NATIONAL PARK SERVICE
U.S. DEPARTMENT OF THE INTERIOR

NATIONAL CAPITAL REGION
DESIGN AND CONSTRUCTION BRANCH
WASHINGTON, D.C.

Stabilization of Scarp at Second and Newcomb Streets

Environmental Assessment

Shepherd Parkway-Fort Circle Parks
National Capital Parks-East
Washington, DC

July 2009

Photo of scarp face

Prepared by:
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EXECUTIVE SUMMARY

The National Park Service (NPS) is considering stabilizing an eroded scarp (slope) in a natural area of Shepherd Parkway (Fort Circle Parks). This Environmental Assessment (EA) analyzes the potential environmental impacts associated with two action alternatives, as well as a no action alternative, that are being considered to stabilize the eroded scarp near Newcomb and 2nd Streets SE, Washington, District of Columbia (DC). The eroded scarp is located within land owned by the National Capital Region, National Capital Parks-East.

The purpose of the proposed actions contained in this EA is to assist National Capital Parks-East in meeting its goals of enhancing the aesthetics of the nation's capital and the quality of life for its citizens by providing a greenbelt of public space that includes community parks, historic sites, and natural resource zones that are managed for their natural, cultural, and scenic values (NPS 2004). In addition, the proposed actions would repair an erosion problem that exists on NPS land to alleviate the potential for loss of municipal infrastructure.

The Fort Circle Parks consist of parts of three NPS units in the Washington, DC area. These parks contain Civil War earthworks that were situated on strategic high ground and encircled the United States Capital during the Civil War. Today, the Civil War earthworks and forts are linked by forested corridors, or greenbelts, that are managed as natural areas. The project site is located within an area that is managed as a natural resource zone (NPS 2004).

The proposed action alternatives were determined to have no or negligible impact on geology, air quality; prime and unique farmlands; soundscapes; visual resources and lightscapes; water quality and quantity, hydrology and hydraulics; floodplains; wetlands; marine and estuarine resources; coastal zone management; land use, urban quality, and gateway communities; rare or unusual vegetation; unique ecosystems, biosphere reserves, world heritage sites; unique, essential or important fish or fish habitat; recreation resources and visitor experience; cultural landscapes; ethnographic resources and museum collections; socioeconomics and environmental justice; energy resources; other agency or Tribal land use plans or policies; and long-term management of resources or land/resource productivity. With implementation of the mitigation measures described in this EA, minor to moderate temporary impacts may occur to soils, vegetation, and wildlife resources. Beneficial impacts would occur to the existing geohazard due to slope stabilization.

Note to Reviewers and Respondents:

If you wish to comment on the EA, you may mail comments directly via US Post or submit them electronically. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal information, may be made publicly available at any time. While you can request in your comment that we withhold your personal information, we can not guarantee that we will be able to do so.

Mailed comments can be sent to:

Stephen Syphax
National Park Service, National Capital Parks–East
1900 Anacostia Drive, SE
Washington DC 20020

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

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ACRONYMS

APE	Area of Potential Effects
bgs	below ground surface
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dB	decibel
DC	District of Columbia
DC DOE	District of Columbia Department of the Environment
DCSSWTSB	District of Columbia's Sediment and Storm Water Technical Services Branch
DO	Director's Order
EA	Environmental Assessment
EFH	Essential Fish Habitat
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	ozone
OSHA	Occupational Safety and Health Administration
$PM_{2.5}$	particulate matter less than 2.5 microns
SHPO	State Historic Preservation Officer

THPO	Tribal Historic Preservation Officer
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

SECTION 1. PURPOSE AND NEED

INTRODUCTION

The National Park Service (NPS) is considering stabilizing an eroded scarp (slope) in a natural area of Shepherd Parkway (Fort Circle Parks). This Environmental Assessment (EA) analyzes the potential environmental impacts associated with two action alternatives as well as a no action alternative to stabilize the eroded scarp near Newcomb and 2nd Streets SE, Washington, District of Columbia (DC). The eroded scarp is located within land owned by the National Capital Region, National Capital Parks-East.

An EA analyzes the proposed action's impacts on the environment. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and regulations of the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1508.9); NPS Director's Order #12 (DO-12): *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2003); and Section 106 of the National Historic Preservation Act (NHPA) of 1966 as amended, and its implementing regulations, 36 CFR Part 800. As described in more detail in Section 4, the NEPA process also supports compliance with Section 106 of NHPA.

PURPOSE OF AND NEED FOR THE PROPOSED ACTIONS

The purpose of the proposed actions evaluated in this EA is to assist National Capital Parks-East in meeting its goals of enhancing the aesthetics of the nation's capital and the quality of life for its citizens by providing a greenbelt of public space that includes community parks, historic sites, and natural resource zones that are managed for their natural, cultural, and scenic values (NPS 2004). In addition, the project would repair an erosion problem that exists on NPS land to alleviate the potential for loss of municipal infrastructure and reduce the hazard to public safety due to the existing scarp erosion.

A slope failure (an area of mass soil movement downslope) occurred on a steep forested slope in an area of Shepherd Parkway near 2nd and Newcomb Streets, SE (project site) at an unknown time in 1993 or 1994. The slope failure created a nearly vertical slope (scarp) approximately 25 feet high and 50 feet long (see photograph in Appendix A). The cause of the slope failure is unknown; however, the slope failure is located in an area of naturally unstable soils, and it appears that water of unknown origin(s) created the conditions that caused the slope failure. Large trees and vegetation have collapsed below and around the scarp.

The scarp is continually eroding toward municipal infrastructure (including water and sewer pipes and a city street) located approximately 30 feet away from the scarp. If another large slope failure occurred at the scarp, the municipal infrastructure could be adversely impacted. Although the scarp is currently fenced off with temporary fencing (snow fence), the cliff-like vertical slope is a safety issue for neighborhood children who play in the Shepherd Parkway natural area. The area around the project site supports native vegetation and wildlife, some of which are unusual in an urban setting. Trees include hackberry, bladdernut, and all four local species of hickories (pignut, shagbark, mockernut, and bitternut). Wildlife includes red-back salamanders (*Plethodon cinereus*), eastern worm snake (*Carphophis amoenus amoenus*), gray fox (*Urocyon cinereargenteus)*, wild turkey (*Meleagris gallopavo*), and bald eagle (*Haliaeetus leucocephalus*).

PURPOSE AND SIGNIFICANCE OF THE PARK

The Fort Circle Parks are a collection of historic Civil War resources and the remnants of what was originally envisioned as a parkway with historical and scenic foci. The Civil War earthworks were to have been connected by a Fort Circle Drive as proposed in 1902 by the McMillan Commission. Although the Fort Circle Drive was never completed, the importance of the historic earthworks and the greenbelt of parks along the ridge surrounding Washington, DC, make the parks a significant open space element in the nation's capital. Significant natural features, that are unusual in this otherwise urban setting, are preserved in the Fort Circle

Parks, including mature hardwood forests, geologic and aquatic resources, and important habitat for plants and animals. Today, the Civil War earthworks and forts are linked by forested corridors, or greenbelts, that contain recreational facilities and include significant natural areas. The project site is located within an area that is managed as a natural resource zone (NPS 2004).

The management of Fort Circle Parks focuses on cultural resources, natural resources, and recreation. The individual parks tell the stories of the Civil War defenses of Washington and how the nation's capital was protected from attack. Visitors are able to make personal connections with the historic events these sites commemorate. The NPS also manages recreation and offers interpretation and education programs so that all visitors can experience the park resources in ways compatible with protecting significant cultural and natural resources.

Guidance for management of the Fort Circle Parks includes the National Capital Planning Commission Comprehensive Plan (NPS 2001) and the NPS Fort Circle Parks, Washington D.C. Final Management Plan (NPS 2004).

PROJECT BACKGROUND

PREVIOUS PLANNING

The proposed actions identified in this EA reflect a planning process by NPS staff to address the slope failure in the Shepherd Parkway area. NPS periodically monitored the scarp between 1994 and 1997 for ongoing slope movement and erosion; however, overgrowth of vegetation surrounding the scarp during the 1997 monitoring season made observation difficult. Because of the difficulty in effectively monitoring the scarp after 1997, NPS became concerned that continual erosion and slope movement were occurring but that it was not possible to determine the extent of the degradation.

Two geotechnical investigations have been conducted on the slope failure. The first investigation was prepared by a U.S. Federal Highway Administration geotechnical engineer in 1998 (FHWA 1998). The results of the investigation stated that the slope failure was suspected to be a combination of rotational earth flow failure at the sand-clay interface that was triggered by water softening and lubricating the top clay layer; the source of water was uncertain. The investigation also presented several options to repair the slide in the form of narrative and hand-drawn conceptual sketches.

In 2005, a second geotechnical investigation was conducted to assess the potential risk of future slope instability that could affect the infrastructure adjacent to the park property (URS 2005). The investigation consisted of a field and laboratory study, including analysis of subsurface conditions, and presented an evaluation of slope stability and potential conceptual alternatives for reducing the risk of future slope movement. The conceptual alternatives presented in that report were the basis for the proposed action alternatives considered for analysis in this EA.

LOCATION

The project site is located northeast of Newcomb Street at its intersection with 2nd Street, SE in Shepherd Parkway, Washington, DC (Figure 1). The project site is located within a naturally forested area and includes approximately 1 acre of woodland. The scarp is a nearly vertical slope extending approximately 50 feet in width and approximately 25 feet in height. The top of the scarp is currently approximately 30 feet away from Newcomb Street.

In general, site topography is moderately to very steep, descending in the east and southeast directions (Figure 2). A small unnamed ravine exists at the east end of the project site. The project area is delineated on Figure 2 by a red line that is labeled "ravine to investigate."

Figure 1. Location Map

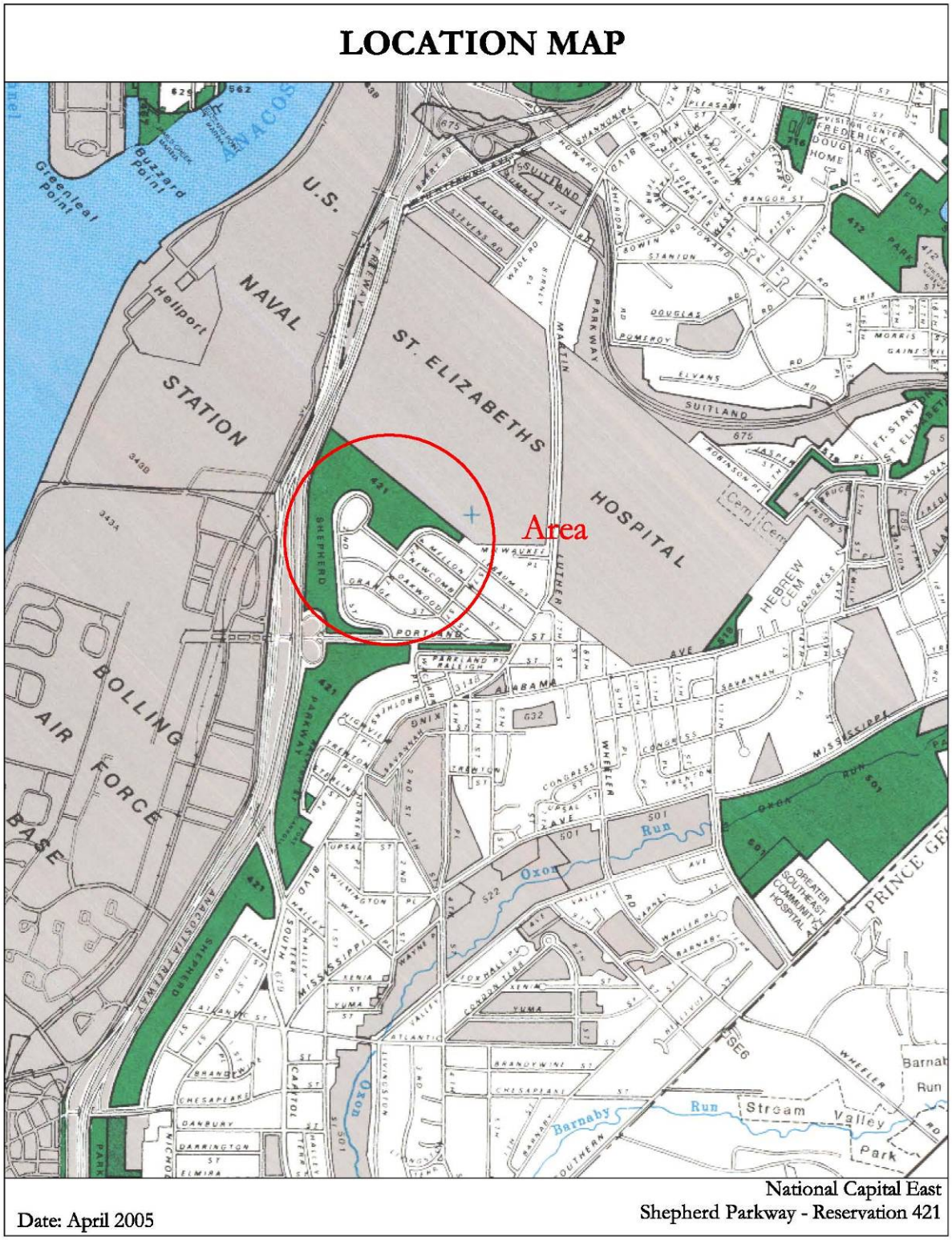
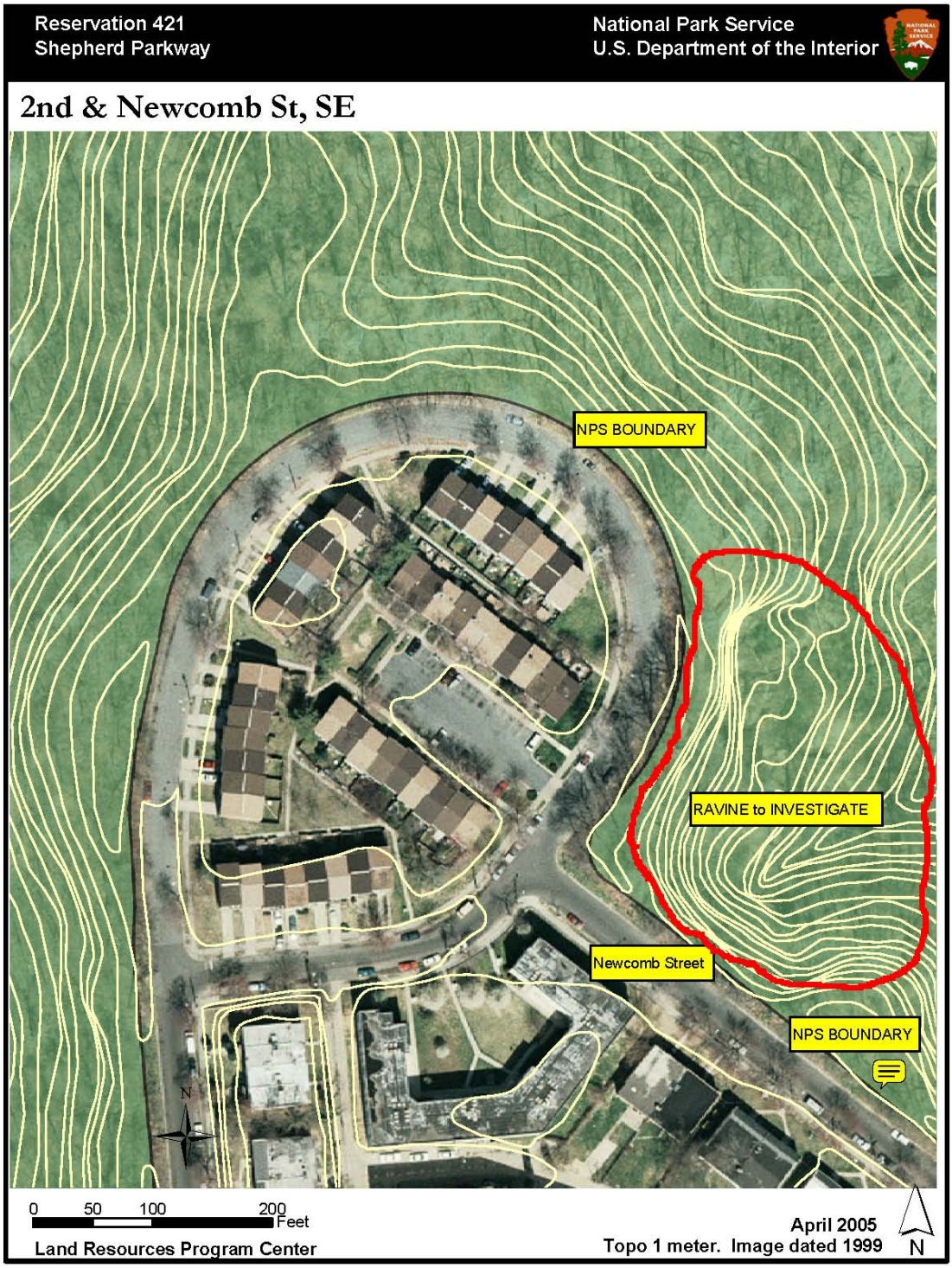


Figure 2. Site Map



SCOPING

As part of the EA process, NPS hosted a scoping meeting on June 18, 2007, at the NPS National Capital Region office located at 1100 Ohio Drive SW in Washington, DC. The meeting was attended by an interdisciplinary team including a geotechnical engineer, cultural resource specialist, and NEPA compliance specialist/soil scientist from URS Group, Inc. (URS), and the NPS National Capital Region Design and Construction Branch Chief and Resource Management Division Chief. The scoping meeting included a discussion of alternatives to repair the scarp and associated environmental and cultural resources issues.

NPS sent the National Capital Region Cultural Resources Office a package of information on the project including the Assessment of Actions Having an Effect on Cultural Resources (Triple X) Form on December 13, 2007.

The NPS mailed a letter to the U.S. Fish and Wildlife Service (USFWS) on February 7, 2008, and to the DC Department of the Environment (DC DOE), Wildlife & Fisheries Division, on February 6, 2008, informing them of the proposed project, describing the anticipated impacts, and requesting agency concurrence with NPS findings. Responses were received from USFWS on February 27, 2008, and from the DC DOE on February 28, 2008 (see Appendix B).

SECTION 2. ISSUES AND IMPACT TOPICS

DERIVATION OF IMPACT TOPICS

Impact topics are resources of concern that could be affected, either beneficially or adversely, by the alternatives considered. Impact topics were identified on the basis of Federal laws, regulations, Executive Orders, *NPS Management Policies* (2006), the Environmental Screening Form, and from NPS knowledge of limited or easily impacted resources. In completing the Environmental Screening Form, the interdisciplinary team reviewed the proposed action alternatives, considered the data needed to describe the affected environment, and predicted impacts of the alternatives. The interdisciplinary planning team also identified specific impact topics associated with the proposed action alternatives.

IMPACT TOPICS INCLUDED IN THIS DOCUMENT

Based on the results of interdisciplinary team scoping and preparation of the Environmental Screening Form, several impact topics were determined to require additional investigation in order to address the requirements of NEPA and DO-12. As shown in Section 4, the impact topics evaluated in detail for each alternative include soils and geohazards, vegetation and wildlife, and cultural resources including both archaeological and historic properties. These impact topics are evaluated in detail because they would be affected by the proposed action alternatives evaluated in this document; all of the impacts topics would be affected by construction activities required to repair the scarp, such as ground disturbances due to excavation, vibrations, and noise.

IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

The impact topics listed below were considered, and determined to not be affected by or affected negligibly by the proposed action alternatives evaluated in this document. Negligible effects are effects that are localized and immeasurable at the lowest level of detection. A brief discussion of each impact topic and the rationale for its dismissal from further analysis is provided below.

GEOLOGY

Geologically, the project site is located within the Coastal Plain physiographic province, which consists of sequences of marine and terrestrial sedimentary deposits. The geologic formations identified in the project site vicinity include Upland Deposits, which consist of gravels and sands with lenses of silt and/or clay, and the Potomac Formation, which consists of interbedded sands, gravels, silts, and clays. The Upland Deposits have a thickness of up to approximately 30 feet, while the Potomac Formation extends to a thickness of up to approximately 800 feet. Surface soils are underlain by Upland Deposits, colluvial deposits (where encountered), and Potomac Group soils, respectively, as depth below ground surface (bgs) increases (URS 2005).

The risk of seismic activity is low because of the project site's location at the center of the North American tectonic plate, away from active faults. The majority of earthquakes occur in the Appalachian physiographic region, which lies approximately 125 miles to the west of the project area (Virginia Tech 2007).

The proposed action alternatives are expected to result in no impacts to geology. The proposed action alternatives would require some excavation and earthwork; however, the excavation would not impact the geologic character of the site. As the proposed action alternatives would result in negligible impacts to geology, this impact topic was dismissed from further consideration.

PRIME AND UNIQUE FARMLANDS

Prime and unique farmlands are protected under the Farmland Protection Policy Act (7 United States Code 4201 et seq.), which states that Federal agency programs must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) as prime or unique. Prime farmland is defined in the Act as "land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion," while unique farmlands are lands "other than prime farmland that is used for the production of specific high-value food and fiber crops."

The proposed scarp stabilization project is not located on land suitable for agricultural use due to the steeply sloping terrain and surrounding urban environment. Therefore, the soil located on the project site is not regulated under the Farmland Protection Policy Act. Additionally, soils on the project site are classified as Sassafras gravely silt loam, which is not a soil type classified by NRCS as a prime farmland soil, soil of statewide importance, or unique farmland soil (USDA/NRCS 2002). As the soil located within the project site does not meet the definition of a prime or unique farmland, this impact topic was dismissed from further consideration.

AIR QUALITY

The Clean Air Act (CAA), as amended, requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The CAA established two types of NAAQS. Primary standards set limits to protect public health, including the health of "sensitive" populations, such as asthmatics, children, and the elderly, and secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, or buildings.

The Washington, DC, area is classified as non-attainment for 8-hour ozone (O_3), carbon monoxide (CO), and particulate matter less than 2.5 microns ($PM_{2.5}$) (EPA 2007). The proposed action alternatives would not result in any noticeable short-term or long-term impacts. As a result of construction activities, emissions from fuel-burning internal combustion engines could temporarily increase the localized levels of some pollutants. In order to reduce the emission of pollutants, fuel-burning equipment running times would be kept to a minimum and engines would be properly maintained. This impact topic was dismissed from further consideration because the proposed action alternatives are expected to have negligible impacts on air quality.

VISUAL RESOURCES AND LIGHTSCAPES

A part of the NPS mission, as outlined in the NPS *Management Policies* (2001a), the agency works to understand, maintain, restore, and protect the inherent integrity of the natural resources, processes, systems, and values of the parks. Scenic views and visual resources are considered important characteristics that are individual to each park unit and that the NPS makes a priority to protect. As a part of efforts to preserve the visual resources of a park unit, the NPS strives to preserve the natural ambient landscapes, or lightscapes, of an area. Lightscapes are defined as natural resources and values that exist in the absence of human-caused light.

The proposed scarp stabilization project would result in no long-term changes to visual resources and would not impact the existing lightscape of the park. The associated construction activities would have a short-term, negligible, adverse impact on the visual resources of the park during the construction period due to the short-term addition of construction equipment and personnel to the viewscape. In addition, removal of vegetation would create short-term, minor, adverse impacts to the views of the natural area; however, the impact would be mitigated by re-growth and post-construction planting of native species. As the proposed action alternatives would not result in a long-term change to the existing scenic views and visual resources at the park or create a long-term impact to lightscapes, this impact topic was dismissed from further consideration.

SOUNDSCAPES

An important objective of the NPS mission, as outlined in the NPS *Management Policies* (2001a) and DO-47, *Soundscape Preservation and Noise Management* (NPS 2000), is the preservation of the natural soundscapes associated with an NPS unit. The natural ambient soundscape is defined by the NPS as the natural sound conditions that exist in a park unit in the absence of any human-produced noises. Natural sounds are further defined by the NPS as those sounds associated with a park's natural setting, which may include sounds produced by wildlife, geothermal activity, or geomorphic processes such as wind or water acting on landscape features.

Noise, defined by the NPS as a human-made noise inappropriate to the particular time and place in a park unit, can adversely affect the natural soundscape of a park unit. The frequency, magnitude, and duration of acceptable human-caused sound vary among NPS units. Generally, acceptable levels are greater for park units located in urban or developed areas, while acceptable levels are lower for park units located in rural or undeveloped areas.

The sound environment of the project site currently consists of natural sounds (as defined by the NPS) and, due to the project site's proximity to Newcomb Street and the high-density residential neighborhood of College Heights, of human-created sounds typical of a residential urban environment such as vehicular noise, human voices, radios, closing doors, etc. Table 1 below shows the average sound level in decibels (dB) from various sources that may be associated with the proposed project and the surrounding environment.

Table 1. Average Decibel Ranges for Common Sounds (EPA 1974)

Source	Average Decibels (dB)
Urban Residential	60
Noisy Urban Residential	65
Normal Voice (0.5 meter away)	72
Raised Voice (0.5 meter away)	78
On construction site during pile-driving	120
At child's ear when detonating toy cap or firecracker	143

The proposed action alternatives would result in no long-term differences in noise frequencies, magnitudes, or durations at Fort Circle Parks and would not impact the management of this portion of Shepherd Parkway as a natural resource zone. To mitigate short-term impacts to the adjacent residential neighborhood, construction activities would be performed during day-time business hours, in accordance with State and local regulations. Construction workers would be required to comply with Occupational Safety and Health Administration (OSHA) noise regulations. As the proposed action alternatives would not result in a long-term change to the existing soundscapes of the project area, this impact topic was dismissed from further consideration.

WATER QUALITY AND QUANTITY

The Organic Act, enacted in 1916, requires the NPS to preserve and conserve natural resources, including water resources, on all park lands under its jurisdiction. The Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA), was promulgated in 1972 to restore and maintain waters of the United States. Specific sections of the CWA that must be considered when Federal agencies conduct construction or development activities in or near a waterway include Section 404, which prohibits unauthorized discharges of dredged or fill material into waters of the United States; Section 401, which grants states the authority to administer a water quality certification program in conjunction with Section 404 permit requirements; and Section 402, which requires an EPA National Pollutant Discharge Elimination System (NPDES) permit for

point source discharges of pollutants into waterways, including stormwater runoff from construction sites. A NPDES permit is required if 1 acre or more of land would be disturbed by construction activities.

Currently DC does not have NPDES permitting authority; therefore EPA administers NPDES permits in the District. DC's Sediment and Storm Water Technical Services Branch (DCSSWTSB) reviews and certifies all EPA permits issued in the District.

A construction permit is required from the DCSSWTSB and is based on the amount of land disturbance. An erosion and sediment control plan is required for 50 square feet or more of land disturbance. A stormwater management plan is required for 5,000 square feet or more of land disturbance. The regulations governing stormwater management, erosion and sediment control, and floodplain management are outlined in Chapter 5 of Title 21 and Chapter 31 of Title 20 of the DC Municipal Regulations (DC 2007).

Additionally, Section 303(d) of the CWA and EPA regulations (40 CFR §130.7) require states to identify waters not in compliance with State water quality standards, develop biennial lists of impaired waters, and develop Total Maximum Daily Loads for listed impaired waters.

Surface Water Resources. The proposed project site lies within the Anacostia River watershed, approximately 1 mile northeast of the confluence of the Anacostia River with the Potomac River. The project site is located in an upland area of the tidal Anacostia subwatershed; no streams are located near the project site. An unnamed ephemeral drainage channel that receives surface flow from the project site is located approximately 200 feet east of the scarp. The surrounding area contains a municipal stormwater drainage system that eventually discharges to the Anacostia River. The natural flow of the waterways, drainages, and streams in the tidal Anacostia subwatershed have been significantly altered by the urban landscape and municipal and residential infrastructure.

Since the project does not involve the discharge of dredged or fill materials into waters of the United States and does not involve disturbance of or discharge to surface waters, Sections 401 and 404 of the CWA do not apply. In addition, no water bodies in the immediate vicinity of the project site are listed on EPA's 303(d) list of impaired waters.

For any activities that would disturb between 5,000 square feet and 1 acre of soil, the NPS would submit a stormwater management plan to the DCSSWTSB to obtain coverage under the DCSSWTSB construction permit. A NPDES construction permit would be obtained from the EPA for proposed action alternatives that would disturb more than 1 acre of soil. Because of the distance that separates the project area from the nearest surface water and the fact that a stormwater management plan would be implemented during the construction activities of either action alternative, impacts to water quality would be less than minor for the no action and action alternatives, as a result, this impact topic was dismissed from further analysis.

FLOODPLAINS

Executive Order (EO) 11988 (Floodplain Management) requires Federal agencies to minimize occupancy of and modification to floodplains. Specifically, the EO prohibits Federal agencies from funding construction in the 100-year floodplain unless there are no practicable alternatives.

According to the Flood Insurance Rate Map, Community Panel Number 1100010025B, published by the Federal Emergency Management Agency (FEMA), the proposed project site is located within FEMA floodplain designation zone C, outside of the 100-year floodplain (FEMA 1985). The 100-year floodplain designates the area inundated during a storm having a 1.0 percent chance of occurring in any given year. As the project site is not located within the 100-year floodplain, this impact topic was dismissed from further consideration.

WETLANDS

EO 11990 (Protection of Wetlands) requires Federal agencies to minimize the loss of wetlands and consider direct and indirect impacts on wetlands that may result from federally funded actions. Jurisdictional waters of the United States, including wetlands, are protected under Section 404 of the CWA. The United States Army Corps of Engineers (USACE) and EPA jointly define wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (USACE, 33 CFR 328.3, and EPA, 40 CFR 230.3). For purposes of compliance with EO 11990, the NPS uses "Classification of Wetlands and Deepwater Habitats of the United States" (Cowardin et al. 1979) as the standard for defining, classifying, and inventorying wetlands (NPS DO 77-1: *Wetland Protection; and Wetland Protection Procedural Manual 77-1*).

NPS retained URS to determine if wetlands exist on or near the project site. On June 27, 2007, URS conducted a field investigation according to the USACE *Wetland Delineation Manual* (USACE 1987) and the NPS *Wetland Protection Procedural Manual #77-1*. Although there were some areas of moist soil observed at the surface below the scarp, no wetlands occur within or around the proposed project site. In addition, the USFWS National Wetlands Inventory map was accessed using the Wetlands Online Mapper (USFWS 2007a); according to the map, no wetlands occur at the project site. Therefore, the impact topic of wetlands was dismissed from further consideration.

MARINE AND ESTUARINE RESOURCES

Both the Anacostia and Potomac Rivers are tidally influenced. However, surface water drainage from the project site does not reach a waterway or stream that contributes directly to the tidal rivers or their tributaries. No estuarine wetlands are located near the project site (USFWS 2007a) and marine and estuarine resources would not be affected by any of the proposed action alternatives; therefore, this impact topic was dismissed from further consideration.

COASTAL ZONE MANAGEMENT

The Coastal Zone Management Act (CZMA) was enacted in 1972 to encourage coastal and Great Lake states to develop comprehensive programs to manage and balance competing uses of and impacts to coastal resources. The CZMA emphasizes the primacy of State decision-making regarding the coastal zone. Section 307 of the CZMA (16 USC §1456), called the Federal consistency provision, is a major incentive for States to join the national coastal management program and is a powerful tool that States use to manage coastal uses and resources and to facilitate cooperation and coordination with Federal agencies.

DC is not a participant in the Federal Coastal Zone Management Program and has no review process under the Federal Coastal Zone Management Act (Kehoe pers. comm. 2007). Therefore, this impact topic was dismissed from further consideration.

LAND USE, URBAN QUALITY, AND GATEWAY COMMUNITIES

The proposed project is located within the boundaries of the NPS-owned Shepherd Parkway, which is part of a larger greenbelt of public space known as the Fort Circle Parks. The Fort Circle Parks and greenbelt corridors include a discontinuous trail system and natural resource zones encircling Washington, DC, that follow a portion of the chain of 68 forts which guarded bridges, Capitol Hill, and Navy installations during the Civil War. Some portions of the Civil War Defenses of Washington are operated and maintained by other agencies. The areas surrounding Fort Circle Parks are owned by other Federal, State, and private entities. The project site is characterized as natural forested open space within a highly developed urbanized area, and is designated as a "Natural Resource Zone" in the Final Management Plan of the Fort Circle Parks (NPS 2004). The project site

is located within the boundaries of Shepherd Parkway and the Fort Circle Parks; therefore, the local zoning authorities of Washington, DC do not apply to the project site.

The proposed project site is located within a natural area of Shepherd Parkway that is neither developed for nor focused on public use. A residential subdivision located within the Congress Heights neighborhood of DC borders the west side of the project site approximately 30 feet from the scarp.

Congress Heights is considered a gateway community, which is defined as a community located at the entrance to a park unit and which supports park unit activities through private industry, such as providing food, fuel, or accommodations. The NPS works with gateway communities to identify and address gateway and adjacent land issues as well as to assess and respond to changes to these communities due to NPS activities.

The proposed scarp stabilization would result in no changes to the land use or management designation as a natural zone of Shepherd Parkway or the Fort Circle Parks. The natural forested character of the area would not change, and the proposed project would not impact the developed land around the project site. The proposed project would not adversely affect the adjacent subdivision of Congress Heights. As the proposed action would not result in changes to the existing land use of Shepherd Parkway, the Fort Circle Parks, the immediate project area, or the local community, this impact topic was dismissed from further consideration.

RARE OR UNUSUAL VEGETATION AND WILDLIFE

URS conducted a site visit on behalf of NPS on June 27, 2007. The site consists of upland deciduous woodland vegetation. The USFWS DC Threatened and Endangered Species List in Table 2 identifies the following protected species as potentially occurring in DC (USFWS 2007b).

Table 2. USFWS DC Threatened and Endangered Species List

Common Name	Scientific Name	Federal Status
Hay's spring amphipod	*Stygobromus hayi*	endangered
American burying beetle	*Nicrophorus americanus*	endangered
Eskimo curlew	*Numenius borealis*	endangered
Dwarf wedgemussel	*Alasmidonta heterodon*	endangered
Small-whorled pogonia	*Isotria medeoloides*	threatened (extirpated in DC)

The NPS initiated informal consultation with the USFWS and the DC DOE, Fisheries and Wildlife Division; a letter was sent to the DC DOE on February 6, 2008 and to the USFWS on February 7, 2008 with a determination that the proposed action alternatives would not be likely to adversely affect the bald eagle with implementation of seasonal restrictions on construction activities (Appendix B). The USFWS responded on February 27, 2008, stating that no proposed or federally listed endangered or threatened species are known to exist within the project impact area, and therefore, no Biological Assessment or further Section 7 consultation with the USFWS is required (Appendix B). The DC DOE responded on February 28, 2008, requesting more information on the project alternatives including the choice of a preferred alternative by NPS (the requested information is provided in this EA).

The project site does not contain suitable habitat for any of these species. Therefore, this impact topic was dismissed from further consideration.

UNIQUE ECOSYSTEMS, BIOSPHERE RESERVES, AND WORLD HERITAGE SITES

The proposed scarp stabilization site is not located near and would not affect any unique ecosystems or existing or nominated biosphere reserve or World Heritage Sites. As the proposed action alternatives would not result in changes to any unique ecosystems or existing or nominated biosphere reserve or World Heritage Sites, this impact topic was dismissed from further consideration.

UNIQUE, ESSENTIAL OR IMPORTANT FISH OR FISH HABITAT

Essential Fish Habitat (EFH) is a provision under the Magnuson-Stevens Act of 1996, as amended, to support the goal of maintaining sustainable fisheries. Designated EFH includes any area of a waterway or water body that supports a species of fish throughout any stage of its life cycle. The project site is not located within or adjacent to any waterways or water bodies and the proposed scarp stabilization would not affect EFH. Therefore, this impact topic was dismissed from further consideration.

RECREATION RESOURCES AND VISITOR EXPERIENCE

No recreation resources or activities occur in the portion of Shepherd Parkway where the project site is located; the land use is designated as a "Natural Resource Zone." The scarp is not visible from the any public use areas of the Fort Circle Parks or from the adjacent residential neighborhood. However, due to the proximity of the project site to adjacent residential areas, children occasionally venture near the scarp while playing. Currently the scarp is nearly vertical with a height of 25 feet and does not include a permanent rail or fence to prevent people from falling, although temporary fencing has been placed at the top for safety. Both of the alternatives proposed to stabilize the scarp would indirectly enhance the safety of the area by either eliminating the vertical face of the scarp or installing a permanent safety fence near the top of the scarp to prevent falls. Therefore, no direct impacts to recreation resources and visitor experience would occur. As there would be no direct impacts to recreation resources and visitor experience, and an enhancement to safety would occur, this topic was dismissed from further consideration.

CULTURAL LANDSCAPES

In Director's Order #28, *Cultural Resource Management Guideline* (NPS 1998), the NPS defines cultural landscapes as complex resources that are a reflection of human adaptation of the natural environment. The use of natural features such as landforms, soils, and vegetation and the way that the land has been organized and divided, patterns of settlement, land use history, and circulation systems help to provide an understanding of the evolution of the cultural landscape. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by uses reflecting cultural values and traditions.

The proposed project would not impact the cultural landscape of Fort Circle Parks, since the project would not alter the viewscape or land use of the natural resource zone within Shepherd Parkway. There would be no cumulative effects to the surrounding landscape due to the construction. The characteristics that make the Parkway eligible for listing in the National Register of Historic Places (NRHP) as a cultural landscape would not be altered by the proposed project; therefore, this impact topic was dismissed from further consideration.

ETHNOGRAPHIC RESOURCES AND MUSEUM COLLECTIONS

An ethnographic resource is defined by the NPS in Director's Order #28, *Cultural Resource Management Guideline* (NPS 1998), 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." In accordance with Director's Order #28 and Executive Order 13007 (Indian Sacred Sites), the NPS makes every effort to preserve and protect ethnographic resources. No ethnographic resources are located within the project area; therefore, this impact topic was dismissed from further consideration.

SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Socioeconomic issues are defined as actions that have the potential to create a significant negative change to the demographics, housing, employment, and economy of an area. Where local economies are dependent on a single industry, there is substantial potential for economic effects due to fluctuations in activity in this industry. In 2000, the median household income for the local area was $24,905 and the median family income was $25,194; the national median household income in 2000 was $41,994 and the national median family income was $50,046 (data are taken from the nearby Hillcrest Heights neighborhood with an average of 2.16 persons per household) (DC 2007a). Since the median incomes in the local area are less than half of the median incomes for DC, the area adjacent to the project is considered low income; however, the local area does not meet the threshold for poverty, which is $13,690 for a two-person household (HHS 2007).

The proposed action alternatives would not appreciably change local or regional land use or adversely impact local businesses or other agencies. The proposed project may have a negligible short-term beneficial impact to the local economy through the employment of construction contractors, equipment rentals, fuel usage, and other necessary resources associated with project completion. As the proposed action alternatives would not result in a long-term change to the socioeconomic environment at project site, this impact topic was dismissed from further consideration.

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) requires that all Federal agencies identify and address, as appropriate, any disproportionately high and/or adverse human health or environmental effects due to their programs and activities on minority and low-income populations. The project area is located within DC's 8th Ward, where 97 percent of the population consists of black, non-Hispanic people; therefore, the project area lies within an area dominated by a minority population (NeighborhoodInfo DC 2007).

The proposed action alternatives would not have a disproportionately high and/or adverse health or environmental effect on any minority or low-income populations. All populations in the project area would benefit from either eliminating the vertical face of the scarp or installing a permanent safety fence near the top of the scarp to prevent falls; therefore, this impact topic was dismissed from further consideration.

ENERGY RESOURCES

Energy resources include power generation facilities, transmission and distribution systems, and energy resources such as coal, hydropower, natural gas, and oil. Energy resources also include energy-consumptive practices related to a park unit's mission and construction activities.

The proposed project would not impact power generation facilities or power transmission and distribution systems, as none are located within the project area. Similarly, there would be no impact to energy resources such as natural gas and oil because there are no known deposits located within the project area. Construction activities requiring the use of machinery would be kept to a minimum in order to conserve energy resources during construction activities and the proposed action alternatives would not lead to an increase in energy consumption from park activities. As energy resources in the project area would not be adversely impacted, this impact topic was dismissed from further consideration.

OTHER AGENCY OR TRIBAL LAND USE PLANS OR POLICIES

In 1992, the U.S. Congress adopted amendments to the NHPA (P.L. 102-575) that allow federally recognized Indian Tribes to take on formal responsibility for the preservation of significant historic properties on Tribal lands. Section 101(d)(2) allows Tribes to assume a portion or all of the functions of a State Historic Preservation Officer (SHPO) with respect to Tribal land. The decision of whether to participate in the program rests with the Tribe. In accordance with Section 101(d)(2), Tribes who have taken formal responsibility of the SHPO for purposes of Section 106 compliance on their Tribal lands are listed by the NPS as Tribal Historic Preservation Officers (THPOs). Designated THPOs are consulted by Federal agencies instead of the SHPO for

undertakings occurring on, or affecting historic properties on, Tribal lands There are no federally recognized Tribes in Washington, DC, and no Tribes have assumed preservation responsibility for the proposed project area; therefore, this impact topic was dismissed from further consideration.

LONG-TERM MANAGEMENT OF RESOURCES OR LAND/RESOURCE PRODUCTIVITY

The proposed project is located within the NPS-designated "Natural Resource Zone" of the Fort Circle Parks. The Final Management Plan of the Fort Circle Parks (NPS 2004) states that "the natural resource zone comprises areas of the parks that are managed primarily to maintain forests and natural scenery, but they may also contain cultural resources. Natural processes will predominate except where intervention is needed to protect or restore disturbed systems or preserve cultural resources. …The tolerance for resource degradation in this zone will be low."

Implementation of the proposed project would not result in a change to the desired management strategy outlined by the NPS; in fact, stabilization of the scarp would meet the goals of the NPS management policy to restore disturbed resources by repairing the ongoing erosion problems created by the scarp. As no change to long-term management would occur and the proposed project would enhance the productivity and health of a natural area, this impact topic was dismissed from further discussion.

SECTION 3. ALTERNATIVES

In addition to the No Action Alternative, two action alternatives have been selected for analysis based on the Environmental Screening Form and the geotechnical investigation of the existing slope (URS 2005). Both action alternatives include pile driving and earthwork.

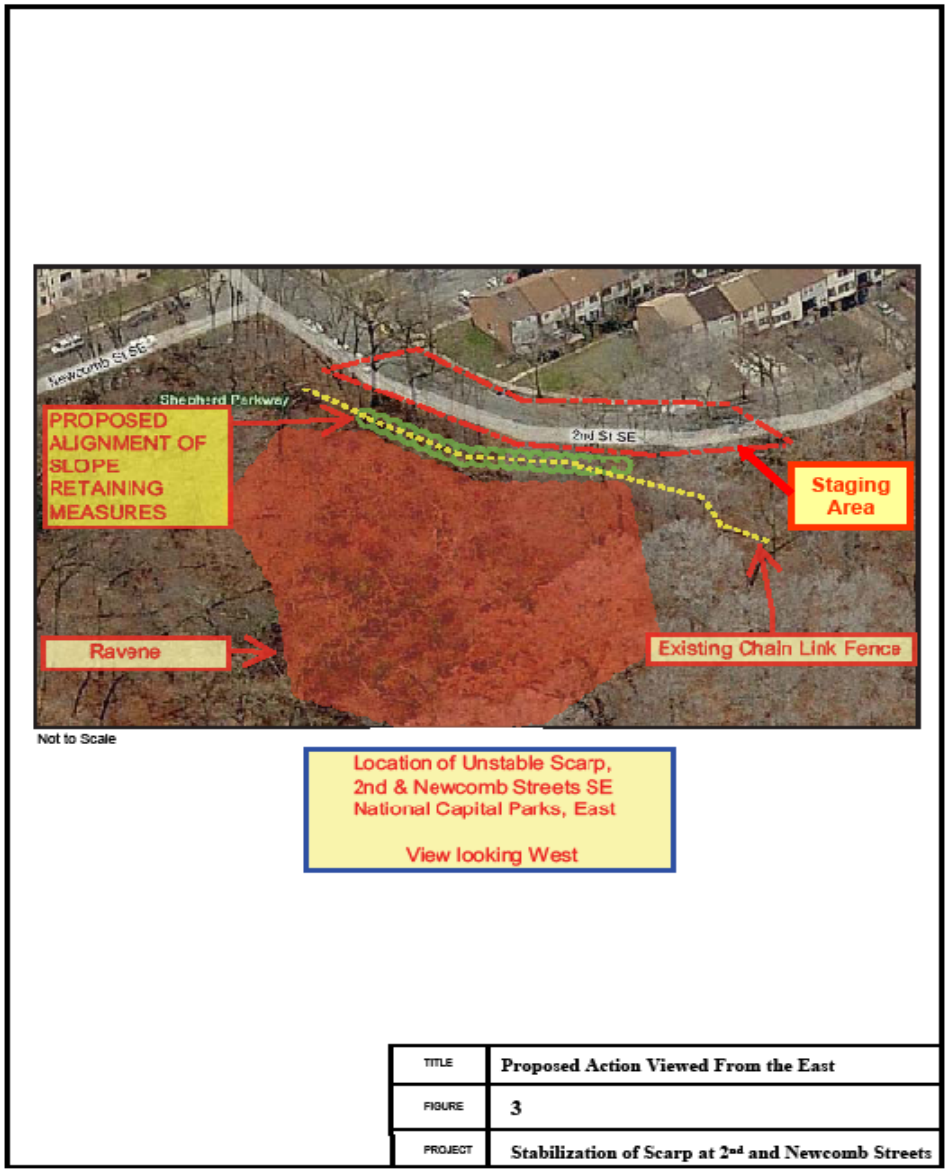
PROJECT ACTIVITIES COMMON TO THE ACTION ALTERNATIVES

Construction activities would impact the adjacent neighborhood due to trucks, personnel, and equipment traveling on 2nd Street and Newcomb Street to reach the project site. Efforts would be made to maintain normal traffic operations in the adjacent College Heights subdivision; however, when necessary, one or both lanes of traffic would be closed along 2nd Street or Newcomb Street and flaggers would direct local traffic and ensure transportation regulations presented in the DC Temporary Traffic Control Manual (DC DOT 2004) are followed. Residences are located along both of these streets close to the project site; however, the project would not restrict entrance into residences at any time. It is anticipated that Newcomb Street would not be closed for more than a few hours, and then temporary closure would occur only when necessary, and for the shortest amount of time necessary. Scheduling of temporary closures would be aimed at avoiding the peak traffic hours of 7 to 9 a.m. and 5 to 7 p.m.

Because 2nd Street would likely be the only feasible place for an equipment staging area, a portion of it may be closed during implementation of the project (see Figure 3). Because of the road configuration in the vicinity, residents would still be able access their homes and a detour would not be necessary. Another smaller staging area on a relatively flat part of NPS property adjacent to Newcomb Street and approximately 250 feet southeast of the project site may be used in conjunction with the 2nd Street staging area. Construction-related vehicles including personnel vehicles would park on NPS land and along 2nd Street and Newcomb Street where feasible during daylight hours. Construction equipment and/or construction-related vehicles would not be left parked on Newcomb Street overnight.

For both alternatives, disturbed areas of the project site would be stabilized with erosion control measures following completion of construction activities.

Figure 3. Proposed Action Viewed from the East



ALTERNATIVE ONE - NO ACTION

Under the No Action Alternative, no action would be taken to alleviate the erosion problems caused by the scarp and the subsequent potential for loss of municipal infrastructure as the scarp erodes toward the subdivision of College Heights. The continual erosion of the scarp would not meet the Fort Circle Parks desired land use management and natural resource restoration strategies for areas designated as a "Natural Resource Zone." The No Action Alternative is the baseline alternative against which all other alternatives are measured.

Geotechnical analysis indicates that the scarp is likely to fail again by one of two modes, deep or shallow, and that the next failure event may impact property beyond the NPS boundary (URS 2005). If this were to occur, emergency measures would be required to stabilize the scarp in order to protect municipal infrastructure and human safety.

ALTERNATIVE TWO - PREFERRED ACTION

The Preferred Action Alternative would involve installation of a cantilever steel sheet pile wall along the existing near-vertical slope (see area shown on Figure 3 as "Proposed Alignment of Slope Retaining Measures"). Cantilevered sheet pile walls are made from a relatively thin section of steel and are installed in a row of interlocking sheets.

The sheet pile wall would be installed from the top of the scarp. All of the construction equipment (including a crane, excavator, and haul truck) would operate from above the scarp, and only workers would conduct operations in the area below the existing scarp face.

Early in the construction of the wall, a void may be left between the sheet pile wall and the existing scarp, and then any void would be filled in with imported soil. Since a vertical face would remain, a permanent safety fence would be installed at the top of the scarp face.

The area of disturbance would occur mostly in the area above the scarp face, and would include approximately 3,000 square feet of vegetation removal. It would not be necessary to construct an access road to the bottom of the scarp. The piles would be driven with a double-acting diesel hammer, an air hammer, or a vibratory hammer.

ALTERNATIVE THREE

Alternative Three would involve installation of a cantilever steel sheet pile wall along the existing near-vertical slope; however, it would be necessary for construction equipment to work below the scarp. The sheet piles would be vibrated into place using a vibratory hammer.

As in the Preferred Action Alternative, a crane would work from the top of the scarp. Under this alternative, an excavator and haul trucks would be positioned below the scarp in order to remove excess soil from the scarp once the sheet pile wall is installed. An access road with a footprint of approximately 2,500 square feet would be constructed around the scarp for access to the area below the scarp face.

The area of disturbance would occur above and below the scarp face, and would include approximately 5,500 square feet of vegetation removal, including construction of an access road to the bottom of the scarp.

MITIGATION MEASURES OF THE ACTION ALTERNATIVES

The NPS would implement on-site mitigation measures to minimize the potential adverse impacts to natural and cultural resources associated with the action alternatives. The following mitigation measures and permits would apply to both of the action alternatives:

1. Construction activities would not be allowed from November 1st to June 15th to avoid adverse impacts to nesting bald eagles.
2. To reduce the emission of air pollutants, fuel-burning equipment running times would be kept to a minimum and engines would be properly maintained.
3. Construction activities requiring the use of machinery would be kept to a minimum to conserve energy resources during construction activities.
4. Because both of the action alternatives would disturb more than 50 square feet of soil, an erosion and sediment control plan is required by DCSSWTSB in order to obtain a construction permit. Alternative Three would disturb more than 5,000 square feet of soil, and if selected, a stormwater management plan would be submitted to DCSSWTSB in order to obtain a construction permit. Erosion and sediment control plans would include best management practices to stabilize soils and minimize movement of sediment off-site.
5. Construction activities would be scheduled to minimize traffic impacts during peak hours and reduce traffic delays; construction would only occur during daylight hours and not on Federal holidays.
6. A planting plan would be required and vegetation would be immediately re-established using native species after the project is completed.
7. To reduce temporary noise impacts, construction activities would occur only during daylight hours and would not occur on Federal holidays.
8. If archaeological resources are uncovered during construction, NPS would stop work and consult with an NPS archaeologist. If an archaeological survey resulted in archaeological resources, NPS would consult with the Washington, DC SHPO. If archaeological resources are encountered as a consequence of construction, NPS may be required to evaluate those resources as potential historic properties and coordinate the discovery with the Washington, DC SHPO. If a resource is encountered that is eligible to the NRHP (i.e., a historic property), NPS would need to determine a means of avoiding or mitigating effects to that resource, in consultation with the Washington, DC SHPO.
9. To minimize the potential to affect previously unknown archaeological resources, the area for construction access to the site should be restricted to the top of the scarp and along the foot of the scarp (if necessary). An archaeological survey may be necessary if a temporary road is built to access the foot of the scarp.

ALTERNATIVES CONSIDERED BUT DISMISSED

The following alternatives to repair the erosion problem of the Newcomb Street scarp were considered but dismissed primarily due to greater area of disturbance, longer project duration, or not being as effective in stabilizing the scarp as the Proposed Action Alternatives.

BUTTRESS WITH A ROCK KEY

This alternative would buttress, or reinforce, the existing vertical slope with a slope similar in dimension to how the landscape existed before the failure, along with the construction of a crushed rock barrier (rock key), approximately 40 feet wide and 150 feet long, through the existing clay layer where the failure plane previously developed. This rock key would create a zone of greater frictional resistance, which would increase the slope stability.

Since the vertical scarp face would be removed and the slope restored back to a gentle grade, there would be no need for a permanent safety fence. Due to the amount of earthwork required to install the buttress and rock key, and restore the slope to pre-failure grade, a temporary access road to reach the base of the scarp would be constructed.

The duration of field construction activities for this alternative was expected to be between 6 and 9 months. Construction equipment would typically include track-hoe type excavation equipment, tandem axle dump trucks, one or two track-type tractors (bulldozers), and compaction equipment (rollers and tampers). The area of disturbance (complete vegetation removal) would be approximately 11,500 square feet, including the area needed for the access road and staging areas.

ROCK KEY ALONE

This alternative would be to install a crushed rock key alone, which would be a linear feature approximately 150 feet wide at the base of the existing scarp face. This alternative would not reduce the risk of shallow failure, but would mitigate against a deeper and larger failure (URS 2005).

Since the vertical scarp face would remain, a permanent safety fence would be installed at the top of the scarp face. The majority of the work required to install the rock key would be completed from the bottom of the scarp; a temporary access road to reach the base of the scarp would be needed.

The duration of field construction activities was expected to be 3 to 4 months. Construction equipment would include the same equipment as used for the buttress with rock key alternative; however, the number of dump trucks would be significantly reduced. The area of disturbance (complete vegetation removal) would be approximately 8,500 square feet, including the area needed for the access road and staging areas.

HORIZONTAL DRAINS

This alternative would be to install horizontal drains from various points toward the downslope end of the failure area that would extend through the clay layer (Potomac Group soils located at approximately 15 to 50 feet bgs), under the existing vertical slope, and up to a higher ground surface elevation. The horizontal drains are a passive system that would allow water to drain out of the surface soils and upper portion of the clay layer. Holes would be drilled into the soil both vertically and horizontally to install the drains. The reduction in water and hydrostatic pressure would reduce the risk of the clay softening over time. This alternative would not provide any increase in stability for a shallow failure.

Since the vertical scarp face would remain, a permanent safety fence would be installed at the top of the scarp face. The majority of the work required to install the horizontal drains would be performed below the scarp on top of the failure area and would require construction of a temporary access road.

The duration of field construction activities was expected to be 2 to 3 months. Construction equipment would include a track-mounted horizontal drill rig, a portable grout mixer, and possibly an air compressor. The area of disturbance would be approximately 4,000 square feet, including the area needed for the access road and staging areas. Some trees in the area of disturbance may not need to be removed for access of construction equipment to the work area if track-mounted equipment is used.

FLATTEN THE EXISTING SLOPE

This alternative would be to flatten the existing near-vertical scarp back to a 2:1 (horizontal: vertical) slope, with the crest of the slope being located on the NPS property line. To reach the desired 2:1 grade, fill would be placed at the toe of the existing near-vertical slope and the site would require grading and earthwork (excavation) approximately 10 feet past the NPS property line.

Since the vertical scarp face would be removed and the slope restored back to a gentle grade, there would be no need for a permanent safety fence. Due to the amount of earthwork required to restore the slope to pre-failure grade, a temporary access road to reach the base of the scarp would be needed.

The duration of field construction activities was expected to be 6 to 9 months. Construction equipment would include the same equipment identified in the buttress with rock key alternative. The area of disturbance

(complete vegetation removal) would be approximately 11,500 square feet, including the area needed for the access road and staging areas.

SHOTCRETE AND SOIL NAILS

This alternative would be to stabilize the scarp face with soil nails and cover the exposed scarp face and soil nails with reinforcing steel and shotcrete (sprayed on concrete).

Since the vertical scarp face would remain, permanent safety fence would be installed at the top of the scarp face. The majority of the work required to install the shotcrete and soil nails would be performed below the scarp, and would require construction of a temporary access road.

The duration of field construction activities was expected to be 9 to 12 months. Construction equipment would include a track-mounted drill rig, mini-track excavator, bulldozer, grouting equipment, and an air compressor. Due to the height of the scarp, a special crane-mounted type of drill may have been required to access the higher locations of the scarp. The area of disturbance (complete vegetation removal) would be approximately 7,000 square feet, including the area needed for the access road and staging areas.

Table 3 summarizes the durations and disturbance areas of the action alternatives.

Table 3. Comparison of Action Alternatives

Alternative Name	Duration of Construction (months)	Area of Disturbance (square feet)
Alternative Two – Preferred Action	4 to 6	3,000
Alternative Three	4 to 6	5,500
Buttress with Rock Key (Dismissed)	6 to 9	11,500
Rock Key Alone (Dismissed)	3 to 4	8,500
Horizontal Drains (Dismissed)	2 to 3	4,000
Flatten the Existing Slope (Dismissed)	6 to 9	11,500
Shotcrete and Soil Nails (Dismissed)	9 to 12	7,000

THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

As defined by the CEQ: "The environmentally preferred alternative is the alternative that would promote the national environmental policy as expressed in NEPA's Section 101. 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" (CEQ 2007). Based on an analysis of the potential environmental impacts of the action alternatives, NPS has determined Alternative Two, the construction of a cantilever sheet pile wall from above the scarp face, to be environmentally preferred: Alternative Two is environmentally preferred because the majority of the work required to install the sheet pile wall would be performed from above the scarp; the area of disturbance was the second smallest among all alternatives that were considered. Although the horizontal drains alternative dismissed in an earlier planning stage had a smaller area of disturbance, it would not be as effective at meeting the purpose and need of the project: to stabilize the erosion scarp to alleviate the potential for loss of municipal infrastructure and reduce the hazard to public safety due to the existing scarp.

SECTION 4. ENVIRONMENTAL ANALYSIS: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Based on the results of interdisciplinary team scoping and preparation of the Environmental Screening Form, two impact topics were determined to require additional investigation in order to address the requirements of NEPA and DO-12. The impact topics evaluated in detail for each alternative include vegetation and wildlife and cultural resources. This section describes the environmental consequences associated with each alternative. The organization of this section is by impact topic, which further refines the issues and concerns into distinct topics for analysis. These topics allow a standardized comparison between the alternatives based on their impact to the environment.

METHODOLOGY

The methodology of the impact analysis follows the guidance provided in NPS DO-12 and CEQ's NEPA implementation guidelines at 40 CFR Parts 1500 through 1508. The environmental consequences associated with the proposed action alternatives are considered in terms of direct, indirect, and cumulative impacts. A direct impact is one that is caused by an action and occurs at the same time and place. An indirect impact is one that is caused by an action that is later in time or further removed in distance, but still reasonably foreseeable. Cumulative effects are defined by CEQ as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR 1508.7).

Each impact is further described in terms of type (beneficial or adverse); context (site-specific, local, or regional); intensity (negligible, minor, moderate, or major); duration (short- or long-term); and impairment (would or would not impair park resources and values). Because definitions of intensity vary by impact topic, intensity definitions are provided separately for each impact topic analyzed.

The NPS *Management Policies* (2001a) and DO-12 require analysis of potential effects to determine if actions would *impair* park resources and values. The fundamental purpose of the National Park Service, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid or minimize, to the greatest degree practicable, adverse impacts on park and monument resources and values. However, the laws do give NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given NPS management discretion to allow certain impacts within parks, that discretion is limited by a statutory requirement 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 otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute impairment. However, an impact would more likely constitute impairment to the extent it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the 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 as a goal in the Fort Circle Parks, Washington DC Final Management Plan (NPS 2004) or other relevant NPS planning documents.

A determination on impairment is made in the conclusion statement of the impact analysis of each alternative.

CUMULATIVE IMPACTS AND CONCURRENT PROJECTS WITHIN THE REGION

In the context of this EA, cumulative impacts are analyzed and expressed in terms of x + y = z; with x being the impacts described as a result of actions being proposed under each alternative; y being impacts of other past, present, and reasonably foreseeable future actions; and z being the cumulative impact. Cumulative impacts are considered for all alternatives and are presented at the end of each impact topic discussion and analysis.

To assess the cumulative impacts of the alternatives, ongoing and future construction and planning projects within the region were identified as described below. The sources for identifying other local projects were the DC Office of Planning and the NPS National Capital Parks-East.

No other activities are planned in the foreseeable future by the NPS or the DC Office of Planning in the immediate project area. There are four neighborhood and revitalization plans proposed for the near future within the Anacostia area by the DC Office of Planning (2007b); however, none of them would impact the immediate project vicinity or the local neighborhood.

IMPAIRMENT ANALYSIS

The NPS *2006 Management Policies* (NPS 2006) require the analysis of potential effects to determine whether or not action would impact park resources, but also to determine whether those actions would impair park resources. The fundamental purpose of the National Park System as established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. These laws give the NPS the management discretion to allow impacts to park resources and values to fulfill the purposes of the park, as long as the impact does not constitute an impairment of the affected resources and values. NPS managers must always seek ways to avoid or minimize to the greatest degree practicable, adversely impacting park resources or values.

The impairment prohibited by the Organic Act and the General Authorities Act is an impact, in the professional judgment of the responsible NPS manager, that harms the integrity of the park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in questions and other impacts. An impact to any park resource or value may constitute impairment, but an impact would be more likely to constitute an impairment to the extent that it has major or severe adverse effect upon a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified n the 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 as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by contractors, and others operating in the park. An impairment determination is included in the conclusion statement for all impact topics related to natural and cultural resources. Impairment determinations are not made for visitor use or enjoyment, health and safety, socioeconomics or park operations because these impact areas are not thought to park values or resources.

SUMMARY TABLE OF ENVIRONMENTAL CONSEQUENCES/IMPACT COMPARISON MATRIX

Table 4: Summary of Environmental Consequences/Impact Comparison Matrix

	Soils	Vegetation and Wildlife	Cultural Resources
Alternative One – No Action	Another slope failure and/or continual erosion of the scarp are likely to occur in the future, which could result in up to moderate long-term adverse impacts to topography and soils from ground disturbance and exposure of soils to erosion. The existing geohazard of slope failure and risk to municipal infrastructure would continue under the No Action Alternative. No adverse or cumulative impacts would occur as a result of this alternative. There would be no impairment of soils under this alternative.	The No Action Alternative has the potential to adversely affect bald eagles. Site-specific, short- or long-term, minor to moderate adverse impacts to bald eagles could occur. NPS would continue to comply with the Eagle Act, Migratory Bird Treaty Act, and the bald eagle management guidelines set forth by NPS National Capital Parks-East. In addition, the No Action Alternative has the potential to result in site-specific, short-term, minor impacts on vegetation due to the loss vegetation if a slope failure were to occur. Short- to long-term minor to moderate adverse cumulative impacts could occur to wildlife and vegetation. There would be no impairment of these resources under this alternative.	Any adverse impacts that may occur to archaeological and historical resources within the project area as a result of the No Action Alternative would likely be less than minor as a result of the low potential for the presence of these resources. However, if archaeological resources are uncovered as a result of slope failure, NPS would stop work on the emergency repairs and consult with an NPS archaeologist. No adverse or cumulative impacts would occur as a result of this alternative. There would be no impairment of these resources under this alternative.
Alternative Two– Preferred Alternative	Alternative Two would result in site-specific, minor, temporary, adverse impacts to soils, and would result in beneficial impacts on the existing geohazard. During construction, impacts to soils would be minimized by implementation of erosion and sediment control best management practices (BMPs) during and after construction. No adverse or cumulative impacts would occur as a result of this alternative. There would be no impairment of soils under this alternative.	During construction activities, short-term, minor adverse impacts are likely to occur to bald eagles, and short-term, minor adverse impacts to vegetation and wildlife habitat as a result of the removal of vegetation and the disturbance to a natural area caused by vibrations, noise, and visual presence of construction personnel and equipment. In the long-term, beneficial impacts would occur with reduction of the hazard for slope failure. The site would be revegetated. The impacts to vegetation and wildlife would not result in impairment with implementation of the mitigation measures outlined in Section 3. No adverse or cumulative impacts would occur as a result of this alternative. There would be no impairment of these resources under this alternative.	The area that would be impacted by this alternative does not appear to contain any archaeological or historical resources eligible for listing on the National Register of Historic Places. If disturbance from construction staging and access is limited to the immediate area of the scarp, historic properties would not be affected. No adverse or cumulative impacts would occur as a result of this alternative. There would be no impairment of these resources under this alternative.

	Soils	Vegetation and Wildlife	Cultural Resources
Alternative Three	Alternative Three would result in site-specific, minor, temporary, adverse impacts to soils, and would result in beneficial impacts on the existing geohazard. This alternative would result in a larger area of soils being affected compared to the Preferred Alternative due to construction of an access road and construction equipment working below the scarp face. Impacts on soils would be minimized by implementation of erosion and sediment control BMPs during and after construction. No adverse or cumulative impacts would occur as a result of this alternative. There would be no impairment of soils under this alternative.	Because the area of disturbance would be greater than for Alternative Two (the Preferred Action), the impacts under Alternative Three would be greater than for Alternative Two. During construction activities, short-term, minor adverse impacts are likely to occur to bald eagles, and short-term, minor adverse impacts to vegetation and wildlife habitat as a result of the removal of vegetation and the disturbance of a natural area caused by vibrations, noise, and visual presence of construction personnel and equipment; in the long-term, beneficial impacts would occur with reduction of the hazard for slope failure. The site would be revegetated. The impacts on vegetation and wildlife would not result in impairment with implementation of the mitigation measures outlined in Section 3. No adverse or cumulative impacts would occur as a result of this alternative. There would be no impairment of these resources under this alternative.	Because the area that would be impacted does not contain any known archaeological or historical resources eligible for listing on the National Register of Historic Places any adverse impacts that may occur to archaeological or historic resources from this alternative would be negligible or less, which equates to a determination of no adverse affects under Section 106 of the National Historic Preservation Act. No adverse or cumulative impacts would occur as a result of this alternative. There would be no impairment of these resources under this alternative.

SOILS AND GEOHAZARDS

AFFECTED ENVIRONMENT

Surface soils range from 1 to 5 inches in depth bgs, with an average thickness of approximately 3 inches. Surface soil types are not continuous over the entire project site area; in some areas, the ground surface consists of gravelly soils and cobbles due to previous ground movements. Colluvial deposits, or loosely consolidated gravels and sands, have accumulated during past ground movements in areas within the existing slope failure. Thickness of the colluvial deposits ranges from 5.5 to 8 feet in depth bgs. Potomac Group soils exist at approximately 15 to 50 feet bgs (URS 2005).

The primary geohazard at the project site is mass soil movement downslope, also known as slumping or slope failure. The cause of the slope failure is currently unknown, but appears to be natural. However, water seepage from an unknown source may be contributing to the instability of the slope. The project site currently consists of a nearly vertical 25-foot-high scarp, a substantial change in topography as a result of the existing geohazard. Geotechnical investigations have determined that there is potential for the slope failure to occur again if the existing slope is not stabilized (URS 2005, FHWA 1998).

ENVIRONMENTAL CONSEQUENCES

Definition of Intensity Levels

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

Negligible: There would be no observable impacts to soils or geohazards. Impacts would be temporary and would not result in changes to the topography or substantial ground disturbance.

Minor: Impacts to soils or geohazards would be detectable. Impacts to undisturbed soil area would be small. Mitigation would be needed to offset adverse impacts, would be relatively simple to implement and would likely be successful.

Moderate: Impacts to soils or geohazards would be readily apparent and result in a change to the soil character over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.

Major: Impacts to soils or geohazards would be readily apparent and substantially change the character of the soils over a large area. Mitigation measures necessary to offset adverse impacts would be needed, extensive, and their success would not be guaranteed

Duration: Short-term impacts occur during all or part of alternative implementation; long-term impacts extend beyond implementation of the alternative.

Alternative One - No Action

Under the No Action Alternative, no immediate action would be taken to stabilize the scarp resulting in the possibility of another slope failure and/or the continued erosion of the scarp to occur. Emergency repairs to municipal infrastructure may be required that would necessitate the use of construction equipment. The construction equipment would cause surficial ground disturbances and may also result in deeper ground disturbances (i.e., excavation) in order to stabilize the slope, which would result in minor to moderate adverse impacts to soils during construction. It is likely that construction equipment would need to work over a larger footprint for emergency repairs than for planned repairs that would occur under Alternatives Two and Three because slope failures tend to spread out at their base; this would result in greater impacts on soils than under the Proposed Action Alternatives. Substantial changes in topography would occur along with another slope failure, resulting in moderate adverse impacts on soils due to the substantial ground disturbance and exposure of soils to erosion.

The existing geohazard of slope failure would continue under the No Action Alternative. Continual erosion and movement of the slope are likely even in the absence of a massive slope failure, which could result in up to moderate long-term adverse impacts on soils that would not be mitigated by slope stabilization or erosion control measures.

If another slope failure were to occur, the existing geohazard would be reduced via “natural” stabilization; however, the risk of loss of or damage to the nearby municipal infrastructure would not be mitigated if the slope were to “naturally” stabilize itself through slope failure, and moderate adverse impacts to soils would occur.

Cumulative Impacts: No other projects that would result in disturbances to soils or changes in topography in the project area are planned at this time. Emergency repairs could cause disturbances to soils that would result in site-specific, minor to moderate adverse impacts at an unknown point in the future, especially if there are other projects resulting in impacts to soils in the area at that time.

Conclusion: Another slope failure and/or continual erosion of the scarp are likely to occur at an unknown point in the future, and could result in changes in topography and up to moderate long-term adverse impacts on soils due to the ground disturbance and exposure of soils to erosion. The existing geohazard of slope failure and risk to municipal infrastructure would continue under the No Action Alternative.

Impairment Determination: The project site is located within an area that is managed as a natural resource zone by Fort Circle Parks, and although the No Action Alternative would not reduce the potential for slope failure or minimize or eliminate the risk of loss of or damage to municipal infrastructure, this alternative would not result in impairment of park resources. A slope failure and emergency repairs would result in long-term adverse impacts on soils; however, the use of the area as a natural resource zone would not be impaired.

Alternative Two (Preferred Action)

Under the Preferred Action Alternative, all of the construction equipment (including a crane, excavator, and haul truck) would operate from above the scarp, and only workers would conduct operations in the area below the existing scarp face. Surficial ground disturbance including the removal of vegetation would occur over approximately 3,000 square feet in the area above the scarp due to the construction equipment. The use of soil stabilization and sediment control BMPs, such as minimizing the removal of existing vegetation, mulching bare soils, post-construction seeding, covering fill piles with plastic to prevent sediment from washing away, or using silt fences, during and after construction would minimize erosion and the movement of sediments as a result of construction activities. Excavated fill would be stored on site and replaced or removed altogether. If imported fill is used, NPS would ensure the imported fill meets the requirements specified in the Natural Resources Management Reference Manual #77 for soil importation (NPS 2007a). With implementation of mitigation measures, adverse impacts to soil would be short-term and minor.

Stabilizing the slope would result in beneficial impacts to the existing geohazard. While the topography would not substantially change under Alternative Two (the existing scarp face would remain but would be stabilized with a sheet pile wall), substantial permanent changes to the existing geohazard would occur. The existing risk of loss or damage to the nearby municipal infrastructure would be substantially reduced or eliminated.

Cumulative Impacts: Since no other projects that would result in disturbances to soils or changes in topography in the project area are planned at this time, no cumulative adverse impacts would occur to soils or geohazards. However, the entire project area would benefit from stabilization of the geohazard.

Conclusion: The Preferred Alternative would result in site-specific, short-term minor adverse impacts to soils, and would result in long-term beneficial impacts on the existing geohazard. Impacts to soils would be minimized by implementation of erosion and sediment control BMPs during and after construction.

Impairment Determination: Although the project site is located within an area that is managed as a natural resource zone by Fort Circle Parks, implementation of the Proposed Action would not result in impairment of natural resources or the park because slope stabilization would result in fewer impacts to soils and would reduce or eliminate the existing geohazard compared to the No Action Alternative.

Alternative Three

Under Alternative Three, it would be necessary for construction equipment to work below the scarp, which would require construction of an access road with a footprint of approximately 2,500 square feet. Similar to the Preferred Action Alternative, a crane would work from the top of the scarp; however, under this alternative, an excavator and haul trucks would be positioned below the scarp, resulting in ground disturbances above, around, and below the scarp.

This alternative would include approximately 5,500 square feet of surficial ground disturbance including the removal of vegetation. The use of soil stabilization and sediment control BMPs, such as minimizing the removal of existing vegetation, mulching bare soils, post-construction seeding, covering fill piles with plastic to prevent sediment from washing away, or using silt fences, during and after construction would minimize erosion and the movement of sediments as a result of construction activities. Excavated fill would be stored on site and replaced or removed altogether. If imported fill is used, NPS would ensure the imported fill meets the requirements specified in the Natural Resources Management Reference Manual #77 for soil importation (NPS 2007a). With implementation of mitigation measures, adverse impacts to soil would be short-term and minor.

Beneficial impacts would occur to the existing geohazard by stabilizing the slope. While the topography would not substantially change under Alternative Three (the existing scarp face would remain but would be stabilized

with a sheet pile wall), substantial permanent changes to the existing geohazard would occur. The existing risk of loss or damage to the nearby municipal infrastructure would be substantially reduced or eliminated.

Cumulative Impacts: Since no other projects that would result in disturbances to soils or changes in topography in the project area are planned at this time, no cumulative adverse impacts would occur to soils or geohazards. However, the entire project area would benefit from stabilization of the geohazard.

Conclusion: Alternative Three would result in site-specific, minor, temporary, adverse impacts to soils, and would result in long-term beneficial impacts on the existing geohazard. This alternative would result in a larger area of soils being affected compared to the Preferred Alternative due to construction of an access road and construction equipment working below the scarp face. Impacts on soils would be minimized by implementation of erosion and sediment control BMPs during and after construction.

Impairment Determination: Although the project site is located within an area that is managed as a natural resource zone by Fort Circle Parks, implementation of the Proposed Action would not result in impairment of natural resources or the park because slope stabilization would result in fewer impacts to soils and would reduce or eliminate the existing geohazard compared to the No Action Alternative.

VEGETATION AND WILDLIFE

AFFECTED ENVIRONMENT

The vegetation on the NPS land in the project area consists of a semi-mature upland hardwood forest community. Between the upland hardwood forest and both Newcomb Street and 2nd Street is a 10-foot wide strip of routinely mowed turf grass (*Gramineae* spp.).

The dominant mature tree species of the upland hardwood forest include mockernut hickory (*Carya tomentosa*), chestnut oak (*Quercus montana*), yellow-poplar (*Liriodendron tulipifera*), beech (*Fagus grandifolia*), and sweetgum (*Liquisambar styraciflua*). Dominant vines within the forest community include trumpet creeper (*Campsis radicans*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), English ivy (*Hedera helix*), greenbriar (*Smilax rotundifolia*), and Japanese honeysuckle (*Lonicera japonica*). Understory shrubs include American holly (*Ilex opaca*), spice bush (*Lindera benzoin*), and high bush blueberry (*Vaccinium corymbosum*). Herbaceous vegetation includes yellow mustard (*Guillenia* spp.), tear-a-thumb (*Polygonum* spp.), may apple (*Podophyllum peltatum*), clover (*Trifolium* spp.), and ferns.

The dominant tree species in the area immediately downslope of the scarp include paw paw (*Asimina triloba*), red maple (*Acer rubrum*), yellow poplar, and tree-of-heaven (*Ailanthus altissima*). Saplings found in this area include beech, chestnut oak, sweetgum, and sassafras (*Sassafras albidum*).

Wildlife species expected on the project site would be typical of woodland and edge community species that are adapted to continuous low-impact human intrusions (e.g., traffic noise, human voices, etc.), and include red-back salamanders (*Plethodon cinereus*), eastern worm snake (*Carphophis amoenus amoenus*), gray fox (*Urocyon cinereargenteus)*, and wild turkey (*Meleagris gallopavo*). Additionally, the large mature trees, fallen trees, and dead snags provide habitat for various bird species including bald eagles (*Haliaeetus leucocephalus*).

A bald eagle nest is located approximately 300 feet east of the project site. On June 28, 2007, the Department of the Interior announced the removal of the bald eagle from the Endangered Species Act (ESA) list of threatened and endangered species; however, bald eagles and their nests are still protected by the Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act. The removal from the Federal list became effective on July 28, 2007, 30 days after publication of the final rule in the Federal Register on June 28, 2007.

The bald eagle nest was first identified and confirmed by the USFWS in 2000. The NPS and USFWS have monitored the nest since 2000. The nest was active every year from 2000 through 2008, but did not produce chicks in 2005 or 2006. One bald eagle chick was confirmed in the nest in spring 2008.

ENVIRONMENTAL CONSEQUENCES

Definition of Intensity Levels

For the purposes of analyzing potential impacts to biological resources, and specifically bald eagles, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: No native vegetation, wildlife, or wildlife habitat would be noticeably affected or some individual native plants and wildlife species could be affected as a result of the alternative, but there would be no effect on their populations. The effects would be on a small scale and no species of special concern would be affected.

Minor: The alternative would affect some individual native plants and wildlife species and would also affect a relatively minor portion of that species' population. Mitigation to offset adverse effects, including special measures to avoid affecting species of special concern, could be required and would be effective.

Moderate: The alternative would affect some individual native plants and wildlife species and would also affect a sizeable segment of the species' population and over a relatively large area. Mitigation to offset adverse effects could be extensive, but would likely be successful. Some species of special concern could also be affected.

Major: The alternative would have a considerable effect on native plants and wildlife species populations, including species of special concern, and affect a relatively large area in and out of the park. Mitigation measures to offset the adverse effects would be required, would be extensive, and success of the mitigation measures would not be guaranteed.

Duration – Short-term impacts would last less than one year; long-term impacts would occur longer than one year.

For all proposed action alternatives, the NPS would implement, as much as possible, seasonal and buffer restrictions in accordance with the USFWS National Bald Eagle Management Guidelines (2007c) and the NPS National Capital Parks-East document (no date) "Managing Your Land for Bald Eagles" excerpted from the *American Bald Eagle Nest Washington D.C. – NACE Management Considerations.*

Alternative One - No Action

Under this alternative, no actions would be taken to stabilize the scarp and another slope failure and/or continual erosion of the scarp could occur at some point in the future. This potential failure could occur during the months in which bald eagles are sensitive to disturbance. Emergency repairs to municipal infrastructure may be required which would result in the use of construction equipment, personnel, and other disturbances within a distance of 660 feet of the active nest. If emergency repairs are required between November 1st and June 15th, this would likely result in short-term minor to moderate adverse impacts to the bald eagles (if they are actively using the nest or in the project area). If emergency repairs are required between June 15th and October 31st, temporary adverse minor impacts to bald eagles may occur. These potential impacts would be less during this period compared to the November 1st to June 15th period because bald eagles are not likely to be actively using the nest between June 15th and October 31st and are also less likely to be in the project area during that time.

Impacts to other wildlife species in the project area as a result of emergency repairs would likely include temporary displacement and temporary loss of habitat due to disturbances of soils and vegetation from construction equipment and vegetation removal. Short-term minor adverse impacts on vegetation would occur due to removal and disturbances from equipment; however, some vegetation would be reestablished within a few weeks of emergency repairs.

Cumulative Impacts: There are no present or reasonably foreseeable future actions within the project area at this time. However, if another construction project or other action occurred in the area at the same time emergency repairs were being conducted, the cumulative impacts of the projects could cause disturbances to wildlife, including bald eagles, and vegetation that may result in site-specific, short- or long-term, minor to moderate adverse impacts.

Conclusion: The No Action Alternative has the potential to adversely affect bald eagles, which are protected by the Eagle Act and Migratory Bird Treaty Act. Site-specific, short- or long-term, minor to moderate adverse impacts to bald eagles could still occur, and NPS would continue to comply with the Eagle Act, Migratory Bird Treaty Act, and the bald eagle management guidelines set forth by NPS National Capital Parks-East (NPS no date). In addition, the No Action Alternative has the potential to result in site-specific, short-term, minor impacts to vegetation resources due to the loss or removal of vegetation if a slope failure were to occur.

Impairment Determination: The project site is located within an area that is managed as a natural resource zone by Fort Circle Parks, and although the No Action Alternative would not reduce the potential for slope failure and the subsequent potential for emergency repairs at a time of year that may disrupt bald eagles, this alternative would not result in impairment of park resources that are key to the integrity, enjoyment of, or management goals of the Fort Circle Parks. Because impacts to vegetation would be short-term, the No Action Alternative would not result in impairment to the vegetation resources.

Alternative Two (Preferred Action) and Alternative Three

During construction activities, short-term, localized impacts would occur to vegetation and wildlife as a result of the removal of vegetation and the disturbance to a natural area caused by vibrations, noise, and visual presence of construction personnel and equipment. Alternative Two would require approximately 3,000 square feet of vegetation to be removed, and construction activities would take approximately 4 to 6 months to complete. Alternative Three would require approximately 5,500 square feet and take approximately 4 to 6 months to complete.

Under both proposed action alternatives, the NPS would revegetate the disturbed area using native species, including the use of fast-growing grasses to aid in soil stabilization and reduce the risk of non-native species establishment, immediately after construction activities have been completed.

Noise levels during pile driving operations would reach levels of approximately of 100 decibels and would be the same for both Alternative Two and Alternative Three. A decibel is a measurement corresponding to the range of human hearing. Ambient noise levels (background sound) in the area of the bald eagle nest are typical of a wooded residential area. Existing sources of noise include vehicles, human voices, and other noises associated with residential community activities; the closest home to the bald eagle nest is approximately 350 feet away and the closest street is approximately 500 feet away.

Table 5 presents estimated outside noise levels associated with certain land uses and locations.

Table 5: Approximate Noise Levels in Decibels Based on Land Uses

Land Use	Decibel (dB)	Similar Sound (Point of Reference)	Overall Noise Level
Wilderness Area	35	Library (40 dB)	Quiet
Rural Residential Area	39	Library (40 dB)	Quiet
Agricultural Crop Land	44	Library (40 dB)	Quiet
Wooded Residential Area	51	Refrigerator (50 dB)	Quiet
Old Urban Residential Area	59	Air conditioner (50-75 dB)	Quiet to Moderately Loud
Urban Housing on Major Avenue	68	Vacuum cleaner (60-85 dB)	Moderately Loud

Land Use	Decibel (dB)	Similar Sound (Point of Reference)	Overall Noise Level
Freeway Traffic	70	Vacuum cleaner (60-85 dB)	Moderately Loud
Downtown Area with Some Construction Activity	79	Ringing Telephone (80 dB)	Moderately Loud
Heavy Traffic	85	Handsaw (85 dB)	Moderately Loud
Sources: LHH, 2007 and NPC, 2007.			

Typical demolition and construction equipment types are presented in Table 6. Noise levels from these equipment types range from in the 70s to low-80s for equipment powered by internal combustion engines, saws, and vibrators and from the mid-80s to more than 100 decibels for impact equipment.

Table 6: Noise Level Ranges of Typical Construction Equipment

Equipment	Range in decibels (dB) at 50 feet
Front Loader	80-85
Dump Truck	85
Crane, Mobile	83
Grader	85
Generator	71-83
Compressors	85
Back Hoe	80
Pile Driving (peaks)	96-101
Source: FHWA, 1995	

Due to the duration of construction activities required to implement the proposed action, short-term, minor adverse impacts to bald eagles are likely to occur under both alternatives. The management guidelines outlined by the NPS National Capital Parks-East (NPS no date) and shown in Table 7 would be implemented.

Table 7. NPS-East Bald Eagle Management Guidelines

Time of Year	Buffer Zones – Distance From Nest		
	Zone 1: 0-330 feet	Zone 2: 330-660 feet	Zone 3: > 0.25 mile
Year Round	These habitat changes should be prevented: timber cutting of any kind, land clearing, and building, road, or trail construction	These major habitat changes should be prevented: clear-cutting, land clearing, and building, road, or trail construction	Not specified.
15 December to 15 June	People should not be allowed in this zone	People should not be allowed in this zone. Farming is possible if researchers have found that the nesting eagles on the property are tolerant of these activities.	These activities should be restricted: timber, land clearing, and building, road, or trail construction. Other activities in this zone that are within sight of the eagles on the nest may need to be restricted.
16 June to 14 December	Activity should be kept to a minimum but these activities are possible: hiking, fishing, farming. These activities should be restricted: hunting, off-road vehicles.	These activities are possible: hunting, hiking, fishing, farming. These activities should be restricted: hunting, off-road vehicles.	Not specified.
16 August to 14 November	Not specified.	These activities are possible: selective thinning of timber stands, maintenance of timber stands, maintenance of existing buildings and roads.	Not specified.

Impacts to bald eagles would result from visual and noise disturbances from people and heavy equipment within the bald eagles' surroundings, especially within designated buffer zones, described in Table 7. In the long-term, beneficial impacts would occur with reduction of the hazard for slope failure, therefore allowing NPS to stabilize the site during the period when bald eagles are less likely to be actively nesting at the site (June 15th through October 31st) – emergency repairs due to a slope failure may occur during the period when bald eagles are more likely to be nesting at the site (November 1st through June 15th). The site would be revegetated once construction activities are completed. The impacts to vegetation and wildlife would not result in impairment with implementation of the mitigation measures outlined in Section 3.

Cumulative Impacts: Since no other projects that would result in disturbances to vegetation and wildlife in the project area are planned this time, no cumulative impacts would occur to vegetation and wildlife.

Conclusion: Both alternatives would result in site-specific, minor, short-term, adverse impacts to vegetation resources and wildlife resources including the bald eagle. The impacts to bald eagles, vegetation, and wildlife would be greater under Alternative Three than Alternative Two due to the larger area of vegetation removal (5,500 square feet and 3,000 square feet respectively). The length of time it would take to implement each of the proposed action alternatives is similar and would not result in a significant difference in impacts on bald eagles or other wildlife.

Vegetation would be cleared in order for heavy equipment to access the area and complete construction activities; removal of vegetation would result in site-specific, minor, short-term adverse impacts to vegetation

and wildlife until native species were reestablished. The NPS would prepare a planting/revegetation plan that would be implemented immediately post-construction to stabilize soils, reestablish native species, and reduce the risk of non-native species reestablishment.

Impairment Determination: The project site is located within an area that is managed as a natural resource zone by Fort Circle Parks, and although the Preferred Alternative would result in short-term minor impacts to wildlife and vegetation, this alternative would not result in impairment of park resources that are key to the integrity, enjoyment of, or management goals of the Fort Circle Parks.

CULTURAL RESOURCES

Section 101(b)(4) of the National Environmental Policy Act of 1969, as amended, requires the Federal government to coordinate and plan its actions to "preserve important historic, cultural, and natural aspects of our national heritage." The Council on Environmental Quality's implementing regulations further require that impacts on historic and cultural resources be included as part of the NEPA process. NPS also has additional requirements to consider the effect of their proposed actions on cultural resources that are listed or eligible for listing on the National Register of Historic Places, in accordance with Section 106 of the NHPA.

In this EA, possible impacts on cultural resources are identified. In accordance with Section 106 of the NHPA, impacts on cultural resources were identified and evaluated by 1) determining the Area of Potential Effects (APE); and 2) identifying the potential for cultural resources within the APE. The process for determining effects on cultural resources or historic properties is underway at NPS in accordance with agreements with the Washington, DC SHPO.

Under the Advisory Council for Historic Preservation's implementing regulations for Section 106 (36 CFR 800), a determination of either adverse effect or no adverse effect must be made for all cultural resources located within the APE that are either listed, or eligible for listing, on the National Register. An adverse effect occurs whenever a proposed project impacts, either directly or indirectly, the characteristics that qualify a property for inclusion in the National Register.

Section 106 of the NHPA, as amended (16 United States Code 470 et seq.), Director's Order #28, *Cultural Resource Management Guideline* (NPS 1998), and the NPS *Management Policies* (2001a) all require that consideration be given to the impacts of a proposed project on historic properties that are listed in or eligible to be listed on the NRHP. These policies and regulations require the NPS to consult with the State Historic Preservation Officer regarding the potential effects on properties listed on or eligible for listing on the National Register.

Cultural resources are analyzed in this EA include archaeological resources and historic structures.

AFFECTED ENVIRONMENT

A field reconnaissance of the proposed undertaking was conducted on June 27, 2007 by Ms. Peggy Nickell, an accredited architectural historian who meets the Secretary of the Interior's qualification requirements. This reconnaissance was conducted along 2nd Street and Newcomb Street in the vicinity of the exposed scarp. For the purposes of the current study, the APE has been defined as extending along Newcomb Street for approximately 500 feet from the intersection with 2nd Street and to include all of the circle at the northern end of 2nd Street. In addition, the APE may extend within NPS property for up to 300 feet from Newcomb Street and/or 2nd Street. Effects within this APE may be indirect, for architectural resources (as a result of construction vibrations), or direct, for any archaeological resources in areas of ground disturbing activities.

The APE is located adjacent to the subdivision of College Heights, a residential development dating from the 1940s to 1970s. A townhouse development constructed circa 1975-79 called the Washington Overlook Townhomes faces the NPS property on 2nd Street. The residences along Newcomb Street near the project site contain the 200 block of townhouse flats constructed in the 1940-50s and a circa 1960, four-story apartment building located at the corner.

The Fort Circle Parks include numerous military fortifications constructed during the Civil War that were designed to protect the Union's capital from attack by Confederate forces. The closest element of the circle forts to the current study area is Fort Carroll, located several blocks south on South Capitol Street.

This area at 2nd and Newcomb Street may at one time have contained archaeological remains, either from prehistoric activity or from the Civil War. However, extensive development during the 20th century of this small landform is likely to have destroyed any archaeological resources that may once have been located here. This development has included the construction of the College Heights/Washington Overlook homes and the construction of 2nd Street and Newcomb Street, which are adjacent to the area of the proposed scarp stabilization.

Impact Thresholds

Negligible: Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for Section 106 would be no adverse effect.

Minor: Disturbance of a site(s)/structure(s) results in little, if any, loss of integrity. For purposes of Section 106, the determination of effect would be no adverse effect.

Moderate: Disturbance of a site(s)/structure(s) results in loss of integrity to the extent that there is a partial loss of the character-defining features and information potential that form the basis of the site's NRHP eligibility. Mitigation is accomplished by a combination of archeological data recovery and in place preservation. The determination of effect for Section 106 would be adverse effect.

Major: Disturbance of a site(s)/structure(s) results in loss of integrity to the extent that it is no longer eligible for the NRHP. Its character-defining features and information potential are lost to the extent that archeological data recovery is the primary form of mitigation. The determination of effect for Section 106 would be adverse effect.

Duration: All impacts to archaeological/historic resources are considered long-term.

ENVIRONMENTAL CONSEQUENCES

Alternative One - No Action

Another slope failure and/or continual erosion of the scarp are likely to occur at an unknown point in the future. Emergency repairs to municipal infrastructure may be required that would necessitate the use of construction equipment. The construction equipment would cause surficial ground disturbances and may also result in deeper ground disturbances (i.e., excavation) in order to stabilize the slope. It is likely that construction equipment would need to work over a larger footprint for emergency repairs than it would for planned repairs under Alternatives Two and Three because slope failures tend to spread out at their base; this would result in greater ground disturbances within the APE than under the Proposed Action Alternatives. Substantial changes in topography would occur with another slope failure, resulting in moderate adverse impacts on soils due to the substantial ground disturbance and exposure of soils to erosion.

The APE does not appear to contain any archaeological or historical resources eligible for listing on the National Register of Historic Places; therefore, any adverse impacts that may occur to cultural or historical resources as a result of slope failure would be less than minor.

Cumulative Impacts: There are no present or reasonably foreseeable future actions within the project area at this time. However, if another construction project or other action occurred in the area at the same time emergency repairs were being conducted and cultural resources were affected, the cumulative impacts of the projects could result in site-specific, short- or long-term, minor to moderate adverse impacts.

Conclusion: Any adverse impacts that may occur to archaeological and historical resources within the project area as a result of the No Action Alternative would likely be less than minor as a result of the low potential for the presence of these resources. However, if archaeological resources are uncovered as a result of slope failure,

NPS would stop work on the emergency repairs and consult with an NPS archaeologist. If archaeological resources are encountered as a consequence of slope failure, NPS may be required to evaluate those resources as potential historic properties and coordinate the discovery with the Washington, DC SHPO. If a resource is encountered that is eligible to the NRHP (i.e., a historic property), NPS would need to determine a means of avoiding or mitigating effects (both considering the impact of the slope failure and any needed construction to stabilize the slope as an emergency effort) to that resource, in consultation with the Washington, DC SHPO.

Impairment Determination: The project site is located within an area that is managed as a natural resource zone by Fort Circle Parks, and although the No Action Alternative would not reduce the potential for slope failure and the subsequent potential for emergency repairs, this alternative would not result in impairment of park resources that are key to the integrity, enjoyment of, or management goals of the Fort Circle Parks.

Alternative Two (Preferred Action) and Alternative Three

The area that would be impacted by the proposed project does not appear to contain any archaeological or historic resources eligible for listing on the National Register of Historic Places. If disturbances from construction staging and access are limited to the immediate area of the scarp, it does not appear that any historic properties would be affected. To minimize the potential to affect previously unknown archaeological resources, the area for construction access to the site should be restricted to the top of the scarp and along the foot of the scarp (if necessary). In addition, if archaeological resources are uncovered during construction, NPS would stop work and consult with an NPS archaeologist. If an archaeological survey resulted in archaeological resources, NPS would consult with the Washington, DC SHPO. If archaeological resources are encountered as a consequence of construction, NPS may be required to evaluate those resources as potential historic properties and coordinate the discovery with the Washington, DC SHPO. If a resource is encountered that is eligible to the NRHP (i.e., a historic property), NPS would need to determine a means of avoiding or mitigating effects to that resource, in consultation with the Washington, DC SHPO. Under Alternative 3, an archaeological survey may be necessary if a temporary road is built to access the foot of the scarp. Because of the lack of historic resources and the low probability of archaeological resources occurring within the project area, any adverse impacts that may occur would likely be negligible or less.

In accordance with Section 106 of the NHPA, the NPS sent a letter to the DC SHPO on July 9, 2009 with a determination of no adverse affect to cultural resources with implementation of the proposed action (Appendix B). Concurrence of this determination from the DC SHPO has not been received to date.

Cumulative Impacts: There are no present or reasonably foreseeable future actions within the project area at this time. As a result, there would be no beneficial or adverse cumulative impacts associated with Alternatives 2 and 3.

Conclusion: The NPS has determined that with avoidance measures stated above, any adverse impacts that may occur to archaeological or historic resources from either Alternatives 2 or 3 would be negligible or less, which equates to a determination of no adverse affects under Section 106 of the National Historic Preservation Act.

Impairment Determination: The project site is located within an area that is managed as a natural resource zone by Fort Circle Parks. With implementation of the avoidance and mitigation measures for cultural resources stated above, the Proposed Action Alternatives would not result in impairment of park resources that are key to the integrity, enjoyment of, or management goals of the Fort Circle Parks.

SECTION 5. CONSULTATION and COORDINATION

The following agencies, organizations, and persons were contacted for information; assisted in identifying issues, developing alternatives, and analyzing impacts; or identified compliance requirements:

Federal Agencies
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State Agencies
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Key staff:

- Stephen Syphax, Chief – Resource Management Division, Project Manager
- Joel Gorder, Regional Environmental Coordinator and Lands Liaison, National Capital Region

URS Group, Inc.
200 Orchard Ridge Drive, Suite 101
Gaithersburg, Maryland 20878

Key staff:

- Suzanne Richert, NEPA Compliance Specialist, Soil Scientist
- Chris Polglase, Cultural Resources
- Bob Pinciotti, Engineer
- Kristine Sinkez, Environmental Planner
- Nic Patterson, Biologist
- Peggy Nickell, Architectural Historian
- Angela Chaisson, Senior NEPA Specialist

SECTION 7. REFERENCES

Council on Environmental Quality (CEQ). 2007. CEQ Regulations Section 1505.1. http://www.nepa.gov/nepa/regs/ceq/1505.htm. Accessed July 3, 2007.

Cowardin, L.M., Carter, V., Golet. F. C., and Laroe. E. T., 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS 79/31.

District of Columbia (DC). 2004. Department of Transportation (DOT). Temporary Traffic Control Manual & Work Zone Pocket Guide. Viewed via the following website: http://ddot.dc.gov/ddot/cwp/view,a,1250,q,640370,ddotNav_GID,1586,ddotNav,|32399|.asp.

DC. 2007. Municipal Regulations website. http://app.os.dc.gov/services/online_mun_reg.shtm. Accessed June 28, 2007.

DC. 2007a. Office of Planning. Census 2000 Demographic Profiles website. http://planning.dc.gov/planning/cwp/view,a,1282,q,626230,planningnav,|32341|.asp. Accessed June 28, 2007.

DC. 2007b. Office of Planning. Neighborhood and Revitalization Plans. http://planning.dc.gov/planning/cwp/view,a,1285,q,571098,planningNav,|32341|.asp. Accessed June 28, 2007.

Federal Emergency Management Agency (FEMA). 1985. Flood Insurance Rate Map. Community Panel Number 1100010025B. Accessed July 3, 2007.

Federal Highway Administration (FHWA). 1995. Typical Noise Level (dBA) 50 ft., U. S. Dept. of Trans. study 1995. Accessed on May 19, 2008 at the website: http://ops.fhwa.dot.gov/wz/workshops/accessible/Schexnayder_paper.htm.

FHWA. 1998. Geotechnical Investigation, Form: FHWA 15-163 (2-92). U.S. Department of Transportation Eastern Federal Lands Highway Division. Sent to Gary L. Klinedinst from William W. Bassett through Eduardo Calderon Tech. Services Engr on December 16, 1998. Principal contact at National Park Service National Capital Parks-East: John Haynes, Landscape Architect.

League for the Hard of Hearing (LHH). 2007. Facts on Noise. http://www.lhh.org/noise/facts/index.html. Accessed October 19, 2007.

National Environmental Policy Act website (NEPA website). 2007. NEPA's Forty Most Asked Questions. http://www.nepa.gov/nepa/regs/40/1-10.HTM#6. Accessed July 18, 2007.

Noise Pollution Clearinghouse (NPC). 2007. Protective Noise Levels. http://www.nonoise.org/library/levels/levels.htm. Accessed October 19, 2007.

National Park Service (NPS). 1998. Director's Order #28 Cultural Resource Management Guideline. June.

NPS. 2000. Director's Order #47 Soundscape Preservation and Noise Management. December.

NPS. 2001. National Capital Planning Commission Comprehensive Plan.

NPS. 2003. Director's Order #12 and Handbook: Conservation Planning, Environmental Impact Analysis, and Decision-Making . U.S. Department of the Interior, National Park Service.

NPS. 2004. Final Management Plan, Fort Circle Parks, Washington, DC. January.

NPS. 2005. Map of Bald Eagle Nest and Buffer Zones. National Capital Area Parks-East. Not for public distribution.

NPS. 2006. Management Policies 2006.

NPS. 2007a. Natural Resource Management Reference Manual #77. Nature and Science website. http://www.nature.nps.gov/Rm77/. Accessed July 18, 2007.

NPS. 2007b. International Biosphere Reserves. http://www.nature.nps.gov/globalconservation/biosphere.cfm. Accessed June 28, 2007.

NPS. 2007c. Office of Internal Affairs World Heritage Convention website. http://www.nps.gov/oia/topics/worldheritage/worldheritage.htm. Accessed June 28, 2007.

NPS. No Date. "Managing Your Land for Bald Eagles" excerpted from the *American Bald Eagle Nest Washington D.C. – NACE Management Considerations.*

NeighborhoodInfo DC. 2007. DC Neighborhood Cluster Profile, Ward 8, Cluster 39. http://www.neighborhoodinfodc.org/nclusters/nbr_prof_clus39.html. Accessed July 6, 2007.

McMillan Commission. 1902. McMillan Commission Report.

URS. 2005. Geotechnical Investigation of the Existing Slope Shepherd Parkway, National Capital Parks, Washington, DC. Prepared for National Park Service, National Capital Parks-East by URS Group, Inc. September 15.

U.S. Army Corps of Engineers (USACE). 1987. Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS. January.

U.S. Department of Agriculture, Natural Resource Conservation (USDA). 2002. Web Soil Survey. Accessed July 3, 2007.

U.S. Department of Health and Human Services (HHS). 2007. 2007 HHS Poverty Guidelines. *Federal Register*, Vol. 72, No. 15, January 24, 2007, pp. 3147–3148. Accessed via HHS website http://aspe.hhs.gov/poverty/07poverty.shtml on July 18, 2007.

U.S. Environmental Protection Agency (EPA). March 30, 2007. http://pubweb.epa.gov/air/oaqps/greenbk/anay.html. Accessed June 28, 2007.

EPA. 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. http://www.nonoise.org/library/levels74/levels74.htm#rationale%20for%20identification%20of%20levels%20of%20environmental%20noise%20requisite%20to%20protect%20public%20health%20and%20welfare. Accessed July 11, 2007.

U.S. Fish and Wildlife Service (USFWS). 2007a. Wetlands Online Mapper website. http://wetlandsfws.er.usgs.gov/wtlnds/launch.html. Accessed June 27, 2007.

USFWS. 2007b. District of Columbia Threatened and Endangered Species List. http://ecos.fws.gov/tess_public/StateListing.do?status=listed&state=DC. Accessed June 28, 2007.

USFWS. 2007c. National Bald Eagle Management Guidelines. May.

U.S. Geological Survey (USGS). USGS MD-DE-DC Water Science Center website. http://md.water.usgs.gov/publications/wsp-2275/md-dc-html.html. Site accessed June 28, 2007.

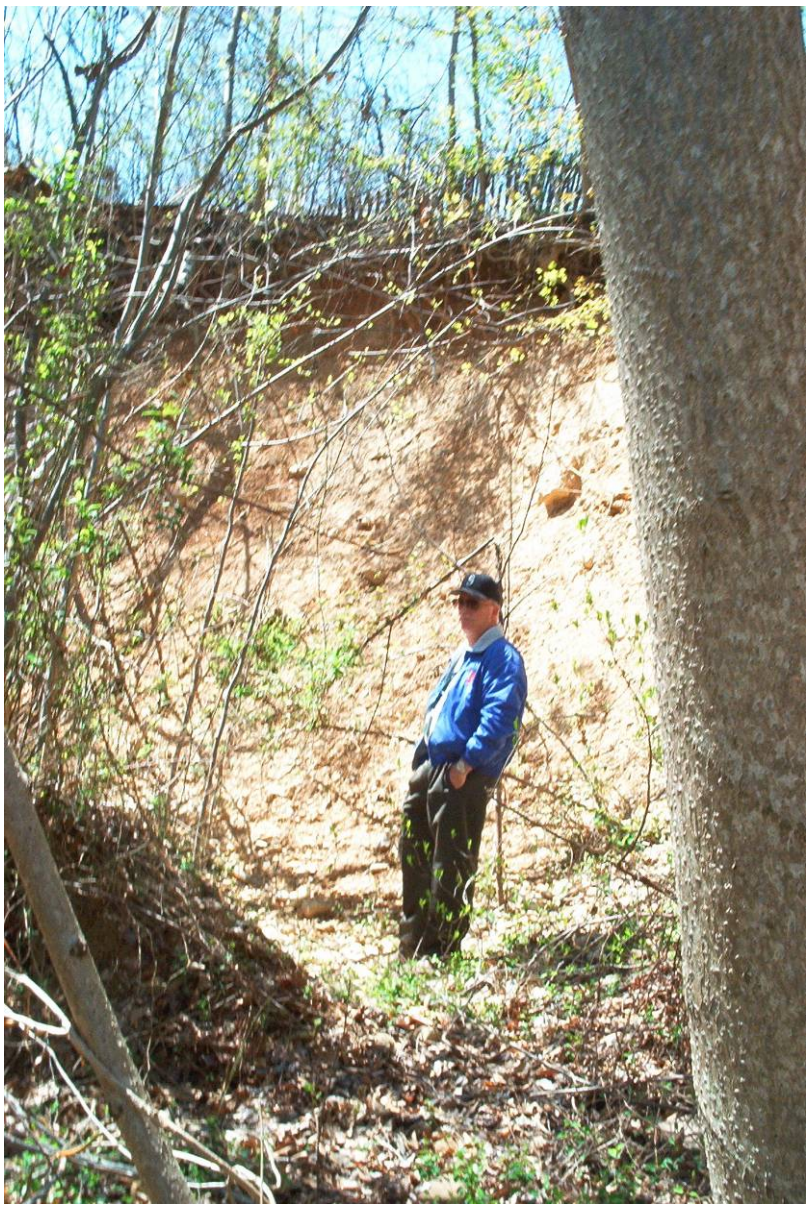
Virginia Tech Department of Geosciences, Virginia Tech Seismological Observatory http://www.geol.vt.edu/outreach/vtso/quake.html. Site accessed June 28, 2007.

Personal Communications

Kehoe, Kerry. 2007. National Oceanic and Atmospheric Administration. Email correspondence with Suzanne Richert, URS, July 9. Kerry.Kehoe@noaa.gov.

Appendices

Appendix A
Photograph of Existing Scarp



This photo illustrates the nearly vertical scarp face.

Appendix B
Agency Correspondence

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of the Environment

Fisheries and Wildlife Division

28 February 2008

Mr. Stephen W. Syphax, Chief
Resource Management Division
National Park Service, National Capital Parks-East
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

Dear Mr. Syphax,

Per your written request dated 06 February 2008, I am providing you with our best information on the proposed scarp stabilization project located at Second and Newcomb Streets, S.E., Washington, D.C.

At this time, the information received does not contain enough detailed documentation to make a sound determination of potential project-related impacts as it relates to each alternative or the preferred National Park Service alternative. The documentation provides seven different alternatives; however, no description of noise level, vibration disturbances, equipment use, or visual impacts is specified by alternative.

It is my professional postulation that each alternative will have some if not all these impacts with similar levels or varying degrees. Therefore, I am requesting you to provide this office with this additional information as it relates to the disturbance, equipment, and a timeline for project completion for each of the proposed alternatives. Hopefully, this is the information that will be submitted to this office in the pending Environmental Assessment (EA).

The information will allow our office to make a more informed determination as to the potential affects of the proposed repair work on the bald eagles and their habitat.

Thank you for contacting our office and including our staff professionals in your planning process.

Sincerely,

Sylvia Whitworth, Acting Chief
Wildlife Management Branch
Fisheries and Wildlife Division
Natural Resources Administration
District Department of the Environment
51 N Street, N.E.
Washington, D.C. 20002

51 N Street, NE, Fifth Floor, Washington, D.C. 20002 •PHONE (202) 535-2600 •FAX (202) 535-1373

United States Department of the Interior

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

February 27, 2008

United States Department of the Interior
NATIONAL PARK SERVICE
National Capital Parks-East
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

RE: Request for Project Review for Stabilzation of Scarp at Second and Newcomb Streets, Fort Circle Parks, Washington D.C.

Dear Mr. Syphax

This responds to your letter, received February 12, 2008, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened in the above referenced 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 proposed or federally 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 should additional information on the distribution of listed or proposed species become available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. Limited information is currently available regarding the distribution of other rare species in the District of Columbia. However, the Nature Conservancy and National Park Service (NPS) have initiated an inventory of rare species within the District. For further information on such rare species, you should contact Mary Pfaffko of the National Park Service at (202)-535-1739.

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 alterations of 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,

Mary Ratnaswamy

Mary J. Ratnaswamy, Ph.D.
Program Supervisor, Threatened and Endangered Species

United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Parks-East
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

IN REPLY REFER TO:
A3815(NCR-NACE)

July 9, 2009

Mr. David Maloney
Associate Director
Historic Preservation Office
DC Office of Planning
801 North Capitol Street, N.E.
Washington, DC 20002

Dear Mr. Maloney:

The National Park Service is preparing an Environmental Assessment (EA) for stabilizing an eroding section of forested slope along Newcomb Street, near 2nd Street in the southeast section of Washington, D.C. The park area is part of Shepherd Parkway (Fort Circle Parks). In the EA, we explore alternatives that will permanently stabilize the actively eroding slope, while minimizing the impact to the surrounding forest (i.e. sheet piling installed at top of slope).

A "No Adverse Effect" determination has been made in an "*Assessment of Actions Having an Effect on Cultural Resources*" review by the National Capital Region's Cultural Resources Division (Acting Chief of the Division, Maureen Joseph, and Regional Archaeologist Robert Sunderland) in June, 2009. This serves to officially initiate consultation with your office pursuant to Section 106 of the National Historic Preservation Act that we hope to incorporate in the EA. The enclosed information sheet/project area map provides additional detail. If you concur with our determination, please sign the concurrence line below and kindly return a copy of this record to this office.

We anticipate releasing the EA in the coming weeks and can provide your office with a copy for review and comment. Thank you for your cooperation. Please contact Stephen Syphax in our

Resource Management Division at (202) 690-5160, if you have any questions or require additional information.

Sincerely,

for Gayle Hazelwood,
Superintendent

Enclosure: Information Sheet/Project Area Map

I concur with the determination of no adverse effect.

_____ _____

State Historic Preservation Officer Date