

SECTION 6. LIST of PREPARERS

**National Park Service
Colonial National Historical Park
U.S. Department of the Interior
Route 17 & Goosley Roads
Yorktown, Virginia 23690**

Key staff:

- Dorothy Geyer, Project Manager, Landscape Architect
- Jane Sundberg, Cultural Resource Specialist
- Charles Rafkind, Natural Resource Specialist
- Tom Nash, Chief Ranger
- Andrew Veech, Archaeologist
- Dave Frederick, GIS Specialist

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

Key staff:

- Jon Randall, NEPA Compliance Specialist
- Charles Benton, Wetlands Scientist
- Amy Barnes, Architectural Historian
- Melissa Hess, Water Resources Engineer
- Kim Collini, Environmental Scientist
- Janet Frey, Independent Technical Review
- John Wade, GIS Specialist

SECTION 7. REFERENCES

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Personal Communications

Martin, Steve. 2005. City of Williamsburg, Department of Public Works. Phone Conversation with Kristine Sinkez, URS, July 1.

Murphy, Carolyn. 2005. City of Williamsburg, Planning Department. Phone Conversation with Kristine Sinkez, URS, July 1.

Appendices

Appendix A
Environmental Screening Form

COLONIAL NATIONAL HISTORICAL PARK ENVIRONMENTAL SCREENING FORM (ESF)

Sections A and B should be filled out by the project initiator (may be coupled with other park project initiation forms). Sections C-I are to be completed by the interdisciplinary team members.

Start up meeting with park staff held on 12.17.2004. Present for all of the meeting were Dorothy Geyer, Jane Sundberg, Tom Nash and Chuck Rafkind. Present for part of the meeting was Karen Rehm. A startup scoping meeting occurred on June 8 to include Federal Highway Administration and the contractor responsible for completing the Environmental Assessment. All went to the three sites and discussed the Parkway watershed alternatives. Afterward, the group reviewed the ESF and made adjustments based on discussions and the site visit. Below are comments reflecting the consensus of the group.

A. PROJECT INFORMATION

Park Name: Colonial National Historical Park

Project/PMIS Number: 57064

Project Type (Check):

- | | | | |
|--|--|--|-------------------------------|
| <input type="checkbox"/> Cyclic | <input type="checkbox"/> Cultural Cyclic | <input type="checkbox"/> Repair/Rehab | <input type="checkbox"/> ONPS |
| <input type="checkbox"/> NRPP | <input type="checkbox"/> CRPP | <input checked="" type="checkbox"/> FLHP | |
| <input type="checkbox"/> Line Item | <input type="checkbox"/> Fee Demo | <input type="checkbox"/> Concession Reimbursable | |
| <input type="checkbox"/> Other (specify) _____ | | | |

Project Location: Colonial Parkway, Paper Mill Creek Watershed

Project Originator/Coordinator: Skip Brooks, Facility Manager

Project Title: Improve Papermill Creek Culverts

Administrative Record Location: Colonial National Historical Park

Administrative Record Contact: Becky Eggleston, (757) 898-2401

B. PROJECT DESCRIPTION/LOCATION [To begin the statutory compliance file, attach to this form, maps, site visit notes, agency consultation, data, reports, categorical exclusion form (if relevant), or other relevant materials.]

This portion of the project involves correcting drainage problems at four culvert locations in the Paper Mill Creek watershed area as recommended in the Papermill Creek Watershed Study (January 2005). The three problem areas are identified as Locations 2, 3, and 4 as shown on Figure 3 of the draft report.

The recommendations for correcting these drainage problems are as follows:

Location 2

Option 1 – Modify existing headwalls to replace existing 24” PVC with 30” RCP (reinforced concrete pipe)

Option 2 – Modify existing headwall or construct a new culvert and headwalls to add one parallel 18” RCP

Location 3

Option 1 – Rehabilitate existing culvert and add new parallel culvert system with double 9x5 RCBC (reinforced concrete box culvert)

Option 2 – Replace existing culvert system with a 4’x 28’ CON-SPAN (pre-cast modular system)

Option 3 – Construction of an approximately 2.2 acre stormwater retention basin (would require acquisition of additional land outside the parkway corridor). This will be listed as an option considered but rejected in the Environmental Assessment.

Location 4

Option 1 – Modify existing headwall or construct a new culvert and headwalls to add one parallel 24” RCP

Option 2 – Modify existing headwalls to replace existing 15” RCP with one 24” RCP

Preliminary drawings (concept) attached? Yes No Background info attached? Yes No

[See Watershed Study]

Date form initiated: December 8, 2004, revised 6/3/2005, 6/8/2005

Anticipated compliance completion date January 2006

Projected advertisement/Day labor start EA, May 30, 2005 Projected construction start 2008

Is project a hot topic (controversial or sensitive issues that should be brought to attention of Regional Director)? Yes No

C. POTENTIAL RESOURCE EFFECTS TO CONSIDER *(Please see section F (Instructions for Determining Appropriate NEPA Pathway) prior to completing this section. Also, use the process described in DO-12, 2.9 and 2.10; 3.5; 4.5(G) to (G)(5) and 5.4 F to help determine the context, duration, and intensity of effects on resources.)*

Identify potential effects to the following physical, natural or cultural resources? ¹	No Effect	Negligible Effects	Minor Effects	Exceeds Minor Effects	Data Needed to Determine
Geological resources – soils, bedrock, streambeds, etc.		X	X		Soils survey.
From geohazards	x				
Air quality	x				
Soundscapes	x				
Water quality or quantity		X	X		Watershed study data
Streamflow characteristics		X	X		
Marine or estuarine resources	x				
Floodplains or wetlands			X		
Land use, including occupancy, income, values, ownership, type of use	x				
Rare or unusual vegetation – old growth timber, riparian, alpine	X				
Species of special concern (plant or animal; state or federal listed or proposed for listing) or their habitat		X			None listed , need to confirm with state and F&W listing
Unique ecosystems, biosphere reserves, World Heritage Sites	x				
Unique or important wildlife or wildlife habitat					X
Unique, essential or important fish or fish habitat	x				
Introduce or promote non-native species (plant or animal)					X
Recreation resources, including supply, demand, visitation, activities, etc.	x				
Visitor experience, aesthetic resources	X	X			Cultural landscape along parkway no net loss
Archeological resources					X (park will provide)
Prehistoric/historic structures			X		(park will provide information)
Cultural landscapes			X		

Identify potential effects to the following physical, natural or cultural resources? ¹	No Effect	Negligible Effects	Minor Effects	Exceeds Minor Effects	Data Needed to Determine
Ethnographic resources	X				
Museum collections (objects, specimens, and archival and manuscript collections)	X				
Socioeconomics, including employment, occupation, income changes, tax base, infrastructure	X				
Minority and low income populations, ethnography, size, migration patterns, etc.	X				
Energy resources	X				
Other agency or tribal land use plans or policies	X				
Resource, including energy, conservation potential, sustainability			X		
Urban quality, gateway communities, etc.	X				
Long-term management of resources or land/resource productivity					storm water management strategy betw. Park and adjacent community (City and CWF) cumulative impacts
Other important environmental resources (e.g. geothermal, paleontological resources)?	X				

¹ Potential effects are identified by the interdisciplinary team through the analysis process described in DO-12 §2.9 and §4.5(G)(4) to (G)(5). For example, negligible effects would be at the lowest levels of detection (barely detectable) and localized. Minor effects would affect a relatively small number of resources, features, or individuals of populations and the effects would be localized and not have an appreciable impact.

Comments

Regarding DATA NEEDS for natural resources – need stream expert to look at erosion and sedimentation problems along Papermill Creek. Data also available from College of William and Mary. Are they stabilizing, continuing or getting worst? Also need wetland/riparian zone/floodplain delineation. Mitigating efforts for the cultural landscape and stream outflow erosion should include vegetation options with engineering solutions.

Provide an aerial photograph of project area and individual sites numbers, along with a more detailed map than the schematic. FHWA has provided topographic survey of Location 3, to exactly locate the toe of the Papermill Creek Dam remnants. Park GIS can supply this.

D. MANDATORY CRITERIA

Mandatory Criteria: If implemented, would the proposal:	Yes	No	Comment or Data Needed to Determine
A. Have material adverse effects on public health or safety?		X	
B. Have adverse effects on such unique characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands; floodplains; or ecologically significant or critical areas, including those listed on the National Register of Natural Landmarks?			X
C. Have highly controversial environmental effects?		X	
D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		X	
E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		X	
F. Be directly related to other actions with individually insignificant, but cumulatively significant, environmental effects? (<i>Note: consider specific occurrences of past impacts to resources in your analysis.</i>)		X	
G. Have adverse effects on properties listed or eligible for listing on the National Register of Historic Places?			X
H. Have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species or have adverse effects on designated Critical Habitat for these species?			X
I. Require compliance with Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act?	X		
J. Threaten to violate a federal, state, local, or tribal law or requirement imposed for the protection of the environment?		X	
K. Involve unresolved conflicts concerning alternative uses of available resources (NEPA sec. 102(2)(B))?		X	
L. Have a disproportionate, significant adverse effect on low-income or minority populations (EO 12898)?		X	
M. Restrict access to and ceremonial use of Indian sacred sites by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007)?		X	
N. Contribute to the introduction, continued existence, or spread of federally listed noxious weeds (Federal Noxious Weed Control Act)?		X	Will provide appropriate native plant materials in disturbed areas needing vegetation. Area already contains a community of non-native, native and invasive vegetation.
O. Contribute to the introduction, continued existence, or spread of non-native invasive species or actions that may promote the introduction, growth or expansion of the range of non-native invasive species (EO 13112)?		X	Will provide appropriate native plant materials in disturbed areas needing vegetation. Area already contains a community of non-native, native and invasive vegetation.
P. Require a permit from a federal, state, or local agency to proceed, unless the agency from which the permit is required agrees that a CE is appropriate?	X		EA will determine what other local, state and federal permits are needed beyond NPS requirements related to wetlands and floodplains.
Q. Have the potential for significant impact as indicated by a federal, state, or local agency or Indian tribe?		X	
R. Have the potential to be controversial because of disagreement over possible environmental effects?		X	
S. Have the potential to violate the NPS Organic Act by impairing park resources or values?		X	

E. OTHER INFORMATION (Please answer the following questions/provide requested information.)

Are personnel preparing this form familiar with the site? Yes No

Did personnel visit site? Yes No (If yes, attach meeting notes re: when site visit took place, who attended, etc.)

Individually all members have visited the site. However, the group plans to revisit site in January now that the final engineering report is available. Members of the initial EA kickoff meeting, including the contractor have made a site visit on June 8, 2005.

Is the project in an approved plan such as a General Management Plan or an Implementation Plan with an accompanying NEPA document? Yes No If so, plan name_1993 Colonial NHP GMP, project would fall under the general park management objectives of protecting the park's resources by using best management practices for natural and cultural resources.

Is the project still consistent with the approved plan? Yes No (If no, you may need to prepare plan/EA or EIS.)

Is the environmental document accurate and up-to-date? Yes No (If no, you may need to prepare plan/EA or EIS.)

FONSI ROD (Check one) Date approved _____ NA _____

Are there any interested or affected agencies or parties? Yes No

Did you make a diligent effort to contact them? Yes No NOT YET

Has consultation with all affected agencies or tribes been completed? Yes No NOT YET

(If yes, attach additional pages re: consultations, including the name, dates, and a summary of comments from other agencies or tribal contacts.)

Are there any connected, cumulative, or similar actions as part of the proposed action (e.g. other development projects in area or identified in GMP, adequate/available utilities to accomplish project)? Yes No (If yes, attach additional pages detailing the other actions.) SEE ABOVE CHECKLISTS WHICH IS WHY GROUP IS RECOMMENDING EA BE COMPLETED

Is implementation of the project likely to disturb human remains, funerary objects, sacred objects, or objects of cultural patrimony, as defined by the Native American Graves Protection and Repatriation Act (NAGPRA)? Yes No (If yes, please answer the following two questions.)

Is an approved plan of action in place to address inadvertent discoveries of human remains, funerary objects, sacred objects, or objects of cultural patrimony? Yes No (If no, how will inadvertent discoveries be dealt with?)

Will the project result in the intentional excavation of human remains, funerary objects, sacred objects, or objects of cultural patrimony? Yes No (If yes, notify the regional ethnographer. Remember-intentional excavation can only proceed after consultation with affiliated Indian tribes, and the excavation must be done in accordance with the Archeological Resources Protection Act and its implementing regulations.)

F. INSTRUCTIONS FOR DETERMINING APPROPRIATE NEPA PATHWAY

Complete the following tasks: conduct a site visit or ensure that staff is familiar with the site's specifics; consult with affected agencies, and/or tribes; and interested public and complete this environmental screening form.

First, always check DO-12, section 3.2, "Process to Follow" in determining whether the action is categorically excluded from additional NEPA analyses. Other sections within DO-12, including sections 2.9 and 2.10; 3.5; 4.5(G)(4) and (G)(5), and 5.4(F), should also be consulted in determining the appropriate NEPA pathway. Complete the following tasks: conduct a site visit or

ensure that staff is familiar with the site's specifics; consult with affected agencies, and/or tribes; and interested public and complete this environmental screening form.

If your action is described in DO-12 section 3.3, "CE's for Which No Formal Documentation is Necessary," follow the instructions indicated in that section.

If your action is not described in DO-12, section 3.3, and IS described in section 3.4, AND you checked yes or identified "data needed to determine" impacts in any block in section D (Mandatory Criteria), this is an indication that there is potential for significant impacts to the human environment, therefore, you must prepare an EA or EIS or supply missing information to determine context, duration and intensity of impacts.

If your action is described in section 3.4 and NO is checked for all boxes in section D (Mandatory Criteria), AND there are either no effects or all of the potential effects identified in Section C (Potential Resource Effects to Consider) are of negligible to minor intensity, usually there is no potential for significant impacts and an EA or EIS is not required. If, however, during internal scoping and further investigation, resource effects still remain unknown, or are at the minor to moderate level of intensity, and the potential for significant impacts may be likely, an EA or EIS is required.

In all cases, data collected to determine the appropriate NEPA pathway must be included in the administrative record.

G. INTERDISCIPLINARY TEAM SIGNATORIES *(All interdisciplinary team members must sign.)*

By signing this form, you affirm the following: you have either completed a site visit or are familiar with the specifics of the site; you have consulted with affected agencies and tribes; and you, to the best of your knowledge, have answered the questions posed in the checklist correctly.

Interdisciplinary Team Leader Name	Discipline/Field Of Expertise	Date
Dorothy Geyer	Landscape Architect	
Technical Specialists Names	Discipline/Field Of Expertise	Date
Jane Sundberg	Cultural Resource Specialist	
Charles Rafkind	Natural Resource Specialist	
Tom Nash	Chief Ranger	
Andrew Veech	Colonial Archeologist	
Dave Frederick	Colonial GIS Specialist	
Keith Wong	Federal Highway Project Manager	
Lisa Thaxton	FHWA Environmental Compliance Engineer	
David Dajc	FHWA Hydraulic Engineer	
Brian Beucler	FHWA Hydraulic Team Leader	

H. *This section may be filled out either as the project progresses or when environmental documentation is complete.*

National Environmental Policy Act

Data entered by: 12/17/2004 group

(Choose one and fill in blanks)

- CE *Complete sections A-F before checking this box.* _____ CE Citation (from 3-4 of DO-12)
(note: actions categorical excluded under NEPA must still be reviewed for compliance with Section 106.)
- EA Public scoping date June 8, 2005
EA release to public TBD
FONSI date January 2006

EIS NOI in FR _____ NOA for DEIS _____
NOA for FEIS _____ ROD date _____

Will the EA/EIS be used as the Section 106 compliance document? Yes No If yes, you must notify in advance the SHPO/THPO and ACHP of your intent to do so (36 CFR 800[c]). Date notified: _____

National Historic Preservation Act

Data entered by: 12/17/2004 _Jane Sundberg

Has the area been surveyed and NRHP resources identified? Yes No
Archeological resources affected? Yes TBD
Historic structures affected? Yes No
Cultural landscapes affected? Yes No
Ethnographic resources affected? Yes No (If yes, affected parties contacted? Yes No)

Choose one of the following for determination of effect on National Register eligible or listed resources:

TO BE DETERMINED

No Historic Properties Affected

Date documentation sent to SHPO/THPO _____
Date of response from SHPO/THPO _____

No Adverse Effect

Programmatic Exclusion (Exclusion # _____)
Date, if appropriate, of letter to SHPO/THPO & ACHP declaring intention of using EA/EIS as Section 106 compliance document _____
Date AEF or combined EA/AEF to SHPO/THPO _____
Date of response from SHPO/THPO _____
Date mitigation completed _____

Adverse Effect

Date, if appropriate, of letter to SHPO/THPO & ACHP declaring intention of using EA/EIS as Section 106 compliance document _____
Date AEF or combined EA/AEF to SHPO/THPO _____
Date to ACHP, if necessary _____
MOA Date _____
Date mitigation completed _____

Native American Graves Protection & Repatriation Act

Data entered by: ___JS 12/17/2004_____

Native American human remains, funerary objects, sacred objects or objects of cultural patrimony inadvertently disturbed?
 Yes No (If yes, complete the following.) TBD

Date of discovery _____
Date consultation initiated with affiliated Native American group _____
Date written plan of action signed _____

Were cultural items left in place and the site secured? Yes No (If no, please complete the following.)
TBD

Date written notification sent regarding excavation _____

Date written plan of action signed _____

Date Archeological Resources Protection Act permit issued _____

Date excavation completed _____

Dates Notice of Intended Disposition published in newspapers _____

Post Disposition Options

Date claimant took physical custody _____

Date of reburial on federal land _____

Date custody was transferred _____

Endangered Species Act

Data entered by: _____ CR 12/17/2004 _____

NOTHING IN PRESENT DATABASE, BUT AREA NEVER RECEIVED ON THE GROUND SURVEY. WILL HAVE TO ARRANGE WITH VDNH

Any threatened/endangered species in area? Yes No

If species in area No effect Not Likely to Adversely Affect Likely to Adversely Affect (If checked, consider EIS)

Date to FWS/NMFS _____ Date FWS/NMFS Response _____

progress document Floodplains/Wetlands/\$404 Permits Data entered by CR 12/17/2004

Is project in 100- or 500-year floodplain, flash flood hazard area, or wetlands? Yes No Exempt (See Floodplain Management Guideline, V. Scope, B. Excepted Actions)

If yes, statement of findings approval date _____

404 permit needed? Yes TBD Date _____

State 401 permit/certification? Yes TBD Date _____

Note: if 404 permit is needed so is 401 permit.

Tribal Water Quality permit? Yes No Date _____

CZM Consistency determination needed? Yes TBD Date _____

Other Permits/Laws

Data entered by: _____

Consistent with Wilderness Act Yes No Date _____

Wilderness minimum requirement (tool) decision needed? Yes No Date _____

Wild and scenic river concerns? Yes No Date _____

National Trails concerns? Yes No Date _____

Air Quality consult w/State? Yes No Date _____

Consistent w/Architectural Barriers, Rehabilitation, and Americans with Disabilities Acts? Yes No Date _____

Other _____ TBD, e.g. local wetlands board, combined wetlands permit _____ Yes No Date _____

I. MITIGATING MEASURES TO BE INCLUDED IN PROJECT:

(Specify here or attach or reference appropriate pages from EA, EIS, FONSI, or ROD) TBD

J. SUPERVISORY SIGNATORY

Based on the environmental impact information contained in the statutory compliance file and in this environmental screening form, environmental documentation for the subject project is complete. If the project involves hot topics or sensitive issues, I have briefed the deputy or regional director.

Recommended:

Compliance Specialist	Telephone Number	Date
Janes Sundberg	(757) 898-2415	

Approved:

Superintendent	Telephone Number	Date
P. Daniel Smith	(757) 898-2401	

progress document

Appendix B
Correspondence from Agencies and Stakeholder Organizations



COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P. O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

Robert G. Burnley
Director

(804) 698-4000
1-800-592-5482

July 18, 2005

Ms. Dorothy Geyer
Landscape Architect
National Park Service
Colonial National Historical Park
P.O. Box 210
Yorktown, Virginia 23690

Re: Colonial Parkway Drainage Redesigns along the Papermill Creek Watershed

Dear Ms. Geyer:

Thank you for your July 13, 2005 letter regarding the evaluation of alternatives for reducing frequent flooding along the Colonial National Historical Parkway in the Papermill Creek Watershed.

The roles of the Virginia Department of Environmental Quality (DEQ) in relation to the project under consideration are as follows. First, DEQ's Office of Environmental Impact Review (this Office) will coordinate Virginia's review of any environmental documents prepared pursuant to the National Environmental Policy Act (NEPA) and comment to the National Park Service on behalf of the Commonwealth. A similar review process will pertain to the federal consistency determination that must be provided pursuant to the Coastal Zone Management Act (CZMA). If the federal consistency determination is included as part of the EA or EIS, there can be a single review taking 60 days as allowed by the Federal Consistency Regulations (15 CFR Part 930, section 930.41(a)). We recommend this approach to save time and extra effort for the Park Service as well as for the Commonwealth.

Environmental Review and Scoping

We are sharing your letter with selected state and local Virginia agencies, which are likely to include the following (note: starred (*) agencies administer one or more of the Enforceable Policies of the Virginia Coastal Resources Management Program; see "Federal Consistency..." below):

Department of Environmental Quality:
Office of Environmental Impact Review
Tidewater Regional Office*
Air Division*
Waste Division
Division of Water Quality*
Department of Game and Inland Fisheries*
Department of Conservation and Recreation:
Division of Chesapeake Bay Local Assistance*
Division of Soil and Water Conservation*
Division of Planning and Recreation Resources
Marine Resources Commission*
Department of Historic Resources
Virginia Institute of Marine Science
Hampton Roads Planning District Commission
James City County.

In order to ensure an effective coordinated review of the Environmental Impact Statement or Environmental Assessment and the consistency determination, we will require 16 copies of the document when it is published. While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments to you concerning the preparation of the NEPA documents for the proposed project.

Federal Consistency under the Coastal Zone Management Act

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities affecting Virginia's coastal resources or coastal uses must be consistent with the Virginia Coastal Resources Management Program (VCP) (see section 307(c)(1) of the Act and the Federal Consistency Regulations, 15 CFR Part 930, sub-part C, sections 930.30 through 930.46). The Air Force must provide a consistency determination which involves an analysis of the activities in light of the Enforceable Policies of the VCP (first enclosure), and a commitment to comply with the Enforceable Policies. In addition, we invite your attention to the Advisory Policies of the VCP (second enclosure). The federal consistency determination may be provided as part of the NEPA documentation; as indicated above, we recommend this approach. Section 930.39 of the Federal Consistency Regulations and Virginia's Federal Consistency Information Package (see below) give content requirements for the consistency determination.

Ms. Dorothy Geyer
Page 3

The Federal Consistency Information Package is available on DEQ's web site, <http://www.deq.state.va.us>. Select "Programs" on the left, then scroll to "Environmental Impact Review/Federal consistency" and select this heading. Select "federal consistency reviews" on the left. This gives you access to the document.

If you have any questions, please feel free to call me (telephone (804) 698-4325) or Charles Ellis of this Office (telephone (804) 698-4488).

I hope this information is helpful to you.

Sincerely,



Ellie L. Irons
Program Manager
Office of Environmental Impact Review

cc: Harold J. Winer, DEQ-TRO
Kotur S. Narasimhan, DEQ-Air
Allen R. Brockman, DEQ-Waste
Catherine M. Harold, DEQ-DWQ
Andrew K. Zadnik, DGIF
Scott Bedwell, DCR
C. Lee Hill, DCR-DSWC
Alice R. T. Baird, DCR-DCBLA
Tony Watkinson, MRC
Ethel R. Eaton, DHR
Nicholas Nies, VDOT
Arthur L. Collins, Hampton Roads PDC
Sanford B. Wanner, James City County

Appendix C
Photographs of Existing Drainage Structures

Colonial National Historical Park

PHOTOGRAPHS

Client Name:

National Park Service

Site Location:

Colonial National Historical Parkway, James City County, Virginia

**Photograph
No. 1**

6/22/05

**Direction Photograph
Taken:**

East

Description:

Drainage structure at
Site A

**Photograph
No. 2****Date:**

6/22/05

**Direction Photograph
Taken:**

West

Description:

Drainage structure at
Site B



Colonial National Historical Park

PHOTOGRAPHS

Client Name:

National Park Service

Site Location:

Colonial National Historical Parkway, James City County, Virginia

**Photograph
No.3**

6/22/05

**Direction Photograph
Taken:**

East

Description:

Drainage structure at
Site C



Appendix D
Floodplain Statement of Finding

INTRODUCTION

Executive Order (EO) 11988 (Floodplain Management) requires the National Park Service (NPS) and other agencies to evaluate the likely impacts of actions located in the regulatory floodplain. This statement of findings (SOF) has been prepared to comply with EO 11988.

Proposed Action

The scenic Colonial Parkway is a major feature of the Colonial National Historical Park that extends over 23 miles and links the three historic sites of Yorktown, Williamsburg, and Jamestown in southeastern Virginia. Over the past decade, regional development has led to increases in stormwater runoff within the Paper Mill Creek watershed. Several locations along the historic Parkway experience a recurring flood hazard during periods of heavy rainfall. In order to address the flood hazard, the NPS has identified alternatives at targeted locations along the Parkway (referred to as Sites A, B, and C).

The NPS has prepared an Environmental Assessment to evaluate two action alternatives, in addition to the no action alternative, at each of the three sites as further described below:

Site A: 1) No Action; 2) Replace Existing 24-inch Culvert with 30-inch Reinforced Concrete Pipe; 3) Add Parallel 24-inch Reinforced Concrete Pipe;

Site B: 1) No Action; 2) Add Parallel Culvert System; 3) Replace Existing Culvert with CON-SPAN Structure; and

Site C: 1) No Action; 2) Install Parallel 24-inch Reinforced Concrete Pipe; 3) Replace Existing Culvert with 24-inch Reinforced Concrete Pipe.

For each of the action alternatives, NPS would use construction materials that are compatible with existing materials in order to retain the Parkway's historic character. Efforts would be made to maintain normal operation of the Parkway during construction activities. The use of bioengineering techniques and sustainable stream restoration design would also be incorporated to minimize impacts to natural and cultural resources along the Parkway corridor.

Site Description

The three project sites are located within the Parkway corridor about 1.3 miles south of Colonial Williamsburg within the Colonial National Historic Park in James City County, Virginia. Sites A, B, and C are north of the Parkway's intersection with Route 199 by about 2,300 feet, 3,600 feet, and 3,800 feet, respectively.

The sites are located along Paper Mill Creek, which drains to James River via College Creek. The topography at Sites A, B, and C consists of mostly level terrain at approximately 40 to 50 feet above mean sea level (amsl) with slopes ranging from 0 to 7 percent. Shallow, meandering streams and intermittent depressional wetlands provide additional topographic variation along the Parkway corridor at the project sites. The project area is rural in character with only limited development occurring throughout the Paper Mill Creek watershed. The segment of the Parkway that includes the three project sites is surrounded by upland and wetland forest communities. Upland vegetation in the immediate vicinity of the three project sites are associated with the road bank fill that was placed in the Paper Mill Creek floodplain during the Parkway's original construction. NPS maintains a 10-foot wide strip of routinely mowed turf grass (*Gramineae* spp.) along both sides of the parkway. Immediately beyond the grassy area, a strip of mature upland woods, approximately 20-feet to 40-feet wide, has become established along the road bank fill.

General Characteristics of Flooding in the Area

The project sites are located within the 100-year floodplain of Paper Mill Creek. Increased development in the region has led to increases in stormwater runoff in the watershed. As a result, the Colonial Parkway culverts experience frequent flooding. Currently, the culverts at Sites B and C cannot pass flows associated with the 25-year event. Under anticipated future conditions, the culvert at Site A will also not be able to pass flows associated with the 25-year event.

JUSTIFICATION FOR USE OF THE FLOODPLAIN

At all three sites, construction would occur within the 100-year floodplain. Since the existing culvert systems are located in the floodplain, it is not practicable to upgrade the system without performing work in the floodplain. During construction activities, negligible, short-term, localized impacts to the floodplain would occur as the result of the temporary movement of excavated fill material during culvert removal and installation.

The proposed project would decrease the risk to visitors and damage to the roadway associated with flooding by increasing the channel's capacity to convey floodwaters. Hydrologic and hydraulic analyses have concluded that the project would not impact the

downstream channel. In the long-term, beneficial impacts at the local project sites would occur with the reduction of the flood hazard.

DESCRIPTION OF SITE-SPECIFIC FLOOD RISK

Several locations along the historic Parkway experience a recurring flood hazard during periods of heavy rainfall, usually after Northeasters. The Parkway experienced severe flooding following Hurricane Isabel in 2003. NPS staff have reported that the Parkway Tunnel under Colonial Williamsburg has flooded two times approximately 10 years apart, once in the early 1990s and again in the early 2000s.

Peak discharge volumes for the culverts at Sites A, B, and C area provided below as Table 1.

Location	2-Year Event (cfs)	5-Year Event (cfs)	10-Year Event (cfs)	25-Year Event (cfs)	50-Year Event (cfs)	100-Year Event (cfs)
Site A	36.06	44.72	50.49	65.06	79.63	91.96
Site B	200.00	402.60	587.77	767.20	952.31	1118.24
Site C	10.19	12.29	13.79	17.81	21.22	24.54

FLOOD MITIGATION

Proposed structures would be designed in accordance with the standards and criteria of the National Flood Insurance Program (44 CFR Part 60) and in accordance with all Federal, State, and local regulations. The proposed project would reduce flooding in the watershed, decreasing the risk to driver safety and property loss associated with the flood hazard. Mitigation measures would be incorporated into the project design to minimize impacts to natural and cultural resources.

CONCLUSION

The proposed project would substantially reduce potentially hazardous conditions associated with flooding by increasing the hydraulic capacity of the culverts at Sites A, B, and C. Mitigation and compliance with regulations and policies to prevent impacts to water quality, floodplain values, and loss of property or human life would be strictly adhered to during and after construction. Required permits would be obtained prior to construction activities. No long-term adverse impacts would occur; therefore, the NPS finds the proposed project to be in compliance with EO 11988.