate any recommendations into the planning process at the earliest possible time.

If you need additional information or should you have any questions regarding this project, please feel free to contact me on 202-895-6000.

Sincerely,

Adrienne A. Coleman  
Superintendent, Rock Creek Park



# United States Department of the Interior



IN REPLY REFER TO:

## NATIONAL PARK SERVICE

National Capital Region

Rock Creek Park

3545 Williamsburg Lane, N.W.

Washington, D.C. 20008-1207

H3015 (NCA-ROCR)

AUG 19 2009

Harriet Tregoning, Director  
District of Columbia Office of Planning  
2000 14<sup>th</sup> Street, NW, 4<sup>th</sup> Floor  
Washington, D.C. 20002

Re: Preserve Historic Peirce Mill Site  
Rock Creek Park, Washington, DC  
Environmental Assessment/Assessment of Effect

Dear Ms. Tregoning:

The National Park Service (NPS) has initiated planning to preserve the historic Peirce Mill site in Rock Creek Park. Peirce Mill is a property listed in the National Register of Historic Places. The proposed action would include interior and exterior rehabilitation to the mill, as well as improvements to the surrounding landscape and site. These planned actions are being executed to make the mill operational once again. Plans also include landscape improvements to provide better opportunities for visitor understanding of the site, ADA accessibility to the site, and resolution of circulation issues. Rehabilitation to the mill includes stabilizing the structure and providing appropriate environmental controls and security. Additional landscape improvements include options for relocating parking to provide a more historically accurate landscape.

As we continue to pursue these plans, we have initiated an Environmental Assessment/ Assessment of Effect (EA/AoE) to comply with the National Environmental Policy Act and Section 106 of the National Historic Preservation Act of 1966, as amended. Currently, we are proposing to have the EA/AoE available for public and regulatory review later this year. We also welcome any initial comments you may have regarding the project. Our intent is to address your agency's concerns and incorporate any recommendations into the planning process at the earliest possible time.

If you need additional information or should you have any questions regarding this project, please feel free to contact me on 202-895-6000.

Sincerely,

Adrienne A. Coleman  
Superintendent, Rock Creek Park



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Chesapeake Bay Field Office  
177 Admiral Cochrane Drive  
Annapolis, MD 21401  
410/573-4575



Andy  
Simone  
file: H3015

September 1, 2009



United States Department of the Interior  
National Park Service  
National Capital Region  
Rock Creek Park  
3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008-1207

*RE: Preserve Historic Peirce Mill site Rock Creek Park, Washington, D.C.*

Dear: Adrienne A. Coleman

This responds to your letter, received August 20, 2009, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the above reference project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further section 7 Consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

Effective August 8, 2007, under the authority of the Endangered Species Act of 1973, as amended, the U.S. Fish and Wildlife Service (Service) removed (delist) the bald eagle in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife. However, the bald eagle will still be protected by the Bald and Golden Eagle Protection Act, Lacey Act and the Migratory Bird Treaty Act. As a result, starting on August 8, 2007, if your project may cause "disturbance" to the bald eagle, please consult the "National Bald Eagle Management Guidelines" dated May 2007.

If any planned or ongoing activities cannot be conducted in compliance with the National Bald Eagle Management Guidelines (Eagle Management Guidelines), please contact the Chesapeake Bay Ecological Services Field Office at 410-573-4573 for technical assistance. The Eagle Management Guidelines can be found at:

**<http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf>**.

In the future, if your project can not avoid disturbance to the bald eagle by complying with the Eagle Management Guidelines, you will be able to apply for a permit that authorizes the take of bald and golden eagles under the Bald and Golden Eagle Protection Act, generally where the take to be authorized is associated with otherwise lawful activities. This proposed permit process will not be available until the Service issues a final rule for the issuance of these take permits under the Bald and Golden Eagle Protection Act.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Devin Ray at (410) 573-4531.

Sincerely,

A handwritten signature in black ink, appearing to read "Leopoldo Miranda", written in a cursive style.

Leopoldo Miranda  
Field Supervisor



Cindy  
Simone  
orig-file  
H3015

*Preserving America's Heritage*

August 27, 2009

Adrienne Coleman, Superintendent  
National Park Service  
Rock Creek Park  
3545 Williamsburg Lane NW  
Washington, DC 20008-1207

Dear Ms. Coleman:

On August 24, 2009, the Advisory Council on Historic Preservation (ACHP) received The National Park Service's (NPS) notification pursuant to Section 800.8(c) of the ACHP's regulations, "Protection of Historic Properties" (36 CFR 800). We appreciate receiving your notification, which establishes that the National Park Service will use the process and documentation required for the preparation of an EA/FONSI or an EIS/ROD to comply with Section 106 of the National Historic Preservation Act in lieu of the procedures set forth in 36 CFR 800.3 through 800.6.

In addition to notification to the ACHP, the National Park Service must also notify the DC State Historic Preservation Officer and meet the standards in Section 800.8(c)(1)(i) through (v) for the following:

- identifying consulting parties;
- involving the public;
- identifying historic properties and assessing the undertaking's effects on historic properties; and
- consulting regarding the effects of the undertaking on historic properties with the SHPO/THPO, Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to affected historic properties, other consulting parties, and the ACHP, where appropriate, during NEPA scoping, environmental analysis, and the preparation of NEPA documents.

To meet the requirement to consult with the ACHP as appropriate, NPS should notify the ACHP in the event the NPS determines, in consultation with the SHPO/THPO and other consulting parties, that the proposed undertaking(s) may adversely affect properties listed, or eligible for listing, on the National Register of Historic Places (historic properties). In addition, Section 800.8(c)(2)(i) requires that you submit to the ACHP any DEIS or EIS you prepare. Inclusion of your adverse effect determination in both the DEIS/EIS and in your cover letter transmitting the DEIS/EIS to the ACHP will help ensure a timely response from the ACHP regarding its decision to participate in consultation. Please indicate in your

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004  
Phone: 202-606-8503 • Fax: 202-606-8647 • [achp@achp.gov](mailto:achp@achp.gov) • [www.achp.gov](http://www.achp.gov)

cover letter the schedule for Section 106 consultation and a date by which you require a response by the ACHP.

The regulations do not specifically require that an agency submit an EA to the ACHP. However, keep in mind that, in the case of an objection from the ACHP or another consulting party, Sections 800.8(c)(2)(ii) and (c)(3) provide for ACHP review of an EA (in addition to a DEIS or EIS) to determine whether preparation of the EA, DEIS or EIS has met the standards set forth in Section 800.8(c)(1) and/or to evaluate whether the substantive resolution of the effects on historic properties proposed in an EA, DEIS or EIS is adequate.

If the NPS' determination of adverse effect will be documented in an EA, we request that you notify us of the adverse effect and provide adequate documentation for its review. The ACHP's decision to review an EA, DEIS or EIS will be based on the applicability of the criteria in Appendix A of the ACHP's regulations.

Thank you for your notification pursuant to Section 800.8(c). If you have any questions or if we may be of assistance, please contact Louise Brodnitz at 202-606-8527, or via e-mail at [lbrodnitz@achp.gov](mailto:lbrodnitz@achp.gov).

Sincerely,



Caroline D. Hall  
Assistant Director  
Federal Property Management Section  
Office of Federal Agency Programs

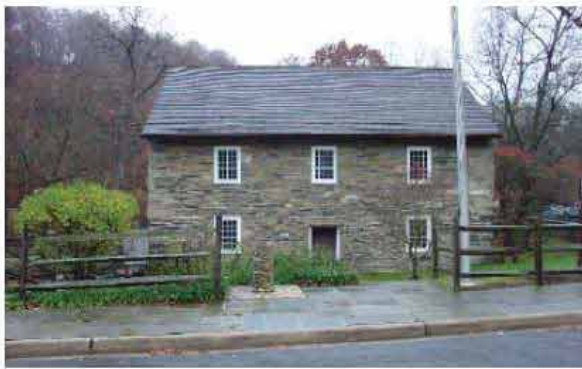
# **APPENDIX B: PHOTOGRAPHS OF EXISTING CONDITIONS: VIEWSHEDS**







PHOTOS OF EXISTING CONDITIONS



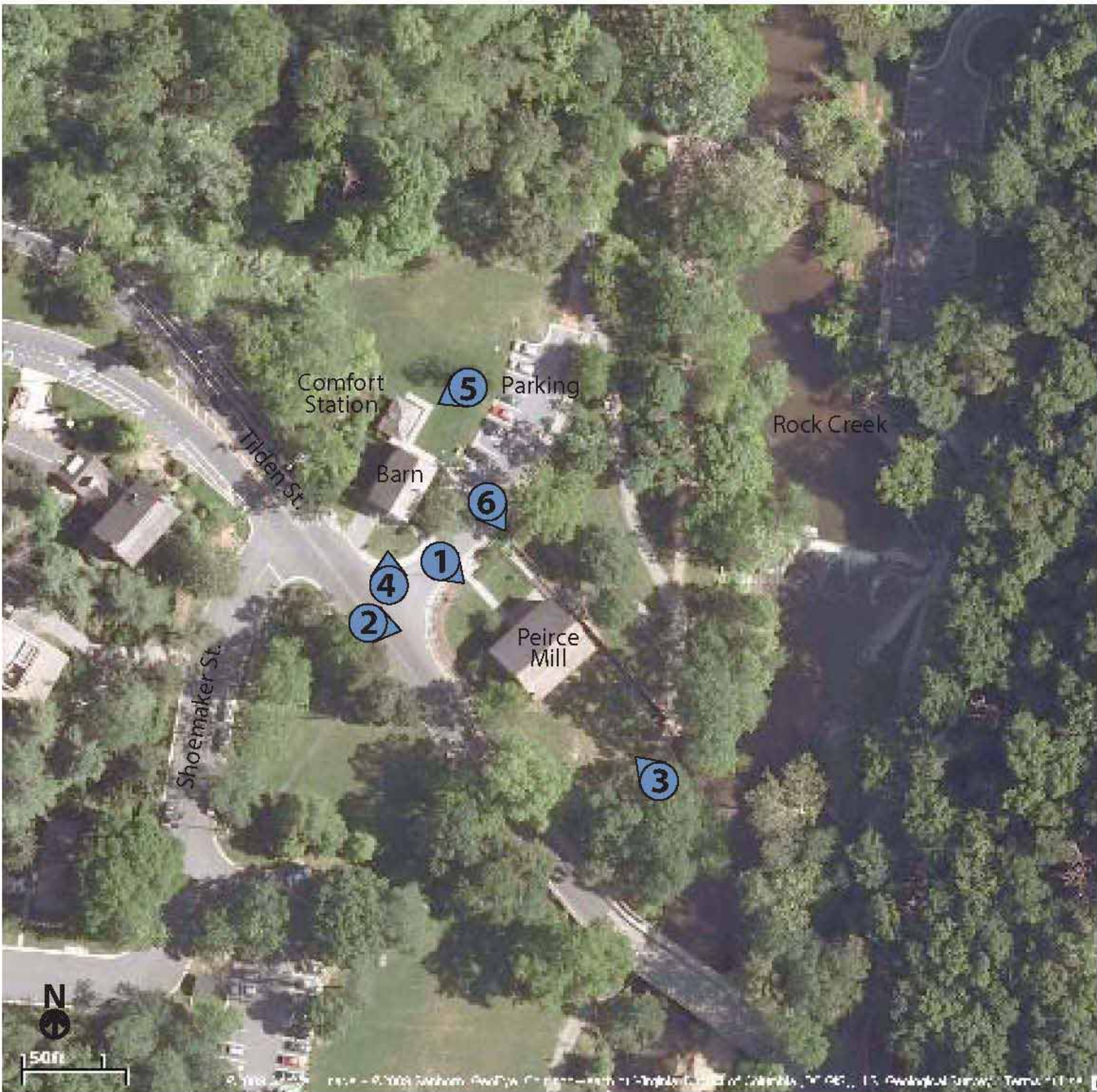
1 FRONT ELEVATION - NORTH



2 VIEW FROM TILDEN STREET



3 REAR ELEVATION - SOUTH



4 BARN (NO WORK IN THIS PROJECT)



5 COMFORT STATION (EXISTING TO BE REMOVED)



6 1968-1971 FLUME (TO BE REPLACED)











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

January 2010

Document No. 100848

United States Department of the Interior – National Park Service