RESOURCE MANAGEMENT PLAN

for Colonial National Historical Park



Jamestown * Yorktown * Colonial Parkway, Virginia

RESOURCE MANAGEMENT PLAN

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Revised
April 20, 1999

Approved by _____

Superintendent, Colonial NHP **Date**

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INTRODUCTION

Purpose of This Plan

This resources management plan (RMP) was developed to provide direction and continuity and to establish priorities for the protection and preservation of Park resources. This plan presents the general resource management directions and objectives described in the Park's Statement for Management and General Management Plan (GMP). The RMP functions as a broad action plan that defines resource management (cultural and natural) issues and describes what management, monitoring, or research actions are needed to restore damaged resources, mitigate current adverse impacts, or protect sensitive resources from current or future threats.

This plan serves as the parent document for even more specific Park action plans such as Geographic Information Management Plan, Water Resource Management Plan, and Fire Management Plan that are listed in the appendix.

The natural and cultural resources management program sections include the following information: an overview and needs section that identifies and summarizes the most significant problems or issues. This section also states priorities and the basis on which they are set. The project statements make up a four-year schedule of proposed natural and cultural resource management, monitoring and research actions including the funding and staffing needs for dealing with the identified problems. The main body of the plan is made up of project statements that define major issues, describe past and current activities and establish actions that will be taken in the future.

Environmental and historic compliance needs are referenced in each project statement. Projects requiring such clearances will have separate environmental assessments, and/or XXX cultural clearances prepared that address specific project concerns or impacts.

The park's Resource Management Plan guides the management of cultural and natural resources within the park. This plan will be updated every 2-4 years to include new information gained from current investigations, to refine management actions, and to adjust priorities.

Figure 1 Regional Overview

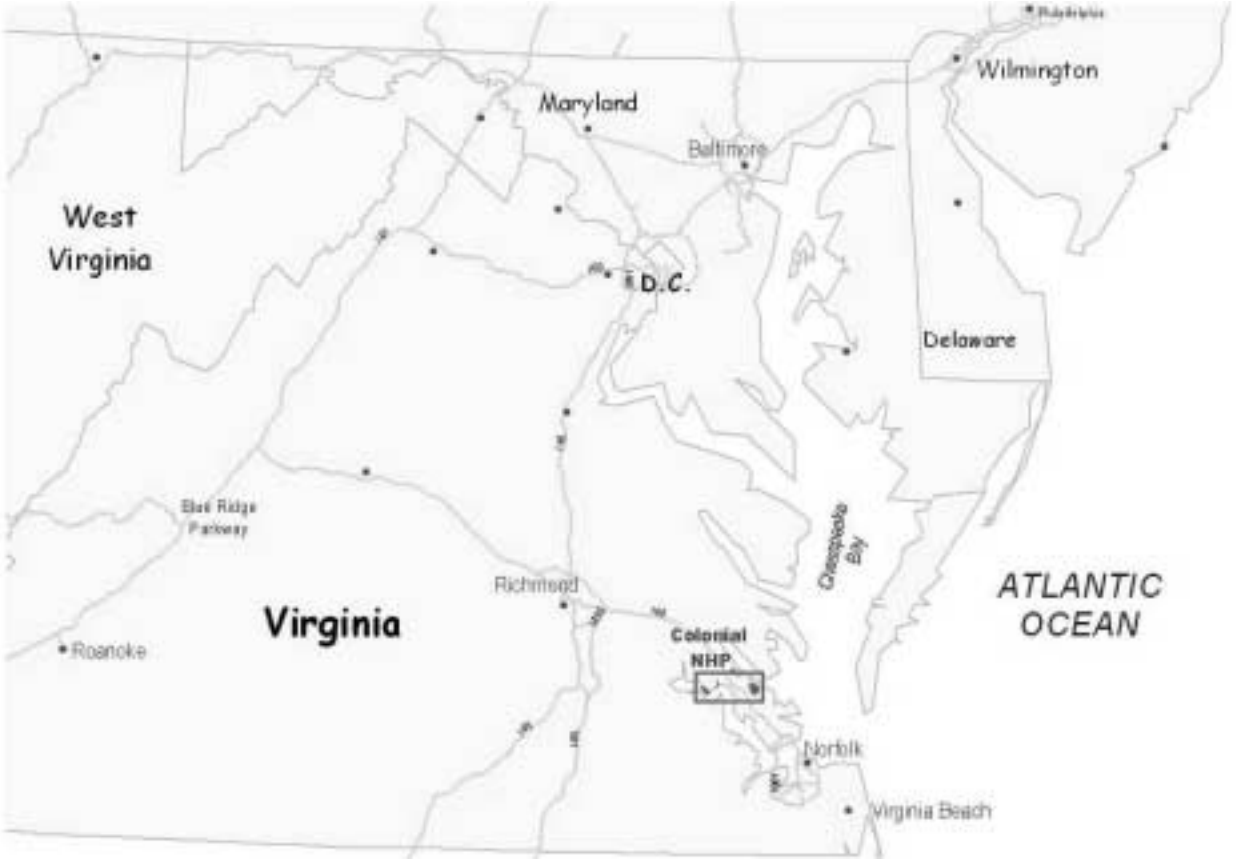
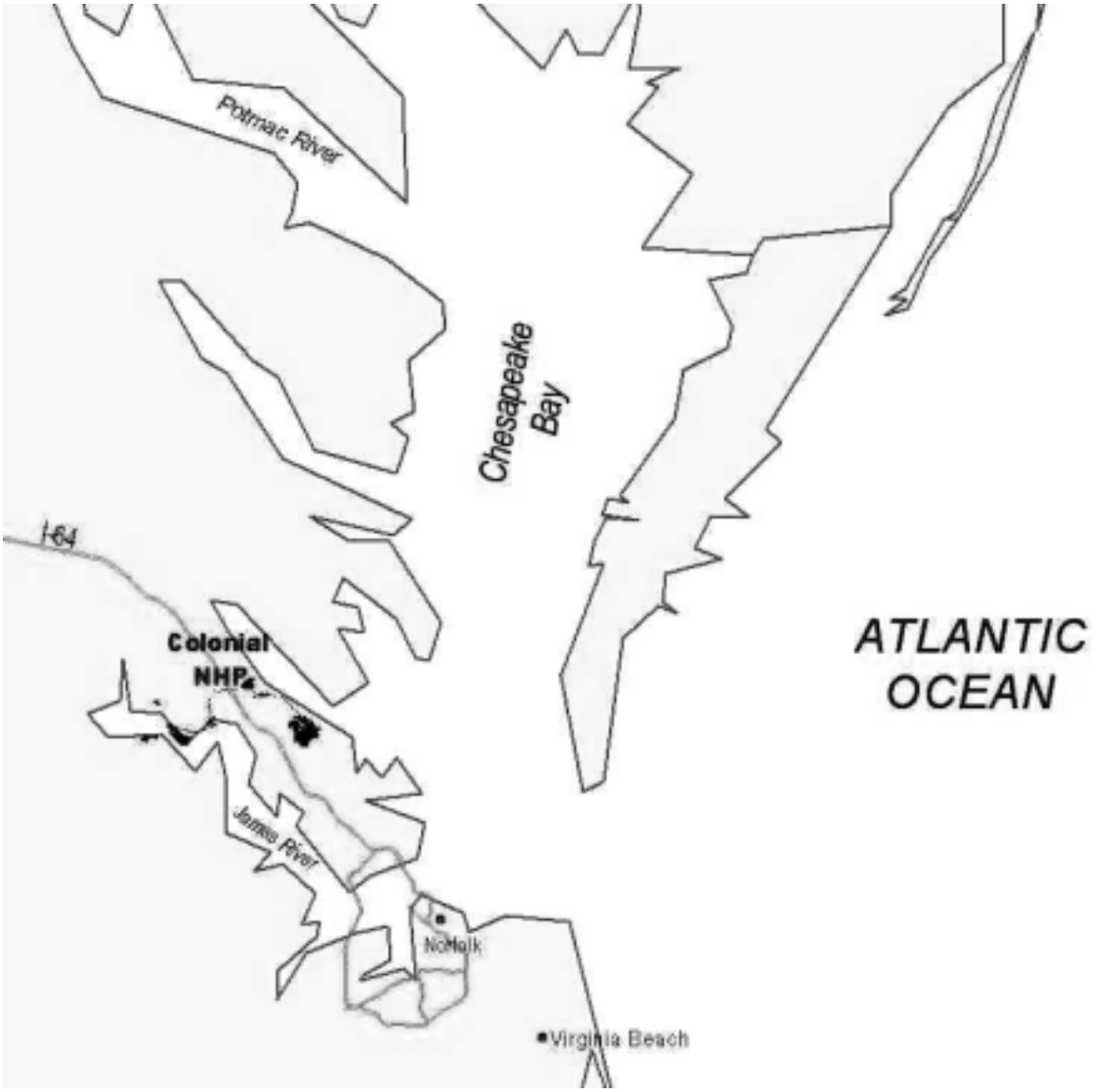


Figure 2 Colonial NHP and the Chesapeake Bay



CULTURAL RESOURCE SIGNIFICANCE

Colonial National Historical Park is a 9,324-acre historical park located in the southern tidewater region of Virginia. The park was established in 1930 by Public Law 510 to commemorate the Battle of Yorktown and Jamestown, the first permanent English settlement of North America.

Significance

The individuals who set out to establish Colonial National Historical Park had a clear vision of +their direction. They wanted to philosophically and physically link the triple shrines of the Virginia Peninsula: Jamestown, Williamsburg and Yorktown. Jamestown, the first permanent British settlement in North America and Yorktown, the site of the last major battle of the American Revolution would be would be linked by a parkway with Williamsburg, which was one of the places where American political ideology and defiance to the British Parliament developed. This "historic triangle" would recognize geographically, within scarcely 20 miles, the phenomenon of the rise and fall of British dominance over its North American Colonies.

Administratively, Jamestown and Yorktown became part of the national park system while Colonial Williamsburg remained a private non-profit institution.

The nationally significant themes are:

English Colonial Exploration and Settlement

Jamestown was first settled by European-Americans in 1607. Many nationally significant themes relate to the struggles to survive and adapt English institutions and culture to the New World. Jamestown progressed from a beleaguered outpost on the edge of North America to become the governmental seat of a Royal Colony reaching from the shores of Chesapeake to the Blue Ridge Mountains and beyond. The colonists brought with them the law, language and religion of England. The first English Legislative Assembly met at Jamestown. It was also at Jamestown that the first blacks became part of English North America.



Figure 3 Reconstructed ruins, Jamestown

The Yorktown area and sites along the Colonial Parkway were settled in 1631 and have nationally significant resources pertaining to the period of English Exploration and Colonization. There is even strong evidence that there was limited Spanish activity within the park as well. However, this theme needs to be further researched.

Development of the English Colonies, 1688-1763

Yorktown's secondary theme is that of the Development of the English Colonies 1688-1763. The town was surveyed in 1691 and expanded due to its location as the primary tobacco port for the York River and the port of entry for Williamsburg. The own plan is still evident and used today.



Figure 4 Nelson House, Yorktown

The American Revolution

Yorktown's significance rests primarily upon its role as the site of the last major campaign and battle of the American Revolution. The National Park Service owns approximately 40% of the area of the existing town of Yorktown, the target of the siege, as well as the outlying areas utilized by the Allied Siege Lines and encampments.

The Civil War

The most obvious remains in support of this theme are the vestiges of three distinct Civil War periods of activities within the park. These are from the Siege of Yorktown 1861-62, the Battle of Williamsburg 1862; and finally the Confederate fortifications constructed to deny the Union Navy passage up the James River.

Historic Preservation

Because of the Park's pioneering role in historical preservation and interpretation in the National Park Service many structures, sites and archival materials associated with the establishment and management of park now are cultural resources in their own right.

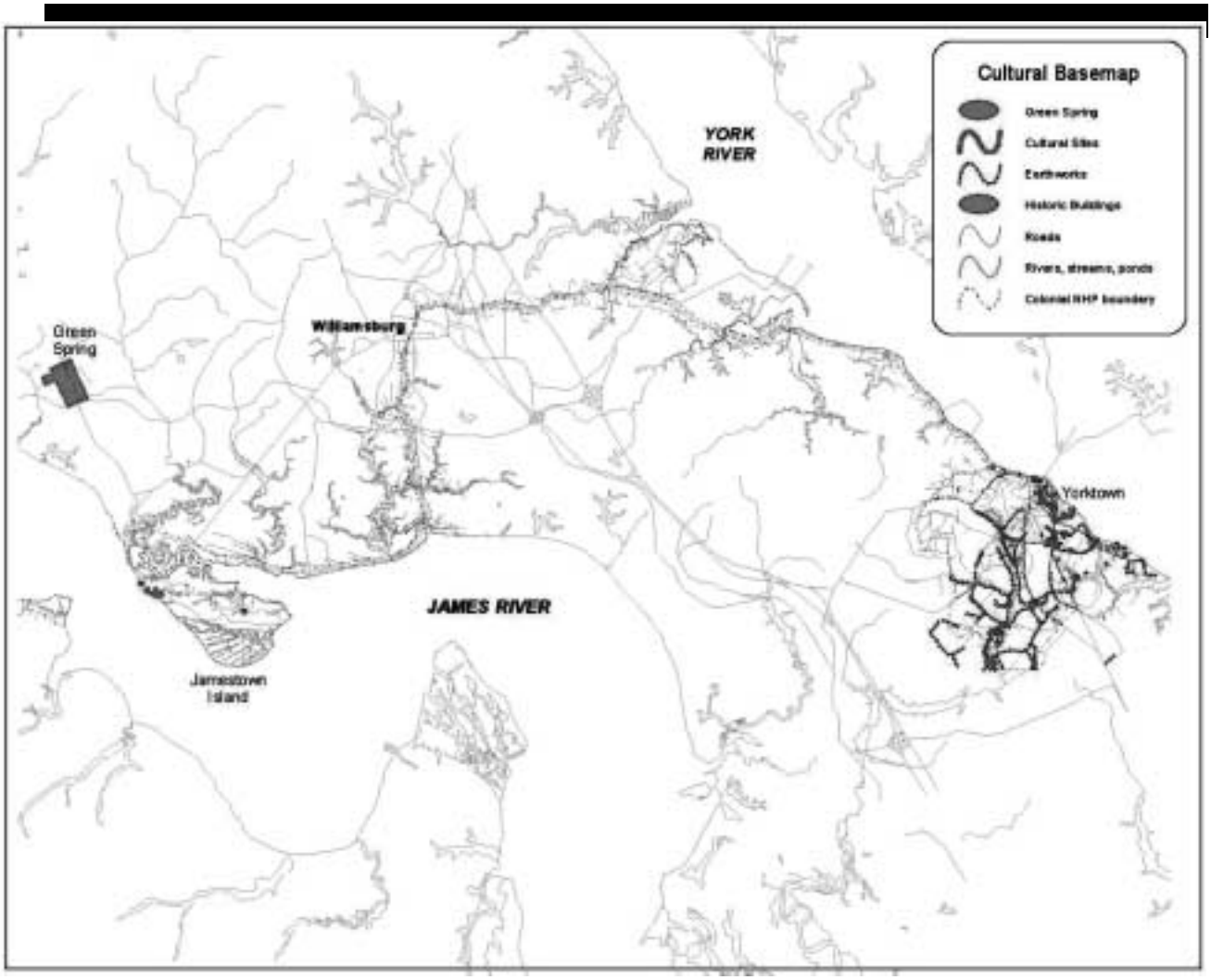
Figure 5 Archaeological Investigation, Green Spring, 1954



Figure 6 Ambler Ruins, Jamestown



Figure 7 Cultural resources basemap of Colonial NHP



NATURAL RESOURCES SIGNIFICANCE

Colonial National Historical Park lies between the York and James Rivers in Virginia. Much of the surface relief is flat, but steep topography can be found along edges of ravines and sandstone bluffs lining tidal Rivers and creeks. Various types of land use surround the park, including two large naval bases, a Coast Guard facility, rural residential subdivisions, the cities of Newport News and Williamsburg, and the village of Yorktown.

Natural resources in the park include marine and freshwater wetland habitats, pine and mixed hardwood forests, open fields, rivers, ponds, coastal bluffs and ravines. Jamestown Island is a low terrace island, nearly level to gently sloping. It contains pine-oak forests and associated marshes and wetlands.

The Yorktown battlefield lies in the Coastal Plain uplands; its topography is gently sloping with some steep ravines. Loblolly pine and various oaks are the predominant species in its pine oak forests. It has poorly drained soils. Its waters are primarily upland streams and ponds.

The area that includes Colonial Parkway and Cheatham Pond varies from sea level marshes to upland slopes with elevations near 50 feet. It contains pine and hardwood forests with associated marshes and wetlands. There are upland streams and both freshwater and brackish ponds. Yorktown onions growing in this area are a unique species.

The park has the second highest number of rare, threatened, and endangered flora and fauna for NPS sites in Virginia.



Figure 8 Aerial view of Jamestown Island

MANAGEMENT OBJECTIVES

The following management objectives are based primarily on the general resource protection mandate stated in the NPS Organic Act of l916, and the park's enabling legislation. Additional direction is also derived from other Acts, laws, and Executive Orders such as the Endangered Species Act, the National Historic Preservation Act, the Antiquities Act, and Floodplain and Wetlands Regulations.

General

- The resource management objectives stated in this section are consistent with the above listed documents, applicable laws, regulations, and NPS policies and guidelines. The park's General Management Plan identifies overall objectives and needed planning. The park's General Management Plan contains the following management objectives:

Entire Park

- Interpret for visitors the significance and relationships of the sites and events at Jamestown, Yorktown, and Colonial Williamsburg.
- Provide an integrated and high-quality visitor experience, incorporating historically relevant park sites.
- Preserve colonial-period resources and make them accessible in a manner that is safe and enjoyable for visitors.
- Maximize the visual and historical integrity of the visitor experience.
- Protect, enhance and interpret natural resources in a manner consistent with applicable policies and regulations while supporting cultural resource objectives.
- Actively promote conservation of the landscapes adjacent to Colonial National Historical Park to enhance historic and scenic views and to protect park resources and values.
- Cooperate with organizations, individuals and other agencies to further park objectives and encourage compatible land uses.
- Provide for compatible recreational uses such as walking, jogging and bicycling when those uses do not conflict with the primary goals of resource protection and interpretation of the historical themes.
- Interpret the history of the park as a continuum, highlighting other important events such as the Civil War, Colonial National Historical Park as an early example of the American historic preservation movement, and the history of the park as a focus for commemorations that have taken place on the site.
- Develop and implement a comprehensive program to inventory, research, and monitor cultural and natural resources

- Provide friendly, courteous service and accurate information for visitors.

Jamestown

- Interpret the 17th century history of Jamestown, with emphasis on the first settlement, the beginnings of representative government, the people who placed various roles in the development of Jamestown and the historical and archeological resources that remain.
- Keep human habitation sites clear of vegetation to the extent necessary for visitors to see cultural resources.
- In areas without evidence of habitation, maintain the natural environment in ways that suggest the conditions of the 1607 forest environments.
- Promote a sense of the primitive isolation Europeans experienced in 1607.

Yorktown

- Preserve, restore and research historic structures and archeological sites of the colonial and revolutionary periods and the Victory Monument.
- Plan interpretation of Yorktown around the primary interpretive theme of the siege of Yorktown; interpret this from strategic points in the town. As a secondary theme, interpret colonial commerce on the waterfront and other aspects of colonial life on Main Street.
- Manage NPS properties to suggest the character and flavor of colonial times within the limits of safety and practicality.
- Impart a sense of Yorktown history while encouraging social and economic vitality in keeping with preservation and interpretation goals; support a balanced mix of homes, businesses, governmental functions, churches, waterfront activities, visitor services, roads, trails, and recreational uses that reflect the community's size, scale, traditions, and spirit.

Yorktown Battlefield

- Interpret the winning of American independence at Yorktown in its historical context. Emphasize the significance of the battle of Yorktown, discuss people who played important roles in the battle, and describe the cultural resources that remain.
- Establish conditions on the battlefield and the York River that reflect the visual scene of 1781.
- Promote a sense of the surrounding rural agricultural setting.

Colonial Parkway

- Maintain the Colonial Parkway for safety while retaining the integrity of its design as a scenic roadway. Protect the historic sites, the landscapes and the undeveloped vistas of the James and York rivers along the parkway.
- The primary visitor experience along the parkway involves enjoyment of the parkway and its surroundings. It is best enjoyed as a limited access road with low to moderate traffic levels and little or no congestion.

Resource Management

- Preserve, protect and interpret cultural resources, museum collection and natural processes/resources in their environment.
- Rare, threatened, or endangered species, as identified through the process established by the Endangered Species Act, will be protected as a part of the naturally evolving ecosystem.
- Restore, protect and preserve natural watershed(s) conditions and processes, and native plant and animal communities that are characteristics of the Coastal Plain
- Achieve better understanding of cultural and natural processes through research and monitoring to guide management activities and interpretation including ecological sound decision making; gather and evaluate information through research and monitoring in natural science, visitor use, archaeology, history, and land uses to guide decision making and management actions.
- Provide through interpretation, environmental education and outreach programs for public understanding, appreciation, involvement and support.
- Develop and maintain cooperative protection strategies with federal, state and local government agencies, community groups, corporations, and individuals to protect the integrity of the natural and cultural environments within and surrounding the park
- Park facilities will be developed, operated and maintained in a sustainable manner to avoid adverse impacts to park resources.
- Park operations will be conducted to minimize impacts to natural and cultural resources.
- In 1998, an amendment to the park's GMP was initiated for the Green Spring unit, which was authorized in 1936 but not acquired until 1966. The draft GMP is scheduled for completion in 1999. Development of this unit will require the support of outside groups, such as the Friends of the National Park Service for Green Spring, Inc.



Table 1 Assessment of Existing Natural Resource Inventorying and Monitoring Programs

Function	Meets Standard	Below Standard
Chemical Inventorying & Monitoring		
Surface Waters		
Atmospheric Deposition		X
		X
Geophysical Inventorying & Monitoring		
Natural event records		X
Develop Maps:	X	
Imagery from satellites		X
Topographic	X	
Geology:	X	
Geologic Maps		X
Soils	X	X
Physical geology, mineralogy and soils:		
Soils analysis		
Sediment transport		X
Principle mineral composition		
Geo-hazards		X
Hydrology:		
Develop watershed maps		X
Inventory through description:		
Streams	X	X
Wetlands		X
Groundwater	X	
Measure physical parameters:		X
Temperature		X
Turbidity		X
Stage and discharge		
Create hydrologic models of surface water	X	
	X	
Meteorology	X	
Indicate meteorological parameters:		
Precipitation		
Air temperature		
Atmospheric conditions (e.g. RH, wind direction, etc.)		
Biological Inventorying & Monitoring		
Historical database	X	X

Function	Meets Standard	Below Standard
Species:		X
Inventory of vascular plants including distribution		X
Inventory of mammals, birds, fish, amphibians and reptiles including distribution	X	X
Listing of species that are threatened, endangered, endemic or non-native	X X	
Distribution map of plant and animal species	X	X X X
Populations:	X	
For selected species:		
Distribution		X
Population size/density/cover		
Age/stage/size class structure		X
Growth/recruitment/productivity mortality		
Communities		
Vegetation/land cover map		
Integration		
Qualitative community descriptions to correspond with vegetation map		
Geography		
Location of resources associated with an appropriate base map series and coordinate system		
Resources mapped accurately to GIS standards		
Accurate and comprehensive representation of park landscape (e.g. satellite, aerial photography, survey as appropriate)		
Human Use		
Event Records		X
Maps:	X	

Function	Meets Standard	Below Standard
Develop maps to indicate present areas of use		X
Develop maps to indicate past areas of use	X	
Human Activities:		
Identify each type of activity present (e.g. farming, grazing, residential, recreation, etc.)	X	X
Quantify the identified activities (e.g. yield/acre, density, number of visitors)		
Ownership		



Figure 9 Jamestown Island marshes, Back River

Table 2 Cultural Resource Documentation Checklist

Title	Current And Approved	Incomplete; Needs Revision Or Updating	Needed
Planning Documents			
Preauthorization and Authorization	X		
Statement for Management (SFM)	X		
Outline of Planning Requirements (OPR)	X		X
General Management Plan (GMP)			X
Development Concept Plan (DCP)			X
Resources Management Plan (RMP)			X
Interpretive Prospectus (IP)			
Servicewide Inventories, Lists, Catalogs, And Registers			
Cultural Resources Bibliography (CRBIB)		X	X
Cultural Sites Inventory (CSI)		X	
List of Classified Structures (LCS)		X	
National Catalog of Museum Objects			X2
National Register of Historic Places			
Basic Cultural Resource Documents			
Archeological Overview and Assessment			X
Archeological Identification Studies			X
Archeological Evaluation Studies			X
Ethnographic Overview & Assessment			X
Oral Histories & Life Histories			X
Ethnographic Program	X		X
Historical Base Maps			X
Historic Resource Study (HRS)			X
Park Administrative History			X
Scope of Collection Statement			
Special Resource Studies And Plans			
Archeological & Ethno. Collection Studies			X
Archeological Data Recovery Studies		X	X
Collection Management Plan			X
Collection Storage Plan			X

2 Nomination currently underway

Title	Current And Approved	Incomplete; Needs Revision Or Updating	Needed
Collection Condition Survey	X		X
Cultural Landscape Report (CLR)		X	X
Ethnohistory		X	X
Exhibit Plan		X	
Historic Furnishings Report		X	
Historic Structure Preservation Guide (HSPG)			X
Historic Structure Report			
Social Impact Study			
Special History Study			
Traditional Use Study			



Figure 10 4000 year old fishing spear from Jamestown Island

NATURAL RESOURCE OVERVIEW

Overview

Colonial National Historical Park's 9327 acres lies within the boundaries of the counties of York, James City, Gloucester, Surry and the City of Williamsburg. The park is within the coastal plain of Tidewater Virginia. The entire park has a direct hydrological link to the Chesapeake Bay. Most of the park extends along either the York or James Rivers, two of the largest rivers contiguous to the western shore of the Chesapeake Bay. In addition, numerous streams, creeks and ponds flow through the park and feed directly into one of these two rivers. Mixed pine and hardwood forests cover most of the park. Substantial acreage of both tidal and nontidal wetlands and open fields also exist.

Physical Resources

Climate

Average winter daytime temperatures peak at 100C (500F) with nighttime lows of –30C (25-300F). Summer temperatures range from daytime highs of 300C (85-950 F) down to 200C (600F) at night. The area is humid, especially during the summer months. Fifty percent of the annual total precipitation falls between the months of April and September. July and August are the wettest months. October, November and April are the driest. The average yearly total is about 45 inches.

Topography

Parklands have a varying topography, which takes in both low-lying wetlands, ravines and terraces up to 120 feet (38 meters) above mean sea level (MSL).

Water Resources



More than 30 miles of shoreline along the James and York rivers bounds the park. In addition, approximately 24 miles of perennial streams and 30 miles of intermittent streams and drainage's flow through the park.

Figure 13 King's Creek from

Numerous freshwater tributaries in Yorktown flow through the park. As they approach the James and York rivers, these tributaries become tidally influenced estuarine waters. The Colonial Parkway passes among upland and tidal streams as well as freshwater and brackish ponds. A freshwater spring and a small creek are at Green Spring plantation. Also, a series of springs and seeps originate on Yorktown Battlefield. Numerous ephemeral ponded sinkholes occur in the Yorktown Battlefield and along the Parkway between Yorktown and College Creek.

Wetlands

Wetlands in the park include forested freshwater communities, emergent freshwater communities and emergent tidal communities. Wetlands cover over 25% of the parklands. Most park wetlands are connected to larger adjacent wetland areas. Park wetlands contribute to species diversity because they support many rare species and serve as nurseries for many different species of fish.

Surface Water Resources

Preliminary findings indicate generally good water quality in most surface waters within the park. Most of the water bodies and wetlands in the park have major portions of their drainage basin upstream and outside of park boundaries. Therefore, activities outside of the park can have a detrimental effect on water quality within the park (oil spills, erosion and sedimentation, chemicals).

Erosion and Sedimentation

Erosion is a significant process along the river shorelines of the park. Much of the erosion results from normal and storm induced wave activity yet impacts resulting from recreational use are also a concern. Shoreline recession threatens the cultural resources of Jamestown Island, Glasshouse Point and Yorktown. The park in cooperation with the Virginia Institute of Marine Science and the US Army Corp of Engineers is conducting a shoreline conservation study of the 17 miles of park shoreline along the James River. When the study is completed, we will have a better knowledge of the shoreline erosion process over the past decades, those areas experiencing the highest erosion rates and recommendations (with alternatives) for conserving the shoreline and its associated cultural and natural resources.



Figure 15 Shoreline erosion, Black Point, Jamestown Island

Figure 14 Tobacco Trail stormwater run-off, Yorktown



Floodplains

Approximately 33 percent or 3061 acres of the park are located within the 100-year floodplain.

Groundwater Resources

The park, in cooperation with researchers from the Virginia Institute of Marine Science conducted a study to investigate the effects of adjacent urban and agricultural development on the shallow groundwater and selected surface water resources of the park. Testing indicates potential local sources of groundwater contamination from nitrate and ammonia at several sites near Jamestown Island, Williamsburg and Yorktown. Salinity and phosphate concentrations were low or below detectable levels.

The US Geological Survey, Water Division, Richmond, Virginia, has completed the mapping and analysis of the springs and seeps of Yorktown Battlefield. They will soon be conducting a study to develop the hydrogeological framework of the Yorktown area of the park and surrounding environs.

Biological Resources

Figure 16 Pitch and Tar Swamp, Jamestown Island



The biological resources of Colonial NHP include a variety of birds, fish, mammals, aquatic invertebrates, plants and wetlands typical of the mid-Atlantic Coastal Plain. None of these resources are limited to the park, but parklands provide important habitat areas within the larger geographic area. The park contains significant aquatic habitats within the tidal systems found along the shores of the York and James rivers and in most of the tidal creeks to those rivers. In addition, freshwater streams and ponds in the Yorktown unit and along the Colonial Parkway support a number of freshwater aquatic communities.

Protection of these aquatic communities is also important because the park provides unique opportunities for public observation, education and recreational fishing. The roadways and access areas throughout the park afford opportunities for close examination of wetlands and waterfowl as well as opportunities for swimming fishing and shellfishing.

Flora

Park records have identified 593 species of vascular flora. Predominant vegetation types within the park include approximately 5500 acres of forest (including about 730 acres of forested wetlands), approximately 1700 additional acres of emergent (herbaceous) wetlands and over 1100 acres of open fields. Three types of forests grow on parklands. These include the pine, mixed pine and hardwood and hardwood forest types. Loblolly and Virginia pine is the dominant species. A number of hardwood species exist in both the wet and dry areas of the park. The dry species include tulip poplar, white oak, willow oak, black cherry, red oak and hickory. Hardwood species found in the wet or poorly drained soils include sweet gum, white ash, red maple, black walnut, black gum and sycamore

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In addition to providing habitat for park animals, local flora also contributes to the beauty of the area. Some of these flowering species are dogwood, redbud, paper mulberry, scotch-broom and the Yorktown onion.

Figure 17 Field, Yorktown





Figure 18 Forest trail, Yorktown

Fauna

As with vegetation Colonial National Historical Park supports a diverse body of wildlife species. The park has recorded the presence of at least 40 mammals, 225 birds and 81 reptiles (see ***NPFauna***). Common species of mammals in the park include white-tailed deer, silver and red fox, beaver, raccoons, muskrat and turkeys. Bald eagle, osprey, hawk's, owls, Canada geese and other waterfowl frequent the park.

US Fish and Wildlife Service fishery surveys concluded that park aquatic areas serves as an important nursery ground for several important commercial and recreational fishes namely: striped bass, Atlantic croaker, American eel, summer flounder, white perch and spot. Recreational fish observed include largemouth bass, channel catfish, yellow perch, sunfish, American shad, Atlantic menhaden, blue catfish, channel catfish, striped bass, bluegill, black crappie, yellow perch, mummichog, inland silverside, gizzard shad, weakfish, Atlantic croaker and southern flounder. This diverse mixture of fishes is typical for upper estuarine habitat due to the seasonal changes in salinity that occur. Water sampling indicates relatively good water quality for the maintenance of diverse fish communities.


Figure 19 Bald Eagle


Figure 20 Canada Geese

Waters in and around the park are known to support oyster beds, crabs, clams, crayfish, perch, sunfish, bluegill and bass.

Rare, Threatened and Endangered (RTE) Species

According to studies by the Virginia Department of Conservation and Recreation, Division of Natural Heritage Colonial NHP has the second highest number of rare threatened and endangered species of all the National Park Service units in the state. The inventory reports indicate the importance of parklands and areas adjacent to the park. The Division of Natural Heritage has recently completed a detailed management plan for these species and habitats.

Species of Special Interest

Colonial NHP is the location of several national champions' specimen trees including Devil's walking stick, California privet, Paper mulberry, Compton oak and the Yorktown onion.

Table 3 Partial list of Invasive Flora of Colonial NHP

(initial partial inventory only)	
Scientific name	Common name
Ailanthus altissima	tree of heaven
Albizia julibrissin	mimosa
Berberis thunbergii	barberry
Cirsium arvense	Canadian thistle
Cirsium vulgare	bull thistle
Festuca elatior	tall fescue
Hedera helix	English ivy
Lespedeza cuneata	Chinese lespedeza
Ligustrum sinense	privet
Lonicera japonica	Japanese honeysuckle
Microstegium vimineum	eulalia
Paulownia tomentosa	princess tree
Phragmites australis	common reed
Phyllostachys aurea	bamboo
Pueraria lobata	kudzu
Rosa multiflora	multiflora rose



Figure 21 Phragmitis

Table 4 Potential Invasive Flora of Colonial NHP

Growth Form	Scientific Name	Common Name	Season of Inventory	Comments
Grasses	Agropyron repans	quack grass	early/late summer	
	Agrostis gigantea	redtop	late summer	
	Arrhenatherum elatius	oatgrass	early summer	
	Arthraxon hispidus	jointed grass	fall	
	Arundo donax	giant reed	fall	
	Cynodon dactylon	Bermuda grass	early summer	
	Dactylis glomerata	orchard grass	early summer	
	Eragrostis curvula	weeping lovegrass	spring/early summer	
	Festuca elatior	tall fescue	early summer	
	Holcus lanatus	velvet grass	early summer	
	Imperata cylindrica	cogon grass		
	Microstegium vimineum	eulalia	fall	
	Miscanthus sinensis	silvergrass	fall	
	Phleum pratense	Timothy	late summer	
	Phragmites australis	common reed	fall	
	Phyllostachys aurea	golden bamboo	winter	
	Poa compressa	Canada bluegrass	early summer	
	Poa trivialis	rough bluegrass	spring	
	Setaria faberi	giant foxtail	late summer	
	Sorghum halapense	Johnson-grass	summer	
Sedges	*Carex kobomugi*	Asiatic sand sedge	early summer	
Herbs	*Ajuga reptans*	bugleweed	spring	
	Allium vinale	wild onion	early/late summer	
	Alternanthera philoxeroides	alligator weed	spring/early summer	
	Artemisia vulgaris	mugwort	late summer/fall	
	Carduus nutans	musk thistle	early summer	
	Cassia obtusifolia	sickle pod	late summer	
	Centaurea maculosa	spotted knapweed	late summer	
	Cirsium arvense	Canada thistle	late summer	
	Cirsium vulgare	bull-thistle	late summer	
	Commelina communis	common dayflower	late summer	

Growth Form	Scientific Name	Common Name	Season of Inventory	Comments
	Conium maculatum	poison hemlock	early summer	
	Convovulus arvensis	field bindweed	late summer	
	Coronilla varia	Crown vetch	late summer	
	Dipsacus sylvestris	common teasel	late summer	
	Egeria densa	Brazilian water weed	early summer	
	Foeniculum vulgare	fennel	late summer	
	Glechoma hederacea	gill-over-the-ground	spring	
	Hydrilla verticillata	hydrilla	late summer	
	Ipomoea coccinea	Red morning glory	fall	
	Ipomoea hederacea	ivy leaved morning glory	late summer	
	Ipomoea purpurea	common morning-glory	late summer	
	Iris pseudacorus	yellow flag	early summer	
	Lespedeza bicolor	shrubby bushclover	late summer	
	Lotus corniculatus	birdsfoot trefoil	early/late summer	
	Lysimachia nummularia	moneywort	early summer	
	Lythrum salicaria	purple loosestrife	late summer	
	Melilotus alba	white sweet clover	spring	
	Melilotus officinalis	yellow sweet clover	spring	
	Murdannia keisak	aneilima		
	Myriophyllum aquatica	parrot's feather		
	Myriophyllum spicatum	European water-milfoil		
	Pastinaca sativa	wild parsnip	early summer	
	Perilla frutescens	beefsteak plant	fall	
	Polygonum cespitosum	bristled knotweed	early summer	
	Polygonum cuspidatum	Japanese knotweed	early summer	
	Ranunculus ficaria	lesser celandine	winter	
	Raphanus raphanistrum	jointed charlock	spring	
	Rumex acetosella	red sorrel	spring	
	Stellaria media	common chickweed	winter	

Growth Form	Scientific Name	Common Name	Season of Inventory	Comments
	Trapa natans	water chestnut	early summer	
	Xanthium strumarium	common cocklebur	late summer	
Shrubs	*Berberis thumbergii*	Japanese barberry	spring	
	Elaeagnus angustifolia	Russian olive		
	Elaeagnus pungens	thorny elaeagnus	winter	
	Elaeagnus umbellata	autumn olive	spring/late summer	
	Euonymus fortunei	wintercreeper		
	Ligustrum obtusifolium	blunt-leaved privet	winter	
	Ligustrum sinense	Chinese privet	early summer	
	Lonicera x bella	Bell's honeysuckle	spring	
	Rosa multiflora	multiflora rose	early summer	
	Rubus phoenicolasius	wineberry	early summer	
Trees	*Acer platanoides*	Norway maple	spring	
	Ailanthus altissima	tree of heaven	sumer	
	Albizzia julibrissin	mimosa	early summer	
	Melia azederach	China-berry	spring	
	Morus alba	white mulberry	spring	
	Paulownia tomentosa	empress tree	spring	
	Pinus thumbergii	black pine		
	Populus alba	white poplar	winter/spring	
	Akebia quinata	fiveleaf akebia	spring/early summer	
Vines	*Cardiospermum halicacabum*	balloon vine	late summer	
	Celastrus orbiculatus	oriental bittersweet	spring/late summer	
	Dioscorea batatas	Chinese yam	summer	
	Hedera helix	English ivy	winter	
	Humulus japonicus	Japanese hops	early/late summer	
	Lonicera japonica	Japanese honeysuckle	winter	
	Pueraria lobata	Kudzu	late summer	
	Vinca minor	periwinkle	spring	
	Wisteria floribunda	Japanese wisteria	spring	
	Wisteria sinensis	Chinese wisteria	spring/early	

Growth Form	Scientific Name	Common Name	Season of Inventory	Comments
			summer	

Table 5 Natural Heritage Occurrences in and adjacent to Colonial NHP

		Number of Occurrences	
Common Name	Scientific Name	Within Park	Adjacent to Park
PLANTS			
Fibrous Bladderwort	*Utricularia fibrosa*	1	0
Florida Adder's-Mouth	*Malaxis spicata*	1	0
Loesel's Twayblade	*Liparis loeselii*	3	0
Mountain Camellia	*Stewartia ovata*	1	0
Spanish Moss	*Tillandsia usneoides*	0	1
ANIMALS			
Bald Eagle	*Haliaeetus leucocephalus*	2	0
Great Blue Heron			
Great Egret	*Ardea herodias*	3	0
Least Bittern	*Casmerodius albus*	2	0
Northern Spring sideswimmer	*Ixobrychus exilis*	1	0
	Gammarus pseudolimnaeus	1	0
NATURAL COMMUNITIES			
	TOTAL	16	5



Figure 22 Great Blue Heron

Hazardous Materials

Underground Storage Tanks

Colonial National Historical Park maintains a number of underground storage tanks (UST's) in order to support park operations and maintenance activities. A 1991 survey revealed 30 known UST's within the park, including 26 used to store fuel oil and 4 used to store gasoline. In 1991, the park tested all of these tanks in accordance with state UST regulations. While all tanks passed the testing, the park replaced UST's at the visitor centers (2), maintenance facilities (2)(fueling areas), ranger office (1), and selected park residence (4). A leak was discovered during the UST replacement operation at the Yorktown Visitor Center (1992). A site characterization study was conducted at this site and soil and groundwater samples were tested over a one-year period under the guidance of the Virginia State Water Control Board. No contamination of soils or groundwater was found.

The park also removed two inactive 50-gallon generator fuel oil tanks at College and Mill Creeks formerly used to power navigational lights. Also, five fuel oil tanks were removed from residences and replaced with heat pumps or natural gas systems. Over the next six years 17 additional UST's will be removed from the park and replaced with natural gas systems.

External Spills and Leaks

Over the past several years, there have been periodic fuel oil and sewerage spills and leaks from outside of the park, which have contaminated park waters. Virginia Department of Environmental Quality (or its predecessor - the Virginia Water Control Board) has investigated all spills and leaks. A series of fuel spills and leaks, and one sewerage spill entered Papermill Creek and an unnamed creek from buildings owned by Colonial Williamsburg adjacent to the park. Shallow groundwater monitoring wells, as well as surface observation points have been used to locate and monitor the sources of the leaking UST's at bus maintenance facility. No long-term impacts have been observed. Colonial Williamsburg has taken the appropriate corrective actions including spill mitigation, tank replacement, and follow-up monitoring. In addition, Colonial Williamsburg is currently working to replace the use of fuel oil with natural gas where feasible

Figure 23 Oil spill entering Papermill Creek, from outside the park



A major spill involving approximately 4500 gallons of heating fuel entered Papermill Creek from the adjacent National Center for State Courts, in 1991. No long-term impacts to park resources from this spill have been observed. However, the National Center for State Courts has replaced fuel oil with natural gas service in order to eliminate any future problems.

An additional petroleum-related leak, in 1991, from a York County sewerage pumping station entered Great Run Creek, in the Yorktown unit of the park. The problem was corrected promptly, and no long-term damage to park resources was observed. York County has implemented new procedures in order to reduce the probability of repeat episodes.

Two known sewerage lines breaks, in 1991 and 1993, from Hampton Roads Sanitation Authority are reported to have entered park and public waters along the James River. While the breaks were repaired promptly, the Virginia Department of Health temporarily suspended commercial shellfishing near the sewerage lines breaks.

External Hazardous Waste Disposal Sites

The park is adjacent to several hazardous waste materials disposal sites belonging to the Commonwealth of Virginia and the U.S. Navy. Extensive site investigations have been conducted on all these properties under the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the Superfund Amendments Reauthorization Act (SARA) of 1986. The Department of Defense, and the U.S. Navy, has developed programs similar to the U.S. Environmental Protection Agency's managed Superfund programs. The park sits on the U.S. Navy Technical Review Committees for these sites, while communicating directly with the Commonwealth of Virginia's manager of investigations and clean up.

Commonwealth of Virginia Emergency Fuel Storage Facility (Cheatham Annex)

The Commonwealth of Virginia currently owns a 435-acre fuel storage facility located in western York County adjacent to the Colonial Parkway. The site, known as Commonwealth of Virginia Emergency Fuel Storage Facility (CVEFSF), was formerly owned and operated by the U.S. Navy. This site lies within the Kings Creek sub-basin, which drains through the park into the York River. This facility contains 23 two million-gallon underground storage tanks, which have stored various petroleum products including No. 2 fuel oil, kerosene, gasoline, oil and various special Navy and aviation fuels. A site investigation has been conducted over the

past several years and a remediation study proposal prepared (Commonwealth of Virginia, 1990b). While the site is neither on the Superfund list nor the National Priorities List (NPL), the Commonwealth of Virginia is negotiating with EPA and the U.S. Army Corps of Engineers regarding final site remediation. Remediation activities to date have included removal of all known PCB materials, equipment and numerous small PCB stains from the soil and concrete pads. As well, contracts have been initiated to remove petroleum sludge from pits and contaminated water and soil from the site. Cleaning of contaminants from the storage tanks has not yet begun.

The York County Health Department is currently monitoring off-site wells located to the west of the facility. To date, neither on-site nor off-site monitoring wells have indicated significant groundwater contamination (Commonwealth of Virginia, 1990b). Currently, the Virginia Department of Environmental Quality for a number of petroleum-associated inorganic and organic constituents is monitoring outflow from the site on both a monthly and quarterly basis.
Additional on-site monitoring has been undertaken at the CVEFSF site of surface waters and sediments of the on-site pond. Additional downstream monitoring of water, sediments and shellfish are currently planned.

U.S. Navy Yorktown Fuel Depot

The Yorktown Naval Fuel Depot is located adjacent to Wormley Pond in the Yorktown Unit of the park. Soils, surface water and groundwater assessments of the sludge farm area detected slightly elevated petroleum hydrocarbon concentrations. The terrain of the area grades away from the park and no migration into the adjacent Wormley Pond or Creek has been detected (U.S. Navy, 1992). Removal of several feet of contaminated soils at the sludge farm area is going through final approval process. Interim actions for a previously detected oil plume from an underground storage tank has included the pumping from a groundwater testing well of any petroleum hydrocarbon concentration free product. Over the past year (1993-94), no additional free petroleum product has been recovered. Additional groundwater testing is planned to ascertain if the plume has spread or confirm that recovery has been successful. In another area of the depot petroleum, hydrocarbon concentration free product is also being recovered from an underground plume. The Navy is currently designing remediation solutions for this site. No off-site migration has been detected.

U.S. Navy Yorktown Naval Weapons Station (NWS)

The Yorktown Naval Weapons Station is a 10,624-acre (4,300-hectare) site bounded by I-64 and the Colonial Parkway. Investigations at the NWS have previously identified 16 sites which have been utilized for hazardous waste disposal as far back as 1925 (U.S. Navy, 1993a). All sixteen sites are located upstream from the Colonial Parkway or adjacent to the Yorktown unit of the park.

Figure 24 Superfund cleanup on Naval Weapons Station, adjacent to Yorktown unit



The entire station has been added to the National Priorities List under CERCLA. Site 12, approximately 4 acres (1.6 hectares) bounds Ballard Creek, which is within the Yorktown unit of the park. Investigations at this site indicate the need for remediation. Remediation was completed during 1998.

Table 6 Acreage information on Colonial NHP natural resources

COLONIAL NHP GIS INFORMATION as of 7/93		
Feature	**Subtotal, acres or miles**	**Total, acres or miles**
Acreage		9327
Shoreline, miles		33.60
James River	19.08	
York River	14.52	
Streams, creeks, drainages, miles		55.33
Perennial	24.43	
Intermittent, drainages	30.903	
Wetlands, acres		2482
Forested, non-tidal	738	
Non-forested, tidal	1744	
Earthworks, miles		36.00
Civil War	23.04	
Revolutionary	12.96	
Floodplains, acres	3061	3061
Chesapeake Bay Regulatory, acres		
Resource Protection Area	2609 acres	
Resource Management Area	1616 acres	
Watersheds, #		344
James River #	13	
York River #	18	
Fields, acres		1104
Forest, acres		5540
Sinkholes	40	11
Park Roads, miles		53.87





3 Based on USDA, SCS digital soil survey drainages, 1992
4 Missing some data for Swann's Point and Green Springs

Introduction to Research

The park faces complex environmental, visitor-use and cultural resource management problems. Some of the issues include impacts on native wildlife populations, significant vegetation changes, protection of state and federally listed endangered and threatened species, exotic invasive species, impacts from soil erosion-sedimentation-stormwater problems, shoreline erosion, potential air and water quality problem impacts from adjacent and regional uses and hazardous material investigations and remediation from adjacent landowners impacts.

The park is actively involved in meeting its Chesapeake Bay Program commitments and participates on the National Park Service Chesapeake Bay Taskforce. An active geographic information system program has been developed over the past nine years winning several national awards. The park works closely with its many Federal, State, regional, and local governmental agencies, non-governmental organizations, academia and neighbors to protect the Chesapeake Bay watershed's natural and cultural resources. Consequently, there is a great need for research in environmental, biological, social science and support services.

The Park's general and special funding is only sufficient to meet some of the most critical and time-urgent resource management problems. Other important park research contributions come from cooperative and independent activities by various public and private sources. These outside contributions provide an important supplement to our research, inventory and monitoring, and planning program. These contributions significantly broaden the base for acquiring scientific information and solving resource management problems. Depending on the priority of the management problem, various levels of park logistical support and/or limited park or regional funding may also be available.

This research section is intended to serve as a reference for qualified investigators interested in meeting park natural science research, inventory and monitoring, planning and mitigation needs. Please take the time to review as you develop your own research interests and projects, and those of your graduate (and undergraduate) students).

The park is always interested in receiving cooperative independent assistance in conducting its research activities. If your planned research interest and activities complement our needs, we encourage you to contact us. Call me at 757.898.8677 or email me at Charles_Rafkind@nps.gov for further details concerning the specific project(s) and the possibilities and advantages of conducting independent or cooperative research at Colonial National Historical Park. Your interest is greatly appreciated.

Table 7 Investigator's Annual Report for CY1996

Investigator/Institution	Title
Hudgins, Mark, Norfolk District, US Army Corp of Engineers ; Hardaway, Scott, Virginia Institute of Marine Science, College of William and Mary	Shoreline Conservation Plan Development and Mitigation
Case, Dr. Martha, Amanda Ingram College of William and Mary	Vascular Flora of Green Springs-Native and Introduced Vegetation
Roberts, Dr. Morris, Mary Ann Vogelbein, George Vados, Virginia Institute of Marine Science, College of William and Mary	Baseline Water Quality and Bioassay of Yorktown Creek
Cristol, Dr. Dan, College of William and Mary	Learning of a Complex Behavior in Herring Gulls
Cristol, Dr. Dan, College of William and Mary	Migration Distance in Dark-eyed Juncos
Capelli, Dr. Gregory, College of William and Mary	Distribution of Freshwater Macrobenthos in Relation to Water Quality in the Yorktown Battlefield Unit
Bruce, Mr. T. Scott, Virginia Department of Environmental Quality	Investigation of Groundwater Water Level at Edgemarsh Point and Yorktown Battlefield
Bradshaw, Mr. Dana, Center for Conservation Biology, College of William and Mary	Neotropical Migratory Bird Survey
Hobson, Mr. Chris, Gary Fleming, Nancy VanAlstine, Virginia Department of Conservation and Recreation, Division of Natural Heritage	Natural Heritage Survey of Cheatham and Wormley Pond Drainage's
Watts, Dr. Bryan, Dana Bradshaw, Dr. Mitchell Byrd, Center for Conservation Biology College of William and Mary	Monitoring of Eagles and Great Blue Heron-Great Egret Rookeries of Colonial NHP
Bradshaw, Ms. Julie, Virginia Institute of Marine Science, College of William and Mary	NWI Wetlands Investigation of Non-Tidal Wetlands
Tobias, Mr. Craig, Virginia Institute of Marine Science, College of William and Mary	Nitrate Reduction at the Groundwater-Salt Marsh Interface
West, Mr. Phil, Virginia Department of Game and Inland Fisheries	Deer Herd Health Survey of Colonial NHP

Table 8 Project Statement List

List of Project Statement

PROP PRIORITY	PROJECT NUMBER	PROJECT TITLE	SUB-TITLE	FUNDED	UNFUNDED	LAST YEAR UPDATE
0	COLO-C-301.800	BRING MUSEUM COLLECTION TO STANDARD	COMPLETE COLL. MGMT PLAN	10.00	0.00	1998 02/19/99
0	COLO-C-302.000	CONDUCT ARCHEOLOGICAL ASSESSMENT, JAMESTOWN		1236.90	0.00	1992 02/19/99
0	COLO-C-304.001	PREPARE SPECIAL HISTORY STUDY ON AFRICAN AMERIC	JAMESTOWN/GREEN SPRING	30.00	0.00	1997 02/06/98
0	COLO-C-310.001	PRESERVE POOR POTTER ARCHEOLOGICAL SITE	CONDUCT PHASE I ARCHEOL.	21.00	0.00	1997 02/19/99
0	COLO-C-312.001	PRESERVE AND REHAB PATE HOUSE	PREPARE HSR	30.00	0.00	1997 02/06/98
0	COLO-C-317.000	PREPARE THE JAMESTOWN NRHP DOCUMENTATION		17.00	0.00	1998 02/19/99
0	COLO-C-343.000	RESEARCH THE HISTORY OF YORKTOWN AS A SEAPORT		4320.00	20.00	1999 02/22/99
1	COLO-C-313.000	PREVENT FURTHER EROSION OF JAMESTOWN AT NEW TOW		49.00	451.00	1997 02/22/99
2	COLO-C-301.700	CONSERVE WASHINGTON'S TENTS		92.00	330.00	1996 02/19/99
3	COLO-C-309.001	IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIO	EXCAVATE THREATENED SITE	0.00	50.00	1998 02/22/99
4	COLO-C-318.000	CREATE ARCHEOLOGIST POSITION FOR PARK		0.00	65.00	1998 02/22/99
5	COLO-C-320.000	CREATE HISTORICAL ARCHITECT POSITION		0.00	65.00	1998 02/22/99
6	COLO-C-319.000	CREATE RESEARCH HISTORIAN POSITION FOR PARK		0.00	55.00	1998 02/22/99
7	COLO-C-003.000	MAINTAIN HISTORIC STRUCTURES		2495.00	300.00	1992 02/22/99
8	COLO-C-306.001	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN	CONDUCT TOWN ARCHEOLOGY	83.00	90.00	1998 02/22/99
9	COLO-C-303.000	MANAGE CULTURAL RESOURCE PROGRAM		477.00	25.00	1992 02/09/98
10	COLO-C-310.002	PRESERVE POOR POTTER ARCHEOLOGICAL SITE	DESIGN & CONSTRUCT BLDG	82.50	708.00	1997 02/19/99
11	COLO-C-315.000	PREVENT WATER DAMAGE TO YORKTOWN COLLECTION		0.00	2000.00	1998 02/19/99
12	COLO-C-321.000	PRESERVE AND MAINTAIN NELSON HOUSE AND WALL		0.00	397.10	1999 02/21/99
13	COLO-C-314.000	PREVENT WATER DAMAGE TO JAMESTOWN COLLECTION		0.00	3005.00	1998 02/19/99
14	COLO-C-304.003	PREPARE SPECIAL HISTORY STUDY OF NATIVE AMERICA	JAMESTOWN STUDY	0.00	35.00	1998 02/22/99
15	COLO-C-309.003	IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIO	INVESTIGATE TOWN SITES	30.00	185.00	1998 02/22/99
16	COLO-C-304.002	PREPARE SPECIAL HISTORY ON AFRICAN AMERICANS	YORKTOWN STUDY	0.00	60.00	1992 02/22/99
17	COLO-C-309.002	IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIO	INVESTIGATE ISLAND SITES	10.00	200.00	1998 02/22/99
18	COLO-C-301.300	BRING MUSEUM COLLECTION TO STANDARD	IMPLEMENT FIRE/SECURITY	82.00	290.00	1992 02/19/99
19	COLO-C-322.000	PRESERVE AND MAINTAIN MOORE HOUSE COMPLEX		0.00	138.10	1999 02/21/99
20	COLO-C-312.002	PRESERVE AND REHAB PATE HOUSE	REPAIR AND PROTECT STRUC	112.50	180.00	1997 02/06/98
21	COLO-C-308.001	DEVELOP GREEN SPRING	CONDUCT ARCHEOL. ASSESS.	40.00	200.00	1996 02/19/99
22	COLO-C-301.200	BRING MUSEUM COLLECTION TO STANDARD	IMPROVE MUSEUM STORAGE	190.00	1085.00	1992 02/19/99
23	COLO-C-335.000	PROVIDE TERMITE CONTROL FOR HISTORIC STRUCTURES		0.00	70.00	1999 02/21/99
24	COLO-C-332.000	PRESERVE AND MAINTAIN THE YORKTOWN MONUMENT		0.00	100.00	1999 02/21/99
25	COLO-C-306.004	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN	BATTLEFIELD AND ENVIRONS	50.00	250.00	1998 02/22/99
26	COLO-C-310.003	PRESERVE POOR POTTER ARCHEOLOGICAL SITE	RESEARCH HISTORY	2.00	20.00	1998 02/19/99
27	COLO-C-301.400	BRING MUSEUM COLLECTION TO STANDARD	UPDATE ACCESSIONS, LOANS	61.00	0.00	1992 02/19/99
28	COLO-C-301.500	BRING MUSEUM COLLECTION TO STANDARD	CONSERVE COLLECTN	37.00	25.00	1992 02/19/99
29	COLO-C-333.000	PRESERVE AND MAINTAIN THE JAMESTOWN MONUMENT		0.00	100.00	1999 02/21/99
30	COLO-C-327.000	PRESERVE AND MAINTAIN SWAN TAVERN COMPLEX		0.00	385.40	1999 02/21/99
31	COLO-C-306.003	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN	DEFINE SURRENDER FIELD	0.00	60.00	1999 02/21/99
32	COLO-C-301.900	BRING MUSEUM COLLECTION TO STANDARD	CONDUCT APPRAISALS	5.00	20.00	1997 02/19/99
33	COLO-C-301.600	BRING MUSEUM COLLECTION TO STANDARD	INCREASE TO BASE FUNDING	75.00	110.00	1992 02/19/99
34	COLO-C-305.000	ARCHEOLOGICAL SURVEY, COLONIAL PARKWAY		0.00	200.00	1992 02/22/99
35	COLO-C-316.000	MAINTAIN PARK LIBRARY		5.00	3.00	1998 02/19/99
36	COLO-C-336.000	REPLACE HALON SYSTEM AT NELSON AND MOORE HOUSES		0.00	295.60	1999 02/21/99
37	COLO-C-306.002	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN	RESEARCH LANDHOLDINGS	10.00	40.00	1998 02/07/98
999	COLO-C-301.000	BRING MUSEUM COLLECTION TO STANDARD		0.00	0.00	1992 02/07/98
999	COLO-C-301.100	BRING MUSEUM COLLECTION TO STANDARD	COMPLETE CATALOGING	405.50	30.00	1992 02/19/99
999	COLO-C-304.000	CONDUCT SPECIAL HISTORY STUDIES OF DIVERSE CULT		0.00	0.00	1998 02/06/98
999	COLO-C-306.000	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN		0.00	0.00	1992 02/22/99

999	COLO-C-307.000	PREPARE ADMINISTRATIVE HISTORY		0.00	5.00	1992	02/06/98
999	COLO-C-308.000	DEVELOP GREEN SPRING		0.00	0.00	1998	02/22/99
999	COLO-C-309.000	IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIO		0.00	0.00	1998	02/06/98
999	COLO-C-310.000	PRESERVE POOR POTTER ARCHEOLOGICAL SITE		0.00	0.00	1998	02/06/98
999	COLO-C-312.000	PRESERVE AND REHABILITATE PATE HOUSE		0.00	0.00	1997	02/19/99
999	COLO-C-323.000	PRESERVE AND MAINTAIN DUDLEY DIGGES COMPLEX		0.00	194.50	1999	02/21/99
999	COLO-C-324.000	PRESERVE AND MAINTAIN SOMERWELL HOUSE AND STABL		0.00	208.90	1999	02/21/99
999	COLO-C-325.000	PRESERVE AND MAINTAIN SMITH HOUSE		0.00	153.90	1999	02/21/99
999	COLO-C-326.000	PRESERVE AND MAINTAIN BALLARD HOUSE		0.00	0.00	1999	02/21/99
999	COLO-C-328.000	PRESERVE AND MAINTAIN ARCHER COTTAGE		0.00	157.10	1999	02/21/99
999	COLO-C-329.000	PRESERVE AND MAINTAIN NATIONAL CEMETERY STRUCTU		0.00	145.00	1999	02/21/99
999	COLO-C-330.000	PRESERVE AND MAINTAIN BLOW ESTATE STRUCTURES		0.00	198.60	1999	02/21/99
999	COLO-C-331.000	PRESERVE AND MAINTAIN BURCHER COTTAGE		0.00	50.00	1999	02/21/99
999	COLO-C-334.000	PRESERVE AND MAINTAIN CHURCH STREET COMFORT STA		0.00	19.70	1999	02/21/99
999	COLO-C-337.000	PRESERVE JAMESTOWN RUINS		0.00	73.90	1999	02/21/99
999	COLO-C-338.000	PRESERVE JAMESTOWN GLASSHOUSE RUINS		0.00	21.90	1999	02/21/99
999	COLO-C-339.000	PRESERVE GREEN SPRING RUINS		0.00	47.30	1999	02/21/99
999	COLO-C-340.000	DEVELOP ARCHITECTURAL DESIGN GUIDELINES/ YORKTO		40.00	0.00	1998	02/22/99
999	COLO-C-341.000	RESEARCH SURRENDER AT YORKTOWN		0.00	20.00	1999	02/22/99
999	COLO-C-342.000	RESEARCH THE BRITISH CAMPAIGN IN VIRGINIA, 1781		0.00	21.00	1999	02/22/99
Resource Type Sub-total----------				10098.40	12960.00		
0	COLO-I-002.200	PRESERVE AND STABILIZE EARTHWORKS	REGULAR MAINTENANCE	84.00	0.00	1992	02/06/98
1	COLO-I-002.100	PRESERVE AND STABILIZE EARTHWORKS	ESTABLISH MGMT PROGRAM	6.00	140.00	1992	02/09/98
2	COLO-I-017.000	PREPARE PARKWAY CULTURAL LANDSCAPE REPORT		13.80	70.00	1997	02/19/99
4	COLO-I-005.000	REMOVE HAZARDOUS TREES		240.00	170.00	1992	02/10/98
5	COLO-I-004.000	MAINTENANCE OF PARK GROUNDS, FIELDS, TRAILS		2800.00	1850.00	1992	02/10/98
6	COLO-I-011.001	DEVELOP CULTURAL LANDSCAPE PROGRAM FOR JAMESTOW	PREPARE CLI	0.00	45.00	1997	02/19/99
7	COLO-I-006.000	CONDUCT RESOURCE PROTECTION ACTIVITIES		332.00	60.00	1992	02/05/98
8	COLO-I-007.000	PARTICIPATE IN ADJACENT LAND USE PROTECTION ACT		210.00	65.00	1994	02/19/97
9	COLO-I-004.200	MAINTENANCE OF PARK GROUNDS, FIELDS, TRAILS	EROSION CONTROL	0.00	177.00	1992	02/29/96
10	COLO-I-004.100	MANAGEMENT OF GROUNDS, FIELDS, TRAILS	OPEN FIELDS MANAGEMENT	9.00	75.00	1992	02/10/98
11	COLO-I-014.000	SURVEY AND FENCE PARK BOUNDARIES		0.00	1004.00	1995	02/05/98
12	COLO-I-011.002	DEVELOP JAMESTOWN CULTURAL LANDSCAPE PROGRAM	PREPARE CLR	0.00	70.00	1998	02/19/99
13	COLO-I-009.000	MANAGE ROW'S AND SPECIAL PARK USES		142.00	50.00	1992	02/05/98
14	COLO-I-002.400	PRESERVE AND STABILIZE EARTHWORKS	VISITOR USE STUDY-YKTOWN	0.00	10.00	1992	02/06/98
15	COLO-I-016.000	MANAGE RECREATIONAL BEACH USE ALONG PARKWAY		0.00	40.00	1992	02/27/96
16	COLO-I-001.100	MANAGE GEOGRAPHIC INFORMATION SYSTEM	CULTURAL RESOURCE GIS	84.00	9.00	1992	02/10/98
16	COLO-I-012.000	CORNWALLIS CAVE MITIGATION		3.00	60.00	1992	02/19/99
17	COLO-I-002.300	PRESERVE AND STABILIZE EARTHWORKS	PROTECT AND MONITOR	10.00	5.00	1992	02/06/98
18	COLO-I-004.300	VEGETATION MGMT. FOR EXOTICS,SHORELINES, EARTHW		0.00	275.00	1999	02/05/98
999	COLO-I-002.000	PRESERVE AND STABILIZE EARTHWORKS		0.00	0.00	1992	02/06/98
999	COLO-I-011.000	DEVELOP JAMESTOWN CULTURAL LANDSCAPE PROGRAM		0.00	0.00	1992	02/19/99
Resource Type Sub-total----------				3933.80	4175.00		
0	COLO-N-601.303	INVENTORY AND SITE ASSESSMENT OF EROSION AND SE	RELATED PROBLEMS	97.00	10.00	1994	02/27/96
1	COLO-N-015.000	HAZARDOUS MATERIALS INVESTIGATION AND MITIGATIO		269.00	80.00	1994	02/21/99
1	COLO-N-601.100	WATER RESOURCE MANAGEMENT	GROUNDWATER MONITORING	61.00	30.00	1992	02/21/99
1	COLO-N-601.401	DEVELOP GEOLOGICAL MAPS		2.00	0.00	1993	02/27/96
1	COLO-N-601.410	DELINEATE REGIONAL SHALLOW AQUIFER	YORKTOWN	53.00	175.00	1994	02/21/99
1	COLO-N-601.503	SURFACE WATER QUALITY TRENDS MONITORING/RISK	ASSESSMENT	15.00	125.00	1995	02/21/99

1	COLO-N-601.504	SHORELINE STABILITY/EROSION MONITORING		170.00	2770.00	1994	02/21/99
1	COLO-N-601.512	DETERMINE FUNCTIONS & VALUES OF PARK WETLANDS	GRAFTON SINKHOLE COMPLEX	30.00	12.00	1998	02/21/99
1	COLO-N-607.000	EXOTIC SPECIES IDENTIFICATION, MONITORING, MITI		61.00	32.00	1995	04/12/99
2	COLO-N-001.000	CONTINUE GEOGRAPHIC INFORMATION SYSTEM DEVELOPM		304.50	46.50	1996	04/12/99
3	COLO-N-604.000	HIRE PLANT ECOLOGIST AND INVENTORY AND MONITORI		157.00	310.00	1992	04/12/99
4	COLO-N-602.000	MONITORING AND MITIGATION OF RTE SPECIES		55.00	32.00	1992	02/21/99
5	COLO-N-004.300	HIRE VEGETATION MANAGEMENT CREW-EXOTICS, SHOREL		0.00	200.00	1999	04/12/99
5	COLO-N-606.000	DEVELOP VC NAT'L RES. EXHIBITS, HANDOUTS, SLIDE		36.00	175.00	1994	02/21/99
6	COLO-N-605.000	DEER RESEARCH, MONITORING, MITIGATION		36.00	75.00	1995	02/21/99
7	COLO-N-608.000	FAUNA INVENTORY AND MONITORING		66.40	185.00	1992	02/21/99
8	COLO-N-609.000	FLORA INVENTORY AND MONITORING		44.00	110.00	1992	02/21/99
9	COLO-N-603.000	DEVELOP LONG TERM ENVIRONMENTAL MONITORING PROG		35.00	170.00	1996	02/21/99
11	COLO-N-013.000	DEVELOP FORESTRY MANAGEMENT PLAN		0.00	215.00	1996	02/20/99
12	COLO-N-603.100	DEVELOP LONG TERM ENVIRONMENTAL MONITORING PROG	DEVELOP INFO MGMT SYSTEM	100.00	150.00	1996	02/21/99
13	COLO-N-008.000	CONDUCT IPM MONITORING, MITIGATION-STRUCTURES,		61.00	24.00	1992	02/21/99
13	COLO-N-601.412	DELINEATE SHALLOW AQUIFER	OTHER THAN YORKTOWN	0.00	150.00	1997	02/21/99
14	COLO-N-601.502	DETERMINATION OF THE FUNCTIONS & VALUES OF PARK	WETLAND ENVIRONMENTS	53.00	139.00	1994	02/21/99
15	COLO-N-601.201	STATE REGULATORY PROCESS	PERMIT REVIEW	19.00	15.00	1994	02/21/99
16	COLO-N-601.302	ESTABLISHING LAND SUBSIDENCE/CLIMATE CHANGE BAS		0.00	40.00	1994	02/27/96
17	COLO-N-010.000	CONDUCT FIRE MANAGEMENT, TRAINING, EQUIPMENT		73.00	20.00	1992	02/20/99
18	COLO-N-610.000	AIR QUALITY MANAGEMENT, MONITORING, ACID DEPOSI		0.00	80.00	1997	02/27/96
Resource Type Sub-total				1797.90	5370.50		
Grand Total				15830.10	22505.50		

CULTURAL RESOURCE MANAGEMENT PROGRAMS AND PRIORITIES

Colonial National Historical Park possesses a wealth of cultural resources. These range from late Archaic and early Woodland sites to structures within the park that represent the pioneering efforts in Federal historic preservation during the early to mid-20th century. There has been, and continues to be, extensive multi-disciplined research conducted within the park. This is closely linked with preservation activities in the museum collection, on historic structures and archeological resources.

The changing policies and guidelines within the National Park Service complicate the management of the park's cultural resources during the 69 years of the park's existence. The park benefited from extensive research activity in the park during the 1930s. However, the historical archeology, research and planning were in their formative stages. It is said that NPS archeologist J.C. Harrington developed the process now known as historical archeology at Jamestown. Archeological methods and interpretation, knowledge of 17th and 18th century Virginia and historic preservation philosophy and techniques has changed radically since 1930. Yet, most of the park's management decisions are based on this dated information. This has created a backlog of astronomical proportions if we are to bring the park's planning and research documents to today's standards. The park incorporates four centuries of history as well as prehistory over 9,234 acres. The variety and complexity of cultural resources staggers the imagination.

The park's cultural resources are being documented for the National Register of Historic Places. The Yorktown documentation is underway and should be completed in 1999. The Jamestown documentation is scheduled to begin in 1999. The Colonial Parkway is being nominated to the National Register in 1999 as nationally significant. Green Spring, the only unit with approved NRHP documentation, will need to be revised based upon the findings of the archeological surveys and the Cultural Landscape Inventory. The numerous historical research projects for the four park units identify the need for a full-time Historian.



Figure 25 Moore House, Yorktown

Museum Collections

The park's museum collection numbers over 1.1 million objects. Since 1986, buoyed by congressional support, the park has addressed the massive backlog of archeological, archival, and historic materials that had to be inventoried and catalogued. Approximately 95% of the collection have now been catalogued and 85% computerized. The backlog cataloging is nearly completed after several years of financial support from the MCPP funds. Progress has also been made to properly store and protect these collections. There are two immediate concerns for storage. First, the Yorktown collection which is housed in five different buildings with varying degrees of security and environmental control, needs to be consolidated at Yorktown. The second concern is the proper storage of the archival collection, which is completely cataloged. The collection lacks suitable storage equipment such as map cases and archival boxes. Much of the archival collection is still unsecured. Also of concern and being addressed in the General Management Plan is the long-term storage for the Jamestown collection, which is located in a flood plain. Security and fire protection of the collections is also being improved. Through operational adjustments, access to the collections is limited. In 1992, a fire detection and suppression system was installed at Jamestown. The two exhibited historic houses are protected by halon systems. However, the Yorktown Visitor Center and museum storage buildings are not fully protected. The greatest challenge that remains is conservation treatment where required. Condition surveys are needed for all 1.1 million objects and a conservation program established.

Another element of the museum collections is that of historic furnishings. The Moore House Furnishings Study is being implemented with yearly funding from Eastern National. Additional staff time and funds are required for its completion.

Despite the infusion of large sums of money for cataloging, storage, security and fire protection, the park lacks sufficient permanent curatorial staff to care for the collection. Large amounts of funding require contracting out for the work, which means staff time, is needed for preparing the contracts and supervising the work. Therefore, one Curator each for Jamestown and Yorktown and one shared Museum Technician is insufficient to oversee the 1.1 million-object collection. Increased national requirements on accountability and bringing the museum collections to standard as set forth in the NPS Museum Handbook, Parts I & II; the increased research requests to use the collections, and special long term projects such as the Jamestown and Yorktown archeological assessments make it impossible for the current staff to meet their obligations in the care and security of the collections.



Figure 26 Pottery shard from Green Spring

Historic Structures

Colonial NHP has a wealth of cultural resources and among the most important are the historic structures. The Nelson, Smith, Ballard, Somerwell, Dudley Digges and Archer houses have been restored in Yorktown. The Nelson House is one of the finest examples of Georgian architecture in America. It is not only significant for its association with Thomas Nelson, a signer of the Declaration of Independence and the Battle at Yorktown, but for its architectural design. A Historic Structure Report (HSR) is underway for this structure. The one other primary structure is the Pate House that will require an extensive rehabilitation. Fee Revenue funds will enable the park to repair basic systems, provide fire and intrusion alarms systems, and eliminates water penetration. An HSR is underway for the Pate House. Yorktown also contains the Swan Tavern Complex of five buildings. These were reconstructed in 1933 and represent some of the earliest attempts by the NPS to reconstruct historic buildings. The Swan Tavern Kitchen needs major repairs to ensure its preservation. The Medical Shop and a number of outbuildings were also reconstructed.

On the battlefield is the Moore House, site of the surrender negotiations. The house was restored and its outbuildings reconstructed in the mid-1930s.

Yorktown's historic buildings were restored in the period between 1933 and 1976; making some of the restorations quite old and raising the specter of extensive repair activities in the future. Paradoxically, the 1976 restorations have required more maintenance than those completed in the 1930s.

Because of changing procedures, only the structures restored in 1976 have Historic Structures Preservation Guides and these require review and updating. The rushed atmosphere of preparing for the American Revolution Bicentennial in the 1970s did not allow for the preparation of a historic structures report for the nationally significant Nelson House nor for any other building restored at that time. Although the park's List of Classified Structures was updated a few years ago, the National Register of Historic Places documentation will alter the LCS considerably. The park is also not able to update it on a more regular basis. The impressive number and quality of 18th century buildings in Yorktown require the attention of a full time Historical Architect to ensure that they are maintained in such a manner that their historical significance is not adversely affected.

The park has an extensive collection of earthworks unique to the National Park System. They include Revolutionary War, Civil War built on top of Revolutionary War, Civil War and reconstructed Revolutionary War. There are two documented British earthworks and a newly re-discovered French earthwork. However, several other works need to be researched as to whether they are Revolutionary or Civil War.

An extesive line of earthworks surrounding the town of Yorktown represents a Confederate/Union defense line superimposed over the British defense line of 1781.

There are miles of Confederate works built in 1861-62 related to a defensive line running across the Virginia Peninsula anchored at Yorktown. Union works built to protect the attackers or house batteries built to reduce Yorktown in 1862 faces these. There are also limited works associated with the fighting during the battle of Williamsburg in 1862 located along Colonial Parkway. There are also several forts and water batteries on Jamestown Island or the nearby mainland built to deny the Union Navy passage up the James River.

There is a series of earthworks reconstructed on their original sites from 1934 to 1976. The American and French armies leveled all their siege works after the Allied victory in 1781. Since the mid-1930s, the park has used funding created by the various national commemorations to excavate and reconstruct various portions of these siege lines.

The park has been able to successfully manage these works passively for over half a century. Maturing forests and the march of urban development to our boundaries will no longer allow this.

There is an urgent need for a detailed survey of the works and the development of professional management plans for these resources. The management plans must address both natural and human impact. Extensive funding will be required for both the survey and the implementation of the management strategies.

If these structures are going to receive the treatment that National Park Service standards require, a combination of funding and staffing must be available to document, rehabilitate and maintain these structures.

Archeological Sites

In an area where one can hardly turn over a shovel of dirt without disturbing some cultural object or feature archeological resources range from the Ambler foundations on Jamestown Island to road traces and American Indian sites within the park. A detailed Cultural Sites Inventory of the park is required to protect fragile resources from disturbance. Funding will be necessary for both the inventory and the follow- up. There are specific and urgent conservation problems at Cornwallis Cave. The Jamestown Glasshouse ruins and the Poor Potters kiln represent long term conservation problems. While there have been some short-term solutions implemented, the long-term solutions remain to be developed.

Figure 27 Archaeological dig, Jamestown



Comments

Much of the required information for the above surveys exists in the extensive data deposited in the park's research libraries and archives. This body of information gathered over such an extensive period represents a major task not only in assembling specific information but also in evaluating it. An Archeological Inventory and Assessment is nearly completed for Jamestown. After five years and at least one million dollars, a multi-disciplinary approach and a Cooperative Agreement with the Colonial Williamsburg Foundation and the College of William and Mary enabled the park to provide new and insightful knowledge on Jamestown from pre-historic times to the most recent past. A tree ring study provided a key to understanding the desperate early years of survival for the settlement when it was uncovered that the region was experiencing one of the worst droughts in 800 years. Land ownership maps from the 1620s to the present and biographical essays on these owners provide an interesting mosaic view of the diverse enterprises and people who populated Jamestown. Most of the reports are in draft or final stages, but the findings will enable the park to develop a solid research plan for the future, identify key archeological sites to be preserved, and interpret a more complete story of the first permanent English settlement in North America.

With the extraordinary number and quality of archeological sites and the frequent number of projects requiring archeological clearance, the need of a full-time archeologist is identified as one of our top ten priorities in the Project Statements. The Assessment has brought attention to the significance of Jamestown and what can be learned from its archeological resources over the years to come.

An Archeological Assessment of Yorktown began in 1997 and received funding for a second year in 1998. Many more years of funding are needed to complete the Phase I survey of Yorktown and the 4000-acre battlefield.

In 1998, Fee Revenue Funds supported a Phase I Archeological Survey of Green Spring in preparation for a GMP. Funding is needed to conduct Phase II testing in those sites that tested positive and to conduct similar surveys of Colonial Parkway. In many cases, the same data will be utilized in developing the park’s ASMIS.

Cultural Landscapes

The park has four Cultural Landscapes identified at this time: Jamestown, Yorktown, Colonial Parkway and Green Spring. A *Cultural Landscape Report for Colonial Parkway* was completed in 1998 and received an award from the Society of Landscape Architects. It provides a history of the Parkway and identifies the character defining features. The Cultural Landscape Inventory (CLI) for Green Spring was initiated in the spring of 1999 to facilitate the GMP amendment for this unit. The CLI for the remaining units needs to be scheduled.

NATURAL RESOURCE MANAGEMENT PROGRAMS AND PRIORITIES

Priorities 2-7 are only partially funded. Other priorities are unfunded needs:

Priority 1 - Increase to ONPS, additional FTEs

Increase to base funding, add FTE's and support funding - the natural resource program has developed into a complex and multi-faceted program involving many partners. But the program is now at the point that it is to complex and demanding to be handled by one FTE. There is an urgent need for permanent base funding for FTE's. This priority would add four-FTEs. The first sub-priority is for a plant ecologist and a biological technician. The second sub-priority is for zoologist and another biological technicians. Additional funding on-top of salaries and benefits would support research, inventory and monitoring, supplies and materials. Them personnel are critical to developing and implementation of an invasive species mitigation, vegetation management programs dealing with fields, shorelines and earthworks; endangered species monitoring, water and wetlands monitoring, wildlife inventory work, NEPA planning and compliance.

Priority 2, Exotic Invasive Flora Species

Obtain funding for mitigation of exotic species. Funding from soft monies is currently being used to develop a parkwide inventory and mitigation plan. But for mitigation to be conducted not only does priority one above need to be fulfilled, but additional ONPS increases for staffing, supplies and materials will be needed.

Priority 3 - Sinkholes Study

Biological and physical study of the sinkholes of Yorktown has begun funded with regional science monies. These park sinkholes are part of the larger environmentally important Grafton Pond Sinkhole complex. This three study is part of the larger inventory of the biotic and abiotic environment of the Yorktown Battlefield environs

Priority 4 - Develop Hydrogeological Framework of the Park

The USGS under an interagency agreement funded by regional science is developing the geohydrological framework of the Yorktown environs. This three study is part of the larger inventory of the biotic and abiotic environment of the Yorktown Battlefield environs.

Priority 5 - Water Quality

Surface and Ground water analysis and long-term monitoring planning is being conducted by the NPS, Water Resource Division. This is an out-growth of the different water studies, e.g., Groundwater, Fisheries, STORET.

Priority 6 - Public Information and Education

A great amount of inventory information on the park natural resources has been collected. A park website on the natural resources has been initiated. But the overall interpretative program of the park does not include natural resources. Long-term interpretative planning is being conducted parkwide. This priority would include the design, production and installation of Visitor Center's and wayside exhibits, expansion and enhancement of the natural resource website, natural resource handouts and handbook, and development of video on the park's natural resources.

Priority 7 - Deer Management

Obtain funding for cooperative research and monitoring studies with adjacent jurisdictions and

Priority 8 - Herps study - parkwide study of reptiles and amphibians.

Priority 9 - Develop LTEM

Obtain increase to ONPS to design and implement a long-term environmental monitoring program (LTEM). Before the management of natural resources, it is essential that we fully understand what resources exist and their condition. The LTEM program provides the yardstick by which we are able to measure the success of all other actions. A core LTEM program is developing providing some basic information on general field and forest vegetation, aquatic resources, water quality, wetlands, RTE's, erosion, and some pest management components. Other components need to be developed, along with a master plan and guidelines. Add one-FTE to serve as Inventory and Monitoring Program Manager. Obtain funding for multi-year research project to develop comprehensive database management information system to link spatial and non-spatial data and analysis into one system.

Priority 10 - Flora Surveys

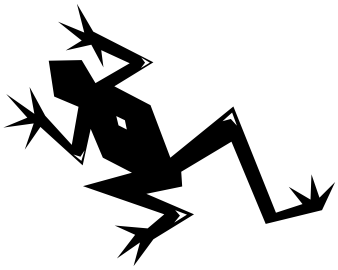
Flora surveys are needed to fully understand and manage the resources of the park, in cooperation with our adjacent governmental agencies and other neighboring landowners.

Priority 11 - Forestry and Landscape Management Planning

Forestry and landscape management includes a more complete understanding of the historic forestry and landscape elements of the park, the current conditions, the desired objectives and the means to reach those objectives. This program also includes vista management, hazard tree control, roadside vegetation control and landscaping in developed areas. Some of these project areas are the responsibility of the Maintenance Division but require professional assistance in planning and monitoring from the natural and cultural resources management specialists.

Priority 12 - Faunal Surveys - Awaiting NPS I&M funding

[redacted]



NATURAL AND CULTURAL RESOURCE PROGRAMMING TABLES

The following tables are used for programming purposes. The totals for the work, project or staffing are tabulated from the individual project statements (see Project Statements section). Some project statements are completely funded; others are only partially funded and others are unfunded.

Summary Report Funded $ by Activity, FY99

Table 9 Summary Report Funded $ by Activity, FY99, Colonial NHP
($ in thousands - by activity type)

FUNDING SOURCE	TOTAL	RES	MIT	MON	PRO	INT	ADM
NDON	4337.00	4337.00	0.00	0.00	0.00	0.00	0.00
NSTA	1.00	0.00	0.00	1.00	0.00	0.00	0.00
NUNV	3.50	0.00	0.00	3.50	0.00	0.00	0.00
NVOL	1.00	0.00	0.00	0.00	0.00	1.00	0.00
PCR1	114.50	32.50	2.50	20.00	5.00	0.00	54.50
PFEE	36.00	0.00	36.00	0.00	0.00	0.00	0.00
PNR1	243.00	38.00	3.00	117.00	0.00	5.00	80.00
POF1	456.00	0.00	395.00	2.00	49.00	0.00	10.00
RCCM	49.00	0.00	49.00	0.00	0.00	0.00	0.00
RNRM	27.00	27.00	0.00	0.00	0.00	0.00	0.00
SCRP	17.00	17.00	0.00	0.00	0.00	0.00	0.00
SFIR	2.00	0.00	2.00	0.00	0.00	0.00	0.00
SNWR	4.00	4.00	0.00	0.00	0.00	0.00	0.00
SOTH	4.00	0.00	0.00	4.00	0.00	0.00	0.00
TOTAL	5295.00	4455.50	487.50	147.50	54.00	6.00	144.50

RMP Summary Report, Unfunded $ by Activity, FY:1-4

Table 10 RMP Summary Report, Unfunded $ by Activity, FY:1-4, Colonial NHP
($ in thousands - by funding type)

FUNDING TYPE	TOTAL	RES	MIT	MON	PRO	INT	ADM
Onetime	21606.50	3061.00	6946.00	1115.50	9805.00	195.00	484.00
Recur.	899.00	200.00	320.00	144.00	0.00	0.00	235.00
TOTAL	22505.50	3261.00	7266.00	1259.50	9805.00	195.00	719.00

CULTURAL/INTEGRATED/NATURAL FUNDED ACTIVITIES

Table 11 Cultural/Integrated/Natural Funded Programming Sheet

PROJECT NUMBER	PROJECT TITLE	PKG NUM	CULT RES TYPE	SYSTEM-WIDE ISSUE	FUNDING SOURCE	ACT TYP	TYP	CURRENT YEAR 1999 $$	CURRENT YEAR 1999 FTE	OUTYEAR 1 2000 $$	OUTYEAR 1 2000 FTE	OUTYEAR 2 2001 $$	OUTYEAR 2 2001 FTE	OUTYEAR 3 2002 $$	OUTYEAR 3 2002 FTE	TOTAL $$	TOTAL FTE
301.100 C	BRING MUSEUM COLLECTION TO STANDARD COMPLETE CATALOGING		OBJC	C46	PKBASE-CR	ADM	R	20.00	0.40	10.00	0.20	10.00	0.20	5.00	0.10	45.00	0.90
301.200 C	BRING MUSEUM COLLECTION TO STANDARD IMPROVE MUSEUM STORAGE		COMB	C47 C50	PKBASE-CR	MON	R	20.00	0.40	10.00	0.20	10.00	0.20	10.00	0.20	50.00	1.00
301.300 C	BRING MUSEUM COLLECTION TO STANDARD IMPLEMENT FIRE/SECURITY		COMB	C50 C97	PKBASE-CR	PRO	R	5.00	0.10	5.00	0.10	5.00	0.10	5.00	0.10	20.00	0.40
301.400 C	BRING MUSEUM COLLECTION TO STANDARD UPDATE ACCESSIONS, LOANS		COMB	C46 C81	PKBASE-CR	RES	R	5.00	0.10	5.00	0.10	5.00	0.10	5.00	0.10	20.00	0.40
301.500 C	BRING MUSEUM COLLECTION TO STANDARD CONSERVE COLLECTN		OBJC	C48 C41	PKBASE-CR	MIT	R	2.50	0.05	2.50	0.05	2.50	0.05	2.50	0.05	10.00	0.20
301.700	CONSERVE		OBJC	C48 C49	FEE-REV	MIT	O	36.00	0.25	.00	.00	.00	.00	.00	.00	36.00	0.25

C	WASHINGTON'S TENTS																
301.900 C	BRING MUSEUM COLLECTION TO STANDARD CONDUCT APPRAISALS	OBJC	C46	$-DONATE	RES	O	2.00	.00	.00	.00	.00	.00	.00	.00	2.00	0.00
	Project Total $$						90.50		32.50		32.50		27.50		183.00	
	Project Total FTE						1.30		0.65		0.65		0.55		3.15	
303.000 C	MANAGE CULTURAL RESOURCE PROGRAM	COMB	C83 C93	PKBASE-CR	ADM	R	28.00	0.50	53.00	1.00	28.00	0.50	.00	.00	109.00	2.00
				PKBASE-CR	RES	R	25.00	0.50	.00	.00	25.00	0.50	.00	.00	50.00	1.00
	Subtotal						53.00	1.00	53.00	1.00	53.00	1.00	.00	.00	159.00	3.00
306.001 C	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN CONDUCT TOWN ARCHEOLOGY	SITE	C01 C02	FEE-REV	RES	O	.00	.00	35.00	.00	.00	.00	.00	.00	35.00	0.00
306.002 C	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN RESEARCH LANDHOLDINGS	SITE	C02	PKBASE-CR	RES	R	2.50	0.05	2.50	0.05	2.50	0.05	.00	.00	7.50	0.15
	Project Total $$						2.50		37.50		2.50		0.00		42.50	
	Project Total FTE						0.05		0.05		0.05		0.00		0.15	
309.003 C	IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIONS INVESTIGATE TOWN SITES	SITE	C02 C03	$-DONATE	RES	O	15.00	0.03	.00	.00	.00	.00	.00	.00	15.00	0.03
310.002 C	PRESERVE POOR POTTER ARCHEOLOGICAL SITE DESIGN &	SITE	C05	PKBASE-CR	ADM	O	5.00	0.10	5.00	0.10	5.00	0.10	5.00	0.10	20.00	0.40

	CONSTRUCT BLDG																	
310.003 C	PRESERVE POOR POTTER ARCHEOLOGICAL SITE RESEARCH HISTORY		COMB	C38		PKBASE-CR	ADM	R	0.50	0.01	0.50	0.01	0.50	0.01	.00	.00	1.50	0.03
	Project Total $$									5.50		5.50		5.50		5.00		21.50
	Project Total FTE									0.11		0.11		0.11		0.10		0.43
313.000 C	PREVENT FURTHER EROSION OF JAMESTOWN AT NEW TOWNE	B	COMB	C07	C13	RG-CR-MTN	MIT	O	49.00	0.10	.00	.00	.00	.00	.00	.00	49.00	0.10
316.000 C	MAINTAIN PARK LIBRARY		COMB	C83	C60	PKBASE-CR	ADM	R	1.00	0.02	1.00	0.02	1.00	0.02	1.00	0.02	4.00	0.08
317.000 C	PREPARE THE JAMESTOWN NRHP DOCUMENTATION		COMB	C36		CRPP	RES	O	17.00	.00	.00	.00	.00	.00	.00	.00	17.00	0.00
340.000 C	DEVELOP ARCHITECTURAL DESIGN GUIDELINES/ YORKTOWN		STRC	C57		FEE-REV	RES	O	.00	.00	40.00	.00	.00	.00	.00	.00	40.00	0.00
343.000 C	RESEARCH THE HISTORY OF YORKTOWN AS A SEAPORT		COMB	C38		$-DONATE	RES	O	4.32	.00	.00	.00	.00	.00	.00	.00	4.32	0.00
004.000 I	MAINTENANCE OF PARK GROUNDS, FIELDS, TRAILS		COMB	C14	N08	PKBASE-OT	MIT	R	350.00	11.00	.00	.00	.00	.00	.00	.00	350.00	11.00
005.000 I	REMOVE HAZARDOUS TREES		COMB	N24		PKBASE-OT	MIT	R	30.00	0.50	.00	.00	.00	.00	.00	.00	30.00	0.50

006.000	CONDUCT	COMB	N22	C71	PKBASE-OT	PRO	R	40.00	1.50	.00	.00	.00	.00	.00	.00	40.00	1.50
I	RESOURCE PROTECTION ACTIVITIES																
009.000	MANAGE ROW'S	COMB	N24	C70	PKBASE-OT	ADM	R	10.00	0.20	10.00	0.20	.00	.00	.00	.00	20.00	0.40
I	AND SPECIAL				PKBASE-NR	MON	R	3.00	0.10	3.00	0.10	.00	.00	.00	.00	6.00	0.20
	PARK USES																
					Subtotal			13.00	0.30	13.00	0.30	.00	.00	.00	.00	26.00	0.60
001.000	CONTINUE		N20	N17	UNIV-COLL	MON	O	3.50	.00	.00	.00	.00	.00	.00	.00	3.50	0.00
N	GEOGRAPHIC				PKBASE-NR	MON	R	58.00	1.00	56.00	1.00	.00	.00	.00	.00	114.00	2.00
	INFORMATION				PKBASE-NR	ADM	R	19.00	0.15	12.00	0.20	.00	.00	.00	.00	31.00	0.35
	SYSTEM																
	DEVELOPMENT				Subtotal			80.50	1.15	68.00	1.20	.00	.00	.00	.00	148.50	2.35
008.000	CONDUCT IPM	COMB	C18	N04	PKBASE-OT	MIT	R	5.00	0.10	.00	.00	.00	.00	.00	.00	5.00	0.10
N	MONITORING,				ST-LOCAL	MON	R	1.00	.00	.00	.00	.00	.00	.00	.00	1.00	0.00
	MITIGATION-STR				PKBASE-NR	ADM	R	1.00	.00	.00	.00	.00	.00	.00	.00	1.00	0.00
	UCTURES, VEG.																
					Subtotal			7.00	0.10	.00	.00	.00	.00	.00	.00	7.00	0.10
010.000	CONDUCT FIRE	COMB	N24	C72	FIRE-$	MIT	R	2.00	.00	.00	.00	.00	.00	.00	.00	2.00	0.00
N	MANAGEMENT,				PKBASE-OT	PRO	R	9.00	0.25	.00	.00	.00	.00	.00	.00	9.00	0.25
	TRAINING,																
	EQUIPMENT				Subtotal			11.00	0.25	.00	.00	.00	.00	.00	.00	11.00	0.25
015.000	HAZARDOUS	SITE	N20	N11	PKBASE-NR	ADM	R	12.00	0.20	.00	.00	.00	.00	.00	.00	12.00	0.20
N	MATERIALS				WATER-RES	RES	R	4.00	.00	.00	.00	.00	.00	.00	.00	4.00	0.00
	INVESTIGATION				SVC-OTHER	MON	R	4.00	.00	.00	.00	.00	.00	.00	.00	4.00	0.00
	AND				PKBASE-OT	MIT	O	10.00	.00	.00	.00	.00	.00	.00	.00	10.00	0.00
	MITIGATION																
					Subtotal			30.00	0.20	.00	.00	.00	.00	.00	.00	30.00	0.20
601.100	WATER	COMB	N20	N11	PKBASE-NR	MON	R	4.00	0.10	.00	.00	.00	.00	.00	.00	4.00	0.10
N	RESOURCE				PKBASE-OT	MON	R	2.00	.00	.00	.00	.00	.00	.00	.00	2.00	0.00
	MANAGEMENT																
	GROUNDWATER				Subtotal			6.00	0.10	.00	.00	.00	.00	.00	.00	6.00	0.10
	MONITORING																
601.201	STATE		N11	N13	PKBASE-NR	MIT	R	3.00	0.10	3.00	0.10	4.00	0.10	.00	.00	10.00	0.30
N	REGULATORY																
	PROCESS																
	PERMIT REVIEW																
601.303	INVENTORY AND		N20	N12	PKBASE-NR	MON	R	4.00	0.10	4.00	0.10	.00	.00	.00	.00	8.00	0.20
N	SITE																
	ASSESSMENT OF																
	EROSION AND																

	SEDIM. RELATED PROBLEMS															
601.410 N	DELINEATE REGIONAL SHALLOW AQUIFER YORKTOWN		N20	PKBASE-NR RES	O	5.00	0.10	.00	.00	.00	.00	.00	.00	5.00	0.10
601.502 N	DETERMINATION OF THE FUNCTIONS & VALUES OF PARK WETLAND ENVIRONMENTS		N20	PKBASE-NR MON	R	10.00	0.20	10.00	0.20	.00	.00	.00	.00	20.00	0.40
601.503 N	SURFACE WATER QUALITY TRENDS MONITORING/RISK ASSESSMENT		N11 N20	PKBASE-NR ADM	R	3.00	0.10	3.00	0.10	.00	.00	.00	.00	6.00	0.20
601.504 N	SHORELINE STABILITY/EROSION MONITORING		N20	PKBASE-NR MON	R	5.00	0.10	.00	.00	.00	.00	.00	.00	5.00	0.10
				PKBASE-NR ADM	O	5.00	0.10	.00	.00	.00	.00	.00	.00	5.00	0.10
				Subtotal		10.00	0.20	.00	.00	.00	.00	.00	.00	10.00	0.20
601.512 N	DETERMINE FUNCTIONS & VALUES OF PARK WETLANDS GRAFTON SINKHOLE COMPLEX		N20 N17	PKBASE-NR RES	O	30.00	.00	.00	.00	.00	.00	.00	.00	30.00	0.00
				Project Total $$			71.00		20.00		4.00		0.00		95.00
				Project Total FTE			0.90		0.50		0.10		0.00		1.50
602.000 N	MONITORING AND MITIGATION OF RTE SPECIES		N02 N03	PKBASE-NR MON	R	4.00	0.10	4.00	0.10	.00	.00	.00	.00	8.00	0.20
603.000 N	DEVELOP LONG TERM	COMB	N20	PKBASE-NR RES	R	3.00	0.10	5.00	0.10	.00	.00	.00	.00	8.00	0.20
				PKBASE-NR MON	R	5.00	0.10	5.00	0.10	.00	.00	.00	.00	10.00	0.20

	ENVIRONMENTAL MONITORING PROGRAM			Subtotal	8.00	0.20	10.00	0.20	.00	.00	.00	.00	18.00	0.40
603.100 N	DEVELOP LONG TERM ENVIRONMENTAL MONITORING PROGRAM DEVELOP INFO MGMT SYSTEM	COMB	N20 N24	PKBASE-NR ADM R	15.00	0.30	20.00	0.40	15.00	0.20	15.00	0.20	65.00	1.10
				Project Total $$		23.00		30.00		15.00		15.00		83.00
				Project Total FTE		0.50		0.60		0.20		0.20		1.50
604.000 N	HIRE PLANT ECOLOGIST AND INVENTORY AND MONITORING M	COMB	N20 N08	PKBASE-NR ADM R	20.00	0.40	.00	.00	.00	.00	.00	.00	20.00	0.40
607.000 N	EXOTIC SPECIES IDENTIFICATION , MONITORING, MITIGATI	COMB	N05 N20	PKBASE-NR MON R	4.00	0.10	4.00	0.10	4.00	0.10	4.00	0.10	16.00	0.40
				RG-RM-NAT RES O	27.00	1.00	.00	.00	.00	.00	.00	.00	27.00	1.00
				PKBASE-NR ADM O	5.00	.00	.00	.00	.00	.00	.00	.00	5.00	0.00
				Subtotal	36.00	1.10	4.00	0.10	4.00	0.10	4.00	0.10	48.00	1.40
608.000 N	FAUNA INVENTORY AND MONITORING		N20	PKBASE-NR MON R	6.00	0.10	6.00	0.10	.00	.00	.00	.00	12.00	0.20
609.000 N	FLORA INVENTORY AND MONITORING		N20	PKBASE-NR MON R	8.00	0.20	.00	.00	.00	.00	.00	.00	8.00	0.20
41 projects printed				Grand Total $$		967.32		314.50		117.50		52.50		1451.82
				Grand Total FTE		20.91		4.73		2.23		0.97		28.84

CULTURAL/INTEGRATED/NATURAL UNFUNDED ACTIVITIES

Table 12 Cultural/Integrate/Natural Unfunded Programming Sheets ($ thousands)

PK PRI	PROJECT NUMBER	PROJECT TITLE	PKG NUM	CULT RES TYPE	SYSTEM-WIDE ISSUE	ACT TYP	TYP	CURRENT YEAR 1999 $$	CURRENT YEAR 1999 FTE	OUTYEAR 1 2000 $$	OUTYEAR 1 2000 FTE	OUTYEAR 2 2001 $$	OUTYEAR 2 2001 FTE	OUTYEAR 3 2002 $$	OUTYEAR 3 2002 FTE	TOTAL $$	TOTAL FTE
1 C	313.000	PREVENT FURTHER EROSION OF JAMESTOWN AT NEW TOWNE	B	COMB	C07 C13	MIT	O	451.00	1.00	.00	.00	.00	.00	.00	.00	451.00	1.00
2 C	301.700	CONSERVE WASHINGTON'S TENTS		OBJC	C48 C49	RES	O	10.00	0.10	.00	.00	.00	.00	.00	.00	10.00	0.10
						MIT	O	300.00	2.64	.00	.00	5.00	0.01	.00	.00	305.00	2.65
						INT	O	.00	.00	15.00	0.10	.00	.00	.00	.00	15.00	0.10
				Subtotal				310.00	2.74	15.00	0.10	5.00	0.01	.00	.00	330.00	2.85
3 C	309.001	IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIONS EXCAVATE THREATENED SITES		SITE	C04 C05	MIT	O	20.00	.00	10.00	.00	10.00	.00	10.00	.00	50.00	0.00
4 C	318.000	CREATE ARCHEOLOGIST POSITION FOR PARK		SITE	C80	ADM	R	65.00	1.00	.00	.00	.00	.00	.00	.00	65.00	1.00
5 C	320.000	CREATE HISTORICAL ARCHITECT POSITION		STRC	C85	ADM	R	65.00	1.00	.00	.00	.00	.00	.00	.00	65.00	1.00
6 C	319.000	CREATE RESEARCH HISTORIAN POSITION FOR PARK		COMB	C86	ADM	R	55.00	1.00	.00	.00	.00	.00	.00	.00	55.00	1.00
7 C	003.000	MAINTAIN HISTORIC STRUCTURES	B	STRC	C55 C58	MIT	R	300.00	3.00	.00	.00	.00	.00	.00	.00	300.00	3.00
8 C	306.001	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN CONDUCT TOWN ARCHEOLOGY		SITE	C01 C02	RES	O	30.00	.00	30.00	.00	30.00	.00	.00	.00	90.00	0.00

9	303.000 C	MANAGE CULTURAL RESOURCE PROGRAM	COMB	C83	C93	ADM	O	.00	.00	25.00	.00	.00	.00	.00	.00	25.00	0.00
10	310.002 C	PRESERVE POOR POTTER ARCHEOLOGICAL SITE DESIGN & CONSTRUCT BLDG	SITE	C05		PRO	O	708.00	0.50	.00	.00	.00	.00	.00	.00	708.00	0.50
11	315.000 C	PREVENT WATER DAMAGE TO YORKTOWN COLLECTION	OBJC	C47	C49	PRO	O	2000.00	1.00	.00	.00	.00	.00	.00	.00	2000.00	1.00
12	321.000 C	PRESERVE AND MAINTAIN NELSON HOUSE AND WALL	STRC	C55	C53	PRO	O	161.60	1.00	.00	.00	186.20	2.00	49.30	1.00	397.10	4.00
13	314.000 C	PREVENT WATER DAMAGE TO JAMESTOWN COLLECTION	OBJC	C49	C47	PRO	O	3000.00	2.00	5.00	0.25	.00	.00	.00	.00	3005.00	2.25
14	304.003 C	PREPARE SPECIAL HISTORY STUDY OF NATIVE AMERICANS JAMESTOWN STUDY	COMB	C38		RES	O	35.00	0.02	.00	.00	.00	.00	.00	.00	35.00	0.02
15	309.003 C	IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIONS INVESTIGATE TOWN SITES	SITE	C02	C03	RES	O	185.00	0.27	.00	.00	.00	.00	.00	.00	185.00	0.27
16	304.002 C	PREPARE SPECIAL HISTORY ON AFRICAN AMERICANS YORKTOWN STUDY	COMB	C38		RES	R	30.00	.00	30.00	.00	.00	.00	.00	.00	60.00	0.00
17	309.002 C	IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIONS INVESTIGATE ISLAND SITES	SITE	C02	C03	RES	O	50.00	0.06	50.00	0.06	50.00	0.06	50.00	0.06	200.00	0.24
18	301.300 C	BRING MUSEUM COLLECTION TO STANDARD IMPLEMENT FIRE/SECURITY	COMB	C50	C97	PRO	O	240.00	.00	50.00	.00	.00	.00	.00	.00	290.00	0.00

19	322.000 C	PRESERVE AND MAINTAIN MOORE HOUSE COMPLEX	STRC	C55	C56	PRO	O	113.10	.00	25.00	0.20	.00	.00	.00	.00	138.10	0.20
20	312.002 C	PRESERVE AND REHAB PATE HOUSE REPAIR AND PROTECT STRUC.	STRC	C56		PRO	O	.00	.00	180.00	2.00	.00	.00	.00	.00	180.00	2.00
21	308.001 C	DEVELOP GREEN SPRING CONDUCT ARCHEOL. ASSESS.	SITE	C02	C04	RES	O	200.00	0.50	.00	.00	.00	.00	.00	.00	200.00	0.50
22	301.200 C	BRING MUSEUM COLLECTION TO STANDARD	COMB	C47	C50	PRO	O	875.00	.00	150.00	.00	.00	.00	.00	.00	1025.00	0.00
						MON	O	.00	.00	60.00	1.00	.00	.00	.00	.00	60.00	1.00
		IMPROVE MUSEUM STORAGE	Subtotal					875.00	.00	210.00	1.00	.00	.00	.00	.00	1085.00	1.00
23	335.000 C	PROVIDE TERMITE CONTROL FOR HISTORIC STRUCTURES	STRC	C55		PRO	O	35.00	.00	35.00	.00	.00	.00	.00	.00	70.00	0.00
24	332.000 C	PRESERVE AND MAINTAIN THE YORKTOWN MONUMENT	STRC	C56		PRO	O	100.00	.00	.00	.00	.00	.00	.00	.00	100.00	0.00
25	306.004 C	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN BATTLEFIELD AND ENVIRONS	SITE	C01	C02	RES	O	250.00	.00	.00	.00	.00	.00	.00	.00	250.00	0.00
26	310.003 C	PRESERVE POOR POTTER ARCHEOLOGICAL SITE RESEARCH HISTORY	COMB	C38		RES	O	5.00	.00	5.00	.00	5.00	.00	5.00	.00	20.00	0.00
27	301.400 C	BRING MUSEUM COLLECTION TO STANDARD UPDATE ACCESSIONS, LOANS	COMB	C46	C81	RES	R	25.00	0.50	.00	.00	.00	.00	.00	.00	25.00	0.50
28	301.500 C	BRING MUSEUM COLLECTION TO STANDARD	OBJC	C48	C41	MIT	O	25.00	0.50	.00	.00	.00	.00	.00	.00	25.00	0.50

		CONSERVE COLLECTN													
						Project Total $$	50.00		0.00		0.00		0.00		50.00
						Project Total FTE	1.00		0.00		0.00		0.00		1.00
29	333.000 C	PRESERVE AND MAINTAIN THE JAMESTOWN MONUMENT	STRC	C55	PRO	O	100.00	.00	.00	.00	.00	.00	.00	.00	100.00	0.00
30	327.000 C	PRESERVE AND MAINTAIN SWAN TAVERN COMPLEX	STRC	C56 C52	RES	O	50.00	.00	.00	.00	.00	.00	.00	.00	50.00	0.00
					PRO	O	80.10	.00	255.30	.00	.00	.00	.00	.00	335.40	0.00
			Subtotal				130.10	.00	255.30	.00	.00	.00	.00	.00	385.40	0.00
31	306.003 C	CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN DEFINE SURRENDER FIELD	SITE	C02 C03	RES	O	60.00	.00	.00	.00	.00	.00	.00	.00	60.00	0.00
32	301.900 C	BRING MUSEUM COLLECTION TO STANDARD CONDUCT APPRAISALS	OBJC	C46	RES	O	5.00	.00	5.00	.00	5.00	.00	5.00	.00	20.00	0.00
33	301.600 C	BRING MUSEUM COLLECTION TO STANDARD INCREASE TO BASE FUNDING	OBJC	C81 C83	ADM	O	20.00	.00	90.00	2.00	.00	.00	.00	.00	110.00	2.00
						Project Total $$	25.00		95.00		5.00		5.00		130.00
						Project Total FTE	0.00		2.00		0.00		0.00		2.00
34	305.000 C	ARCHEOLOGICAL SURVEY, COLONIAL PARKWAY	COMB	C02 C19	RES	O	50.00	0.30	50.00	0.30	50.00	0.30	50.00	0.30	200.00	1.20
35	316.000 C	MAINTAIN PARK LIBRARY	COMB	C83 C60	ADM	O	3.00	.00	.00	.00	.00	.00	.00	.00	3.00	0.00
36	336.000 C	REPLACE HALON SYSTEM AT NELSON AND MOORE HOUSES	STRC	C55	PRO	O	295.60	.00	.00	.00	.00	.00	.00	.00	295.60	0.00
37	306.002	CONDUCT	SITE	C02	RES	O	10.00	.00	10.00	.00	10.00	.00	10.00	.00	40.00	0.00

	C	ARCHEOLOGICAL ASSESSMENT, YORKTOWN RESEARCH LANDHOLDINGS																
999	307.000	PREPARE	COMB C37	RES	O	.00	.00	.00	.00	.00	.00	5.00	0.30	5.00	0.30
	C	ADMINISTRATIVE HISTORY																
999	301.100	BRING MUSEUM	OBJC C46	RES	O	.00	.00	.00	.00	.00	.00	30.00	.00	30.00	0.00
	C	COLLECTION TO STANDARD COMPLETE CATALOGING																
999	323.000	PRESERVE AND	STRC C55 C56	PRO	O	73.90	.00	95.60	1.20	.00	.00	.00	.00	169.50	1.20
	C	MAINTAIN DUDLEY		RES	O	.00	.00	25.00	.00	.00	.00	.00	.00	25.00	0.00
		DIGGES COMPLEX																
			Subtotal			73.90	.00	120.60	1.20	.00	.00	.00	.00	194.50	1.20
999	324.000	PRESERVE AND	STRC C55 C56	PRO	O	73.90	.00	100.00	.00	.00	.00	.00	.00	173.90	0.00
	C	MAINTAIN SOMERWELL		RES	O	.00	.00	35.00	.00	.00	.00	.00	.00	35.00	0.00
		HOUSE AND STABLE																
			Subtotal			73.90	.00	135.00	.00	.00	.00	.00	.00	208.90	0.00
999	325.000	PRESERVE AND	STRC C55 C52	PRO	O	59.10	.00	69.80	1.00	.00	.00	.00	.00	128.90	1.00
	C	MAINTAIN SMITH		RES	O	.00	.00	25.00	.00	.00	.00	.00	.00	25.00	0.00
		HOUSE																
			Subtotal			59.10	.00	94.80	1.00	.00	.00	.00	.00	153.90	1.00
999	328.000	PRESERVE AND	STRC C56 C55	PRO	O	132.10	2.00	.00	.00	.00	.00	.00	.00	132.10	2.00
	C	MAINTAIN ARCHER		RES	O	25.00	.00	.00	.00	.00	.00	.00	.00	25.00	0.00
		COTTAGE																
			Subtotal			157.10	2.00	.00	.00	.00	.00	.00	.00	157.10	2.00
999	329.000	PRESERVE AND	STRC C56 C52	RES	O	30.00	.00	.00	.00	.00	.00	.00	.00	30.00	0.00
	C	MAINTAIN NATIONAL		PRO	O	.00	.00	75.00	.00	40.00	.00	.00	.00	115.00	0.00
		CEMETERY STRUCTURES																
			Subtotal			30.00	.00	75.00	.00	40.00	.00	.00	.00	145.00	0.00
999	330.000	PRESERVE AND	STRC C56 C52	RES	O	30.00	.00	.00	.00	.00	.00	.00	.00	30.00	0.00
	C	MAINTAIN BLOW		PRO	O	49.90	.00	118.70	.00	.00	.00	.00	.00	168.60	0.00
		ESTATE STRUCTURES																
			Subtotal			79.90	.00	118.70	.00	.00	.00	.00	.00	198.60	0.00
999	331.000	PRESERVE AND	STRC C55	PRO	O	.00	.00	.00	.00	.00	.00	50.00	.00	50.00	0.00
	C	MAINTAIN BURCHER COTTAGE																

999	334.000 C	PRESERVE AND MAINTAIN CHURCH STREET COMFORT STATION	STRC	C55	C56	PRO	O	19.70	0.25	.00	.00	.00	.00	.00	.00	19.70	0.25
999	337.000 C	PRESERVE JAMESTOWN RUINS	SITE	C05		PRO	O	73.90	.00	.00	.00	.00	.00	.00	.00	73.90	0.00
999	338.000 C	PRESERVE JAMESTOWN GLASSHOUSE RUINS	SITE	C07		PRO	O	21.90	.00	.00	.00	.00	.00	.00	.00	21.90	0.00
999	339.000 C	PRESERVE GREEN SPRING RUINS	SITE	C07		PRO	O	47.30	.00	.00	.00	.00	.00	.00	.00	47.30	0.00
999	341.000 C	RESEARCH SURRENDER AT YORKTOWN	COMB	C38		RES	O	20.00	.00	.00	.00	.00	.00	.00	.00	20.00	0.00
999	342.000 C	RESEARCH THE BRITISH CAMPAIGN IN VIRGINIA, 1781	COMB	C38		RES	O	21.00	.00	.00	.00	.00	.00	.00	.00	21.00	0.00
1	002.100 I	PRESERVE AND STABILIZE EARTHWORKS ESTABLISH MGMT PROGRAM	COMB	C19	C20	RES	R	35.00	1.00	35.00	1.00	35.00	1.00	35.00	1.00	140.00	4.00
2	017.000 I	PREPARE PARKWAY CULTURAL LANDSCAPE REPORT	COMB	C20	C11	MIT	O	35.00	0.04	35.00	0.04	.00	.00	.00	.00	70.00	0.08
4	005.000 I	REMOVE HAZARDOUS TREES	COMB	N24		MIT	O	170.00	2.00	.00	.00	.00	.00	.00	.00	170.00	2.00
5	004.000 I	MAINTENANCE OF PARK GROUNDS, FIELDS, TRAILS	COMB	C14	N08	RES	O	100.00	1.00	.00	.00	.00	.00	.00	.00	100.00	1.00
						MIT	O	1750.00	2.00	.00	.00	.00	.00	.00	.00	1750.00	2.00
			Subtotal					1850.00	3.00	.00	.00	.00	.00	.00	.00	1850.00	3.00
6	011.001 I	DEVELOP CULTURAL LANDSCAPE PROGRAM FOR JAMESTOWN PREPARE CLI	COMB	C10		RES	O	45.00	1.00	.00	.00	.00	.00	.00	.00	45.00	1.00
7	006.000 I	CONDUCT RESOURCE PROTECTION ACTIVITIES	COMB	N22	C71	PRO	O	.00	.00	60.00	1.00	.00	.00	.00	.00	60.00	1.00
8	007.000	PARTICIPATE IN	COMB	N16	N11	MIT	O	.00	.00	65.00	1.00	.00	.00	.00	.00	65.00	1.00

	I	ADJACENT LAND USE PROTECTION ACTIV.																
9	004.200	MAINTENANCE OF PARK		COMB	N22	C13	MON	O	.00	.00	10.00	0.20	85.00	0.30	7.00	0.20	102.00	0.70
	I	GROUNDS, FIELDS, TRAILS					RES	O	.00	.00	75.00	0.10	.00	.00	.00	.00	75.00	0.10
		EROSION CONTROL		Subtotal					.00	.00	85.00	0.30	85.00	0.30	7.00	0.20	177.00	0.80
10	004.100	MANAGEMENT OF		COMB	N08	N06	MIT	O	.00	.00	25.00	0.20	25.00	0.20	25.00	0.20	75.00	0.60
	I	GROUNDS, FIELDS, TRAILS OPEN FIELDS MANAGEMENT																
				Project Total $$					0.00		110.00		110.00		32.00		252.00	
				Project Total FTE					0.00		0.50		0.50		0.40		1.40	
11	014.000	SURVEY AND FENCE		COMB	N16	C73	MIT	O	.00	.00	.00	.00	.00	.00	1000.00	.00	1000.00	0.00
	I	PARK BOUNDARIES					RES	O	.00	.00	.00	.00	.00	.00	4.00	0.10	4.00	0.10
				Subtotal					.00	.00	.00	.00	.00	.00	1004.00	0.10	1004.00	0.10
12	011.002	DEVELOP JAMESTOWN		COMB	C11		RES	O	35.00	1.00	35.00	1.00	.00	.00	.00	.00	70.00	2.00
	I	CULTURAL LANDSCAPE PROGRAM PREPARE CLR																
13	009.000	MANAGE ROW'S AND		COMB	N24	C70	ADM	R	.00	.00	.00	.00	.00	.00	50.00	0.80	50.00	0.80
	I	SPECIAL PARK USES																
14	002.400	PRESERVE AND		SITE	C71	N22	RES	O	.00	.00	5.00	.00	5.00	.00	.00	.00	10.00	0.00
	I	STABILIZE EARTHWORKS VISITOR USE STUDY-YKTOWN																
15	016.000	MANAGE RECREATIONAL		COMB	N22		RES	O	.00	.00	20.00	.00	20.00	.00	.00	.00	40.00	0.00
	I	BEACH USE ALONG PARKWAY																
16	001.100	MANAGE GEOGRAPHIC		COMB	C62	C83	ADM	O	9.00	.00	.00	.00	.00	.00	.00	.00	9.00	0.00
	I	INFORMATION SYSTEM CULTURAL RESOURCE GIS																
16	012.000	CORNWALLIS CAVE	B	STRC	N21	C13	MIT	O	23.00	0.04	37.00	0.30	.00	.00	.00	.00	60.00	0.34
	I	MITIGATION																

17	002.300	PRESERVE AND		COMB	C20		MON	R	5.00	0.07	.00	.00	.00	.00	.00	.00	5.00	0.07
	I	STABILIZE EARTHWORKS PROTECT AND MONITOR																		
18	004.300	VEGETATION MGMT.			C72	N05	MIT	O	275.00	5.00	.00	.00	.00	.00	.00	.00	275.00	5.00
	I	FOR EXOTICS,SHORELINES, EARTHWORKS																		
0	601.303	INVENTORY AND SITE			N20	N12	RES	O	5.00	.00	.00	.00	.00	.00	.00	.00	5.00	0.00
	N	ASSESSMENT OF					INT	O	5.00	.00	.00	.00	.00	.00	.00	.00	5.00	0.00
		EROSION AND SEDIM.																		
		RELATED PROBLEMS	Subtotal						10.00	.00	.00	.00	.00	.00	.00	.00	10.00	0.00
1	607.000	EXOTIC SPECIES		COMB	N05	N20	RES	O	.00	.00	32.00	1.00	.00	.00	.00	.00	32.00	1.00
	N	IDENTIFICATION, MONITORING, MITIGATI																		
1	601.100	WATER RESOURCE		COMB	N20	N11	MON	R	.00	.00	10.00	.00	10.00	.00	10.00	.00	30.00	0.00
	N	MANAGEMENT GROUNDWATER MONITORING																		
1	601.410	DELINEATE REGIONAL			N20		RES	O	.00	.00	50.00	.00	50.00	.00	75.00	.00	175.00	0.00
	N	SHALLOW AQUIFER YORKTOWN																		
1	601.503	SURFACE WATER			N11	N20	MON	O	.00	.00	50.00	.00	50.00	.00	.00	.00	100.00	0.00
	N	QUALITY TRENDS					RES	O	.00	.00	.00	.00	.00	.00	25.00	.00	25.00	0.00
		MONITORING/RISK																		
		ASSESSMENT	Subtotal						.00	.00	50.00	.00	50.00	.00	25.00	.00	125.00	0.00
1	601.504	SHORELINE			N20		ADM	O	50.00	.00	75.00	.00	75.00	.00	.00	.00	200.00	0.00
	N	STABILITY/EROSION					RES	O	.00	.00	80.00	.00	25.00	.00	.00	.00	105.00	0.00
		MONITORING					MIT	O	.00	.00	150.00	.00	2300.00	.00	.00	.00	2450.00	0.00
							MON	O	.00	.00	.00	.00	.00	.00	15.00	.00	15.00	0.00
			Subtotal						50.00	.00	305.00	.00	2400.00	.00	15.00	.00	2770.00	0.00
			Project Total $$							50.00		415.00		2510.00		125.00		3100.00		
			Project Total FTE							0.00		0.00		0.00		0.00		0.00		
1	015.000	HAZARDOUS MATERIALS		SITE	N20	N11	MON	R	5.00	.00	25.00	.00	25.00	.00	25.00	.00	80.00	0.00
	N	INVESTIGATION AND MITIGATION																		

1	601.512	DETERMINE FUNCTIONS & VALUES OF PARK WETLANDS GRAFTON SINKHOLE COMPLEX		N20	N17	ADM	O	.00	.00	12.00	.00	.00	.00	.00	.00	12.00	0.00
N																		
2	001.000	CONTINUE GEOGRAPHIC INFORMATION SYSTEM DEVELOPMENT		N20	N17	MON	R	5.00	.00	.00	.00	.00	.00	.00	.00	5.00	0.00
N						ADM	O	15.00	.00	.00	.00	.00	.00	.00	.00	15.00	0.00
						MON	O	8.00	.00	18.50	.00	.00	.00	.00	.00	26.50	0.00
			Subtotal					28.00	.00	18.50	.00	.00	.00	.00	.00	46.50	0.00
3	604.000	HIRE PLANT ECOLOGIST AND INVENTORY AND MONITORING M	COMB	N20	N08	MON	O	.00	.00	100.00	1.00	185.00	1.00	.00	.00	285.00	2.00
N						RES	O	.00	.00	.00	.00	.00	.00	25.00	0.50	25.00	0.50
			Subtotal					.00	.00	100.00	1.00	185.00	1.00	25.00	0.50	310.00	2.50
4	602.000	MONITORING AND MITIGATION OF RTE SPECIES		N02	N03	MON	O	8.00	.00	.00	.00	.00	.00	.00	.00	8.00	0.00
N						MON	R	.00	.00	8.00	.00	8.00	.00	8.00	.00	24.00	0.00
			Subtotal					8.00	.00	8.00	.00	8.00	.00	8.00	.00	32.00	0.00
5	004.300	HIRE VEGETATION MANAGEMENT CREW-EXOTICS, SHORELINE		C72	N05	MIT	O	.00	.00	200.00	3.00	.00	.00	.00	.00	200.00	3.00
N																		
7	608.000	FAUNA INVENTORY AND MONITORING		N20		MON	O	.00	.00	75.00	1.00	100.00	1.00	.00	.00	175.00	2.00
N						ADM	O	.00	.00	10.00	.00	.00	.00	.00	.00	10.00	0.00
			Subtotal					.00	.00	85.00	1.00	100.00	1.00	.00	.00	185.00	2.00
8	609.000	FLORA INVENTORY AND MONITORING		N20		ADM	O	.00	.00	10.00	.00	.00	.00	.00	.00	10.00	0.00
N						RES	O	.00	.00	50.00	1.00	.00	.00	.00	.00	50.00	1.00
						MON	O	.00	.00	.00	.00	50.00	.00	.00	.00	50.00	0.00
			Subtotal					.00	.00	60.00	1.00	50.00	.00	.00	.00	110.00	1.00
9	603.000	DEVELOP LONG TERM ENVIRONMENTAL MONITORING PROGRAM	COMB	N20		RES	O	.00	.00	.00	.00	50.00	.00	.00	.00	50.00	0.00
N						MON	O	.00	.00	.00	.00	.00	.00	120.00	2.00	120.00	2.00
			Subtotal					.00	.00	.00	.00	50.00	.00	120.00	2.00	170.00	2.00
11	013.000	DEVELOP FORESTRY MANAGEMENT PLAN	COMB	N08	C20	RES	O	.00	.00	70.00	.00	70.00	.00	75.00	.00	215.00	0.00
N																		
12	603.100	DEVELOP LONG TERM ENVIRONMENTAL MONITORING PROGRAM	COMB	N20	N24	RES	O	.00	.00	.00	.00	75.00	.00	.00	.00	75.00	0.00
N						ADM	O	.00	.00	.00	.00	.00	.00	75.00	1.00	75.00	1.00

		DEVELOP INFO MGMT SYSTEM	Subtotal			.00	.00	.00	.00	75.00	.00	75.00	1.00	150.00	1.00
13	008.000 N	CONDUCT IPM MONITORING, MITIGATION-STRUCTURES, VEG.	COMB	C18	N04 MON O	24.00	.00	.00	.00	.00	.00	.00	.00	24.00	0.00
13	601.412 N	DELINEATE SHALLOW AQUIFER OTHER THAN YORKTOWN		N11	N20 RES O	.00	.00	.00	.00	75.00	.00	75.00	.00	150.00	0.00
14	601.502 N	DETERMINATION OF THE FUNCTIONS & VALUES OF PARK WETLAND ENVIRONMENTS		N20	RES O	9.00	0.30	55.00	.00	55.00	.00	.00	.00	119.00	0.30
					MON O	.00	.00	.00	.00	.00	.00	20.00	.00	20.00	0.00
			Subtotal			9.00	0.30	55.00	.00	55.00	.00	20.00	.00	139.00	0.30
15	601.201 N	STATE REGULATORY PROCESS PERMIT REVIEW		N11	N13 ADM O	.00	.00	15.00	0.10	.00	.00	.00	.00	15.00	0.10
16	601.302 N	ESTABLISHING LAND SUBSIDENCE/CLIMATE CHANGE BASELIN		N20	RES O	.00	.00	.00	.00	.00	.00	40.00	.00	40.00	0.00
			Project Total $$			9.00		70.00		130.00		135.00		344.00	
			Project Total FTE			0.30		0.10		0.00		0.00		0.40	
17	010.000 N	CONDUCT FIRE MANAGEMENT, TRAINING, EQUIPMENT	COMB	N24	C72 MIT R	5.00	.00	5.00	.00	5.00	.00	5.00	.00	20.00	0.00
18	610.000 N	AIR QUALITY MANAGEMENT, MONITORING, ACID DEPOSITN	COMB	N20	N14 MON O	.00	.00	.00	.00	.00	.00	80.00	0.50	80.00	0.50
		94 projects printed													
			Grand Total $$			13306.10		3126.90		3769.20		2058.30		22260.50	
			Grand Total FTE			32.09		20.05		5.87		7.96		65.97	

PROJECT STATEMENTS

Project Statement COLO-C-003.000
Last Update: 02/22/99 Priority: 7
Initial Proposal: 1992

Title : MAINTAIN HISTORIC STRUCTURES

Funding Status: Funded: 2495.00 Unfunded: 300.00

Servicewide Issues : C55 (MAINTENANCE)
C58 (PRGM DEV)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number : B

Problem Statement

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.3

Colonial maintains 34 historic buildings, 54 cannon carriages and 12 monuments. Due to lack of FTE and funding, "crisis" style maintenance has replaced routine or preventive maintenance. As a result, three historically significant buildings stand empty and are interpretatively unused. Ten of the 19 buildings require basement stabilization work in order to maintain long-term structural stability and most are in need of HVAC, electrical and/or plumbing system replacements. The Nelson House in particular needs an updated preservation guide including a reanalysis of the structure based on current historical and architectural research. The Moore House, which was restored in 1935, also needs to be re-evaluated and historical and architectural information updated. Currently, only 54 of 70 cannons are supported with carriages and, at our present level of maintenance, we will lose approximately two cannon carriages per year. Outdoor monuments are exposed to a variety of threats such as chemical reactions, weather damage and physical damage due to accidents or vandalism. The chemical damage is the most common and the most treatable through a simple process of cleaning and waxing. Currently, there is no preventive maintenance program for the monuments and the resulting deterioration is obvious. In 1993, a Restoration and Exhibit Specialist position was established in the maintenance division to increase park capability to properly maintain historic structures.

Description of Recommended Project or Activity

With ONPS base funds continue to conduct routine maintenance fo highest priority structures.

Submit requests to increase ONPS base funding to allow for a more preventive approach to maintaining historical structures.

Obtain funding for research and documentation to develop preservation and landscape guides and/or an ICAP program.

HISTORIC BUILDINGS:

-Develop an Inventory and Condition Assessment Program (ICAP) or Preservation and Landscape Guide for all of Colonial's historic buildings. Establish a comprehensive preventive maintenance program from ICAP or the Preservation Guides which will lend towards the protection of the historic fabric and significance of other structures.

-Perform an investigative study of the 11 historic buildings which appear to be in need of basement stabilization.

-Continue to locate and use donated funds to complete a reanalysis of the Nelson House in support of an updated preservation guide.

CANNON CARRIAGES: Increase funding to support a 12-month cannon shop operation.

MONUMENTS: Develop and document a preventive maintenance schedule for cleaning and waxing the monuments once every two years. Schedule a washing and repointing of the marble monuments approximately every five years.

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-OT	MIT	Recurring	300.00	11.20
	RG-CR-MTN	MIT	One-time	225.00	0.00
	$-DONATE	RES	One-time	10.00	0.00
			Subtotal:	535.00	11.20
1993:	PKBASE-OT	MIT	Recurring	300.00	11.20
1994:	PKBASE-OT	MIT	Recurring	300.00	11.20

1995:	PKBASE-OT MIT	Recurring	300.00	11.20
1996:	PKBASE-OT MIT	Recurring	320.00	8.00
1997:	PKBASE-OT MIT	Recurring	320.00	8.00
1998:	PKBASE-OT MIT	Recurring	320.00	8.00
	RG-CR-MTN MIT	Recurring	25.00	1.00
	RG-CR-MTN MIT	Recurring	40.00	1.00
	RG-CR-MTN MIT	Recurring	35.00	1.00
		Subtotal:	420.00	11.00
		Total:	2495.00	71.80

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MIT	Recurring	300.00	3.00
		Total:	300.00	3.00

(Optional) Alternative Actions/Solutions and Impacts

Note: This project was formerly identifed as COLO-I-003.000. However, it is a purely cultural project and was renumbered in the 1998 update with a cultural number.

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.000
Last Update: 02/07/98 Priority: 999
Initial Proposal: 1992

Title : BRING MUSEUM COLLECTION TO STANDARD

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C41 (CMP)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The museum collection for Colonial NHP includes the individual sites of Yorktown and Jamestown, each with its own museum collection and some shared resources. Colonial has approximately 1.1 million museum objects in its collection. These materials mush be documented, protected, and preserved to Dept. of the Interior and NPS standards for museum objects as stated in the DOI Checklist for Preservation, Protection and Documentation of Museum Property, the NPS Museum Handbook, Parts I & II, and NPS-28, Cultural Resources Management Guidelines. Current staffing and funding are inadequate to accomplish work necessary to correct existing backlog, bring museum collections management up to DOI and NPS standards and continue to manage the museum collections. Preparation and submission of reports in response to calls are required, including the annual inventory of museum property, the Collections Management Report, and the annual submission of completed Museum Catalog Records. The environment must be monitored and controlled on a regular basis. Objects on exhibit and in storage must be inspected and maintained. Preservation treatments must be accomplished and the museum spaces maintained. Deficiencies must be identified and funding secured for staff, supplies and equipment need to manage museum collections at DOI and NPS standards.

Description of Recommended Project or Activity

Provide adequate funding and staffing to implement and maintain curatorial/museum plans and programs at DOI and NPS standards. Set priorities for improving collection management.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.100
Last Update: 02/19/99 Priority: 999
Initial Proposal: 1992

Title : BRING MUSEUM COLLECTION TO STANDARD

Sub-title: COMPLETE CATALOGING

Funding Status: Funded: 405.50 Unfunded: 30.00

Servicewide Issues : C46 (ACCOUNTBLY)

Cultural Resource Type: OBJC (Object)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Servicewide Long-term Goal Ib2
Park Long-term Goal 1.1

The park's 1.1 million museum objects include archeological, historical and archival materials excavated and collected since 1930 when the park was established. The last major excavations took place in the 1970s. Approximately 80% of the collection has been cataloged and 60% is entered on the Automated National Catalog System. The majority of the cataloging has been accomplished since 1988 under cataloging contracts with the James River Institute for Archaeology using the backlog cataloging program or with Eastern National Parks and Monument Association funds. In FY 95 a special project inventoried and prepared worksheets for an estimated fifteen individuals under the NAGPRA program. A forensic study and final cataloging need to be completed.

At the end of FY 97, contracts for the backlog cataloging for the entire Colonial NHP collection had been awarded and approximately 80% has been fully cataloged. All new projects such as the Jamestown, Yorktown and Green Spring archeological assessments, compliance projects and special projects require cataloging as part of the project. New purchases and donations are cataloged by the park curatorial staff.

Documentation of the collection has been essential to the success of the five-year Jamestown Archeological Assessment which was initiated in FY 92. However, the collection was documented simultaneously to the assessment resulting in the need for additional handling and searching in support of the project. The Yorktown Archeological Assessment began in late FY 97 and the completion of the cataloging of the Yorktown collection including park archival materials before then has resulted in more efficient use of staff and better security for the collection. The archeological and archival collections are also used extensively for research (including an administrative history of the park), exhibits, and educational programs.

With one curator each for Jamestown and Yorktown and a shared museum technician between the two sites, staff time is extremely limited for cataloging new purchases and donations, for updating and correcting old catalog records and for spot checking the thousands of records produced from the archeological assessments and other special projects. A base increase of $3,000 to support the ANCS+ program was received in FY98.

Description of Recommended Project or Activity

The park will request funds under the Cultural Resources Preservation Program (CRPP) backlog cataloging program if necessary after all the current cataloging contracts are completed or unknown collections become known.

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	REG-OTHER	MIT	One-time	135.00	0.00
	PKBASE-CR	ADM	One-time	50.00	1.10
			Subtotal:	185.00	1.10
1993:	PKBASE-CR	ADM	Recurring	24.00	0.50
1994:	PKBASE-CR	ADM	Recurring	24.00	0.50
1995:	PKBASE-CR	ADM	Recurring	24.00	0.50
1996:	PKBASE-CR	ADM	Recurring	24.00	0.50
	SVC-OTHER	RES	One-time	14.00	0.00
			Subtotal:	38.00	0.50
1997:	PKBASE-CR	ADM	Recurring	20.00	0.40

	SVC-OTHER RES	One-time	17.50	0.00
		Subtotal:	37.50	0.40
1998:	PKBASE-CR ADM	Recurring	20.00	0.40
	PKBASE-CR ADM	One-time	3.00	0.00
		Subtotal:	23.00	0.40
1999:	PKBASE-CR ADM	Recurring	20.00	0.40
2000:	PKBASE-CR ADM	Recurring	10.00	0.20
2001:	PKBASE-CR ADM	Recurring	10.00	0.20
2002:	PKBASE-CR ADM	Recurring	5.00	0.10
2003:	PKBASE-CR ADM	Recurring	5.00	0.10
		Total:	405.50	4.90

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 4:	RES	One-time	30.00	0.00
		Total:	30.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.200
Last Update: 02/19/99 Priority: 22
Initial Proposal: 1992

Title : BRING MUSEUM COLLECTION TO STANDARD

Sub-title: IMPROVE MUSEUM STORAGE

Funding Status: Funded: 190.00 Unfunded: 1085.00

Servicewide Issues : C47 (STORAGE)
C50 (SECTY&FIRE)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Servicewide Long-term Goal 1a6
Park Long-term Goal 1.2

Since 1986, Colonial NHP has received an investment of over $1,500,000 to catalog its museum collections. The vast majority of the collection consists of archeological materials which were excavated in the 1930s, 1950s and 1970s. However, the park also has a large and valuable archival collection which is inadequately stored and does not meet NPS standards.

While the Jamestown collection is stored in a central environmentally controlled room, the Yorktown collection is scattered among five sites with varying degrees of environmental and physical security. The collections now located at Yorktown are primarily those returned intermittently to the park in the mid-1980s from archeological investigations conducted in the 1970s. No comprehensive storage plan was available at that time and storage areas were established on a piecemeal basis without complete analysis of the impact on the collections or on the buildings and historic structures used for storage. None of the areas used for storage of the Yorktown collection at Yorktown is environmentally stable and several have moisture and insect problems. In turn, the weight of storing the collections in
historic structures is threatening the structures. The main storage area is in a concrete block building on a slab which has constant problems with moisture and insects. The Yorktown curator must travel among five storage sites (one 23 miles away) and three exhibit buildings in order to care for the collection. Approximately 20% of his time is used for the moving and restoring of the collection in order to safeguard it.

In 1995, a new 26' x 45' storage building was built at Yorktown and 70,000 Yorktown archeological materials were moved from Jamestown. Approximately 2,000 Yorktown objects are still stored at Jamestown need to be moved. A single climate controlled facility at Yorktown is required in order to consolidate the archeological collection and meet the basic requirements set forth in the NPS Museum Handbook. In 1993 a Museum Storage Plan was prepared which recommended the first phase of a central storage building (now completed) and a library addition to house the park archival collection.

In addition to a central facility, both the Jamestown and the Yorktown collections need additional museum cases, map cases, shelving, and acid-free folders and boxes to store individual objects in compliance with NPS guidelines.

Although the Jamestown collection is housed in a climate controlled facility, the entire museum storage area is located on a floodplain and is not in accordance with Executive Order 11988, "Floodplain Management," and the NPS Floodplain Management and Wetland Protection Guidelines. The General Management Plan addresses this problem with a recommendation for a new storage facility located out of the floodplain.

Description of Recommended Project or Activity

Based on Special Directive 80-1, the highest priority is to request funding to construct a central museum storage building at Yorktown. To be done through 10-238.

Also of high priority is to extend the Yorktown Visitor Center library to create an archival room which will consolidate the Yorktown archival collection and eliminate storage in historic structures. To be done through 10-238.

Request funds to purchase 200-300 museum storage cabinets to replace the 300 damaged cases at Jamestown and Yorktown which do not meet NPS standards and to provide adequate storage for the expanded collection. The estimated cost is $135,000.

Request funds to purchase 40 map cases to store the Jamestown and Yorktown archival collection. The estimated cost is $10,000.

Request funds to crate large objects. Est. cost $5,000.

If funding is provided for either the Museum Storage Building, Phase II or the archival room, assistance will be needed to move and re-house approximately 160,000 archival materials.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs

1992:	REG-OTHER PRO	One-time	35.00	0.00
	PKBASE-OT PRO	One-time	35.00	0.30
		Subtotal:	70.00	0.30
1996:	PKBASE-CR MON	Recurring	10.00	0.20
	PKBASE-CR MON	Recurring	10.00	0.20
		Subtotal:	20.00	0.40
1997:	PKBASE-CR MON	Recurring	10.00	0.20
	PKBASE-CR MON	Recurring	10.00	0.20
		Subtotal:	20.00	0.40
1998:	PKBASE-CR MON	Recurring	10.00	0.20
	PKBASE-CR MON	Recurring	10.00	0.20
		Subtotal:	20.00	0.40
1999:	PKBASE-CR MON	Recurring	10.00	0.20
	PKBASE-CR MON	Recurring	10.00	0.20
		Subtotal:	20.00	0.40
2000:	PKBASE-CR MON	Recurring	10.00	0.20
2001:	PKBASE-CR MON	Recurring	10.00	0.20
2002:	PKBASE-CR MON	Recurring	10.00	0.20
2003:	PKBASE-CR MON	Recurring	10.00	0.20
		Total:	190.00	2.70

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	150.00	0.00
	PRO	One-time	525.00	0.00
	PRO	One-time	200.00	0.00
		Subtotal:	875.00	0.00

Year 2:	MON	One-time	60.00	1.00
	PRO	One-time	135.00	0.00
	PRO	One-time	10.00	0.00
	PRO	One-time	5.00	0.00
		Subtotal:	210.00	1.00
		Total:	1085.00	1.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.300
Last Update: 02/19/99 Priority: 18
Initial Proposal: 1992

Title : BRING MUSEUM COLLECTION TO STANDARD

Sub-title: IMPLEMENT FIRE/SECURITY

Funding Status: Funded: 82.00 Unfunded: 290.00

Servicewide Issues : C50 (SECTY&FIRE)
C97 (MUSEUM MGMT)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Servicewide Long-term Goal 1a6
Park Long-term Goal 1.2

Accountability and security of museum collections is heavily emphasized by the NPS and the Department of the Interior. Since 1986, the NPS has established funding programs of approximately $2.5 million per year each for cataloging and security backlogs. It has also developed Special Directive 80-1 to determine park curatorial needs and updated the NPS Museum Handbook, Parts I & II.

Both the Jamestown and the Yorktown collections need increased security from theft, fire and other threats. The problem of security is two-fold: lack of appropriate storage and lack of adequate staff. While the Jamestown collection is stored in one central location with controlled key access and a fire detection/suppression system, the Yorktown collection is stored at five different sites with varying degrees of security and fire protection. Collections housed in the Moore House and Nelson House at Yorktown are protected by halon systems. Both of these systems have dumped within the last five years and the cost of replacement is expensive. An alternative to halon will need to be addressed in the future.

The collections housed in the Yorktown Visitor Center, Swan Tavern Kitchen and Hamilton House have no or insufficient fire protection systems. In 1995 a new 26' x 45' storage building was constructed at Yorktown and 70,000 Yorktown archeological materials were moved from the Jamestown museum storage area. In FY 97 the park will request funding for Phase II of this storage building. In FY 97 the park will request funding for adding an archival storage room at the Yorktown Visitor Center.

The operational and physical security of the museum collections at Jamestown and Yorktown vary. Key control, digital entry, sign-in procedures, limited access and other operational measures are in place at some of the storage and exhibit areas including the main storage area at Yorktown (Hamilton House) and the Jamestown museum storage area. With the exception of the Yorktown Storage Building and the Swan Tavern Kitchen, alarmed security systems tied into the park communications center are in place. A Museum Security Survey was completed in December 1992 and identifies actions for improving the protection of the collections.

Associated with security and fire protection is the need for a comprehensive museum disaster plan for both Jamestown and Yorktown. Although there is a park emergency plan, it only partially includes the museum collections and historic structures. Emergency preparedness actions are in place for hurricanes for both Jamestown and Yorktown. The disaster plan does not include clean up procedures for hurricanes which is the highest priority. There is no plan for fire, other natural disasters or theft.

Description of Recommended Project or Activity

The Museum Security Survey will continue to serve as a guide for recommending actions to increase the security and fire protection of the park collections. Funds will be requested under the Museum Collection Preservation and Protection Program (MCPP). Highest priority is to complete an intrusion and fire detection system for the Yorktown Museum Storage Building, Phase II and/or the archival storage room at the Yorktown Visitor Center when they are built. Second priority is a fire detection and suppression system for the Yorktown Visitor Center.

The size, location and complexity of the museum collections require a comprehensive museum disaster plan. Consideration shall be given to contracting the preparation of the basic plan unless additional base funding for the museum curatorial program is provided. A portion of the Cultural Resource Management Specialist's time will be given each year to research and prepare a museum disaster plan. Highest priority for the plan is to expand the plan for hurricane preparation and clean up.

Priority 1: Install fire detection/suppression system in Yorktown Museum Storage Building when constructed. In 10-238.

Priority 2: Install Intrusion System in Yorktown Museum Storage Building when constructed. In 10-238.

Priority 3: Install fire detection/suppression system at the Yorktown Visitor Center. Est. cost: $150,000.

Priority 4: Upgrade Security at Yorktown and Jamestown Visitor Centers. Est. $90,000

Priority 5: Upgrade Hamilton House. Est. cost: $50,000.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-CR PRO	Recurring	2.50	0.10
1993:	PKBASE-CR PRO	Recurring	2.50	0.10
1994:	PKBASE-CR PRO	Recurring	2.50	0.10
1995:	PKBASE-CR PRO	Recurring	2.50	0.10
1996:	PKBASE-CR PRO	Recurring	5.00	0.10
	SVC-OTHER PRO	One-time	32.00	0.00
		Subtotal:	37.00	0.10
1997:	PKBASE-CR PRO	Recurring	5.00	0.10
1998:	PKBASE-CR PRO	Recurring	5.00	0.10
1999:	PKBASE-CR PRO	Recurring	5.00	0.10
2000:	PKBASE-CR PRO	Recurring	5.00	0.10
2001:	PKBASE-CR PRO	Recurring	5.00	0.10
2002:	PKBASE-CR PRO	Recurring	5.00	0.10
2003:	PKBASE-CR PRO	Recurring	5.00	0.10
		Total:	82.00	1.20

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs

Year 1:	PRO	One-time	150.00	0.00
	PRO	One-time	90.00	0.00
		Subtotal:	240.00	0.00
Year 2:	PRO	One-time	50.00	0.00
		Total:	290.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.400
Last Update: 02/19/99 Priority: 27
Initial Proposal: 1992

Title : BRING MUSEUM COLLECTION TO STANDARD

Sub-title: UPDATE ACCESSIONS, LOANS

Funding Status: Funded: 61.00 Unfunded: 0.00

Servicewide Issues : C46 (ACCOUNTBLY)
C81 (COLLECTIONS)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Colonial NHP was established in 1930 and since that time numerous archeological investigations have taken place at Jamestown, Yorktown, Green Spring and the Colonial Parkway. The park also has a large archival collection and two libraries.

Over the years Colonial NHP also housed archeological collections from other national parks in the old Region I and for the Association for the Preservation of Virginia Antiquities. Severe understaffing for the museum collection has resulted in numerous lost or never completed records on loans, accessions, deaccessions, transfers and thefts. There are numerous cases of duplicate catalog numbers, assigning more than one object to a catalog number, and assigning numbers with no record produced. Since 1986 the park has become aware of undocumented loans to other parks and institutions dating back to as early as the 1930s. Some library and archival materials are known to be missing. In an effort to gain accountability for the collections, the park curators and the Cultural Resource Management Specialist have been slowly but systematically retrieving loans and locating or generating documentation on loans, transfers and library materials. The nature of this work requires long term knowledge of the collections and records.

The number of loans generated by the park is increasing as the cataloging of the collection progresses. Public knowledge of the collections has increased due to the Jamestown Archeological Assessment and the Yorktown Poor Potter project. Processing loans including the locating and selecting objects, packing, shipping, unpacking and returning the objects to secured storage is time consuming. Without additional curatorial staff, outgoing loans will need to be severely restricted.

Servicewide Long-term Goal Ia6

Park Long-term Goal 1.2

Description of Recommended Project or Activity

Accession records will continue to be updated under the cataloging of the collections. However, a full-time permanent or temporary museum technician position would relieve the curators of the tedious recordkeeping accountability and more efficiently complete the work by focusing time and attention to searching records and preparing the needed paperwork. The museum technician position would also have responsibility for incoming and outgoing loans.

Est. cost for one temporary GS-7 Museum Technician: $20,000 per annum (50% of time)

Est. cost for supplies and materials: $5,000 per annum

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-CR	RES	Recurring	9.00	0.10
1993:	PKBASE-CR	RES	Recurring	4.00	0.10
1994:	PKBASE-CR	RES	Recurring	4.00	0.10
1995:	PKBASE-CR	RES	Recurring	4.00	0.10
1996:	PKBASE-CR	RES	Recurring	5.00	0.10
1997:	PKBASE-CR	RES	Recurring	5.00	0.10
1998:	PKBASE-CR	RES	Recurring	5.00	0.10
1999:	PKBASE-CR	RES	Recurring	5.00	0.10
2000:	PKBASE-CR	RES	Recurring	5.00	0.10
2001:	PKBASE-CR	RES	Recurring	5.00	0.10
2002:	PKBASE-CR	RES	Recurring	5.00	0.10
2003:	PKBASE-CR	RES	Recurring	5.00	0.10

Total:	61.00	1.20

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.500
Last Update: 02/19/99 Priority: 28
Initial Proposal: 1992

Title : BRING MUSEUM COLLECTION TO STANDARD

Sub-title: CONSERVE COLLECTN

Funding Status: Funded: 37.00 Unfunded: 25.00

Servicewide Issues : C48 (TREATMENT)
C41 (CMP)

Cultural Resource Type: OBJC (Object)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

As the park makes progress on the cataloging and secure storage of the museum collections, the questions of conserving this massive collection will need to be addressed. Nearly all the conservation work performed in the collection was done 30-50 years ago. In the half-century since then, techniques have improved and work performed in previous decades (especially for those objects on exhibit) is becoming unstable, causing objects which have been restored to their original appearance to collapse with normal handling.

Most probably due to a 1970s humidifier leak at the Moore House, all rough underside and backs of furniture have mold growth. It may have been this same incident or an air quality change which damaged all the drapes and bed hangings making them unusable for exhibit purposes.

The key to an effective conservation program is preventive conservation. When exhibit and storage environments are suitable, when a regular housekeeping program is implemented and when objects are carefully handled, the need for conservation treatment is reduced. A 1993 general survey of the collections observed that the collections stored in the environmentally stable Jamestown museum storage area were showing limited deterioration. As the collections are cataloged and restored in less crowded drawers and cases, preventative conservation is being implemented. However, due to inadequate staff and funds, the museum storage areas and exhibit cases are not cleaned on a regular basis.

Furthermore, the majority of the collection has received no conservation work whatsoever, and conservation surveys are critically needed at both Jamestown and Yorktown. The park funded a partial survey of the collections at Jamestown in 1984 and with cyclic funds hired a temporary museum technician to conduct some conservation of metals during the summers of 1985 and 1986. A partial metals survey of the Yorktown Poor Potter study collection has been completed. Of the 238 artifacts inspected (they represent less than 10% of those in the collection), 39% were identified as having high priority for treatment. The archeology conducted at Yorktown in the 1970s including the Poor Potter collection of 300,000 objects did not include any conservation and every one of the collections have numerous objects which were not even washed by the archeologist.

Servicewide Long-term Goal Ia6
Park Long-term Goal 1.2

Description of Recommended Project or Activity

Conduct a condition survey of the Jamestown collection. A survey of the Yorktown collection is also critically needed but of second priority. The restorage of the Yorktown collection in suitable environmental conditions should be accomplished before a survey is conducted.

Est. cost: $10,000 per year

A temporary GS-7 museum technician will be requested to improve the park's housekeeping program and support preventive conservation.

Est. cost: $20,000 per year (50% of technician's time)

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-CR	MIT	Recurring	6.00	0.10
1993:	PKBASE-CR	MIT	Recurring	2.00	0.05
1994:	PKBASE-CR	MIT	Recurring	2.00	0.05
1995:	PKBASE-CR	MIT	Recurring	2.00	0.05
1996:	PKBASE-CR	MIT	Recurring	2.50	0.05
	SVC-OTHER	MIT	One-time	5.00	0.00
			Subtotal:	7.50	0.05

1997:	PKBASE-CR MIT	Recurring	2.50	0.05
1998:	PKBASE-CR MIT	Recurring	2.50	0.05
1999:	PKBASE-CR MIT	Recurring	2.50	0.05
2000:	PKBASE-CR MIT	Recurring	2.50	0.05
2001:	PKBASE-CR MIT	Recurring	2.50	0.05
2002:	PKBASE-CR MIT	Recurring	2.50	0.05
2003:	PKBASE-CR MIT	Recurring	2.50	0.05

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Total: 37.00 0.65

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MIT	One-time	25.00	0.50

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Total: 25.00 0.50

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.600
Last Update: 02/19/99 Priority: 33
Initial Proposal: 1992

Title : BRING MUSEUM COLLECTION TO STANDARD

Sub-title: INCREASE TO BASE FUNDING

Funding Status: Funded: 75.00 Unfunded: 110.00

Servicewide Issues : C81 (COLLECTIONS)
C83 (GEN CR MNGT)

Cultural Resource Type: OBJC (Object)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

For 50 years, Colonial National Historical Park had one permanent museum curator with intermittent seasonal assistance to care for an archeological collection of 600,000 objects. In the mid-1980s upon the transfer of more than 400,000 objects resulting from archeological investigations conducted at Yorktown during the 1970s, the park established a second curatorial position. No increase in park base funding was received to support this position. In 1993 with the initiation of the Jamestown archeological assessment and anticipated long term curatorial activities related to the 400th anniversary of Jamestown in 2007, the park established a permanent museum technician position. No increase in park bas funding was received to support this position.

Although significant amounts of funding have been generously available to the park to catalog its 1.1 million object collection and to improve fire suppression and storage for the collections, all the work must be contracted. The museum curators, however, are not only the designated contract officer's technical representative (COTR) but they must prepare the statements of work for the contracts, review the bids and then provide access and assistance to the contractors in their capacity as curators responsible for the security of the collection. This represents approximately 20% of their time. Such projects are expected to continue for at least five years. In addition, since the cataloging and museum security funds from Washington may not be used to hire a temporary museum technician to assist the curators on routine duties, the curators must rely on volunteers. This, in turn, requires time for training and supervision.

In addition, the cataloging of the collections has increased professional interest and use of the collections. Such use by highly reputable research organizations such as the Colonial Williamsburg Foundation has contributed greatly to the knowledge and interpretation of the collection and, while welcome, is nonetheless a security and preservation threat to the collection. They inadvertently endanger an object's safety because the required handling increases the risk of damage. And, there is always the risk of theft. In reality, the curators should be giving 100% of their time to assuring that the collection is secure during use by contract catalogers, park staff and researchers. But with other required duties, the curators simply cannot be available and a certain amount of risk management is necessary. Furthermore, since the two curators are stationed 23 miles apart, it is difficult for them to cover for one another.

The emphasis within the NPS to gain accountability for the collections, protect them from fire and theft and conserve them has particularly benefitted Colonial. However, such programs have required additional reporting procedures for site specific projects and assistance to the SSO and Washington offices to develop programs and guidelines. For instance, if the museum inventory is conducted according to standard, it will take several months to complete. With the implementation of the Jamestown and Yorktown archeological assessments, the workload for the curators has become unmanageable. Constant access to the Jamestown collection is necessary and it is difficult for the curators to take sick or annual leave or participate in professional training. The extra workload means that required reports and inventories, research and loan requests, assistance to park staff and other institutions, routine housekeeping, park employee program participation and public education programs by the curators may need to be strictly curtailed or eliminated.

Servicewide Long-term Goals Ia6 and IVa4
Park Long-term Goals 1.2 and 7.4

Description of Recommended Project or Activity

The park base funding should be increased to provide for the resource careers upgrade of two GS-09 curators to GS-11.

Add two permanent GS-7 museum technicians (one for each site).
The museum technician positions would be responsible for duties as supervising volunteers, exhibit cleaning and maintenance, inventory of government property, housekeeping of storage area and historic houses, rewriting and implementing the housekeeping guide, monitoring the collection, assisting researchers and park staff, and cataloging those objects in the collection not eligible for other funding. Est. Cost: One GS-07 Museum Technician, $40,000 per year

Increase base funds for general supplies and materials and training.
Est. Cost: $15,000 per year for supplies and materials and training.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1996: PKBASE-CR	ADM	Recurring	25.00	0.45
PKBASE-CR	MON	Recurring	50.00	1.00
		Subtotal:	75.00	1.45
		Total:	75.00	1.45

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	ADM	One-time	20.00	0.00
Year 2:	ADM	One-time	90.00	2.00
		Total:	110.00	2.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.700
Last Update: 02/19/99 Priority: 2
Initial Proposal: 1996

Title : CONSERVE WASHINGTON'S TENTS

Funding Status: Funded: 92.00 Unfunded: 330.00

Servicewide Issues : C48 (TREATMENT)
C49 (ENVIRONMNT)

Cultural Resource Type: OBJC (Object)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Washington office tent (chamber) and dining tent (lining) on exhibit at Colonial NHP are among the most important objects owned by the NPS. In fact, they were listed as the first entry on the sample list of nationally significant museum objects prepared at the request of the Chairman of the House of Representative Appropriations Subcommittee on Interior and Related Agencies in 1987.

The tent parts on display at Colonial are only a portion of these important objects. The sleeping tent marquee is on loan to Valley Forge NHP by the Valley Forge Historical Society, the dining tent marquee is on exhibit at the Smithsonian and related objects are known to be in the collections of Arlington House, Mt. Vernon and Morristown NHP. Historically, the two tents and equipage were always set up together and acted as George Washington's headquarters.

In the fall of 1997, the tents were removed from their exhibit cases for conservation treatment by the Harpers Ferry Conservation Center. The office tent had suffered major damage due to a faulty environmental control system installed in 1981 that leaked on the tent causing some irreversible damage and fluctuating humidity. It was also discovered that the tent was incorrectly displayed and earlier restoration work in the 1950s was flawed. It was recommended that the tent not be returned to the display case, but be placed in a newly designed case that would hold both tents with an new environmental control system.

The dining tent has yet to be evaluated for its condition but will be in 1999.

Description of Recommended Project or Activity

In order to ensure the preservation of the tents, the following actions are required:

1.Complete special history study of tents to determine actual configuration and use. $10,000.

2.Condition Assessment and preservation of dining tent lining. Est. $15,000.

3.Design a new exhibit case for both tents with an environmental control system and appropriate lighting. Est. $300,000.

4.Prepare a long term preservation and housekeeping program for the tents. MCPP Technical Assistance Request: $5,000

Meets GPRA Goals: Ia6, Ib, and IIB.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1996:	PKBASE-CR	MON	Recurring	2.50	0.05
1997:	SVC-OTHER	PRO	One-time	35.00	0.00
	PKBASE-CR	MON	Recurring	2.50	0.05
			Subtotal:	37.50	0.05
1998:	PKBASE-CR	MON	Recurring	2.50	0.05
	PKBASE-CR	PRO	One-time	2.50	0.05
	FEE-REV	MIT	One-time	11.00	0.10
			Subtotal:	16.00	0.20
1999:	FEE-REV	MIT	One-time	36.00	0.25
			Total:	92.00	0.55

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	10.00	0.10
	MIT	One-time	300.00	2.64

	Subtotal:	310.00	2.74	
Year 2:	INT	One-time	15.00	0.10
Year 3:	MIT	One-time	5.00	0.01
	Total:	330.00	2.85	

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.800
Last Update: 02/19/99 Priority: 0
Initial Proposal: 1998

Title : BRING MUSEUM COLLECTION TO STANDARD

Sub-title: COMPLETE COLL. MGMT PLAN

Funding Status: Funded: 10.00 Unfunded: 0.00

Servicewide Issues : C41 (CMP)

Cultural Resource Type: OBJC (Object)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Currently, the park collection contains an estimated 1.1 million objects for both Jamestown and Yorktown. The last Collection Management Plan dates to 1982 when the collection was uncataloged. Since 1982, the collection has been 90% cataloged and a major archeological collection, the Poor Potter has been returned to the park which resulted in a Yorktown curator position being established. In addition, archeological assessments for both Jamestown and Yorktown have been initiated and the planning process for the 400th anniversary of Jamestown is about to begin.

In 1993 a revised CMP was started by WASO. However, the draft document provided in 1996 is already vastly outdated and responsibility for revising and printing the report has been delegated to the park under the NPS reorganization. The report requires a major revision and it would be more efficient and timely to start the process over.

Description of Recommended Project or Activity

Complete and publish a new Collections Management Plan in 1998 which will provide adequate updated documentation, care and preservation recommendations for the park collection.

BUDGET AND FTEs:
----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998:	SVC-OTHER RES	One-time	10.00	0.00
		Total:	10.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-301.900
Last Update: 02/19/99 Priority: 32
Initial Proposal: 1997

Title : BRING MUSEUM COLLECTION TO STANDARD

Sub-title: CONDUCT APPRAISALS

Funding Status: Funded: 5.00 Unfunded: 20.00

Servicewide Issues : C46 (ACCOUNTBLY)

Cultural Resource Type: OBJC (Object)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Colonial NHP has approximately 1.1 million objects in it collection of which approximately 1000 have been appraised by a certified appraiser. The lack of an appraisal limits the efficiency of security of an object and affects the use of value in acquiring funding for museum projects. Classification of an object as controlled property depends (in one instance) upon the object's value of at least $1,000. The park staff are not able to make this valuation due to lack of expertise. Both the Jamestown and Yorktown collections have had increases in request for loans. As the cataloging of the collections is completed, appraisals are needed to complete or update information.

Servicewide Long-term Goal Ia6
Park Long-term Goal 1.2

Description of Recommended Project or Activity

Complete an appraisal of all recommended museum property. Program for a certified appraiser to examine and assess the current museum collection and submit written report. Transfer information to catalog records.

BUDGET AND FTEs:
----------FUNDED----------
Source Activity Fund Type Budget ($1000s) FTEs

1997:	$-DONATE	RES	One-time	1.00	0.00
1998:	$-DONATE	RES	One-time	2.00	0.00
1999:	$-DONATE	RES	One-time	2.00	0.00
			Total:	5.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	5.00	0.00
Year 2:	RES	One-time	5.00	0.00
Year 3:	RES	One-time	5.00	0.00
Year 4:	RES	One-time	5.00	0.00
		Total:	20.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-302.000
Last Update: 02/19/99 Priority: 0
Initial Proposal: 1992

Title : CONDUCT ARCHEOLOGICAL ASSESSMENT, JAMESTOWN

Funding Status: Funded: 1236.90 Unfunded: 0.00

Servicewide Issues : C02 (ID & EVAL)
C19 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The year 2007 will mark the 400th anniversary of the settlement of Jamestown, the first permanent British settlement in North America. Despite the archeological investigations of the 1930s and the 1950s which produced over 600,000 artifacts, we still do not have a clear understanding of what Jamestown looked like in the 17th and 18th centuries and how it grew and expanded as Virginia's first capital. No systematic survey had been made of the approximately 1500 acres of Jamestown Island outside of the Old Town and New Town sites. And, there was almost no documentation on the prehistoric resources of the island. The site specific research on Jamestown is dated and there has been no active research there since 1957 expect for small specific studies of the artifacts, such as the faunal analysis completed in 1988 and the re-analysis of Project 100, both of which were funded under Eastern National Park & Monument Association research grants.

Jamestown, which was once in the forefront of research on the 17th century Chesapeake, has remained dormant for over a quarter of a century. In the meantime, there has been a concentrated effort to identify and study a wide range of 17th century sites in the lower Chesapeake such as Flowerdew Hundred, Wolstenholme Town, and St. Mary's City. These sites, plus numerous other small projects have produced a wealth of knowledge on what life was like in the 17th century. Several projects have also uncovered 17th century forts which have added to the body of knowledge related to the first Jamestown Fort which has never been located.

Archeological investigation techniques have also changed drastically in the last 50 years. Therefore, allowing Jamestown's resources to lie dormant while other 17th century site excavations have been made, has probably benefitted the preservation of Jamestown. In 1992 only 15 years to the 400th anniversary, the National Park Service, the Colonial Williamsburg Foundation and the College of William & Mary undertook a joint venture to conduct an archeological assessment of Jamestown to attempt to locate the extent of the town's boundaries, the outlying farms and native american sites. Concurrently, the Association for the Preservation of Virginia Antiquities (APVA) initiated Jamestown Rediscovery, a full scale archeological investigation of the 1607 fort site. The NPS assessment will include a geological/geomorphological study of the island, an iconographic study, an analysis of previous archeological excavations and the materials produced by the excavations, a study of landholdings and property ownership and the identification of prehistoric sites. The information gathered will be tied together through a geographic information system which will be used to guide future archeological excavations. The GIS will also assist the National Park Service on cultural and natural resource management decisions for Jamestown.

The archeological assessment has progressed at a faster pace than anticipated. The expertise and professional support of the Colonial Williamsburg Foundation and the College of William and Mary over and above the funded portion of the project has generated national interest among scholars as well as among their own staffs who continue to research related topics. The project to complete an environmental reconstruction of the Island has generated questions and research needs which cannot be funded under the assessment allocation. The lack of adequate interpretive and curatorial staff severely limits the opportunities for public interpretive programs and exhibits related to the findings of the assessment. But of serious concern is the unavailability of programmed federal funds early in the fiscal year when much of the archeological and environmental investigations need to be conducted. This uncoordinated funding process causes some research to be delayed for as long as one year, thereby causing delays and lost opportunities for other related research projects.

Description of Recommended Project or Activity

The National Park Service completed its fifth year of funding for the cooperative agreement with the Colonial Williamsburg Foundation and the College of William and Mary for the multi-discipline assessment of Jamestown. The agreement is for five years with a budget of $200,000 per year. Archeological investigations of the New Town site have been limited to goundtruthing the results of remote sensing or to reinvestigating excavated areas to answer specific questions resulting from the re-evaluation of the archeological excavations of the 1930s and 1950s. The assessment for the remainder of Jamestown Island was completed in 1995/96.

Draft and final reports are in preparation with due dates in 1999.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs

1992:	REG-OTHER RES	Recurring	200.00	0.00
	PKBASE-CR ADM	Recurring	15.00	0.30
	PKBASE-CR MON	Recurring	21.00	0.50
	$-DONATE RES	One-time	2.90	0.00
		Subtotal:	238.90	0.80
1993:	CRPP RES	Recurring	200.00	0.00
	PKBASE-CR ADM	Recurring	15.00	0.30
	PKBASE-CR MON	Recurring	21.00	0.50
		Subtotal:	236.00	0.80
1994:	CRPP RES	Recurring	200.00	0.00
	PKBASE-CR ADM	Recurring	15.00	0.30
	PKBASE-CR MON	Recurring	21.00	0.50
		Subtotal:	236.00	0.80
1995:	CRPP RES	Recurring	200.00	0.00
	PKBASE-CR ADM	Recurring	15.00	0.30
	PKBASE-CR MON	Recurring	21.00	0.50
		Subtotal:	236.00	0.80
1996:	CRPP RES	Recurring	180.00	0.00
	PKBASE-CR ADM	Recurring	10.00	0.20
	PKBASE-CR MON	Recurring	30.00	0.50
		Subtotal:	220.00	0.70
1997:	CRPP RES	Recurring	60.00	0.00
	PKBASE-CR ADM	Recurring	10.00	0.20
		Subtotal:	70.00	0.20
		Total:	1236.90	4.10

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)
EA (ENV. ASSESSMENT)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-303.000
Last Update: 02/09/98 Priority: 9
Initial Proposal: 1992

Title : MANAGE CULTURAL RESOURCE PROGRAM

Funding Status: Funded: 477.00 Unfunded: 25.00

Servicewide Issues : C83 (GEN CR MNGT)
C93 (CR MANAGEMT)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

At present the only base funding for cultural resource management is for the GS-11, Cultural Resource Management Specialist, a portion of the GS-13, Chief, Historical Interpretation and Preservation and very limited funds for training, supplies and materials. The CRM Specialist directly administers a complex program dealing with the supervision of two museum curators and 1.1 million objects, the research and documentation of historic structures and cultural/archeological sites and the cultural geographic information system. In 1996 the CRM Specialist was assigned new responsibilities as 106 Coordinator. The CRM Specialist also prepares National Register of Historic Places nominations, conducts cultural resources inspections and monitoring, administers the park archival and library, conducts training, prepares a variety of contracts, prepares reports for both curatorial and cultural resources, conducts research, coordinates with the park staff and other institutions on cultural resources, and plans and implements both short and long-term programs related to cultural resources.

There is a critical need to increase the inspection, monitoring and documentation of the park's cultural resources such as the earthworks and archeological sites and to prepare preservation guides. In addition to the routine supplies and materials, the CRM budget of approximately $1,000 must also support curatorial supplies and materials, photographs and maps associated with the 106 compliance and National Register documentation, the maintenance of three curatorial computers which house in addition to the collections required planning documents, the LCS and RMP, the care and maintenance of the park libraries and archival collection and for staff training. An increase in base funding is essential for achieving the most basic requirements of the program. This funding correlates with requested increases to base funding for bringing the museum collection to standard and for the operation of the cultural GIS program.

There is also the need for the potential promotions of the GS-9 curators to GS-11 and the CRM Specialist from a GS-11 to a GS-12 based upon the Resource Careers Initiative.

Description of Recommended Project or Activity

Increase to base funding: $10,000 per year for supplies and materials, computer maintenance, staff training

Implement Resource Careers Initiative for the two curators from GS-9 to GS-11, and the CRM Specialist from a GS-11 to a GS-12.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-CR	ADM	Recurring	11.50	0.10
	PKBASE-CR	RES	Recurring	27.50	0.50
			Subtotal:	39.00	0.60
1993:	PKBASE-CR	ADM	Recurring	11.50	0.10
	PKBASE-CR	RES	Recurring	27.50	0.50
			Subtotal:	39.00	0.60
1994:	PKBASE-CR	ADM	Recurring	11.50	0.10
	PKBASE-CR	RES	Recurring	27.50	0.50
			Subtotal:	39.00	0.60
1995:	PKBASE-CR	ADM	Recurring	11.50	0.10
	PKBASE-CR	RES	Recurring	27.50	0.50
			Subtotal:	39.00	0.60
1996:	PKBASE-CR	ADM	Recurring	28.00	0.50
	PKBASE-CR	RES	Recurring	25.00	0.50
			Subtotal:	53.00	1.00
1997:	PKBASE-CR	ADM	Recurring	28.00	0.50
	PKBASE-CR	RES	Recurring	25.00	0.50

	Subtotal:	53.00	1.00
1998:	PKBASE-CR ADM	Recurring	28.00	0.50
	PKBASE-CR RES	Recurring	25.00	0.50
	PKBASE-CR ADM	One-time	3.00	0.00
	Subtotal:	56.00	1.00
1999:	PKBASE-CR ADM	Recurring	28.00	0.50
	PKBASE-CR RES	Recurring	25.00	0.50
	Subtotal:	53.00	1.00
2000:	PKBASE-CR ADM	Recurring	28.00	0.50
	PKBASE-CR ADM	Recurring	25.00	0.50
	Subtotal:	53.00	1.00
2001:	PKBASE-CR ADM	Recurring	28.00	0.50
	PKBASE-CR RES	Recurring	25.00	0.50
	Subtotal:	53.00	1.00
	Total:	477.00	8.40

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	ADM	One-time	10.00	0.00
	ADM	One-time	15.00	0.00
	Subtotal:		25.00	0.00
	Total:		25.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM6 APP. 7.4 E(2)

Project Statement COLO-C-304.000
Last Update: 02/06/98 Priority: 999
Initial Proposal: 1998

Title : CONDUCT SPECIAL HISTORY STUDIES OF DIVERSE CULTURES

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C38 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The history of Jamestown and Yorktown represents the stories of diverse cultures that should be explored in order to understand the resources and their significance. At Jamestown, the recent identification of skeletons recovered decades ago as African American, require further study of these individuals and how they relate to the nationally significant story of the introduction of slavery in British colonial America. Green Spring reflects the expansion of slave labor into the establishment of plantations and their use in the development of diverse agricultural practices. Recent archeological discoveries of early Native American sites on Jamestown Island, which include pre-historic groups, demonstrate the lack of knowledge that we have on these people and those that followed. We also lack an understanding of the role of women in this early outpost.

At Yorktown, the role of African Americans in this early port town from the 17th century through the 20th century needs to be explored to understand related resources and how they fit into the overall story of Yorktown. Uniontown, which was established during the Civil War period as a community for the newly freed blacks, was removed by the National Park Service during the development of the park but traces of it can still be seen on the landscape. Yorktown was established on the former Native American settlement known as Chiskiak. Little is known of these early relations with the Native Americans here and along the York River where Powhatan's capital was located.

Without conducting research on these topics, we cannot fully understand the significance of these related resources or interpret them to the public.

Description of Recommended Project or Activity

The park will seek funding through various sources to complete these studies and incorporate them in exhibits, resource management reports and interpretive programs. Each report will be submitted as a separate project statement.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-304.001
Last Update: 02/06/98 Priority: 0
Initial Proposal: 1997

Title : PREPARE SPECIAL HISTORY STUDY ON AFRICAN AMERICANS

Sub-title: JAMESTOWN/GREEN SPRING

Funding Status: Funded: 30.00 Unfunded: 0.00

Servicewide Issues : C38 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

In 1619, the first African American slaves arrived in Jamestown. The practice of slavery soon spread throughout the British colonies. In the 1640s, Governor Berkeley of Virginia established is plantation of Green Spring a short distance from Jamestown, where he experimented with a variety of planting and agricultural practices using slave labor. A study is needed to provide factual documentation in support of two major redevelopment projects: the 400th anniversary of Jamestown in 2007 that will include a new visitor center and a current initiative to develop Green Spring. The story of African Americans is especially relevant to Jamestown with the recent determination that skeletal remains discovered decades ago are actually those of African Americans from the 1620s-1640s. This study will enable the Park Service to tell a more complete story of all of the first settlers to the new country.

Description of Recommended Project or Activity

The park will work with Colonial Williamsburg, the College of William and Mary, and Hampton University to develop a research project that uses all of the primary sources that are available for the area. We will try to use graduate students from Hampton University to conduct the research in the primary records as an educational experience.

BUDGET AND FTEs:
----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998: CRPP	RES	One-time	30.00	0.02
		Total:	30.00	0.02

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-304.002
Last Update: 02/22/99 Priority: 16
Initial Proposal: 1992

Title : PREPARE SPECIAL HISTORY ON AFRICAN AMERICANS

Sub-title: YORKTOWN STUDY

Funding Status: Funded: 0.00 Unfunded: 60.00

Servicewide Issues : C38 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

There has been a strong black presence at Yorktown since the seventeenth century. No comprehensive study of blacks in Yorktown has been completed. A study would identify the evolution of slavery and the free black settlements that began in the 18th century. After the Civil War, a slabtown (Uniontown) was established next to the Yorktown National Cemetery. Freedmen also settled on lands surrounding Uniontown. When Colonial NHP was established in 1930, there were two impacts on the black population. First, the National Park Service began to purchase the lands settled by blacks including Uniontown and Surrender Road. Second, various federal programs including the Civilian Conservation Corps were available to the black population. A comprehensive study of black history at Yorktown is vital to an understanding of 18th century Virginia and to the past and current landscape of Yorktown Battlefield.

Description of Recommended Project or Activity

A comprehensive study would examine the black history of Yorktown at the following stages:

1. Complete annotated bibliography of the existing bodies of information in the park files including archeological studies, the Colonial Williamsburg York County Project, the cultural resource studies of the Yorktown Naval Weapons Station and Cheatham Annex, the National Archives, the Swems Library and other libraries as appropriate.

2. Complete research design for extended study.

3. In consultation with Colonial Williamsburg Foundation, complete historic resource study of blacks at Yorktown.

GPRA Goals: Ib and IIb.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	Recurring	30.00	0.00
Year 2:	RES	Recurring	30.00	0.00
Total:			60.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-304.003
Last Update: 02/22/99 Priority: 14
Initial Proposal: 1998

Title : PREPARE SPECIAL HISTORY STUDY OF NATIVE AMERICANS

Sub-title: JAMESTOWN STUDY

Funding Status: Funded: 0.00 Unfunded: 35.00

Servicewide Issues : C38 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Native Americans are associated with the history and resources of Jamestown Island. Recent archeological studies identified prehistoric sites that associate the use of the island with the earliest populations known to have occupied the East Coast. The interaction of the first settlers in 1607 with Native Americans has been told from the perspective of the white settlers with little or no understanding of the tribes and their use of the surrounding land and resources. As the Park Service prepares for 2007, it must take a new approach to understanding the role of the Native Americans in the survival of the settlers, the conflicts that ensued, and relate this new understanding to the artifacts and resources protected and managed by the park.

Description of Recommended Project or Activity

The park will work with the College of William and Mary, Colonial Williamsburg, and representatives from associated Native American groups in Virginia on documenting this history and relating it to the resources by examining primary sources and records for the Jamestown period.

GPRA Goals: Ib and IIb1.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs

Total:	0.00	0.00	

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	35.00	0.02
Total:			35.00	0.02

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-305.000
Last Update: 02/22/99 Priority: 34
Initial Proposal: 1992

Title : ARCHEOLOGICAL SURVEY, COLONIAL PARKWAY

Funding Status: Funded: 0.00 Unfunded: 200.00

Servicewide Issues : C02 (ID & EVAL)
C19 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

When the Colonial Parkway was constructed in the 1930s and the 1950s, only limited archeological investigations were completed. Almost nothing is known of the pre-contact and colonial sites, which are heavily impacted by recreation users. The purpose of the parkway was not to locate and connect pre-contact and historic sites although interpretive signs along the length of the Parkway add to the visitors' enjoyment of the scenic road.

Adjacent residential and other development such as ROWs have increased in the last, ten years threatening not only the viewsheds of the Parkway but the cultural sites, which overlap with the developed lands. Long term management of the Parkway will require an archeological survey and assessment in the near future.

Description of Recommended Project or Activity

An archeological survey along the entire length of the Colonial Parkway needs to be completed within the next ten years. The Survey would be conducted over four years.

GPRA Goals: Ib and Ib2.

BUDGET AND FTEs:
----------FUNDED----------
Source Activity Fund Type Budget ($1000s) FTEs

			==========	
	Total:		0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	50.00	0.30
Year 2:	RES	One-time	50.00	0.30
Year 3:	RES	One-time	50.00	0.30
Year 4:	RES	One-time	50.00	0.30
			==========	
	Total:		200.00	1.20

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-306.000
Last Update: 02/22/99 Priority: 999
Initial Proposal: 1992

Title : CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C01 (OVERVIEW)
C02 (ID & EVAL)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Yorktown and the surrounding battlefield have been subjected to numerous archeological investigations since the 1930s some of which have included reconstructions. The National Park Service conducted or supervised most excavations with several other conducted by non-profit institutions on non-NPS property.

During a 1992 review of the draft Yorktown Historic District documentation for the National Register of Historic Places, it was recommended that one of the statements of significance should be archeology and that the statement should document in a systematic fashion just what archeological investigations have taken place over the past century (both NPS and others), what we have learned from these investigations, the likely integrity of surviving sites, and what new knowledge is likely to be gained should additional investigation take place.

Although many potential archeological sites on the battlefield and encampment areas have been identified, only a few have been investigated and verified. Much of the archeological work in the 1930s was superficial and incomplete. A more thorough inventory and assessment is needed to guide future NPS management decisions both in the town and on the battlefield.

In 1994/5 Phase I and II archeological surveys were conducted on approximately eight acres on the north side of Yorktown creek which provided the park with its first archeological documentation of the Gwyn Read Subdivison.

Description of Recommended Project or Activity

Request funding to complete an exhaustive inventory and analysis of archeological investigations conducted on both NPS and private property since 1920. Conduct Phase I and where recommended Phase II archeological investigations through a Cooperative Agreement with the Colonial Williamsburg Foundation. Due to the size of the Yorktown unit, the work will be divided up into the town unit and battlefield units.

GPRA Goals: Ia and Ib2.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-306.001
Last Update: 02/22/99 Priority: 8
Initial Proposal: 1998

Title : CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN

Sub-title: CONDUCT TOWN ARCHEOLOGY

Funding Status: Funded: 83.00 Unfunded: 90.00

Servicewide Issues : C01 (OVERVIEW)
C02 (ID & EVAL)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The park is working closely with York County and the Yorktown Foundation on projects that may involve the transfer of NPS property to the County in exchange for inholdings within the battlefield proper. The need for fire suppression systems in the park's historic structures in Yorktown now require concrete vaults to be constructed in areas that may contain significant archeological resources. There is also a need to reopen some of the area for new park sponsored interpretive activities, such as walking tour near the earthworks in town, and the landscape plan for the Victory Monument.

Therefore Phase I and II surveys are needed on the town lots and waterfront areas belonging to the NPS. While the Battlefield area would be surveyed at 20 meter intervals, the 1/2 acre town lots because of the density of cultural resources require intervals of no more than 10 meters plus larger test units for specific features. The NPS owns approximately 60 lots. However, some lots or combination of lots warrant more careful investigation.

Of high priority is a survey of Lots 46, 47, 84, 85 known as the William Nelson property. These two acres include the remains of the house and outbuildings belonging William Nelson which were destroyed in the 1814 fire as well as the remains of the Cox House and Nelson stores. The northern portions of the lots contain Civil War earthworks. The research and interpretive value of these four lots require more careful archeological investigation. In addition, there is public pressure to open these lots for interpretation and other activities which might impact the archeological resources.

Also of high priority is a survey of Secretary Nelson's property located on the east side of Zweybrucken. The house was headquarters for General Cornwallis and it and its outbuildings were destroyed during the Siege of Yorktown in 1781. This area is proposed as part of the landscape plan for the Yorktown Monument and is heavily used during park and town public events.

Servicewide Long-term Goals Ia0,
Ib2, IVb
Park Long-term Goals 1.1, 5.1

Description of Recommended Project or Activity

Year 1: Conduct Phase I on four William Nelson lots ($20,000) and on Secretary Nelson's property to determine boundary and structures ($10,000).

Year 2: Conduct Phase I on other 1/2 acre town lots ($2,500 each) with emphasis on lots for possible exchange with York County.

Year 3: Conduct Phase I on other 1/2 acre town lots
($2,500 each) with emphasis on lots for interpretive activities.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998: CRPP	RES	One-time	48.00	0.00
2000: FEE-REV	RES	One-time	35.00	0.00
		Total:	83.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	30.00	0.00
Year 2:	RES	One-time	30.00	0.00
Year 3:	RES	One-time	30.00	0.00
		Total:	90.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-306.002
Last Update: 02/07/98 Priority: 37
Initial Proposal: 1998

Title : CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN

Sub-title: RESEARCH LANDHOLDINGS

Funding Status: Funded: 10.00 Unfunded: 40.00

Servicewide Issues : C02 (ID & EVAL)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Concurrent with the archeological surveys of the battlefield and individual town lots, additional research on the landownership and related activities needs to be conducted. The historical research conducted by Charles Hatch in the 1960s and 1970s needs to be updated and expanded.

Description of Recommended Project or Activity

Conduct historical research based on priorities identified in the archeological assessment.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998:	PKBASE-CR RES	Recurring	2.50	0.05
1999:	PKBASE-CR RES	Recurring	2.50	0.05
2000:	PKBASE-CR RES	Recurring	2.50	0.05
2001:	PKBASE-CR RES	Recurring	2.50	0.05
		Total:	10.00	0.20

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	10.00	0.00
Year 2:	RES	One-time	10.00	0.00
Year 3:	RES	One-time	10.00	0.00
Year 4:	RES	One-time	10.00	0.00
Total:			40.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-306.003
Last Update: 02/21/99 Priority: 31
Initial Proposal: 1999

Title : CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN

Sub-title: DEFINE SURRENDER FIELD

Funding Status: Funded: 0.00 Unfunded: 60.00

Servicewide Issues : C02 (ID & EVAL)
C03 (SITE DOC)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes : OTH (Other)

10-238 Package Number :

Problem Statement

Although many potential archeological sites on the battlefield and encampment areas have been identified, only a few have been investigated and verified. Much of the archeological work in the 1930s was superficial and incomplete. A more thorough inventory and assessment is needed to guide future NPS management decisions both in the town and on the battlefield.

Beginning in 2000, the park will be participating in the 225th anniversary of the American Revolution with the 225th anniversary of the surrender in 2006. A complete archeological assessment of the battlefield and encampment areas needs to be completed by then to direct development and interpretation.

One of the most pressing needs is to conduct a Phase I survey of the remaining areas related to the surrender and surrender field and to the construction of the first and second siege lines including the American first shot location.

Servicewide Long-term Goals Ia0,
Ib2, IVb
Park Long-term Goals 1.1, 5.1

Description of Recommended Project or Activity

Through the cooperative agreement with the Colonial Williamsburg Foundation conduct Phase I archeology of the 1781 battlefield located between Zweybrucken Road on the eastern edge of town through the first siege lines including the Surrender Field area.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	60.00	0.00
Total:			60.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : ARPA (ARCH. RES. PROT. ACT.)
NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-306.004
Last Update: 02/22/99 Priority: 25
Initial Proposal: 1998

Title : CONDUCT ARCHEOLOGICAL ASSESSMENT, YORKTOWN
Sub-title: BATTLEFIELD AND ENVIRONS

Funding Status: Funded: 50.00 Unfunded: 250.00

Servicewide Issues : C01 (OVERVIEW)
C02 (ID & EVAL)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Yorktown Battlefield has been the subject of numerous archeological investigations since the 1930s, primarily for the purpose of reconstructing the earthworks from the 1781 siege. During a 1992 review of the draft Yorktown Historic District documentation for the National Register of Historic Places, it was recommended that one of the statements of significance should be archeology. Although many of the potential archeological sites have been identified, only a few have been investigated and verified. Much of the archeological work in the 1930s was superficial and incomplete. A more thorough inventory and assessment is needed to guide future NPS management decisions.

Description of Recommended Project or Activity

An overview and assessment is needed to identify archeological sites related to all periods associated with Yorktown, including Native American, colonial, Revolutionary War, Civil War, and the post war period.

GPRA Goals: Ib and Ib2.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998: CRPP	RES	One-time	30.00	0.00
PKBASE-CR	ADM	Recurring	5.00	0.10
$-DONATE	RES	One-time	15.00	0.00
		Subtotal:	50.00	0.10
		Total:	50.00	0.10

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	250.00	0.00
		Total:	250.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-307.000
Last Update: 02/06/98 Priority: 999
Initial Proposal: 1992

Title : PREPARE ADMINISTRATIVE HISTORY

Funding Status: Funded: 0.00 Unfunded: 5.00

Servicewide Issues : C37 (ADMIN HIS)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Colonial National Historical Park represents the pioneering efforts of the National Park Service in historical research and management. The first park historians in the NPS were hired at Yorktown; who were without an organized program of research and interpretation from Washington. They worked with other professional disciplines in the park, including architects, engineers and archeologists, to gather and correlate information which would become the basis for future development and interpretation. This work is still used to guide park management decisions today. Under the direction of J. C. Harrington, the park became the birthplace of American historical archeology. The first complete restoration project carried out by the NPS was the Moore House in 1932-34. The first reconstruction by the NPS based on archeological investigations was the Swan Tavern complex. The Colonial Parkway is the only three-lane parkway in the United States and was built as a concept to connect the historic triangle of Virginia: Jamestown, Colonial Williamsburg and Yorktown.

With a long and varied history of management issues and practices which impacted not only the park but the entire national park system, an extensive administrative history is essential.

Description of Recommended Project or Activity

In 1993, Karen Rehm, then a historian in the Southeast Regional Office, volunteered to prepare the park's administrative history. Over the last four years, she has conducted most of the research and has prepared a basic outline. In her new position as Chief Historian at Colonial, she will continue to work on the history when time permits. Funding will be needed to print the final document

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
		Total:	0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 4:	RES	One-time	5.00	0.30
		Total:	5.00	0.30

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM6 APP. 7.4 B

Project Statement COLO-C-308.000
Last Update: 02/22/99 Priority: 999
Initial Proposal: 1998

Title : DEVELOP GREEN SPRING

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C05 (TREATMENTS)
C38 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Green Spring was added to Colonial National Historical Park in 1936 to commemorate the life of Sir William Berkeley, the longest serving royal governor of Virginia, and the relationship of the site to Colonial American history. It was not purchased until 1966 and is still not open to the public. The large manor house of Berkeley was taken down in the late 18th century, but its foundations were excavated in the 1950s. Remnants on the property include the structural ruins of an outbuilding, garden walls, artifacts associated with a pottery of the 17th century, and various landscape features associated with a large garden, the early Great Road, and rice cultivation.

Description of Recommended Project or Activity

In 1997, the Friends of the National Park Service for Green Spring, Inc., was formed by local citizens to help the park open Green Spring to the public and preserve its resources. A GMP Amendment was begun in 1998 with expectations of a draft and final in 1999. Due to the sensitivity of the site, significant amounts of archeological, historical, and cultural landscape research is needed before the plan can be fully implemented.

GPRA Goals: Ia, Ib, Ib2, IIb1, and IVb.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs

Total:	0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)
EA (ENV. ASSESSMENT)

Explanation:

Project Statement COLO-C-308.001
Last Update: 02/19/99 Priority: 21
Initial Proposal: 1996

Title : DEVELOP GREEN SPRING

Sub-title: CONDUCT ARCHEOL. ASSESS.

Funding Status: Funded: 40.00 Unfunded: 200.00

Servicewide Issues : C02 (ID & EVAL)
C04 (DATA RECOV)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The National Park Service acquired the Green Spring site in the 1960s. The site's primary significance is as the home of Sir William Berkeley from about 1650 to 1677. Berkeley was Royal Governor from the 1642 through 1677. His tenure was interrupted by the English Civil War but he returned to his position with the return of the Stuarts to the throne. Green Spring was not only the most extensive home in Virginia at this time it was also the social center as well as serving periodically as the actual seat of government after Jamestown experienced another of its various fires.

It was also the center of a large plantation where Berkeley conducted a number of experiments seeking to develop crops that would help the colonists to become self-sufficient.

In the 1950s Jane Carson prepared the historical report "GREEN SPRING PLANTATION IN THE 17TH CENTURY". During the same period Louis R. Caywood conducted an archeological investigation of the mansion site. While Mr. Caywood was a National Park Service archeologist the project was funded by the Virginia's 350th Anniversary Commission and the Jamestown-Williamsburg-Yorktown Celebration Commission. Unfortunately, this investigation had to be conducted within severe time constraints and adverse weather conditions. More recent work on doctoral candidates has identified a need for additional work on the mansion as well as elsewhere on the area. There had been some early archeology on the site in the 1920s.

The site has remained untouched since its acquisition by the National Park Service. In 1997, the Friends of the National Park Service for Green Spring, Inc., offered to raise funds and support the park's efforts to open Green Spring to the public. A GMP was begun in 1998 to develop alternatives. Using Fee Revenue funds, a Phase I Survey was completed in 1998, which identied several sites outside of the manor house that required additional testing. Additional testing may also be needed in areas identified for development, such as for parking and a visitor contact station.

Description of Recommended Project or Activity

To ensure the preservation and interpretation of cultural resources located at Green Spring, additional archeological testing is needed of related 17th century sites, 18th century slave quarter sites, and areas slated for development.

Investigate 18th Century Ludwell-Lee house site. This is necessary because the house is believed to have been constructed of materials robbed from the mansion site.

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998:	FEE-REV	RES	One-time	40.00	0.03
			Total:	40.00	0.03

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	200.00	0.50
		Total:	200.00	0.50

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-309.000
Last Update: 02/06/98 Priority: 999
Initial Proposal: 1998

Title : IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIONS

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C03 (SITE DOC)
C04 (DATA RECOV)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number : B

Problem Statement

The Jamestown Archeological Assessment conducted between 1992 and 1998 was conducted jointly among the National Park Service, the Colonial Williamsburg Foundation and the College of William & Mary. From its conception, the project was designed as an interdisciplinary study, bring to bear not only advances in archeology but sophisticated techniques in other disciplines. The most basic goal of the assessment was to inventory all archeological sites on NPS lands at Jamestown Island as required by the 1992 System-Wide Archeological Inventory Program (SAIP). This included the first comprehensive survey of the 1500 acres outside of the townsite as well as a re-evaluation of previous archeology within the townsite. An integral part of the archeological work was the environmental reconstruction of the Island, a comprehensive history to link landholdings and documentary record to the archeology and the application of new methods and techniques for locating sites without destroying the resource.

Jamestown Island represent a preserve of sorts under National Park Service stewardship where sites have been spared from the development that characterizes the surrounding region. It represents a true study of a "place," one that physically and historical is distinct. It is truly comprehensive in scope as both archeological and environmental observations are integrated with the documentary record; in large measure, it is a study in human ecology.

As of January 1998, the various studies are still in draft form. Each study and the synopsis will provide recommendations for future research to answer specific questions. The resultant information from the assessment will be applied in improving both management and interpretive programs as the park plans for Jamestown's 400th anniversary in 2007.

Description of Recommended Project or Activity

Develop proposals for additional research. Implement recommendations for threatened sites. Conduct archeological investigations of specific sites. Conduct additional historical research. Conduct additional environmental studies. Conduct research on museum collection. Interpret findings of assessment to public.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-309.001
Last Update: 02/22/99 Priority: 3
Initial Proposal: 1998

Title : IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIONS

Sub-title: EXCAVATE THREATENED SITES

Funding Status: Funded: 0.00 Unfunded: 50.00

Servicewide Issues : C04 (DATA RECOV)
C05 (TREATMENTS)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The comprehensive archeological survey of Jamestown Island (outdside the townsite) identifies 19 prehistoric and historic sites threatened by erosion. Of these, two are considered critical for excavation; two are recommended for mapping and testing and the remainder are recommended for testing. Erosion of parts of Jamestown Island is severe and cultural sites have lost as much of 50% of their resources. Testing and excavation of the most threatened sites need to be conducted in the very near future.

Description of Recommended Project or Activity

In 1998 conduct data recovery for two sites most threatened by erosion.

Develop list of priorities for testing and mapping remaining sites.

Implement priorities.

Note: One of the 2 sites was lost in 1998 after a series of northeasters hit the area. The second site was severely damaged. Funding from Fee Revenue was requested but was not approved until late 1998. Mitigation will not occur until 1999.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MIT	One-time	20.00	0.00
Year 2:	MIT	One-time	10.00	0.00
Year 3:	MIT	One-time	10.00	0.00
Year 4:	MIT	One-time	10.00	0.00
Total:			50.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-309.002
Last Update: 02/22/99 Priority: 17
Initial Proposal: 1998

Title : IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIONS

Sub-title: INVESTIGATE ISLAND SITES

Funding Status: Funded: 10.00 Unfunded: 200.00

Servicewide Issues : C02 (ID & EVAL)
C03 (SITE DOC)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Jamestown Archeological Assessment identifies not only additional work for threatened sites but recommends additional testing in areas to determine the full extent of the resources. Planning for Jamestown 2007 addresses the need to tell the stories and interpret the significant archeological resources associated with the earliest homesteads and plantations in British North America on Jamestown Island. The Assessment identified resources that also link the Island with its prehistoric past. Additional testing and Phase II excavations are required to assist with this planning and to protect sensitive resources from any developmental impacts.

Description of Recommended Project or Activity

Working with the Colonial Williamsburg Foundation and the College of William and Mary, the park will determine those sites that require further testing and some excavation over a four year period. The College of William and Mary has already donated $10,000 for some testing in FY1998 of two significant sites as an extension of their Cooperative Agreement.

GPRA Goals: Ib, Ib2, and IIb1.

BUDGET AND FTEs:
----------FUNDED----------
Source Activity Fund Type Budget ($1000s) FTEs

1998:	$-DONATE	RES	One-time	10.00	0.02

Total:	10.00	0.02

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	50.00	0.06
Year 2:	RES	One-time	50.00	0.06
Year 3:	RES	One-time	50.00	0.06
Year 4:	RES	One-time	50.00	0.06

Total:	200.00	0.24

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-309.003
Last Update: 02/22/99 Priority: 15
Initial Proposal: 1998

Title : IMPLEMENT JAMESTOWN ARCH. ASSESS. RECOMMENDATIONS

Sub-title: INVESTIGATE TOWN SITES

Funding Status: Funded: 30.00 Unfunded: 185.00

Servicewide Issues : C02 (ID & EVAL)
C03 (SITE DOC)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

A five year Archeological Overview and Assessment for Jamestown Island, completed in 1998, determined the need for additional testing and minimal excavation of major sites located within the "New Towne" portion of the Island. Major excavations conducted by the NPS in the 1930s and 1950s were incomplete and sometimes misidentified due to the limited knowledge base of the time. The thoroughness of the Overview and Assessment, which included major historical documentation research, has resulted in a new understanding of this first capital of Virginia. However, additional testing at a Phase I & II level are needed to determine the full significance and extent of the resources to adequately identify them and to fully understand the resource. Of utmost concern, is the potential threat to the resources from shoreline erosion, impacts from major storms or hurricanes, and proposed development on the Island resulting from the current efforts to improve interpretive trails, media, and perhaps even add "shadow" reconstructions of structures as part of the Jamestown 2007 and beyond initiative.

Description of Recommended Project or Activity

Through the Cooperative Agreement with the Colonial Williamsburg Foundation and the College of William and Mary, additional testing will be conducted on the most significant sites throughout the coming years. This information will be used to reinterpret the site and to assist in the preparation of National Register Documentation for Jamestown. It will also determine areas that should be avoided in plans for additional development or access.

GPRA Goals: Ib, Ib2, and IIb.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998:	$-DONATE	RES	One-time	15.00	0.03
1999:	$-DONATE	RES	One-time	15.00	0.03
			Total:	30.00	0.06

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	185.00	0.27
		Total:	185.00	0.27

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-310.000
Last Update: 02/06/98 Priority: 999
Initial Proposal: 1998

Title : PRESERVE POOR POTTER ARCHEOLOGICAL SITE

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C05 (TREATMENTS)
C04 (DATA RECOV)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Poor Potter kiln archeological site is one of the best known and historically important colonial-era industrial sites in North America. From c 1715 to his death in 1739, merchant William Rogers operated a fairly large-scale ceramics industry in Yorktown, Virginia on lots 51 and 55. The stoneware and earthenware kilns probably continued operation for several years after Rogers' death, perhaps as late as 1745.

Archeological work in the vicinity of the pottery kilns was started in 1966 by Norman F. Barka, Professor of Anthropology at the College of William & Mary, and continued on a limited basis until 1970 when the property was purchased by the NPS. Between 1970 and 1972, four structures and the Large Kiln were excavated by Barka, under sponsorship of the NPS. The Small Kiln, located east of the Large Kiln was started in 1975 and completed in 1981, along with additional testing on Lots 51 and 55. According to Barka's 1984 report, "The Poor Potter of Yorktown," approximately 40%-50% of the site has been tested or excavated. These excavations resulted in a quarter of a million artifacts and associated documentation. The Small Kiln and other features such as the waster pits were reburied to protect them.

In the early 1970s, the National Park Service erected a 25 ft. high corrugated metal quonset hut over the Large Kiln and associated workrooms in order to preserve the site without backfilling it. Extremes in temperature, condensation drip lines, extensive water seepage under the walls and resulting erosion under the quonset structure have damaged large areas of the outer kiln walls and seriously threaten the kiln itself. The quonset hut walls are deteriorating with overall rusting and tearing and holes along the foundation edges which sit directly on the ground. Located in the preservation and interpretive district of Yorktown identified in the 1993 GMP, the quonset hut seriously detracts from the historic scene. More important, the quonset hut is not anchored and presents a major hurricane hazard to the kiln ruins and surrounding historic properties and private residences. The LCS identifies the site's condition as "poor".

The Poor Potter museum collection includes 229,000 objects including 20 vessel types as well as associated kiln artifacts. The size of the collection which is fully cataloged and the extent of the remains of the kiln complex are bringing national and international interest to the site. There are no known comparable sites either in the U.S. or Europe. Regional collections and archeology sites are frequently identifying Poor Potter wares which were traded along the East Coast and in the Caribbean. With leadership from the SO, a WWW pilot project is being developed for the Poor Potter to make it more accessible to researchers and the public. The opportunity to study the kiln in conjunction with its artifacts is critical to the further understanding of the resource.

The specific threats are erosion of the site and possible collapse of the quonset hut. The Curator and Cultural Resource Management Specialist monitor the site and periodically photograph the continuing erosion. The quonset hut deterioration is continual and at greater risk each hurricane season. The workroom complex was reburied and the quonset hut was reduced in size to prevent further deterioration of these features. Reburying the Large Kiln site is the very last resort. Covering it with a suitable structure will protect the kiln from further deterioration.

The Poor Potter has national significance but is a well kept secret for both visitors and researchers. The site is located in the historical heart of Yorktown and offers the opportunity to interpret the story of a colonial entrepreneur, the exceptional quality of his wares, the expertise of the artisans (including skilled slave labor) and trade in the colonies. The 229,000 artifacts are stored in scattered locations in Yorktown and are difficult to access. There is no permanent exhibit and only two small temporary exhibits in the past 15 years. Visitation to the kiln asite is rare and limited to occasional tours primarily by archeologists. The condition of the quonset hut, the difficulty of access and walking/viewing space, and the fragile nature of the kiln ruins contribute to limiting public access. Educational programs for children have not been developed due to lack of safe access. The park initiated a pilot summer program in conjunction with the park cooperating association to test our ability to interpret the site. although there are interpretive signs and visitors can view the kiln from outside through a wire mess end wall, the quonset hut is not user friendly and the program was only marginally successful.

In order to fully interpret the Poor Potter, its importance to colonial-era industry and the skilled labor who produced the wares, additional historical studies need to be undertaken. This research will focus on the skilled labor as an untold story of Yorktown. However, additional research is also needed on the merchant William Rogers and his role in the English colonial trade, the on the wares produced from the kiln and on the manufacturing process.

Description of Recommended Project or Activity

Plan and program for construction of a building to replace the quonset hut. Plan and conduct additional archeology. Identify and implement additional research. Make museum collection available to public and researchers.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : DOC (COVERED BY ANOTHER DOC)

Explanation: 516 DM6 APP. 7.4 B(5)

Project Statement COLO-C-310.001
Last Update: 02/19/99 Priority: 0
Initial Proposal: 1997

Title : PRESERVE POOR POTTER ARCHEOLOGICAL SITE

Sub-title: CONDUCT PHASE I ARCHEOL.

Funding Status: Funded: 21.00 Unfunded: 0.00

Servicewide Issues : C02 (ID & EVAL)
C03 (SITE DOC)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

A building to protect the Poor Potter archeological site needs to be designed and constructed consistent with the preservation goals of the site. The purpose of the final structure will be to protect the resource from erosion and vandalism, to prevent visitor overuse and to provide appropriate environmental controls. The project needs to preserve the exposed archeological sites of the Large and Small Kiln foundations, consider energy conservation and a controlled environment, reflect the colonial atmosphere of Yorktown and the function of a colonial pottery industry without creating a false colonial image, and accommodate public access and interpretation. The project should identify options for exhibiting and interpreting objects and materials associated with the site including already existing structures such as the Nelson House Stables. The project should include an exhibit design and installation of exhibits meeting NPS Standards.

Although major archeological work was conducted in the 1970s on the site, it focused on the main pottery site and kiln. In order to construct the building and open it for interpretation, Phase I archeology is needed to determine the extent of Phase III archeology required for construction and prevent the destruction of major resources.

Servicewide Goal Ib2
Park Long-term Goal 1.1

Description of Recommended Project or Activity

Phase I archeology will be conducted by the Colonial Williamsburg Foundation under the current Cooperative Agreement. It will focus on the basic footprint of the existing structure and include those areas that would be affected by overall project.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998: CRPP	RES	One-time	20.00	0.00
PKBASE-CR	ADM	One-time	1.00	0.06
		Subtotal:	21.00	0.06
		Total:	21.00	0.06

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
	Total:	0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-310.002
Last Update: 02/19/99 Priority: 10
Initial Proposal: 1997

Title : PRESERVE POOR POTTER ARCHEOLOGICAL SITE

Sub-title: DESIGN & CONSTRUCT BLDG

Funding Status: Funded: 82.50 Unfunded: 708.00

Servicewide Issues : C05 (TREATMENTS)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Poor Potter site contains the ruins of an early 18th century pottery factory that were discovered and investigated by the NPS in the 1970s. The kiln is judged to be the best preserved example of an updraft kiln in the world producing some of the first stoneware in North America. Over 20 years ago, the main kiln was covered with a "temporary" 25 ft. high corrugated metal Quonset hut. Extremes in temperature, condensation drip lines, extensive water seepage under the walls and resultant erosion have damaged large areas of the outer kiln walls and seriously threaten the kiln itself. The Quonset hut walls are deteriorating with overall rusting and tearing.

Servicewide Long-term Goal Ib2, IIa0
Park Long-term Goal 1.1, 5.1

Description of Recommended Project or Activity

A building to protect the Poor Potter archeological site needs to be designed and constructed consistent with the preservation goals of the site. The purpose of the final structure will be to protect the resource from erosion and vandalism, to prevent visitor overuse and to provide appropriate environmental controls. The project needs to preserve the exposed archeological sites of the Large and Small kiln foundations, consider energy conservation and a controlled environment, reflect the colonial atmosphere of Yorktown and the function of a colonial pottery industry without creating a false colonial image, and accommodate public access and interpretation. The project should identify options for exhibiting and interpreting objects and materials associated with the site including already existing structures such as the Nelson House stables. The project should include an exhibit design and the installation of exhibits that present the significance of this site.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1997:	PKBASE-CR	ADM	One-time	2.50	0.05
1998:	PKBASE-CR	ADM	One-time	5.00	0.10
	SPECIAL-$	ADM	One-time	50.00	0.20
			Subtotal:	55.00	0.30
1999:	PKBASE-CR	ADM	One-time	5.00	0.10
2000:	PKBASE-CR	ADM	One-time	5.00	0.10
2001:	PKBASE-CR	ADM	One-time	5.00	0.10
2002:	PKBASE-CR	ADM	One-time	5.00	0.10
2003:	PKBASE-CR	ADM	One-time	5.00	0.10
			Total:	82.50	0.85

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	708.00	0.50
		Total:	708.00	0.50

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)
Project Statement COLO-C-310.003
Last Update: 02/19/99 Priority: 26
Initial Proposal: 1998

Title : PRESERVE POOR POTTER ARCHEOLOGICAL SITE

Sub-title: RESEARCH HISTORY

Funding Status: Funded: 2.00 Unfunded: 20.00

Servicewide Issues : C38 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The archeological investigations conducted on the Poor Potter included a history which focused on the life, land holdings and business affairs of William Rogers, the probable owner of the factory. The history was minimal and many questions remain unanswered such as who were the laborers (skilled and unskilled) who worked the the factory, who was A.C. whose initials are on the dated 1720 porringer, what did the factory look like, where was the source of clay, the extent of traded goods and specific information on vessel types. Since its publication in 1984, additional documentation has become available including the papers of Robert Anderson, 19th century landowner in Yorktown, research conducted by the Colonial Williamsburg Foundation. No systematic study using sources outside of the Yorktown has been made.

Servicewide Long-term Goal IIb1
Park Long-term Goal 3.1

Description of Recommended Project or Activity

Request EN or other donated funds to complete research related to the Poor Potter.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998:	PKBASE-CR ADM	Recurring	0.50	0.01
1999:	PKBASE-CR ADM	Recurring	0.50	0.01
2000:	PKBASE-CR ADM	Recurring	0.50	0.01
2001:	PKBASE-CR ADM	Recurring	0.50	0.01
		Total:	2.00	0.04

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	5.00	0.00
Year 2:	RES	One-time	5.00	0.00
Year 3:	RES	One-time	5.00	0.00
Year 4:	RES	One-time	5.00	0.00
Total:			20.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-312.000
Last Update: 02/19/99 Priority: 999
Initial Proposal: 1997

Title : PRESERVE AND REHABILITATE PATE HOUSE

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C56 (REHAB, ETC.)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Thomas Pate House is one of the oldest structures in Yorktown and was constructed in the early 1700s. It was a private residence until a few years ago. The proposed adaptive reuse of the structure is to convert it into a restaurant fulfilling a goal established for Yorktown in the 1930s Master Plan. Major repairs are needed to prevent water damage to the basement, replace electrical wiring and systems to meet code, replace in kind flooring and ceiling elements where water damage and severe deterioration is noted, and provide a fire suppression system to protect the structure. The park has already replaced the roof and conducted major archeological studies of the grounds.

Servicewide Long-term goal Ia5, IIa0
Park Long-term goal 1.3, 5.1

Description of Recommended Project or Activity

The major repairs will be funded through Fee Revenue funds, using the Historic Structure Report to guide the repairs and future use of the structure.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-312.001
Last Update: 02/06/98 Priority: 0
Initial Proposal: 1997

Title : PRESERVE AND REHAB PATE HOUSE

Sub-title: PREPARE HSR

Funding Status: Funded: 30.00 Unfunded: 0.00

Servicewide Issues : C52 (HSR)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Thomas Pate House will be undergoing major repair work over the next few years. Funding to modernize utility systems and preserve the structure will be generated through Fee Revenues. The Historic Structure Report is needed to ensure that original fabric and significant interior features are not damaged or adversely affected by these projects. It will also provide guidance to the park in working with potential concessionaires regarding any alterations to the structure.

Description of Recommended Project or Activity

Architects with the Colonial Williamsburg Foundation who have studied similar structures will prepare the architectural data section of the HSR. The Historical Data section will be based upon earlier work completed by park historian Charles Hatch, Jr. The architects will also review project specs to ensure that no original fabric or character defining features are damaged.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1998: CRPP	RES	One-time	30.00	0.03
		Total:	30.00	0.03

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-312.002
Last Update: 02/06/98 Priority: 20
Initial Proposal: 1997

Title : PRESERVE AND REHAB PATE HOUSE

Sub-title: REPAIR AND PROTECT STRUC.

Funding Status: Funded: 112.50 Unfunded: 180.00

Servicewide Issues : C56 (REHAB, ETC.)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Pate House has been unoccupied for several years. The basic utilities and electrical systems have not been upgraded for more than fifty years. Because of its age and intended use as a restaurant, a fire suppression system is needed to protect the structure.

Description of Recommended Project or Activity

The park will contract out to complete water penetration treatment of the cellar of this structure and initiate the installation of a fire suppression system. Other repairs of the structure will be completed by park staff.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1997: FEE-REV	PRO	One-time	112.50	0.03
Total:			112.50	0.03

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	PRO	One-time	180.00	2.00
Total:			180.00	2.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-313.000
Last Update: 02/22/99 Priority: 1
Initial Proposal: 1997

Title : PREVENT FURTHER EROSION OF JAMESTOWN AT NEW TOWNE

Funding Status: Funded: 49.00 Unfunded: 451.00

Servicewide Issues : C07 (SITE PROTCT)
C13 (EMERG STABL)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number : B

Problem Statement

Jamestown Island is the site of the first permanent English settlement in North America. The primary resources are the archeological foundations and artifacts that still lie below the surface. Unfortunately, the shoreline of the Island is eroding resulting in the loss of these resources. Although a major shoreline study is underway to determine the best way to protect the greater part of the Island that is not already protected by a seawall or riprap, the recent series of northeasters as undermined a significant portion of the riprap that once protected New Towne, where major foundations of the 17th century capital city still lie. The riprap has slipped several feet down the embankment with several feet of the earthen shoreline collapsing behind it. This collapse is evident for approximately 1/3 of a mile and is getting worse with each major storm. There are areas where brick is exposed and known archeological sites, 2 kilns and a yeoman's house, are threatened with their complete destruction.

Description of Recommended Project or Activity

The Park Service is working with VIMS and the Corp of Engineers to determine the best way to repair the riprap without compromising the fragile resources that lie behind it. Preliminary cost estimates covered the replacement of the riprap and additional archeology that might be needed to implement the project. The long term solution may be to restore the original shoreline to serve as a buffer for the remaining archeological resources.

GPRA Goals: Ia and Ib.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1999: RG-CR-MTN	MIT	One-time	49.00	0.10
		Total:	49.00	0.10

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MIT	One-time	451.00	1.00
		Total:	451.00	1.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-314.000
Last Update: 02/19/99 Priority: 13
Initial Proposal: 1998

Title : PREVENT WATER DAMAGE TO JAMESTOWN COLLECTION

Funding Status: Funded: 0.00 Unfunded: 3005.00

Servicewide Issues : C49 (ENVIRONMNT)
C47 (STORAGE)

Cultural Resource Type: OBJC (Object)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Jamestown collection is one of the finest 17th century American collections in the country. Although only a small portion of the collection is on display, the majority resides on the basement level of the Jamestown Visitor Center. The Jamestown Visitor Center was expanded in the 1970s as part of the Bicentennial program. Unfortunately, its flat roof design has resulted in major leaks throughout the building which adversely affects the environmental quality of the museum and storage area. The curatorial offices and storage area have been flooded during periods of heavy rain and northeasters that result in water coming under the rear door and through the walls.

Servicewide Long-term Goal Ia6
Park Long-term Goal 1.2

Description of Recommended Project or Activity

The roof and curatorial storage area need to be modified in order to prevent damage to these superior resources. A study completed a few years ago identified structural modifications that would secure the area from flooding. Another solution is to replace the building or rehabilitate it and move the collection to the second floor. The current planning efforts with the APVA will assess these needs in its final recommendations. A short term solution is to brick the window wall to the curatorial office.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	3000.00	2.00
Year 2:	PRO	One-time	5.00	0.25
Total:			3005.00	2.25

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-315.000
Last Update: 02/19/99 Priority: 11
Initial Proposal: 1998

Title : PREVENT WATER DAMAGE TO YORKTOWN COLLECTION

Funding Status: Funded: 0.00 Unfunded: 2000.00

Servicewide Issues : C47 (STORAGE)
C49 (ENVIRONMNT)

Cultural Resource Type: OBJC (Object)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Yorktown Visitor Center displays major objects from the American Revolution, including the only part of Washington's Tent owned by the NPS. Its library and archives are used by researchers throughout the year. However, the building's current design includes a flat roof and a much too small library. Heavy rains result in leaks throughout the building including the museum area and library. Many of the archives are being stored in other parts of the Visitor Center or in other buildings and are not secured according to NPS standards. The Washington Tent is currently undergoing major conservation treatment but there is concern about returning it to an environment that potentially may endanger it.

Servicewide Long-term Goal Ia6
Park Long-term Goal 1.2

Description of Recommended Project or Activity

The park has sought funding to replace the flat roof and to expand the current library. Funding has been sought through line item construction and other backlog requests.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	2000.00	1.00
Total:			2000.00	1.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-316.000
Last Update: 02/19/99 Priority: 35
Initial Proposal: 1998

Title : MAINTAIN PARK LIBRARY

Funding Status: Funded: 5.00 Unfunded: 3.00

Servicewide Issues : C83 (GEN CR MNGT)
C60 (CRBIB)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The park library (with the exception of the Natural Resources library) is managed by the CRM Specialist with assistance from the interpretive staff and volunteers. Libraries are located at the Jamestown and Yorktown Visitor Centers with sub-libraries for the collection management program. For the last 17 years, the libraries have been cataloged under the Library of Congress system. However, many materials are still in the old Dewey Decimal systems. None of the materials are in ProCite. The park no longer has a part-time library technician position and all cataloging of new books and materials is completed with intermittent volunteers. Purchase of books and materials is absorbed by the cultural resources and interpretation programs with no systematic review and purchasing system. Library space at both Jamestown and Yorktown is cramped. With the long range planning for the 400th anniversary of Jamestown in 2007, separate and enlarged libraries for interpretation and collection management need to be funded. The library at the Yorktown Visitor Center needs to be enlarged. All libraries need additional shelving and map cases for flat materials. All libraries need to be converted to ProCite and computers dedicated to each library. All libraries need a budget and purchasing program for new books, periodicals, microfilm readers and other materials. Because Jamestown and Yorktown are 24 miles apart, a central library is not practical.

Servicewide Long-term Goal Ia0
Park Long-term Goal 1.2

Description of Recommended Project or Activity

The park will work with various sources, including donations and volunteers, to organize the library and continue supporting it. An intern in the Library Science field will be sought to assist the park staff organize the library and update the CRBIB using Procite. Additional funding is needed for the purchase of equipment, supplies and materials.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1999:	PKBASE-CR	ADM	Recurring	1.00	0.02
2000:	PKBASE-CR	ADM	Recurring	1.00	0.02
2001:	PKBASE-CR	ADM	Recurring	1.00	0.02
2002:	PKBASE-CR	ADM	Recurring	1.00	0.02
2003:	PKBASE-CR	ADM	Recurring	1.00	0.02
Total:				5.00	0.10

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	ADM	One-time	3.00	0.00
Total:				3.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.7

Project Statement COLO-C-317.000
Last Update: 02/19/99 Priority: 0
Initial Proposal: 1998

Title : PREPARE THE JAMESTOWN NRHP DOCUMENTATION

Funding Status: Funded: 17.00 Unfunded: 0.00

Servicewide Issues : C36 (NR DOCMNT)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Jamestown portion of Colonial NHP has never been documented for the National Register. The recent completion of the five year Jamestown archeological assessment provides a greater understanding of the archeological resources that is the primary component or resource of this site.

Servicewide Long-term Goal Ia0
Park Long-term Goals Ia5, Ia7

Description of Recommended Project or Activity

Prepare National Register documentation with conjunction with the Association for the Preservation of Virginia Antiquities.

BUDGET AND FTEs:

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
			FUNDED		
1999:	CRPP	RES	One-time	17.00	0.00
			Total:	17.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-318.000
Last Update: 02/22/99 Priority: 4
Initial Proposal: 1998

Title : CREATE ARCHEOLOGIST POSITION FOR PARK

Funding Status: Funded: 0.00 Unfunded: 65.00

Servicewide Issues : C80 (ARCHEOLOGY)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Colonial NHP contains some of the earliest and most significant archeological sites associated with the 17th, 18th, 19th century events of American history. Although major archeological work occurred in the 1930s and 1950s, it has not had an archeologist on staff in more than 40 years. The park relies on the expertise of the Colonial Williamsburg Foundation and the Valley Forge Cultural Resources Center for assistance with major projects. However the extent of archeological investigations and programs that occur throughout the year exceeds the abilities of these organizations to meet these demands. We regularly meet with the staff of the Association for the Preservation of Virginia Antiquities on Jamestown related projects but lack the archeological expertise to assist us in coordinating major research efforts. With major overview and assessments, and Phase II and III archeological projects pending at Jamestown, Yorktown, the Parkway and Green Spring, an archeologist is needed to ensure that the projects proceed smoothly and that the research benefits the park's overall mission and goals.

Description of Recommended Project or Activity

Additional base funding and FTE is needed to meet the park's mission. The base funding would include salary and administrative support.

GPRA Goals: Ia, Ib, and Ib2.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	ADM	Recurring	65.00	1.00
Total:			65.00	1.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.1

Project Statement COLO-C-319.000
Last Update: 02/22/99 Priority: 6
Initial Proposal: 1998

Title : CREATE RESEARCH HISTORIAN POSITION FOR PARK

Funding Status: Funded: 0.00 Unfunded: 55.00

Servicewide Issues : C86 (HISTORY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Colonial NHP was the first park to have a park historian. However that was in the 1930s, and although the park had a research historian on the staff through the early 1960s, it has not been able to support this position in recent years. As a result, the research needs have not been met, and the small amount of research that is done has been by Supervisory park rangers who oversee the interpretive programs at Yorktown and Jamestown or by the Cultural Resource Specialist, who oversees the curatorial program and handles the 106 compliance for the park.

There are several research projects that are not being accomplished relating to the history of Yorktown and Jamestown, a Yorktown participants listing, research on Poor Potter site, and National Register documentation for Jamestown.

Description of Recommended Project or Activity

A base increase and FTE is needed to fill a research historian position at the GS-11 grade, which would also include administrative support.

GPRA Goals: Ia, Ib, Ib2, and IIb.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs

		==========	
Total:		0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	ADM	Recurring	55.00	1.00
		==========		
Total:			55.00	1.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.1

Project Statement COLO-C-320.000
Last Update: 02/22/99 Priority: 5
Initial Proposal: 1998

Title : CREATE HISTORICAL ARCHITECT POSITION

Funding Status: Funded: 0.00 Unfunded: 65.00

Servicewide Issues : C85 (STRUCTURES)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Colonial NHP contains nearly 200 structures as identified on the LCS. Several of the structures date to the early 18th century and require special care in long term treatment. We currently work with Colonial Williamsburg Foundation for staff support in preparing Historic Structure Reports, but they are limited in staffing and cannot provide us with assistance for day to day needs in meeting the Secretary of the Interior's Standards.

Description of Recommended Project or Activity

A base increase and FTE is needed to fill a Historical Architect position, which include administrative support.

GPRA Goals: Ia, Ib, and Ib2.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs

Year 1:	ADM	Recurring	65.00	1.00
			==========	==========
		Total:	65.00	1.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.1

Project Statement COLO-C-321.000
Last Update: 02/21/99 Priority: 12
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN NELSON HOUSE AND WALL

Funding Status: Funded: 0.00 Unfunded: 397.10

Servicewide Issues : C55 (MAINTENANCE)
C53 (ICAP)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes : OTH (Other)

10-238 Package Number :

Problem Statement

The Nelson House is the primary historic structure in Colonial NHP and only one of two houses interpreted to the public. The house was built in 1730 by Thomas "Scotch Tom" Nelson and was also the home of his grandson Thomas Nelson, Jr., Signer of the Declaration of Independence, wartime governor of Virginia and commander of the Virginia militia troops at Yorktown. The house is also architecturally important because it is a classic example of early Georgian architecture and 90% of the original fabric remains. The house remained in the Nelson family until 1908. In 1824, General Lafayette slept in the house during his
visit on the anniversary of the siege. The house was also used as a field hospital by both the Confederate and Union forces during the Civil War.

Restored by the National Park Service in 1976, the continued preservation and maintenance of the house is of high priority.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

An Historic Structure Report is being prepared which is guiding the preservation needs for the structure. Exterior and interior preservation and maintenance is required including waterproofing the basement, replacing the electrical system and completing masonry repair.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
		Total:	0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	161.60	1.00
Year 3:	PRO	One-time	161.60	2.00
	PRO	One-time	24.60	0.00
		Subtotal:	186.20	2.00
Year 4:	PRO	One-time	49.30	1.00
		Total:	397.10	4.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-322.000
Last Update: 02/21/99 Priority: 19
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN MOORE HOUSE COMPLEX

Funding Status: Funded: 0.00 Unfunded: 138.10

Servicewide Issues : C55 (MAINTENANCE)
C56 (REHAB, ETC.)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes : OTH (Other)

10-238 Package Number :

Problem Statement

The Moore House is one of only two historic structures open to the public for interpretive purposes. Its importance as the location for negotiating the terms of surrender to end the Siege of Yorktown in 1781. The house is furnished based on a Historic Furnishing Plan. The furnishings are primarily period pieces and reproductions with a few original Moore Family items.

During the Civil War the house was damaged by both Confederate and Union forces.

Beginning in the 19th century, there were several efforts to make the house an historic site. In 1881, the Yorktown Centennial Association purchased the house but it was not until 1929 that it was purchased by the Williamsburg Holding Company in anticipation of the establishment of what is no Colonial National Historical Park. The National Park Service restored the house to its colonial appearance between 1931 and 1934. The restoration included archeology and the construction of a separate kitchen and two comfort stations.

The Moore House was the first historic building to be restored by the National Park Service and the report prepared by Charles E. Peterson was the progenitor of all Historic Structure Reports. Its continued preservation and maintenance is of high priority.

The reconstructed Kitchen needs repair and waterproofing of the basement.

The comfort stations need to be winterized so the Moore House can be open year round.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

The Moore House needs general repairs and rehabilitation as a primarily historic structure open to the public ($20,100 in 2002). The Moore HOuse kitchen needs basement stabilization and rehabilitation ($93,000 in 2002). The comfort stations need to be winterized and upgraded ($25,000).

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	113.10	0.00
Year 2:	PRO	One-time	25.00	0.20
Total:			138.10	0.20

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-323.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN DUDLEY DIGGES COMPLEX

Funding Status: Funded: 0.00 Unfunded: 194.50

Servicewide Issues : C55 (MAINTENANCE)
C56 (REHAB, ETC.)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Dudley Digges house dating to c. 1760 is considered one of the finest 18th century houses in Virginia. It is one of only two surviving 18th century frame houses in Yorktown. With its prime location on Main Street, the Dudley Digges complex is an essential part of the historic landscape. The house was restored by the National Park Service in 1959/60 including archeological investigations. In 1976, the outbuildings were reconstructed.

The continued preservation and maintenance of the house is a high priority ($86,600 in 2002). A fire suppression system is needed ($73,900 in 2001). And, the kitchen roof needs to be replaced ($9,000 in 2002). An updated historic structure report is needed to re-evaluate the 1959/60 restoration and guide future preservation of the house.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Request funding for suppression system, historic structure report and rehab/repair.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	73.90	0.00
Year 2:	PRO	One-time	86.60	1.00
	PRO	One-time	9.00	0.20
	RES	One-time	25.00	0.00
Subtotal:			120.60	1.20
Total:			194.50	1.20

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-324.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN SOMERWELL HOUSE AND STABLE

Funding Status: Funded: 0.00 Unfunded: 208.90

Servicewide Issues : C55 (MAINTENANCE)
C56 (REHAB, ETC.)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Somerwell House is a brick structure constructed c. 1706. It was restored by the National Park Service in the 1930s and is currently used as an antique store open to the public. Located on Main Street, the house is an important element of the historic landscape. Also, because it is on Main Street which has been raised since the 18th century, the house is experiencing moisture problems in the basement. Because of its use as a building open the the public, a fire suppression system is needed.

With the main restoration work done in the 1930s, there has not been a complete historic structure report prepared to re-evaluate the restoration and guide future work.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Prepare HSR ($35,000), waterproof basement ($100,000) and install fire suppression system ($73,900 in 2001). Routine maintenance is funded by the concessioner under the direction of the NPS.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
	Total:		0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	73.90	0.00
Year 2:	RES	One-time	35.00	0.00
	PRO	One-time	100.00	0.00
	Subtotal:		135.00	0.00
	Total:		208.90	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-325.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN SMITH HOUSE

Funding Status: Funded: 0.00 Unfunded: 153.90

Servicewide Issues : C55 (MAINTENANCE)
C52 (HSR)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Edmund Smith House is a brick structure built c. 1706 and restored by the National Park Service in 1976. It is part of the Yorktown historical landscape.

The structure needs a historic structure report to guide future maintenance and repair. The house, and especially the facade needs to be maintained. As a residence, it needs a fire suppression system.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Prepare a historic structure report ($25,000)
Continue maintenance and repair ($69,800 in 2002)
Install fire suppression system (59,100 in 2001)

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
			Total:	0.00 0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	59.10	0.00
Year 2:	RES	One-time	25.00	0.00
	PRO	One-time	69.80	1.00
			Subtotal:	94.80 1.00
			Total:	153.90 1.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-326.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN BALLARD HOUSE

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C55 (MAINTENANCE)
C52 (HSR)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The frame house was built by John Ballard c. 1727. It is one of only two 18th century frame houses still existing in Yorktown. The National Park Service completed an adaptive restoration of the house in 1976. It is part of the Yorktown historical landscape.

The structure needs a historic structure report to guide future maintenance and repair. The house, and especially the facade needs to be maintained. The basement needs to be stabilized. As a residence, it needs a fire suppression system.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Prepare a historic structure report ($25,000)
Continue maintenance and repair, stabilize basement ($61,600 in 2001)
Install fire suppression system (59,100 in 2001)

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-327.000
Last Update: 02/21/99 Priority: 30
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN SWAN TAVERN COMPLEX

Funding Status: Funded: 0.00 Unfunded: 385.40

Servicewide Issues : C56 (REHAB, ETC.)
C52 (HSR)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Swan Tavern complex which includes the tavern, kitchen, stable and smaller associated structures was reconstructed by the National Park Service in the early 1930s. Based on archeology and historical documentation, the complex is the first restoration by the NPS on NPS lands. The complex located on Main Street is a critical element of the historic landscape.

Used as an antique shop and open to the public, the Swan Tavern and especially the kitchen and stable need repair and rehabilitation including waterproofing foundations, upgrading elelctrical systems, installation a suppression system and removing asbestos shingles.

In addition, an historic structure report needs to be prepared to document this early NPS restoration and guide future rehabilitation and repair.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Prepare historic structure report for complex ($50,000)
Restore Swan Tavern Kitchen ($35,700 in 2001)
Restore Swan Tavern Stables (44,400 in 2001)
Install suppression system ($73,900 in 2002)
Upgrade electrical system ($49,300 in 2002)
General maintenance and repair ($132.100 in 2002)

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
		Total:	0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	50.00	0.00
	PRO	One-time	35.70	0.00
	PRO	One-time	44.40	0.00
		Subtotal:	130.10	0.00
Year 2:	PRO	One-time	132.10	0.00
	PRO	One-time	73.90	0.00
	PRO	One-time	49.30	0.00
		Subtotal:	255.30	0.00
		Total:	385.40	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-328.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN ARCHER COTTAGE

Funding Status: Funded: 0.00 Unfunded: 157.10

Servicewide Issues : C56 (REHAB, ETC.)
C55 (MAINTENANCE)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Archer Cottage was constructed c. 1820 after the original house burned during the 1814 fire which swept through Yorktown. It is the only surviving historic structure on the waterfront to represent the thriving 18th century seaport. It was restored by the NPS in 1960. The house is critical to the historical landscape of Yorktown.

Because of its location close to the shoreline of the York River, house and especially its basement are frequently buffeted by high winds, water spray and high tides. York County is in the process of stabilizing the waterfront and building out the beach area to prevent water from flooding Water Street and the buildings along it. As part of that project, the Archer Cottage basement needs to be stabilized and the structure rehabilitated and repaired.

An historic structure report needs to be completed on the cottage.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Stablilize and preserve the Archer Cottage ($108,700 in 2002).
Prepare Historic Structure Report ($25,000)

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	132.10	2.00
	RES	One-time	25.00	0.00
Subtotal:			157.10	2.00
Total:			157.10	2.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-329.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN NATIONAL CEMETERY STRUCTURES

Funding Status: Funded: 0.00 Unfunded: 145.00

Servicewide Issues : C56 (REHAB, ETC.)
C52 (HSR)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

A National Cemetery was established in Yorktown immediately after the end of the Civil War. The cemetery includes a superintendent's house, a tool house and brick wall encompassing the cemetery. The site is located in the middle of the 1781 battlefield and is an important feature of the landscape.

No historic structure report has been completed for the buildings to guide preservation and maintenance.

Rehabilitation and repair of the stone house, brick tool house and brick wall is required.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Prepare historic structure report ($30,000)
Repair brick wall ($75,000)
Rehabilitate and repair the main house ($40,000)

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	30.00	0.00
Year 2:	PRO	One-time	75.00	0.00
Year 3:	PRO	One-time	40.00	0.00
Total:			145.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-330.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN BLOW ESTATE STRUCTURES

Funding Status: Funded: 0.00 Unfunded: 198.60

Servicewide Issues : C56 (REHAB, ETC.)
C52 (HSR)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

In 1915 when George Blow purchased the Nelson House in Yorktown, he planned to make it part of his country estate. In support of that, the architects who restored the Nelson House designed and built three support buildings in 1916: the stables, Wisteria Cottage and the Carriage House. The buildings are either used as park offices or are vacant. All need to have historic structure reports and basic restoration and rehab. in order to preserve them.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Stable: HSR, condition survey and restoration
Wisteria Cottage: HSR, condition survey, removal of lead paint and asbestos, reshingle and restoration.
Carriage House: HSR, restoration.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
		Total:	0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	30.00	0.00
	PRO	One-time	49.90	0.00
		Subtotal:	79.90	0.00
Year 2:	PRO	One-time	60.00	0.00
	PRO	One-time	58.70	0.00
		Subtotal:	118.70	0.00
		Total:	198.60	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-331.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN BURCHER COTTAGE

Funding Status: Funded: 0.00 Unfunded: 50.00

Servicewide Issues : C55 (MAINTENANCE)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Burcher Cottage was built in the late 19th century and in the 1950s and 1980s been almost totally rebuilt. The structure is used as a store. Located on Main Street it is considered an element of the historic landscape. The structure needs a suppression system.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Install fire suppression system.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 4:	PRO	One-time	50.00	0.00
Total:			50.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-332.000
Last Update: 02/21/99 Priority: 24
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN THE YORKTOWN MONUMENT

Funding Status: Funded: 0.00 Unfunded: 100.00

Servicewide Issues : C56 (REHAB, ETC.)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Erected in 1884, the Yorktown Monument is an essential element of the historical landscape. Susceptible to frequent lightning strikes, the monument needs to be inspected and repaired. Full cleaning needs to be performed.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Clean and routine maintenance.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	100.00	0.00

Total:	100.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-333.000
Last Update: 02/21/99 Priority: 29
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN THE JAMESTOWN MONUMENT

Funding Status: Funded: 0.00 Unfunded: 100.00

Servicewide Issues : C55 (MAINTENANCE)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Built in 1907 as part of the Jamestown Tercentennial, the Jamestown Monument is an essential element of the historic scene. The monument needs cleaning and repair.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Routine cleaning and repair.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	100.00	0.00
Total:			100.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-334.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE AND MAINTAIN CHURCH STREET COMFORT STATION

Funding Status: Funded: 0.00 Unfunded: 19.70

Servicewide Issues : C55 (MAINTENANCE)
C56 (REHAB, ETC.)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Church Street comfort station was built in c. 1931 is the only remaining comfort station designed with colonial architectural details to fit in with the colonial landscape. It was constructed with funds from the Public Works Administration.

Located on Church Street near Main Street, the building is important to the historical landscape. It is also the only public restroom available to visitors in the town.

The building needs be rehabilitated and repaired.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Rehabilitate and repair Church Street comfort station for the 225th anniversary of the American Revolution.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	19.70	0.25
Total:			19.70	0.25

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-335.000
Last Update: 02/21/99 Priority: 23
Initial Proposal: 1999

Title : PROVIDE TERMITE CONTROL FOR HISTORIC STRUCTURES

Funding Status: Funded: 0.00 Unfunded: 70.00

Servicewide Issues : C55 (MAINTENANCE)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

All the historic structures in Yorktown are seriously threatened by termite activity. A new bait system is available that meets the needs of preserving the historic structures while meeting environmental standards. The system needs to be installed in all the historic structures.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Install termite system.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	35.00	0.00
Year 2:	PRO	One-time	35.00	0.00
Total:			70.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-336.000
Last Update: 02/21/99 Priority: 36
Initial Proposal: 1999

Title : REPLACE HALON SYSTEM AT NELSON AND MOORE HOUSES

Funding Status: Funded: 0.00 Unfunded: 295.60

Servicewide Issues : C55 (MAINTENANCE)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

In the 1970s and early 1980s, the Nelson House and Moore House had halon fire suppression systems installed. Since that time, halon has been taken off the market and is extremely difficult and expensive to replace in case of a discharge. Both houses need to have their systems replaced with a new agent or with a water suppression system. An evaluation of the alternatives and their impact on the historic structures and the furnishing within the structures need to be considered before a final determination is made.

Servicewide Long-term Goal Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Evaluated, select and install replacement systems.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	147.80	0.00
	PRO	One-time	147.80	0.00
		Subtotal:	295.60	0.00
		Total:	295.60	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-337.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE JAMESTOWN RUINS

Funding Status: Funded: 0.00 Unfunded: 73.90

Servicewide Issues : C05 (TREATMENTS)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The ruins of the 18th century Ambler mansion and the brick foundations over the archeological remains of 17th and 18th century structures need to be repaired and stabilized.

Servicewide Long-term Goal Ia0, Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Repair and stabilize ruins.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	73.90	0.00
Total:			73.90	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : ARPA (ARCH. RES. PROT. ACT.)
NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-338.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE JAMESTOWN GLASSHOUSE RUINS

Funding Status: Funded: 0.00 Unfunded: 21.90

Servicewide Issues : C07 (SITE PROTCT)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The ruins of the 1608 glass furnaces, one of Jamestown's earliest industries, are covered by a glass interpretive structure. In order to protect the site, the structure needs repair.

Servicewide Long-term Goal Ia0, Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Repair of glasshouse ruins shelter.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	21.90	0.00
Total:			21.90	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : ARPA (ARCH. RES. PROT. ACT.)
NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-339.000
Last Update: 02/21/99 Priority: 999
Initial Proposal: 1999

Title : PRESERVE GREEN SPRING RUINS

Funding Status: Funded: 0.00 Unfunded: 47.30

Servicewide Issues : C07 (SITE PROTCT)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Green Spring archeological site includes the ruins of several above ground structures including the jail and the green house wall. In order not to lose these features, repair to the masonry is needed.

Servicewide Long-term Goal Ia0, Ia5
Park Long-term Goal 1.1, 1.3

Description of Recommended Project or Activity

Repair masonry walls.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	PRO	One-time	47.30	0.00
Total:			47.30	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : ARPA (ARCH. RES. PROT. ACT.)
NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-340.000
Last Update: 02/22/99 Priority: 999
Initial Proposal: 1998

Title : DEVELOP ARCHITECTURAL DESIGN GUIDELINES/ YORKTOWN

Funding Status: Funded: 40.00 Unfunded: 0.00

Servicewide Issues : C57 (SPEC STUDY)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

In accordance with the park's GMP and Yorktown's Master Plan, vacant lots currently owned by the park are to be considered for future development. Depending upon the archeological resources present and the location of the site, some of these lots may be exchanged for York County land located in the battlefield or may stay within the park. Archeological resources and the historical and architectural integrity of historic Yorktown must be preserved and protected.

Description of Recommended Project or Activity

After archeological surveys are conducted on at least 10 lots in Yorktown (see COLO-C-306.001), architectural standards and design plans will be developed for areas identified for adaptive use. To ensure that the standards meet the Secretary of the Interior's Standards and that the adjacent historic structures owned by the NPS are not compromised, the park will develop these standards with the county, NPS historical architects, and outside consultants.

GPRA Goals: Ia and IVb.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
2000: FEE-REV	RES	One-time	40.00	0.00
		Total:	40.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
	Total:	0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-C-341.000
Last Update: 02/22/99 Priority: 999
Initial Proposal: 1999

Title : RESEARCH SURRENDER AT YORKTOWN

Funding Status: Funded: 0.00 Unfunded: 20.00

Servicewide Issues : C38 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

On October 19, 1781, General Charles Lord Cornwallis formally surrendered his British and German forces to General George Washington's allied American and French forces. The surrender ceremony involved the handing over of the commander's sword by Cornwallis' second in command, General Charles O'Hara, the marching of the British and German forces through a cordon formed by Washington's Allied army, and the stacking of arms by the surrendering troops at a field today known as surrender field. While the sword exchange area had been marked in the 19th century by a grove of trees and a monument, nothing exist currently specify the location nor is it clear as to what research was done in the 19th century to document this site. Additionally, the scene of the stacking of arms needs to be clarified to improve the interpretation of this most important event and depiction of this cultural area. Surrender cannon displayed on the site of surrender field also need additional research to clarify their history.

Description of Recommended Project or Activity

A comprehensive study would examine the history of the British surrender:

1. Complete annotated bibliography of the existing bodies of information in the park files, contemporary accounts of the siege, the surrender cannon and hte 19th century efforts to document the surrender in such depositories as the State Library of Virginia, National Archives, and other libraries as appropriate.

2. Complete research design for extended study of cannons.

GPRA Goals: Ib and IIb1.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	20.00	0.00
Total:			20.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-342.000
Last Update: 02/22/99 Priority: 999
Initial Proposal: 1999

Title : RESEARCH THE BRITISH CAMPAIGN IN VIRGINIA, 1781

Funding Status: Funded: 0.00 Unfunded: 21.00

Servicewide Issues : C38 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The British attempts to take Virginia in 1781 culminated with their defeat at the siege of Yorktown. Though much is known about the siege, little study has been done on the British and American movements in Virginia prior to August 1781, when Lord Cornwallis located his forces at Yorktown. The largest infantry engagement in Virginia during the War, the Battle of Green Spring, occurred on July 6, 1781, and is located near the Jamestown unit. Initial actions occurred at the Green Spring unit of the park with the forming of troops by Lafayette.

Description of Recommended Project or Activity

A comprehensive study of the Virginia campaign is important to the understanding of the events that led up to the 1781 siege and to identify related cultural sites.

The study would include a complete annotated bibliography of the existing bodies of information in the park files and library, the Library of Virginia, British Public Records Office, and other libraries as appropriate. This would assist in developing a complete research design for extended study.

GPRA Goals: Ib and IIb.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	21.00	0.00
Total:			21.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-C-343.000
Last Update: 02/22/99 Priority: 0
Initial Proposal: 1999

Title : RESEARCH THE HISTORY OF YORKTOWN AS A SEAPORT

Funding Status: Funded: 4320.00 Unfunded: 20.00

Servicewide Issues : C38 (SPEC STUDY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Yorktown was established in 1691 to provide a port for the centralization of trade in the Tidewater area of colonial Virginia. In the first half of the 18th century, Yorktown developed as a thriving seaport and served Williamsburg. Little is known of this era leaving many questions for archeologists, ethnographers, and the public on the people aand resources related to the waterfront area of Yorktown.

Description of Recommended Project or Activity

A comprehensive study of Yorktown's role as a thriving seaport is important to understanding its role in the colonial economy and maritime history, the social structure of the town, and the past landscape of the town. The study would include: a complete annotated bibliography and a complete research design plan.

GPRA Goals: Ib and IIb.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1999: $-DONATE	RES	One-time	4320.00	0.00
		Total:	4320.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	20.00	0.00
		Total:	20.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-I-001.100
Last Update: 02/10/98 Priority: 16
Initial Proposal: 1992

Title : MANAGE GEOGRAPHIC INFORMATION SYSTEM

Sub-title: CULTURAL RESOURCE GIS

Funding Status: Funded: 84.00 Unfunded: 9.00

Servicewide Issues : C62 (GIS)
C83 (GEN CR MNGT)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Concurrent with the development of natural resource themes and databases into the park's Geographic Information System (GIS), data from historical, archeological and national register/LCS reports and maps has begun to be entered. Not only will this information enable the park to quickly assess the impact of actions on cultural resources, it will provide the park with a consolidation of all existing data in order to make decisions on further resource research and funding needs. Of particular importance is the use of the GIS for the Jamestown Archeological Inventory and Assessment. Also of critical importance is the documentation of the park's earthworks on the GIS.

The cultural GIS program requires increased staffing to oversee this critical aspect of the program. Because the Servicewide program was originally developed for natural resource management needs, few cultural resource managers or specialists have been involved. There is no base funding for this program within the Historical Interpretation and Preservation Division (HIP). The HIP division has one employee assigned to cultural GIS for approximately 20% of his time. The original equipment has recently been upgraded to meet the cultural resource management needs for the next five years. The HIP staff has received a variety of basic orientation and specialized training in GIS. Cultural GIS is recognized as critical to the management of the park. Funding for staff, equipment and digitizing has been intermittently allocated at the expense of other programs. Cultural GIS at the park needs base funding and staffing to operate on a continuing basis.
During FY96 10 miles of park Revolutionary and Civil War earthworks were GPS'd. Additional databases were created for the Jamestown Island Archaeological Assessment.

Description of Recommended Project or Activity

For FY97 GIS unfunded needs include:

Historical and cultural data related to Jamestown shall be incorporated into the GIS as part of the Jamestown Archeological Inventory and Assessment.

Base funding for the parkwide GIS should be increased to include one full-time cultural GIS administrator and supplies and materials.

Colonial's cultural GIS should serve as a model for other parks nationwide.

The National Register documentation (when completed) shall be incorporated and refined in the GIS.

Archeological inventories and assessments for Yorktown, the Colonial Parkway and Green Spring shall be incorporated into the GIS.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-CR	MON	Recurring	12.00	0.30
1993:	PKBASE-CR	MON	Recurring	12.00	0.30
1994:	PKBASE-CR	MON	Recurring	12.00	0.30
1995:	PKBASE-CR	ADM	Recurring	12.00	0.30
1996:	PKBASE-CR	ADM	Recurring	10.00	0.20
1997:	PKBASE-CR	ADM	Recurring	10.00	0.20
	PKBASE-CR	ADM	One-time	6.00	0.01
			Subtotal:	16.00	0.21

1998:	PKBASE-CR	ADM	Recurring	10.00	0.20
			Total:	84.00	1.81

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	ADM	One-time	9.00	0.00
		Total:	9.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-I-002.000
Last Update: 02/06/98 Priority: 999
Initial Proposal: 1992

Title : PRESERVE AND STABILIZE EARTHWORKS

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C12 (ICAP)
C20 (PRGM DEV)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : V00 (Vegetation Management)

10-238 Package Number :

Problem Statement

Colonial NHP contains a network of approximately 29 miles of Revolutionary and Civil War earthworks at Yorktown and Jamestown. The earthworks are subjected to a variety of natural and human threats. There is controversy concerning the most appropriate methods for maintaining significant, highly visible earthworks. Earthworks that were reconstructed during the 1930s are now considered significant and are deteriorating. Trails and waysides constructed on the earthworks have invited the public to create new paths on top of the earthworks. Concern over the future treatment of earthworks include types of grass or vegetation, mowing patterns, and presentation to the public.

Description of Recommended Project or Activity

Using the MAR Earthworks Landscape Management Manual as a starting point, determine which method of earthworks management will provide the greatest amount of stabilization at the least cost. Address the following threats to priority earthworks:

1. Routine maintenance - Determine which form of maintenance is in keeping with the historical nature of the park and will also protect the cultural resources. Techniques being considered are grooming verses natural growth. A groomed earthwork is pleasing to the visitor, however, it does invite human intrusion which results in erosion from climbing. One alternative would be to allow the earthworks to "grow up" and perform maintenance by removing woody plants only. Current maintenance technology has

not yet provided an efficient means of accomplishing this task.
Therefore, it is a very labor intense style of maintenance.

Another serious problem with using natural growth as a protective cover to curb visitor intrusion upon earthworks stems from tunneling of groundhogs. The tunneling causes destabilization of the earthwork. The vegetative cover obscures the groundhog tunnel entrances which create unseen hazards for the maintenance crews as they maintain the earthworks.

2. Authorized trails - Install bridges at all earthwork crossing
points. Repair or replace all existing unsound bridges.

3. Unauthorized trails and accesses - Install natural barriers or fences, out of sight from authorized trails or viewing points
wherever possible.

4. Climbing by visitors - Install or expand barriers, bridges and cautionary sign system in heavy use areas. Remove unnecessary "lures" such as signs placed in the actual earthwork and replace them with interpretative signs located so they will serve as "polite" barriers.

5. Fraise - Replace all fraise which are considered to be inappropriate reproductions, deteriorated and/or discolored.

6. Map via GPS all earthworks and identify the original, Revolutionary War, Civil War, reconstructed portions, and year of reconstruction.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)
Explanation:

Project Statement COLO-I-002.100
Last Update: 02/09/98 Priority: 1
Initial Proposal: 1992

Title : PRESERVE AND STABILIZE EARTHWORKS
Sub-title: ESTABLISH MGMT PROGRAM

Funding Status: Funded: 6.00 Unfunded: 140.00

Servicewide Issues : C19 (SPEC STUDY)
C20 (PRGM DEV)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : V00 (Vegetation Management)

10-238 Package Number :

Problem Statement

Colonial NHP is unique for its four categories of earthworks: Revolutionary War, Civil War, Civil War constructed on top of Revolutionary War and reconstructed Revolutionary War. No other national park has the unique interpretive value of having both Revolutionary and Civil War era earthworks within its boundaries.

Despite the magnitude of the scope and physical extent of the park's earthworks, a complete inventory and assessment of these valuable resources has never been conducted. All categories of the earthworks are in critical need for stabilization and protection against a variety of natural and human threats. No coordinated program exists to inventory, assess, prioritize and implement management measures.

Description of Recommended Project or Activity

1. Complete GPS inventory of all earthwork categories. This may include some removal of vegetation.

2. Complete assessment of condition and threats (current and potential) to earthworks.

3. Reestablish Park Earthworks Management Task Force and determine what can be done with current funding, and additional funding is needed.

4. Develop Earthworks Management Plan and procure funding.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1997: $-DONATE	RES	One-time	6.00	0.02
		Total:	6.00	0.02

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	Recurring	35.00	1.00
Year 2:	RES	Recurring	35.00	1.00
Year 3:	RES	Recurring	35.00	1.00
Year 4:	RES	Recurring	35.00	1.00
		Total:	140.00	4.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-I-002.200
Last Update: 02/06/98 Priority: 0
Initial Proposal: 1992

Title : PRESERVE AND STABILIZE EARTHWORKS

Sub-title: REGULAR MAINTENANCE

Funding Status: Funded: 84.00 Unfunded: 0.00

Servicewide Issues : C14 (MAINTENANCE)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The earthworks that are immediately accessible to the public require routine maintenance. A groomed earthwork is pleasing to the visitor, however, it does invite human intrusion which results in erosion from climbing. One alternative would be to allow the earthworks to "grow up" and perform maintenance by removing woody plants only.

Description of Recommended Project or Activity

A regular mowing cyclic is established for those earthworks that are primary to interpreting the Yorktown Siege. Other earthworks are monitored and woody vegetation is removed on a regular basis.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-OT	MIT	Recurring	12.00	0.10
1993:	PKBASE-OT	MIT	Recurring	12.00	0.10
1994:	PKBASE-OT	MIT	Recurring	12.00	0.10

1995:	PKBASE-OT MIT	Recurring	12.00	0.10
1996:	PKBASE-OT MIT	Recurring	12.00	0.10
1997:	PKBASE-OT MIT	Recurring	12.00	0.10
1998:	PKBASE-OT MIT	Recurring	12.00	0.10
		Total:	84.00	0.70

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
	Total:	0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.7

Project Statement COLO-I-002.300
Last Update: 02/06/98 Priority: 17
Initial Proposal: 1992

Title : PRESERVE AND STABILIZE EARTHWORKS

Sub-title: PROTECT AND MONITOR

Funding Status: Funded: 10.00 Unfunded: 5.00

Servicewide Issues : C20 (PRGM DEV)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The earthworks are threatened by human activity, such as illegal trails and metal detecting. Some waysides placed mistakenly on top of earthworks have encouraged this establishment of new trails. Many miles of the earthworks are spread out over the park and cannot be seen from the roadways, inviting those to search for artifacts or to create new bike trails on them. These earthworks are original, primarily to the Civil War, but some to the Revolutionary War.

Description of Recommended Project or Activity

A monitoring program has been established with park staff and volunteers to regularly walk and document any disturbances to those earthworks that may be in jeopardy with the eventual goal that all of the 29 miles of earthworks are monitored during the year.

A special donation by the Children of the American Revolution enabled the park to move some waysides that are placed on top of the earthworks and to add a few more that identify the earthworks as significant but fragile resources and discourages walking and other activities.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs

1997:	PKBASE-CR MON	Recurring	2.00	0.04
	$-DONATE PRO	One-time	5.00	0.10
		Subtotal:	7.00	0.14
1998:	PKBASE-CR MON	Recurring	3.00	0.05
		Total:	10.00	0.19

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MON	Recurring	5.00	0.07
		Total:	5.00	0.07

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-I-002.400
Last Update: 02/06/98 Priority: 14
Initial Proposal: 1992

Title : PRESERVE AND STABILIZE EARTHWORKS

Sub-title: VISITOR USE STUDY-YKTOWN

Funding Status: Funded: 0.00 Unfunded: 10.00

Servicewide Issues : C71 (VISIT IMPCT)
N22 (VIS USE-DEV ZN)

Cultural Resource Type: SITE (Archeological Site)

N-RMAP Program codes : R00 (Social Science Research)

10-238 Package Number :

Problem Statement

One of the most significant areas in Yorktown includes the area of the British Defense Line and the French-American Seige Lines. This area is heavily impacted by a variety of visitor uses. These include, but are not limited to, creating illegal social trails on the earthworks through walking, jogging, playing, dirt bike use, horseback riding, kit flying, model plane flying, frisbee throwing, football, picnicking, etc.

Description of Recommended Project or Activity

A study should be conducted that documents current activities and their physical and social impacts, and evaluates their appropriateness in relation to management objectives.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	RES	One-time	5.00	0.00
Year 3:	RES	One-time	5.00	0.00
Total:			10.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-I-004.000
Last Update: 02/10/98 Priority: 5
Initial Proposal: 1992

Title : MAINTENANCE OF PARK GROUNDS, FIELDS, TRAILS

Funding Status: Funded: 2800.00 Unfunded: 1850.00

Servicewide Issues : C14 (MAINTENANCE)
N08 (CULT LANDSCAPE)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : V00 (Vegetation Management)

10-238 Package Number :

Problem Statement

Colonial supports approximately 2,044 acres of lawns, gardens, fields, trails, roadside and riverside areas which require landscape, vegetation and erosion/sedimentation management in order to preserve cultural and natural resources, and historic viewsheds of the park. Current funding levels are insufficient to meet current legislative, policy and planning document mandates. Furthermore, the insufficient funding causes concern
and discontent with maintenance practices among park staff, because they do not always address the cultural and natural resource issues. Examples are as follows:

1. Due to the lack of a Cultural Landscape Management Plan, operating funds and FTE, many of the "sacred" areas of the park are not being groomed to reflect the era in which they originally designed and the class "A" lawns are not being fertilized, seeded or irrigated in order to maintain a manicured effect. Certain historical landmarks are overgrown and obscured from public view, such as the fort on the corner of Main and Ballard Streets in Yorktown.

2. A mowing regime plan was developed to attempt to meet the workload abilities of the maintenance division and address natural resource management issues. The overall effect is that of a "blended" style of mowing which seems to have met with public approval. Schedules are interrupted to accommodate special interest groups. Also, the maintenance schedule occasionally conflicts with natural resource issues, e.g., exotic species, wildflower growth, erosion and sedimentation prevention.

3. Trail maintenance is on a hit-or-miss basis. Many social trails exist as a result of the lack of proper trail networks. Also, there have been several serious bicycle accidents on the Colonial Parkway. Both a trail plan and a bike path have been recommended for the park. The Federal Highway Administration has provided a schematic design for a parkway bike path. Neither idea has been implemented because of lack of funds. The park with the MARO has developed a Yorktown trail plan.

4. As identified in the General Management Plan, Colonial's interpretation of the area between Surrender Field and Yorktown is hampered due to the secondary forest growth which obstructs the view from the Surrender Field Pavillion to the village of Yorktown.

5. Due to the sandy soil and high water table, erosion is a problem parkwide. Mowing slopes while they are wet worsens the erosion problems. Mowing next to trails, bluffs and creeks also creates erosion and sedimentation problems. Adjacent developable lands also contribute to erosion and sedimentation problems within the park. The Federal Highway Department has documented for Colonial at least 1/2 mile of eroding shoreline, in the Jamestown area, caused by the lack of riprap at drain pipe locations.

Description of Recommended Project or Activity

1. Prepare a Cultural Landscape Management Plan for the park (see COLO-I-011.000).

2. Install irrigation systems in significant class "A" lawn areas.

3. Increase the maintenance ONPS base to allow for an increase in grounds FTE in order to maintain the historic lawns and gardens more in keeping with their original appearance.

4. Comply with the Yorktown Master Plan by exposing and making assessable to the public the fort on the corner of Main and Ballard Streets in Yorktown proper.

5. Make a firm decision on retaining the current mowing plan and allow for as few interruptions as possible.

6. Clear the wooded area to maintain (class C) an open view between the Surrender Field Observatory and Yorktown Proper.

7. Enlist the Denver Service Center to develop a Master Trail Plan which would include a Bike Trail Plan developed by the Federal Highways in 1974.

8. Research the riverside erosion problem and develop recommendations for stabilization (see COLO-N-601.504).

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-OT	MIT	Recurring	350.00	11.00
1993:	PKBASE-OT	MIT	Recurring	350.00	11.00
1994:	PKBASE-OT	MIT	Recurring	350.00	11.00
1995:	PKBASE-OT	MIT	Recurring	350.00	11.00
1996:	PKBASE-OT	MIT	Recurring	350.00	11.00
1997:	PKBASE-OT	MIT	Recurring	350.00	11.00
1998:	PKBASE-OT	MIT	Recurring	350.00	11.00
1999:	PKBASE-OT	MIT	Recurring	350.00	11.00
Total:				2800.00	88.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	100.00	1.00
	MIT	One-time	1500.00	2.00
	MIT	One-time	250.00	0.00
Subtotal:			1850.00	3.00
Total:			1850.00	3.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM6 APP. 7.4 C(3)

Project Statement COLO-I-004.100

Last Update: 02/10/98 Priority: 10

Initial Proposal: 1992

Title : MANAGEMENT OF GROUNDS, FIELDS, TRAILS
Sub-title: OPEN FIELDS MANAGEMENT

Funding Status: Funded: 9.00 Unfunded: 75.00

Servicewide Issues : N08 (CULT LANDSCAPE)
N06 (LAND USE PRAC)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : V00 (Vegetation Management)

10-238 Package Number :

Problem Statement

Colonial NHP has over 1,100 acres of open fields. This is only a small percentage of the open fields existing at the time of
Cornwallis' surrender. Maintenance maintains these areas using
different mowing regimes.

The park has received the input of a multi-disciplinary team of
soil scientist, agricultural agent, forester and conservation
specialist in developing the following goals:

1. Reduce the park maintenance cost and enhance historic appearance of the open fields.

2. Improve soil erosion control.

3. Improve quality of park fields.

4. Improve community relations through local involvement in the
agricultural economy and Chesapeake Bay Initiative.

5. Improve historic vistas and landscapes.

The park has worked with local extension agents, SCS, etc. to
locate individuals interested in haying. The park has developed
model permit conditions and mailed request for bids to local
farmers and extension agents. The plans objectives for each
field are to provide complete analysis of soil and erosion

control needs, e.g., best management practices. Request for bids were issued but no response was received because of the cost of field renovation.

There has been a general reduction of mowing overall, with a small increase in Class A lawns according to a GIS analysis.

Problems with Johnson Grass continues to exist in large fields and some small patchy areas, i.e. next to Dudley Diggs House. The park continues to conduct an experimentally non-herbicide approach to Johnson Grass control that has over the past three years shown over a 50% reduction in Johnson Grass dominance.

Description of Recommended Project or Activity

Some changes in the mowing regime have been instituted. Other recommendations have been made regarding mowing regime involving control of exotic species, reduction of erosion and sedimentation impacts, revegetation and the protection of the Yorktown onion.

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-NR	RES	Recurring	4.00	0.10
	FED-OTHER	RES	One-time	1.00	0.00
			Subtotal:	5.00	0.10
1993:	PKBASE-NR	MON	Recurring	1.00	0.00
1994:	PKBASE-NR	MON	Recurring	2.00	0.10
1995:	PKBASE-NR	MON	Recurring	1.00	0.00
			Total:	9.00	0.20

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	MIT	One-time	25.00	0.20
Year 3:	MIT	One-time	25.00	0.20
Year 4:	MIT	One-time	25.00	0.20
Total:			75.00	0.60

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EA (ENV. ASSESSMENT)
NHPA ((106) NAT. HIST. PRES.)

Explanation: 516 DM6 APP. 7.4 C(3)

Project Statement COLO-I-004.200
Last Update: 02/29/96 Priority: 9
Initial Proposal: 1992

Title : MAINTENANCE OF PARK GROUNDS, FIELDS, TRAILS

Sub-title: EROSION CONTROL

Funding Status: Funded: 0.00 Unfunded: 177.00

Servicewide Issues : N22 (VIS USE-DEV ZN)
C13 (EMERG STABL)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : D00 (Disturbed Area Rehabilitation)

10-238 Package Number :

Problem Statement

There are many miles of trails. Many social trails have been established by visitors and neighbors on earthworks and along the shorelines and cliffs of the park. Maintenance does minor revegetation and blocks some social trails with cut brush. In some areas, control of illegal trails has been attempted by limiting mowing. A Yorktown Bluff Plan was developed but has only been partially implemented.

Also, numerous park construction projects take place yearly by park maintenance division, under contract or as part of permits. Erosion and sedimentation have been a problem, and permittees and contractors have been required to follow state and local erosion and sedimentation regulations. Maintenance has also begun to follow these regulations in their projects (see COLO-N-601.303)

Description of Recommended Project or Activity

The park will continue to need to experiment with different approaches to vegetation management of social trails. A social science study of user needs may need to be conducted and an overall parkwide trail plan developed. For the Yorktown bluffs, the park will need to reinstitute the objectives of the recent plan. This would include repair present fencing, install taller

fences in some areas, conduct biotechnology measures to stabilize and revegetate illegal trails along the bluffs from both human caused and natural erosion and sloughing off. Also changes in mowing patterns will need to be made.

All vegetation proposals will require selective cutting to discourage woody plants. Overseeding, during late February, during "frostpack" should be conducted on the parkway hillside, gully and outside the headquarter's office to reduce erosion problems. Regular inspection patrols of the areas acted on to locate new problems and evaluate past actions will be needed. Finally, the park needs to educate the visiting public by using local radio and TV spots, signing, interpretive messages, patrol and enforcement.

Training in State and local ordinances, and BMP practices should be undertaken for park staff in the maintenance division. This training could be conducted through the Colonial Soil and Water Conservation District at minimum cost.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
		Total:	0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	MON	One-time	10.00	0.20
	RES	One-time	75.00	0.10
		Subtotal:	85.00	0.30
Year 3:	MON	One-time	10.00	0.20
	MON	One-time	75.00	0.10
		Subtotal:	85.00	0.30
Year 4:	MON	One-time	4.00	0.10
	MON	One-time	3.00	0.10
		Subtotal:	7.00	0.20

Total: 177.00 0.80

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EA (ENV. ASSESSMENT)
NHPA ((106) NAT. HIST. PRES.)

Explanation: 516 DM6 APP. 7.4 C(3)

Project Statement COLO-I-004.300
Last Update: 02/05/98 Priority: 18
Initial Proposal: 1999

Title : VEGETATION MGMT. FOR EXOTICS,SHORELINES, EARTHWORKS

Funding Status: Funded: 0.00 Unfunded: 275.00

Servicewide Issues : C72 (PROTECTION)
N05 (NON-NAT PLANTS)

Cultural Resource Type:

N-RMAP Program codes : D00 (Disturbed Area Rehabilitation)

10-238 Package Number :

Problem Statement

This short-term project will address a variety of vegetation management issues. It is related to projects I002, I004.1, I00-4.2 and N607. Issues addressed by this project include control of invasive exotic species, rehab. of vegetation on historic earthworks, maintenance of scenic vistas, and establishment and maintenance of vegetative buffers on shorelines.

Description of Recommended Project or Activity

This project would provide funding for a small crew of temporary employees, who would work under the supervision of the park's landscape architect on the vegetation management issues described above.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MIT	One-time	275.00	5.00
Total:			275.00	5.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EA (ENV. ASSESSMENT)

Explanation:

Project Statement COLO-I-005.000
Last Update: 02/10/98 Priority: 4
Initial Proposal: 1992

Title : REMOVE HAZARDOUS TREES

Funding Status: Funded: 240.00 Unfunded: 170.00

Servicewide Issues : N24 (OTHER (NATURAL))

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : V00 (Vegetation Management)

10-238 Package Number :

Problem Statement

There are approximately 8,176 wooded acres in Colonial National Historical Park. With approximately 68 miles of park, state and county roadways bordered by Colonial's forest, public safety is the foremost issue in examining the park's current preventative maintenance program for removal of hazardous and diseased trees. The Maintenance Management Deferred Program is running around 50%. Past practices have included tree removal on a crisis basis. Due to escalating landfill cost, the affected trees are left in the wooded area in which they are felled. With the decrease in ground cover during the winter months, the felled trees detract from the scenic view along the parkway. Colonial has stands of Southern pine bark beetle infested trees that need to be removed, along with individual dead and dying trees that pose a hazard to public safety. Due to the lack of sufficient FTE's and current funding levels, this type of preventative maintenance is not possible.

Description of Recommended Project or Activity

Develop, document and implement a Hazardous Tree Removal Program at Colonial modeled on the Western regions. Increase ONPS funding levels to allow for two FTE's for full-time tree removal and care.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-OT MIT	Recurring	30.00	0.50
1993:	PKBASE-OT MIT	Recurring	30.00	0.50
1994:	PKBASE-OT MIT	Recurring	30.00	0.50
1995:	PKBASE-OT MIT	Recurring	30.00	0.50
1996:	PKBASE-OT MIT	Recurring	30.00	0.50
1997:	PKBASE-OT MIT	Recurring	30.00	0.50
1998:	PKBASE-OT MIT	Recurring	30.00	0.50
1999:	PKBASE-OT MIT	Recurring	30.00	0.50
		Total:	240.00	4.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MIT	One-time	100.00	0.00
	MIT	One-time	70.00	2.00
		Subtotal:	170.00	2.00
		Total:	170.00	2.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM6 APP. 7.4 C(3)

Project Statement COLO-I-006.000
Last Update: 02/05/98 Priority: 7
Initial Proposal: 1992

Title : CONDUCT RESOURCE PROTECTION ACTIVITIES

Funding Status: Funded: 332.00 Unfunded: 60.00

Servicewide Issues : N22 (VIS USE-DEV ZN)
C71 (VISIT IMPCT)

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : N00 (Resource and Visitor Use Management)
N01 (Control of Poaching and Theft of Natural Resources)

10-238 Package Number :

Problem Statement

Colonial National Historical Park is located in an area undergoing steady urbanization, and private property along the park boundary is increasingly being converted from undeveloped land to residential subdivision or commercial use. This growing population near the park results in increased pressure from recreational use of park lands, as other available open space in the area disappears. As development occurs along the park boundary, there is also increased spillover activity into the park, including adverse uses such as dumping of refuse, boundary encroachment by adjoining landowners, illegal burning of leaves or trash, illegal camping and fires, metal detecting and illegal hunting. Recreational walking, cycling and horseback use of the park originating from adjacent residential areas results in creation of unplanned trails, which in turn have adverse impacts on natural and cultural resources. Some historic earthworks have been severely damaged by recreational use, primarily mountain bike use.

Description of Recommended Project or Activity

Additional directed patrols are needed on a regular basis along the park boundary to detect encroachment and other adverse impacts. Increased contacts with adjacent property owners to educate residents concerning park values and regulations are needed. Such educational programs can also be conducted through various property owner associations in some adjoining neighborhoods, and through an existing county newsletter. These efforts will be conducted as staffing permits, but effective actions for this project will require additional personnel. This project is closely tied to the need for a complete survey of the park boundary, which is identified in a separate project statement. In selected problem areas, techniques such as better signing, fencing or rehab of illegal trails will be needed.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-OT	PRO	Recurring	40.00	1.50
	PKBASE-OT	PRO	Recurring	12.00	0.00
			Subtotal:	52.00	1.50
1993:	PKBASE-OT	PRO	Recurring	40.00	1.50
1994:	PKBASE-OT	PRO	Recurring	40.00	1.50
1995:	PKBASE-OT	PRO	Recurring	40.00	1.50
1996:	PKBASE-OT	PRO	Recurring	40.00	1.50
1997:	PKBASE-OT	PRO	Recurring	40.00	1.50
1998:	PKBASE-OT	PRO	Recurring	40.00	1.50
1999:	PKBASE-OT	PRO	Recurring	40.00	1.50
			Total:	332.00	12.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	PRO	One-time	40.00	1.00
	PRO	One-time	20.00	0.00
		Subtotal:	60.00	1.00
		Total:	60.00	1.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM6 APP. 7.4 E(2)

Project Statement COLO-I-007.000
Last Update: 02/19/97 Priority: 8
Initial Proposal: 1994

Title : PARTICIPATE IN ADJACENT LAND USE PROTECTION ACTIV.

Funding Status: Funded: 210.00 Unfunded: 65.00

Servicewide Issues : N16 (NEAR-PARK DEV)
N11 (WATER QUAL-EXT)

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : E00 (Environmental Planning and Compliance)

10-238 Package Number :

Problem Statement

Colonial National Historical Park is located in an area undergoing steady urbanization, and private property along the park boundary is increasingly being converted from undeveloped land to residential subdivision or commercial use. Changes in land use patterns near the boundary are starting to have an adverse impact on scenic quality, with even greater threats emerging. Also, this growing population near the park results in increased pressure from recreational use of park lands, as other available open space in the area disappears. As development occurs along the park boundary, there is also increased spillover activity into the park, including adverse uses such as nonpoint source and increased storm water runoff not covered by the NPDES program, erosion and sedimentation, the dumping of refuse, boundary encroachment by adjoining landowners, illegal burning, illegal camping and fires, and illegal hunting. Recreational walking, cycling and horseback use of the park originating from adjacent residential areas result in creation of unplanned trails, which in turn have adverse impacts on natural and cultural resources.

Since the water resources within the park are largely part of watersheds which extend beyond the park boundaries, maintenance and conservation of park resources is significantly influenced by activities external to the park. The quantity of surface and groundwaters in the park is subject to greatest change in areas where adjacent land use is undergoing or susceptible to the greatest change. The east end of the park, including the Yorktown Battlefield and the Colonial Parkway along the York River, is not at significant risk currently because adjacent lands are primarily owned and managed by Newport News Water Works and the U.S. Navy. Significant changes in land use patterns on these areas is not anticipated, and much of the land is maintained in a forested condition. The west end of the park, including the parkway route from Queen's Lake westward through Williamsburg and on to Jamestown Island, is at significantly greater risk due to development of surrounding lands. Conversion of lands from forested or agricultural use to more intensive uses increases the potential for alteration of the surface water flows and groundwater levels. These changes
have produced detrimental impacts on the natural and cultural resources within the park.

Additional water-related management actions resulting from adjacent land use activity (including increased nonpoint source runoff, increased erosion and sedimentation, and increased risk of contamination from discharges of fuels, sewage, chemicals and other pollutants) are addressed in project statements rights-of-ways COLO-I-009, hazardous materials COLO-I-015, water planning COLO-N-601.0, groundwater monitoring COLO-N-601.1, permit review COLO-N-601.201, drainage related problems COLO-N-601.303, and surface water monitoring COLO-N-601.503.

Description of Recommended Project or Activity

Effective pursuit of park management objectives requires effective coordination with local and state regulatory and planning programs which address land use within watersheds containing park resources. Those watersheds with significant potential for change in land uses and significant park resources should be targeted for further analysis. These analyses should compare park management objectives with potential impacts from development. This can be assisted by utilizing information now included or being entered into the park's GIS system.

At the present time, land use is directed by the comprehensive plans of York and James City counties and the city of Williamsburg. Critical local programs also include the COLO GIS data base and the state/local Chesapeake Bay Preservation Act regulations. The comprehensive plans address the types of development which will be considered in various watershed areas and the Chesapeake Bay Preservation Act regulations address development restrictions within certain portions of thos waterwheds. These plans have been researched and documented as part of the Water Resource Management Plan (Appendix 5,6). After an evaluation of these plans, a strategy should be designed which provides for monitoring of development in selected areas of the watershed, opportunity to coordinate the park's resource manatement needs with the localities, and to review and comment on local jurisdictions' comprehensive plans and guidelines for proposed projects within the watersheds. The objective should be identification of development options which will minimize adverse impacts on park resources. Subsequent to this analysis, which should be reconsidered periodically, park staff needs to monitor development proposals continuously and maintain coordination with local authorities to ensure consideration of park objectives in all permitting decisions.

The park's GIS is being used to develop an developable lands application, to understand those adjacent land use areas facing the greatest threat to the park's natural, cultural, and aesthetic integrity. Also, the GIS has recorded adjacent critical habitats as delineated by the Virginia Department of Natural Heritage. Digital GIS coverages for soils and drainages and adjacent land use zoning has been created. The park is converting from the adjacent jurisdictions' land use ownership records for entering into the park's GIS. The information gained from this monitoring effort will provide additional information upon which we the park can build a sound and proactive cooperative management program with the neighboring counties that will serve to protect the full spectrum of both NPS and local citizen objectives and values.

In addition to the GIS efforts, park management regularly attends planing commission and Board of Supervisors meetings of the surrounding counties. This regular personal contact provides an avenue for information exchange that is beneficial to all parties. this proactive work by park management is critical to the identification of major issues and assists in soliciting cooperation by all possible concerns that may be held by local, state, and federal governments and citizens. Park, local, and regional values are identified, and a consensus building developed.

Also, additional directed patrols are needed on a regular basis along the park boundary to detect encroachment and other adverse impacts. Increased contacts with adjacent property owners to educate residents concerning park values and regulations are needed. Such educational programs can also be conducted through various property owner associations in some adjoining neighborhoods, and through an existing county newsletter. These efforts will be conducted as staffing permits, but effective actions for this project will require additional personnel. Existing cooperative efforts with other federal, state and local government agencies concerning land use planning, storm water management, and erosion and sedimentation control will continue. This project is closely tied to the need for a complete survey of the park boundary, which is identified in project statement COLO-I-024.

Analysis of current adjacent land use activities, and the effectiveness of adjacent land use plans, along with the development of review/coments on different proposals, combined with the incorporation of this adjacent land-use information into the park's GIS system, evaluating the results of existing monitoring programs, and developing and maintenance of regular, consistent contact with local planing and regulatory agencies will require a minimum of 1 FTE per year.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1994:	PKBASE-OT	MIT	Recurring	40.00	1.00
1995:	PKBASE-OT	MIT	Recurring	40.00	1.00
1996:	PKBASE-OT	MIT	Recurring	40.00	1.00
1997:	PKBASE-OT	MIT	Recurring	45.00	1.00
1998:	PKBASE-OT	MIT	Recurring	45.00	1.00
			Total:	210.00	5.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	MIT	One-time	65.00	1.00
		Total:	65.00	1.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.11

Project Statement COLO-I-009.000
Last Update: 02/05/98 Priority: 13
Initial Proposal: 1992

Title : MANAGE ROW'S AND SPECIAL PARK USES

Funding Status: Funded: 142.00 Unfunded: 50.00

Servicewide Issues : N24 (OTHER (NATURAL))
C70 (ENVRM IMPCT)

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : N00 (Resource and Visitor Use Management)
N11 (Rights-of-Way and Easement Management)

10-238 Package Number :

Problem Statement

Colonial National Historical Park has in excess of 125 existing utility rights-of-way running into, through, over or under the park. Each of these rights-of-way are permitted within the park by Right-of-Way Permits. It is incumbent upon the park to manage and oversee these activities. Since approximately half of the permits involve fees, a fiscal responsibility exists to track, issue Bills for Collection and account for the funds involved.

Each right-of-way permit details the underlying legislation that allows the activity. It makes the statement that the use involved is neither incompatible with the public interest nor inconsistent with the use of such lands for park purpose, and further that the use will not be in derogation of the values and purposes for which the park was established. Each permit must be reviewed on an annual basis to reaffirm these mandates and insure that nothing has changed from the original concept that allowed the permit to be accepted on first review.

The presence of utility lines is widespread throughout both the Yorktown and, to a lesser extent, the Jamestown areas. For the most part, utilities along the Colonial Parkway are confined to corridors encompassing roadways that cross the trans-peninsula parkway. While some of the lines serve the park buildings and appurtenances, the majority transit the park to service residents of the surrounding communities.

The variety of utilities permitted run the full gamut from electrical, telephone, water, sewer, cable television, natural gas and other petroleum products. The possibility of damge to both the natural and cultural resources of the park varies with the type of line involved. However, each of the various types of utilities carries its own potential for harm.

In addition to rights-of-way, the park also manages a near equal number of other types of special uses. These agreements cover a wide range of uses including fire, search and rescue, fence lines, signs, emergency medical services, use of structures and resources and special events. While some are short term, one time uses, most concern long time uses and are managed with the same considerations as a right-of-way.

Until FY97, the park had a full-time special park use coordinator who handled the above activities. That employee has now transferred to WASO to handle similar issues on a service wide basis. As a result, those duties have been absorbed by other division staff, primarily the chief ranger. This workload cannot continue to be absorbed by this position and funding is needed to fill this position again on the park level.

All rights-of-ways have been entered into the park's GIS.

Description of Recommended Project or Activity

Because of the wide variety of utilities and other special park uses in the park, the highly technical nature of the work involved, the subsequent training required and the sheer number of permits, the management of right-of-way permits, require no less than 20% of one FTE. The park has assigned special park use coordinator within the RMVP division to manage this program. This position closely coordinates with the Chief Ranger, Natural Resource Management Specialist, and Cultural Resource Management Specialist to insure that park values and resources are protected and federal, state and local environmental laws and regulations are complied with. Not only are current special use permits being converted to right-of-way permits, but new requests for these and the other types of permits are being processed.

The park special use coordinator also assists the regional coordinator with new permits, training and revision to regulations; and serves as WASO-NPS servicewide special park use coordinator.

Finally, once a permit is issued and activities commence, regular field inspections are conducted by appropriate park staff from the natural resource management specialist, to a cultural resource management specialist/curator, to park engineer, to contract archeologist and to state and local inspectors.

The park's GIS specialist will need to update the past four years of changes and additions to the ROW file. Also with new edge of pavement GIS theme the ROW theme will need to be moved and registered to the edge of pavement instead of the centerline.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-OT	ADM Recurring	38.00	0.90
	PKBASE-NR	MON Recurring	3.00	0.10
		Subtotal:	41.00	1.00
1993:	PKBASE-OT	ADM Recurring	10.00	0.20
	PKBASE-NR	MON Recurring	3.00	0.10
		Subtotal:	13.00	0.30
1994:	PKBASE-OT	ADM Recurring	10.00	0.20
	PKBASE-NR	MON Recurring	3.00	0.10
		Subtotal:	13.00	0.30
1995:	PKBASE-OT	ADM Recurring	10.00	0.20
	PKBASE-NR	MON Recurring	3.00	0.10
		Subtotal:	13.00	0.30
1996:	PKBASE-OT	ADM Recurring	10.00	0.20
	PKBASE-NR	MON Recurring	3.00	0.10
		Subtotal:	13.00	0.30
1997:	PKBASE-OT	ADM Recurring	10.00	0.20
	PKBASE-NR	MON Recurring	3.00	0.10
		Subtotal:	13.00	0.30
1998:	PKBASE-OT	ADM Recurring	10.00	0.20
1999:	PKBASE-OT	ADM Recurring	10.00	0.20
	PKBASE-NR	MON Recurring	3.00	0.10
		Subtotal:	13.00	0.30
2000:	PKBASE-OT	ADM Recurring	10.00	0.20
	PKBASE-NR	MON Recurring	3.00	0.10

Subtotal:		13.00	0.30
Total:		142.00	3.30

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 4:	ADM	Recurring	50.00	0.80
Total:			50.00	0.80

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)
NHPA ((106) NAT. HIST. PRES.)

Explanation: 516 DM6 APP. 7.4 A(4)

Project Statement COLO-I-011.000
Last Update: 02/19/99 Priority: 999
Initial Proposal: 1992

Title : DEVELOP JAMESTOWN CULTURAL LANDSCAPE PROGRAM

Funding Status: Funded: 0.00 Unfunded: 0.00

Servicewide Issues : C11 (REPORT)
N08 (CULT LANDSCAPE)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : V00 (Vegetation Management)

10-238 Package Number :

Problem Statement

With the approach of the 400th anniversary of Jamestown, a major planning effort is underway that will address the construction of a new visitor center and/or the rehabilitation of the existing structure as a research center. Major landscape issues need to be addressed with the development of new trails and interpretive opportunities on the Island and potentially the Parkway.

Colonial NHP is fortunate in that it and the Association for the Preservation of Virginia Antiquities control all of Jamestown Island and the lands beyond Back River on its northern boundary. However, the viewsheds to the south across the James River are very vulnerable. Surry County is still a rural county with low population density. The county's transportation link to Williamsburg and communities and services on the north bank of the James River is a ferry service. In 1992, an effort to have a bridge crossing either at Jamestown or within the viewshed west of Jamestown was halted through the efforts of the Colonial Williamsburg Foundation, James City County, the Association for the Preservation of Virginia Antiquities and the National Park Service. However, population and economic growth of Surry will result in continued pressure for a bridge crossing in the vicinity of Jamestown Island. Development along the south shore of the James River also poses a threat. Already, wooded areas have been stripped for future residential development.

Servicewide Long-term Goals Ia0, IIa0
Park Long-term Goals 1.1, 1.4, 2.1, 2.2

Description of Recommended Project or Activity

A cultural landscape inventory is needed, especially with the completion of the archeological overview and assessment that identified the presence of major agricultural features from the 17th century.

A cultural landscape report is required to identify potential adverse impacts on the Island's viewsheds. The report should also provide baseline information on the existing and historical landscapes for the Island and provide recommendations to address future development of the Island.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Total:		0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EA (ENV. ASSESSMENT)
NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-I-011.001
Last Update: 02/19/99 Priority: 6
Initial Proposal: 1997

Title : DEVELOP CULTURAL LANDSCAPE PROGRAM FOR JAMESTOWN

Sub-title: PREPARE CLI

Funding Status: Funded: 0.00 Unfunded: 45.00

Servicewide Issues : C10 (INVENTORY)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Jamestown Island was the first permanent British colony in North America. It served as the capital of Virginia until 1699, but recent archeological investigations identified major structures that were built in the late 18th century. The APVA (since 1893) and the National Park Service (since 1930) have managed it has a park with various modifications to monuments, walkways, and trails over the years.

With the oncoming 400th anniversary and plans for new development, an inventory of those features and plantings that are significant and contribute to the overall character of the Island is needed.

Servicewide Long-term Goals Ia0, Ib2, IIa0
Park Long-term Goals 1.1, 1.4, 2.1, 2.2

Description of Recommended Project or Activity

Initiate and complete a cultural landscape inventory for Jamestown Island through the Philadelphia Support Office.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	45.00	1.00
Total:			45.00	1.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-I-011.002
Last Update: 02/19/99 Priority: 12
Initial Proposal: 1998

Title : DEVELOP JAMESTOWN CULTURAL LANDSCAPE PROGRAM

Sub-title: PREPARE CLR

Funding Status: Funded: 0.00 Unfunded: 70.00

Servicewide Issues : C11 (REPORT)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

Jamestown Island will be undergoing major development in preparation for the anniversary in 2007. It also is threatened by development across the river and along the south shore of the James. Once the CLI is completed, a CLR is needed that addresses viewshed issues, the development of trails, and planting plans that would enhance the identified components of the cultural landscape.

Servicewide Long-term Goals Ia0, Ib2, IIa0
Park Long-term Goals 1.1, 1.4, 2.1, 2.2

Description of Recommended Project or Activity

With the assistance of the Philadelphia Support Office, contract out to prepare a Cultural Landscape Report for Jamestown Island. This could be phased over 2 years due to the complexity of the site.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	35.00	1.00
Year 2:	RES	One-time	35.00	1.00
Total:			70.00	2.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-I-012.000
Last Update: 02/19/99 Priority: 16
Initial Proposal: 1992

Title : CORNWALLIS CAVE MITIGATION

Funding Status: Funded: 3.00 Unfunded: 60.00

Servicewide Issues : N21 (CAVE RESOURCES)
C13 (EMERG STABL)

Cultural Resource Type: STRC (Structure)

N-RMAP Program codes : G00 (Geologic Resources Management)

10-238 Package Number : B

Problem Statement

Cornwallis Cave is one of only two structures remaining on the Yorktown waterfront which interprets the history of the colonial seaport and the Battle of Yorktown. It is perhaps the earliest documented tourist attraction in Yorktown. The "cave" is actually a two-room, man-made excavation into the waterfront cliffs which consist of coquina (limestone). There is speculation that British General Cornwallis may have taken refuge in the cave during the Battle of Yorktown in 1781. Most likely, the cave served as a storage room for goods unloaded from ships nearby. The National Park Service now interprets the cave with an audio program and an exterior interpretive sign. The cave entrance is barred by an iron gate to prevent visitor entry. A small opening in the second room was sealed to prevent vandalism.

The cementation of the coquina is so poor that rodents have bored holes into it with little effort. Coquina also absorbs moisture easily forming weak areas. A fracture zone runs along the roof diagonally and the separation of the fracture and the bedding planes are contributing to roof failure. Foot trails and vegetation growth on the roof of the cave have further weakened the structure. The gate is probably the main support for the front of the cliff face but is badly corroded. Vandalism, including forced entry to the audio equipment which is located in the cave, has resulted in further damage to the structure. In early 1996, a portion of the limestone ledge on the west side of the cave broke off resulting in serious visitor safety questions.

Systemwide Long-term Goal 1a
Park Long-term Goal 1

Description of Recommended Project or Activity

In 1990, the NPS-WASO, Mining and Mineral Branch conducted a field inspection of the cave and prepared several management options for the cave. A no action alternative will result in the continued caving of the roof and possible loss of the cliff face around and above the entrance and the ultimate natural destruction of the cave. Other alternatives include treating the ceiling with gunite to minimize the moisture from interacting with the clay in the coquina and slow down the rate of spalling; installing steel column supports and cap pieces to hold up the ceiling; and/or injecting a bonding agent such as epoxy directly into the ceiling. An alternative for the gate is to extend the concrete wall on both sides and install a new steel bar gate.

The report recommended retaining the vegetation on top of the cave and eliminating the trails with plantings of appropriate native species. With the exception of trail elimination, all the management options would virtually destroy the historical integrity of the cave while only slowing down the natural deterioration process.

Another inspection and report by College of William and Mary geologist Dr. Gerald Johnson recommended an immediate short-term remedial action of reopening the small portal in the second room. This opening in conjunction with the main portal would allow an air current to develop which would help to remove moisture from the cave thus retarding or inhibiting degradation of the cave and encourage precipitation of calcite cement on or near the surface of the cave. The park recommends this immediate remedial action as it is the least costly and least damaging to the historical integrity of the cave while a long term remedy can be thoroughly evaluated.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-OT	MIT	One-time	3.00	0.00
			Total:	3.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MIT	One-time	23.00	0.04
Year 2:	MIT	One-time	37.00	0.30
Total:			60.00	0.34

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation:

Project Statement COLO-I-014.000
Last Update: 02/05/98 Priority: 11
Initial Proposal: 1995

Title : SURVEY AND FENCE PARK BOUNDARIES

Funding Status: Funded: 0.00 Unfunded: 1004.00

Servicewide Issues : N16 (NEAR-PARK DEV)
C73 (ADJ LANDUSE)

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : N00 (Resource and Visitor Use Management)

10-238 Package Number :

Problem Statement

Colonial has approximately 105 miles of irregular boundary. Approximately 34 miles are along shorelines and tidal wetlands. In certain areas, the park's cultural landscape, earthworks and viewsheds have been impacted due to boundary encroachments as a result of residential and commercial development and military base activities. At least some of this encroachment results because the park boundary is not clearly signed, marked or fenced. In many cases, such signing or fencing is not possible because the location of the boundary is not known with sufficient reliability to allow such activities.

Description of Recommended Project or Activity

Contract for a project to research, survey and document park boundaries. Install cement boundary monuments with fence post.
Conduct sufficient number of order one GPS monuments for inputting park boundary into park GIS.

Then contract for the installation of fence along approximately 23 miles of affected perimeter to clearly establish Colonial NHP boundaries. A 10-238 for this request was completed and submitted to the Regional Office in July 1991.

Also, review the current park listing of lands transactions against the land status maps to determine actual official acreage, fee simple and easement. This recalculation would include a break by counties and cities. Also, make the necessary corrections to the park boundary in the GIS.
BUDGET AND FTEs:
----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
		Total:	0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 4:	MIT	One-time	1000.00	0.00
	RES	One-time	4.00	0.10
		Subtotal:	1004.00	0.10
		Total:	1004.00	0.10

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation: 516 DM6 APP. 7.4 E

Project Statement COLO-I-016.000
Last Update: 02/27/96 Priority: 15
Initial Proposal: 1992

Title : MANAGE RECREATIONAL BEACH USE ALONG PARKWAY

Funding Status: Funded: 0.00 Unfunded: 40.00

Servicewide Issues : N22 (VIS USE-DEV ZN)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : R00 (Social Science Research)

10-238 Package Number :

Problem Statement

Colonial National Historical Park possesses 34 miles of river shoreline in an area of extensive residential development possessing only limited recreational opportunities. As a result, these park areas are heavily impacted by visitor use and access to the river for sunbathing, swimming, and fishing. A General Management Plan for the park has been recently prepared and published. One of the more pressing questions is what to do with recreational activity in an area established for cultural resource purposes. Should these recreational needs be encouraged through the development of facilities to support them? Or should a program be developed to control the growth and direction of such activities? What impact upon the cultural and natural resources is being caused by current recreational activities?

Description of Recommended Project or Activity

Conduct research studies which examine current and future beach recreational use within Colonial National Historical Park (including Indian Field Creek, Felgates Creek, College Creek, Half-Way Creek, Archer's Hope and the Yorktown Bluffs). Research topics include a review and evaluation of the enabling legislation to identify intended recreational uses, documentation of current recreational uses and their social and environmental impacts, visitor and users expectations, and identification of appropriate management actions to mitigate existing and future problems.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs

			==========	
	Total:		0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	RES	One-time	20.00	0.00
Year 3:	RES	One-time	20.00	0.00
			==========	
	Total:		40.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-I-017.000
Last Update: 02/19/99 Priority: 2
Initial Proposal: 1997

Title : PREPARE PARKWAY CULTURAL LANDSCAPE REPORT

Funding Status: Funded: 13.80 Unfunded: 70.00

Servicewide Issues : C20 (PRGM DEV)
C11 (REPORT)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes :

10-238 Package Number :

Problem Statement

The Colonial Parkway is a 26 mile route connecting Jamestown, Williamsburg, and Yorktown. It was key part of the original conception of Colonial National Historical Park. Designed in the 1930s to incorporate views of the York and James River and to connect major historical sites, it has retained its integrity over the years with the addition of only a few accesses and little to no change in the road surface, overpass designs, and interpretive signage.

In the past two years, HABS has completed documentation of the resource, which supplements a major historical study and cultural landscape inventory of the Parkway. However, the Parkway is not currently listed on the National Register of Historic Places, and the park lacks a management document to assist it in future planning efforts that might affect its integrity.

Servicewide Long-term Goals Ia7, Ib2
Park Long-term Goals 1.1, 1.4

Description of Recommended Project or Activity

The Philadelphia Support Office will complete the Parkway's nomination to the National Register to protect it from possible development just outside the park's boundaries. A Cultural Landscape Report is needed that will address various issues: allowing more accesses, planting and removing trees, replacement of overpasses and culverts, and adding a multiple use or bikeway. Because of the complexity of the resource the CLR should be completed in two phases.
BUDGET AND FTEs:
----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1997: CRPP	RES	One-time	13.80	0.04
		Total:	13.80	0.04

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MIT	One-time	35.00	0.04
Year 2:	MIT	One-time	35.00	0.04
		Total:	70.00	0.08

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)
EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-001.000
Last Update: 04/12/99 Priority: 2
Initial Proposal: 1996

Title : CONTINUE GEOGRAPHIC INFORMATION SYSTEM DEVELOPMENT

Funding Status: Funded: 304.50 Unfunded: 46.50

Servicewide Issues : N20 (BASELINE DATA)
N17 (BIODIVERSITY)

Cultural Resource Type:
N-RMAP Program codes : E00 (Environmental Planning and Compliance)

10-238 Package Number :

Problem Statement

Since 1989, the Geographic Information System (GIS) Research Group of the College of Forest Resources at North Carolina University (NCSU) has been working with Colonial National Historical Park to develop and implement a GIS to manage the park's natural, cultural and infrastructure resources.

The further development and enhancement of the GIS is a top priority of management and the number one priority of natural resource management (NRM). The NRMS serves as the coordinating focal point for the parkwide system. Applications include environmental assessments, cultural resource management, endangered species, watershed management, wetland functional studies, fire management unit maps, open fields and mowing regime management, national historic register nominations, wildfire histories, Yorktown onion monitoring, wildlife sighting analysis, and the Jamestown Island Archaeological Assessment. Databases collected benefit all park programs, surrounding counties and the State of Virginia ECOMAP and coastal inventory programs.

The GIS program is also serving to - unify natural/cultural digital mapped themes and databases system; and the database management/spatial analysis sytem for the park's natural resource and science inventory and monitoring program.

This project is expanding current baseline inventory and monitoring information, and consolidating past collected information into an integrated database, assuring a more comprehensive, effective approach to resource management. Natural resource management and protection will continue to concentrate on refinement of the database with the addition of hydrological data layers, wildlife sightings, adjacent land use, topography, building footprints, tax parcels, zoning, geology, exotic species, vegetation monitoring, fire management units, data conversion to ARC/INFO for sharing with cooperators, and development of ATLAS*SCRIPTS for special applications and repetitive tasks.

The park is beginning to integrate adjacent county GIS program data, while sharing its own datasets. In FY94 the NRM\GIS PC network was totally upgraded with Pentium PC's, high speed backup, 3.5 GB of harddisk, HP 650C designjet plotter, and HP scanner. Also in FY94 the park GIS Plan and SOP was upgraded and Atlas GIS for Windows added. In FY95 a FTE, GS-11 GIS Remote Sensing Specialist was added to the staff with support funding. Also in FY95 the park added IDRISI, a remote sensing, imaging software package, along with a GPS unit, and ALTEK digitizer. In 1995 the park added a FTE GIS specialist, GS-11. In 1996 the park started the change over from Atlas-GIS to ESRI's PC ArcInfo 3.5 and ArcView3. In FY97 the NRM-GIS PC's were upgraded to Pentium Pro200 with 64RAM, 4GB SCSI-UW to handle the increasing size and processing needs of the GIS.

During FY96 the park began the conversion to PC ArcInfo and ArcView3. All park data has been converted to AI Export and much of it brought in as coverages. A new naming scheme and databse design has been completed for the conversion to ESRI, and the revised SOP for map taxonomy is almost completed. Some remote sensed and aerial imagery was added. Also WASO-GIS contracted for new 1:24000 base digital cartography and 1:12000 digital orthophotoquads.

Description of Recommended Project or Activity

For FY98/99 the park needs funding to:

1. Convert GIS database, DRG's and imagery to NAD83 (est. cost $2500)
2. Convert TIFF imagery to MrSID format ($2500)
3. Upgrade NRM-GIS peer to peer NT system to NT Server with wider bandwidth and additional NT client ($15,000 est)
4. Part-time salary support for a VIMS wetland graduate student, term appointment. This position would update the park's wetlands databasen, and to be in full compliance with the USFWS Cowardin system and have a tabular cross-walk to the St. of VA, EPA-EMAP, and NOAA-CCAP wetland identification systems (est cost $5000).
5. Prepare new vegetation database using national standards and current color TIFFs over 3 years ($225,000 est)
6. Upgrade GIS PC to Workstation ($8000)

Other planned projects FY98/99

1. Update SOP for GIS Themes, Attributes, Metadata and Map Design.
2. Complete conversion, integration and positional accuracy improvements of park's Atlas GIS database to ESRI
3. Update or prepare new FGDC compliant Metadata for all datasets and imagery.
4. Update ROW's database and move all spatial information to new edge of pavement,
5. Integrate NOAA-CCAP and EPA-EMAP land cover data,
6. Create erosion and sedimentation database,
7. Create natural resource databases for neotropical bird survey, southern pine beetle infestation, gypsy moth, colonial wading bird survey, RTE surveys update,
8. Update boundary database to include fee, easement attributes,
9. Integrate new 1:24000 surficial and bedrock geology data from State,
10. Update park GIS plan
11. Update park GIS slide program and transfer to video and Powerpoint.

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1996:	PKBASE-NR	MON	Recurring	35.00	0.70
	PKBASE-NR	ADM	Recurring	10.00	0.15
	UNIV-COLL	MON	One-time	5.00	0.00
			Subtotal:	50.00	0.85
1997:	PKBASE-NR	MON	Recurring	37.00	0.70
	PKBASE-NR	ADM	Recurring	15.00	0.15
			Subtotal:	52.00	0.85
1998:	PKBASE-NR	MON	Recurring	39.00	0.70
	PKBASE-NR	ADM	Recurring	15.00	0.15
			Subtotal:	54.00	0.85
1999:	UNIV-COLL	MON	One-time	3.50	0.00
	PKBASE-NR	MON	Recurring	58.00	1.00
	PKBASE-NR	ADM	Recurring	19.00	0.15
			Subtotal:	80.50	1.15

2000:	PKBASE-NR MON	Recurring	56.00	1.00
	PKBASE-NR ADM	Recurring	12.00	0.20
		Subtotal:	68.00	1.20
		Total:	304.50	4.90

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MON	Recurring	5.00	0.00
	ADM	One-time	15.00	0.00
	MON	One-time	8.00	0.00
		Subtotal:	28.00	0.00
Year 2:	MON	One-time	15.00	0.00
	MON	One-time	3.50	0.00
		Subtotal:	18.50	0.00
		Total:	46.50	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : OTHER ()

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-004.300
Last Update: 04/12/99 Priority: 5
Initial Proposal: 1999

Title : HIRE VEGETATION MANAGEMENT CREW-EXOTICS, SHORELINE

Funding Status: Funded: 0.00 Unfunded: 200.00

Servicewide Issues : C72 (PROTECTION)
N05 (NON-NAT PLANTS)

Cultural Resource Type:

N-RMAP Program codes : D00 (Disturbed Area Rehabilitation)

10-238 Package Number :

Problem Statement

see alternative section

Description of Recommended Project or Activity

The park has embarked on a inventory of exotic, invasive flora species using regional science funds. Also CLR funds will be used to test native grass revegetation on earthworks. Several other projects will also involve revegetation and the use of native, warm season grasses including field management, Five-Points realignment, Green Spring and Jamestown Island master planning, and shoreline.

Longterm mitigation will require the establishment of a vegetation management crew dealing with mitigation of exotic spp., revegetation projects, shoreline protection, earthworks management. This would be an increase to ONPS for 3-FTEs plus support cost for supplies, materials, training, transportation.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	MIT	One-time	200.00	3.00
Total:			200.00	3.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EA (ENV. ASSESSMENT)

Explanation:

Project Statement COLO-N-008.000
Last Update: 02/21/99 Priority: 13
Initial Proposal: 1992

Title : CONDUCT IPM MONITORING, MITIGATION-STRUCTURES, VEG.

Funding Status: Funded: 61.00 Unfunded: 24.00

Servicewide Issues : C18 (IPM)
N04 (NON-NAT ANIMAL)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : H00 (Pest and Hazard Management)

10-238 Package Number :

Problem Statement

Since 1980, the National Park Service has adopted an integrated pest management (IPM) approach to treating pests. When a pest has been identified and monitoring indicates a specified threat level reached, then park management will initiate mechanical, cultural and biological controls. Chemicals are used as the last recourse. These regulations also apply to park residents' use, contractors and special use permitees.

The park has converted to the IPM method of treatment. When necessary, as in termite treatment, approval is received to treat structures. Other chemical use includes treatment of sidewalks for weeds one or two times per year, the use of personal protection repellent for ticks, chiggers and mosquitoes; the use of Wasp-freeze to protect employees and visitors from stinging insects; and some use of Perma-dust for crawling insects. Otherwise, the park has used non-chemical IMP techniques to deal with mice, forest pests and office pests. Education has been an important tool to inform and train employees. The park's Natural Resource Irregular News has carried articles on mice, cockroach and stinging insect control.

Furthermore, the Yorktown Curator has established an excellent monitoring program for the structures and objects under his care throughout Yorktown.

The Maintenance Division occasionally invites different pest control companies in to conduct inspection of park structures.

The park, in conjunction with the Virginia Department of Forestry and the U.S. Forest Service, has an on-going monitoring program for Southern pine bark beetle (SPB). In the past, maintenance has dropped and/or removed infested trees. A large scale infestation in 1982 prompted the park to institute, under a contract, a large scale removal of infested trees and a buffer zone around them. Since then, almost yearly small scale outbreaks have been dealt with by cutting (and sometime removing) the trees.

Gypsy moth monitoring has been conducted for over six years. At present, the trapping levels indicate only minor activity, while the problem of the gypsy moth has increased in other parts of the state. The park will continue monitoring each summer with USFS support.

Hazardous animals and wildlife occasionally pose threats to health and safety. The park works with the local county animal control officers as needed. Also, lyme disease is a concern, even though the reported problems have been very minor. Brochures have been received and handed out to employees about rabies and notice has been posted on visitor bulletin boards. Additional signing and brochures should be directed towards visitors.

The park has attempted some groundhog control to protect earthworks, building foundations and utility systems of park buildings. Finally the problem of exotic species including bamboo, kudzu, tree of heaven and Princess tree pose potential threats to the health of the natural ecosystem.

Description of Recommended Project or Activity

The park will continue with its present course of action.

The park has begun the Sentricon termite monitoring and treatment system at Dudley Diggs House. The DD House had extensive termite damage in 1997. No termites have been detected with the new system. It hoped funding can be found to expand the Sentricon system to all park historic structures.

Curatorial will continue monitoring activities related to historic collection.

Gypsy moth monitoring will continue.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-OT	MIT	Recurring	5.00	0.10
	ST-LOCAL	MON	Recurring	1.00	0.00
	PKBASE-NR	ADM	Recurring	1.00	0.00
			Subtotal:	7.00	0.10
1993:	PKBASE-OT	MON	Recurring	5.00	0.10
	PKBASE-OT	MIT	Recurring	5.00	0.10
	ST-LOCAL	MON	Recurring	1.00	0.00
	PKBASE-NR	ADM	Recurring	1.00	0.00
			Subtotal:	12.00	0.20
1994:	PKBASE-OT	MIT	Recurring	5.00	0.10
	ST-LOCAL	MON	Recurring	1.00	0.00
	PKBASE-NR	ADM	Recurring	1.00	0.00
			Subtotal:	7.00	0.10
1995:	PKBASE-OT	MIT	Recurring	5.00	0.10
	ST-LOCAL	MON	Recurring	1.00	0.00
	PKBASE-NR	ADM	Recurring	1.00	0.00
			Subtotal:	7.00	0.10
1996:	PKBASE-OT	MIT	Recurring	5.00	0.10
	ST-LOCAL	MON	Recurring	1.00	0.00
	PKBASE-NR	ADM	Recurring	1.00	0.00
			Subtotal:	7.00	0.10
1997:	PKBASE-OT	MIT	Recurring	5.00	0.10
	ST-LOCAL	MON	Recurring	1.00	0.00
	PKBASE-NR	ADM	Recurring	1.00	0.00
			Subtotal:	7.00	0.10
1998:	PKBASE-OT	MIT	Recurring	5.00	0.10
	ST-LOCAL	MON	Recurring	1.00	0.00
	PKBASE-NR	ADM	Recurring	1.00	0.00

	Subtotal:		7.00	0.10
1999:	PKBASE-OT MIT	Recurring	5.00	0.10
	ST-LOCAL MON	Recurring	1.00	0.00
	PKBASE-NR ADM	Recurring	1.00	0.00
	Subtotal:		7.00	0.10
	Total:		61.00	0.90

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MON	One-time	24.00	0.00
	Total:		24.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)
NHPA ((106) NAT. HIST. PRES.)

Explanation: 516 DM6 APP. 7.4 E(2)

Project Statement COLO-N-010.000
Last Update: 02/20/99 Priority: 17
Initial Proposal: 1992

Title : CONDUCT FIRE MANAGEMENT, TRAINING, EQUIPMENT

Funding Status: Funded: 73.00 Unfunded: 20.00

Servicewide Issues : N24 (OTHER (NATURAL))
C72 (PROTECTION)

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : N00 (Resource and Visitor Use Management)

10-238 Package Number :

Problem Statement

Colonial National Historical Park is located in an area undergoing steady urbanization, and private property along the park boundary is increasingly being converted from undeveloped land to residential subdivision or commerical use. This trend has two significant implications for the park's fire management plan. First, increased development along the park boundary increases the risk to private property from a wildfire which may start in the park and spread to adjacent developed areas. Second, increasing population near the park results in increased recreational use of park lands, as other open space in the area disappears. As residential development occurs along the park boundary, there is increased spillover activity in and adjacent to the park, including adverse uses such as illegal burning of leaves or trash, illegal camping and fires, illegal hunting and recreational walking, cycling and horseback use. All of these activities increase the risk of man-caused fires which can affect both park and adjoining private resources. Replacement of one wildland fire truck was received during FY93.

Description of Recommended Project or Activity

Continue to increase the park's capability to respond promptly and efficiently to wildfire by training, equipping and actively involving staff members from all park divisions in the park's wildland fire program. Sufficient park personnel should be trained, equipped and qualified to conduct effective, prompt initial attack on fires occurring in the park, even when some park personnel have been committed to support of fire operations out of the immediate park area. Personnel with an interest in fire have been identified and an active program to train these employees to the crew boss level and other positions in operations, logistics, planning and finance will continue. Training on this vehicle and equipment will be conducted for all red-carded staff. Upon arrival of this new vehicle, equipment will be reallocated among the two park wildland trucks to provide the best possible apparatus at both Yorktown and Jamestown. Existing cooperative agreements with local jurisdictions for mutual aid on wildland fires will be strengthened by increased coordination and planning.

Fire Management "Values at Risk" Unit Maps are in the final stage preparation using the park's GIS system. These maps identify known cultural and natural resources that could be damaged by fire fighting activities, and provides suppression strategies to protect these "value at risk."

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	FIRE-$	MIT	Recurring	2.00	0.00
	PKBASE-OT	PRO	Recurring	6.00	0.25
			Subtotal:	8.00	0.25
1993:	FIRE-$	MIT	Recurring	2.00	0.00
	PKBASE-OT	PRO	Recurring	6.00	0.25
			Subtotal:	8.00	0.25
1994:	FIRE-$	MIT	Recurring	2.00	0.00
	PKBASE-OT	PRO	Recurring	6.00	0.25
			Subtotal:	8.00	0.25
1995:	FIRE-$	MIT	Recurring	2.00	0.00
	PKBASE-OT	PRO	Recurring	7.00	0.25
			Subtotal:	9.00	0.25
1996:	FIRE-$	MIT	Recurring	2.00	0.00
	PKBASE-OT	PRO	Recurring	7.00	0.25

	Subtotal:		9.00	0.25
1997:	FIRE-$	MIT	Recurring	2.00	0.00
	PKBASE-OT	PRO	Recurring	8.00	0.25
	Subtotal:		10.00	0.25
1998:	FIRE-$	MIT	Recurring	2.00	0.00
	PKBASE-OT	PRO	Recurring	8.00	0.25
	Subtotal:		10.00	0.25
1999:	FIRE-$	MIT	Recurring	2.00	0.00
	PKBASE-OT	PRO	Recurring	9.00	0.25
	Subtotal:		11.00	0.25
	Total:		73.00	2.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MIT	Recurring	5.00	0.00
Year 2:	MIT	Recurring	5.00	0.00
Year 3:	MIT	Recurring	5.00	0.00
Year 4:	MIT	Recurring	5.00	0.00
Total:			20.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM6 APP. 7.4 E(2)
Project Statement COLO-N-013.000
Last Update: 02/20/99 Priority: 11
Initial Proposal: 1996

Title : DEVELOP FORESTRY MANAGEMENT PLAN

Funding Status: Funded: 0.00 Unfunded: 215.00

Servicewide Issues : N08 (CULT LANDSCAPE)
C20 (PRGM DEV)

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : V00 (Vegetation Management)
V01 (Native Terrestrial Plant Management and Monitoring)

10-238 Package Number :

Problem Statement

The general historic scene of the park has changed since the Colonial period from natural and human causes. During the Colonial period the park lands were mostly open agricultural fields. Since the Colonial period park lands have changed from 80% open, 20% forested to 20% open, 80% forested. The park lands in the Yorktown area were opened up during World War II for agricultural production. Also, Jamestown Island was mostly open into the early 20th century while it was still in private lands being used for agricultural production. Much of the present forest lands have grown up during the past 60-90 years. On Jamestown Island there is now a mostly mature pine forest. Also, southern pine bark beetle infestation are changing the character of the forest.

National Park Service policy in historic zones has focused on preserving man-made and natural landscapes which project a desired image that reflects a historical event. Because of the forested overgrowth, the park's landscape no longer reflects the historical events that occurred here during the Colonial period and for which the park has become known. But because of urban encroachment a forested screen to block the visual intrusion of adjacent development becomes desirable.

What is needed now is a historic comprehensive forest management plan based on the park's forest management goals and objectives for each unit to provide direction in establishing a sound and safe forest, restoring some historic scenes and creating visual buffers from inimical outside developments (see also COLO-I-011.000)

Description of Recommended Project or Activity

Based on park goals and objectives, the plan would recommend methods/techniques for historic scene restoration in identified interpretive zones. The forestry management plan would include:

*present condition of the forest
*historic condition of the park lands

*prioritized recommendations for attaining a healthy forest
*alternative methods for scene restoration, vista clearing, hazardous tree removal, stump removal, reforestation, and maintaining the desired scene and vegetation
*policies regarding the marking and removal of hazardous and diseased trees
*recommendations for visual buffer zones
*historic vegetative base maps for each unit
*current vegetative maps for each unit
*transitional maps for each unit
*exotic species maps for each unit

This project is closely tied with the addition of 1FTE plant ecologist (see COLO-N-609.000).

Also continue current park practices including vista clearing, and hazardous tree removal. Policies for exotic species removal would have to be developed, and funding for implementation secured (see COLO-N-607.000).

All information would be entered into the park's GIS.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	RES	One-time	70.00	0.00
Year 3:	RES	One-time	70.00	0.00
Year 4:	RES	One-time	75.00	0.00
Total:			215.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EA (ENV. ASSESSMENT)
NHPA ((106) NAT. HIST. PRES.)

Explanation: 516 DM6 APP. 7.4 B

Project Statement COLO-N-015.000
Last Update: 02/21/99 Priority: 1
Initial Proposal: 1994

Title : HAZARDOUS MATERIALS INVESTIGATION AND MITIGATION

Funding Status: Funded: 269.00 Unfunded: 80.00

Servicewide Issues : N20 (BASELINE DATA)
N11 (WATER QUAL-EXT)

Cultural Resource Type: SITE (Archeological Site)
N-RMAP Program codes : E00 (Environmental Planning and Compliance)

10-238 Package Number :

Problem Statement

Colonial is faced with many different environmental problems and costly federal and state regulatory mandates. In recent years the park has addressed issues ranging from hazardous waste disposal (maintenance and curatorial activities), lead paint and asbestos removal, and underground fuel storage tanks in the park. Additional major problems have come from outside the park including oil and sewer spills, US Navy superfund sites that have also impacted upon park resources.

The park has actively worked towards meeting environmental mandates including removal of maintenance and curatorial hazardous waste, upgrading of storage of hazardous materials, revision to purchasing procedures to reduce hazardous waste, change in park practices, removal of lead paint and asbestos, testing and upgrading of UST's, and conversion of UST's to natural gas.

The park has actively participated on USCG Area Oil Pollution Act Committees, and the US Navy Restoration advisory Board for adjacent Navy base problems. WASO Water Resources Division and Facilities Maintenance Division personal, along with VIMS, have acted as technical advisors in dealing with UST and NPL sites adjacent to the park affecting park resources.

Description of Recommended Project or Activity

The USN, NWS, site 12 has been remediated using innovative stormwater technology and native grass species. A LTEM plan has been developed, agreed upon and implemented.

The USN, NFF, LUST site still progresses slowely. A modified CAP has been prepared along with a 30% design. Full agreement between the USCG/NPS and USN/DEQ has not been met. Little other work has been completed by the USN. The project continues to fall farther and farther behind. APEX Environmental continues to provide support, as does the USEPA, Dr. Eva Davis.

Funding is also required to professionally prepare a parkwide Hazardous Materials Response Plan that meets federal and state law and regulation, and is coordinated with numerous adjacent governmental and private organizations. This plan would identify training needs for park staff. The plan would outline hazardous spill response supplies and materials needs. The funding would also be used to conduct the identified training and procure necessary first responder supplies and materials ($15,000).

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1994:	PKBASE-NR	ADM	Recurring	17.00	0.25
	WATER-RES	RES	Recurring	5.00	0.00
	SVC-OTHER	MON	Recurring	5.00	0.00
	PKBASE-OT	MIT	One-time	10.00	0.00
			Subtotal:	37.00	0.25
1995:	PKBASE-NR	ADM	Recurring	17.00	0.25
	WATER-RES	RES	Recurring	5.00	0.00
	SVC-OTHER	MON	Recurring	45.00	0.00
	PKBASE-OT	MIT	One-time	10.00	0.00
			Subtotal:	77.00	0.25
1996:	PKBASE-NR	ADM	Recurring	17.00	0.25
	WATER-RES	RES	Recurring	5.00	0.00
	SVC-OTHER	MON	Recurring	25.00	0.00
	PKBASE-OT	MIT	One-time	10.00	0.00
			Subtotal:	57.00	0.25
1997:	PKBASE-NR	ADM	Recurring	18.00	0.25
	WATER-RES	RES	Recurring	5.00	0.00
	SVC-OTHER	MON	Recurring	5.00	0.00
	PKBASE-OT	MIT	One-time	10.00	0.00
			Subtotal:	38.00	0.25

1998:	PKBASE-NR ADM	Recurring	12.00	0.20
	WATER-RES RES	Recurring	4.00	0.00
	SVC-OTHER MON	Recurring	4.00	0.00
	PKBASE-OT MIT	One-time	10.00	0.00
		Subtotal:	30.00	0.20

1999:	PKBASE-NR ADM	Recurring	12.00	0.20
	WATER-RES RES	Recurring	4.00	0.00
	SVC-OTHER MON	Recurring	4.00	0.00
	PKBASE-OT MIT	One-time	10.00	0.00
		Subtotal:	30.00	0.20

Total:	269.00	1.40	

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MON	Recurring	5.00	0.00
Year 2:	MON	Recurring	25.00	0.00
Year 3:	MON	Recurring	25.00	0.00
Year 4:	MON	Recurring	25.00	0.00
Total:			80.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : OTHER ()
EA (ENV. ASSESSMENT)

Explanation: 516 DM2 APP. 2, 1.6
Project Statement COLO-N-601.100
Last Update: 02/21/99 Priority: 1
Initial Proposal: 1992

Title : WATER RESOURCE MANAGEMENT

Sub-title: GROUNDWATER MONITORING

Funding Status: Funded: 61.00 Unfunded: 30.00

Servicewide Issues : N20 (BASELINE DATA)
N11 (WATER QUAL-EXT)

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : Q00 (Water Resources Management)
Q01 (Water Resources Management)

10-238 Package Number :

Problem Statement

The park lands are surrounded by the James and York Rivers, which are part of the greater Chesapeake Bay watershed, the largest estuary in the world. Over 40 miles of the James and York River shoreline are adjacent to the park. Also, there are 24 miles of streams in the park. Over 2,482 acres of (27% of park acreage) wetlands have been delineated in the park so far. Extensive wetlands surround the park. The second highest number of rare, threatened, and endangered species, of National Park System units in Virginia, are found in Colonial NHP.

The park's surrounding communities are experiencing rapid urban growth. The information on impacts of park water quality and wetlands is limited. The park in cooperation with the Center for Management and Policy, Virginia Institute of Marine Science, has developed a water resource management plan to plan a comprehensive approach to park water quality, research, monitoring, and management. Park actions are being closely coordinated with other federal, state, local and university research, monitoring and mitigation activities as part of the greater Chesapeake Bay Initiative. The plan and this project directly relate to the larger Chesapeake Bay ecosystem and the various research, monitoring and mitigation programs.

Groundwater quality in regions of the Colonial National Historical Park may be currently impacted by neighboring human activities, past and present, which include: agriculture, residential development, and waste disposal in landfills. Housing construction proximal to park boundaries rapidly increased in the 1980s. More construction adjacent to the park is now in the planning stage, and similar development with potential impacts on groundwater quality in the Park can be anticipated in the future..

As required by federal and state laws and regulations, the park has been conducting long- term water quality monitoring of its drinking water systems. This monitoring has included organics, lead, and coliform testing. In conjunction with the Virginia Department of Health, Water Programs, more complete organic chemical testing is being conducted. Also, the US Public Health Service consultant for the NPS-National Capital and Mid-Atlantic Regions makes regular visits and inspections of the overall water system.

Description of Recommended Project or Activity

The park will continue with all necessary testing required by the Safe Drinking Water Act and NPS regulations (NPS-82).

The Groundwater Final Report is being prepared and is awaiting final maps before being released for peer review.

Based on funding and final recommendations of the groundwater study follow-up monitoring will be conducted on a more limited basis ($10,000 per year).

Water reports on park are being reviewed by NPS-WASO-WRD to prepare LTEM.

BUDGET AND FTEs:

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-NR	MON	Recurring	8.00	0.20
	WATER-RES	MON	Recurring	6.00	0.10
	UNIV-COLL	MON	Recurring	5.00	0.00
			Subtotal:	19.00	0.30
1993:	PKBASE-NR	MON	Recurring	4.00	0.10
	PKBASE-OT	MON	Recurring	2.00	0.00
			Subtotal:	6.00	0.10
1994:	PKBASE-NR	MON	Recurring	4.00	0.10
	PKBASE-OT	MON	Recurring	2.00	0.00
			Subtotal:	6.00	0.10
1995:	PKBASE-NR	MON	Recurring	4.00	0.10
	PKBASE-OT	MON	Recurring	2.00	0.00

	Subtotal:		6.00	0.10
1996:	PKBASE-NR MON	Recurring	4.00	0.10
	PKBASE-OT MON	Recurring	2.00	0.00
	Subtotal:		6.00	0.10
1997:	PKBASE-NR MON	Recurring	4.00	0.10
	PKBASE-OT MON	Recurring	2.00	0.00
	Subtotal:		6.00	0.10
1998:	PKBASE-NR MON	Recurring	4.00	0.10
	PKBASE-OT MON	Recurring	2.00	0.00
	Subtotal:		6.00	0.10
1999:	PKBASE-NR MON	Recurring	4.00	0.10
	PKBASE-OT MON	Recurring	2.00	0.00
	Subtotal:		6.00	0.10
	Total:		61.00	1.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	MON	Recurring	10.00	0.00
Year 3:	MON	Recurring	10.00	0.00
Year 4:	MON	Recurring	10.00	0.00
	Total:		30.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)
NHPA ((106) NAT. HIST. PRES.)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-601.201
Last Update: 02/21/99 Priority: 15
Initial Proposal: 1994

Title : STATE REGULATORY PROCESS

Sub-title: PERMIT REVIEW

Funding Status: Funded: 19.00 Unfunded: 15.00

Servicewide Issues : N11 (WATER QUAL-EXT)
N13 (WATER RIGHTS)

Cultural Resource Type:
N-RMAP Program codes : E00 (Environmental Planning and Compliance)

10-238 Package Number :

Problem Statement

The primary legal mechanism for Colonial National Historical Park to effectively control and monitor potential external impacts and degradation to surface and groundwater resources which flow through its landscape is the Virginia's Water Protection Permit (VWPP), which became effective in May of 1992. VWPP addresses both the use of and impacts to state waters. The Virginia Water Protection Permit Program (VWPP) regulations define "state waters" as "...all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction". The VWPP program regulations suggest that the program is primarily focused on surface waters. The program operates in conjunction with a number of other federal and state regulatory programs. While the VWPP is not a comprehensive regulatory program, it does represent one of the means by which the park can seek to have its interests in water quantity and quality recognized and considered.

Colonial National Historical Park's interest in groundwater resources pertains primarily to the shallow aquifer which influences the health and maintenance of existing wetland resources. The Department of Environmental Quality (DEQ) has the authority to designate groundwater management areas for the principal purpose of managing withdrawals. In the coastal plain the program operates only at very small scale, covering extensive geographic areas. The DEQ utilizes information derived from a regional study of groundwater resources by the U.S. Geologic Survey and a model of groundwater aquifer recharge and yield generated in conjunction with that study. The model addresses relatively deep aquifers (those recharged in the Piedmont region and typically found at depths of 50 to 1000 feet in the COLO area) and is therefore not particularly pertinent to the surficial wetland resources within the park. Nevertheless, the authority to recognize management areas and the increasing reliance on mathematical models for guidance in review processes is significant.

In the absence of other more formal and/or effective mechanisms, participation in the public review and comment opportunities afforded by the VWPP regulations constitute one mechanism for the park to safeguard its interests in the water resources in and around the park. Other means of park participation in public review and comments includes adjacent land use protection activities discussed under COLO-I-007, and the park's legal water rights in Virginia under the doctrine of riparian water rights. Effective representation of the park interests in groundwater resources requires that the park staff maintain a current knowledge of these regulatory developments and the permit process, as well as the ability to periodically acquire the services of hydrologists/modelling specialists who both understand model capabilities and who can provide technical assistance in permit review.

Description of Recommended Project or Activity

Since the VWPP program is new, all of the mechanics of its operation are not well developed at this time. Nevertheless, the NPS needs to become familiar with the regulations and implementation procedures of the DEQ so that it may participate effectively in the review process. As the program is presently structured, the park staff will need to undertake a continuing review of all permit applications submitted for activities within the park watersheds. The review of these applications should occur from the perspective of potential impacts on quantity or quality of waters in the park. Preliminary coordination with DEQ staff will ensure that park input to the review process is structured for maximum value.

In addition to the continuing review of permits, the park staff, in conjunction with the National Park Service's Water Resources Division and appropriate contractors should undertake periodic evaluations of the technical information available to provide rationales for its comments to the VWPP program. These evaluations should identify the types of projects which pose the greatest threat and the nature/significance of the potential impacts on park resources. This will enable the park to submit technically supported comments and recommendations, enhancing its impact on the review process.

An initial evaluation of the technical considerations of the specific hydrologic issues, the regulatory/permitting process and park specific focus issues is expected to cost approximately $25,000. It is recommended that this evaluation be conducted externally by an appropriate cooperator/consultant. A periodic review and update of program effectiveness should be considered every three to five years.

When fully implemented, the technical consultation and permit review will require the equivalent of 0.2 FTE/year of park and/or Water Resources Division staff time. While the number and complexity of the permit reviews is likely to vary from year to year, these activities can be expected to continue for the foreseeable future.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1995:	PKBASE-NR MIT	Recurring	2.00	0.05
1996:	PKBASE-NR MIT	Recurring	1.00	0.05
1997:	PKBASE-NR MIT	Recurring	3.00	0.10
1998:	PKBASE-NR MIT	Recurring	3.00	0.10
1999:	PKBASE-NR MIT	Recurring	3.00	0.10
2000:	PKBASE-NR MIT	Recurring	3.00	0.10
2001:	PKBASE-NR MIT	Recurring	4.00	0.10
		Total:	19.00	0.60

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Year 2: ADM	One-time	15.00	0.10
	Total:	15.00	0.10

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-601.302
Last Update: 02/27/96 Priority: 16
Initial Proposal: 1994

Title : ESTABLISHING LAND SUBSIDENCE/CLIMATE CHANGE BASELIN

Funding Status: Funded: 0.00 Unfunded: 40.00

Servicewide Issues : N20 (BASELINE DATA)

Cultural Resource Type:
N-RMAP Program codes : G00 (Geologic Resources Management)
G05 (Shoreline Management)

10-238 Package Number :

Problem Statement

Relative sea level in the vicinity of Colonial NHP has been rising as a result of land subsidence and increasing volumes of sea water for the past 18,000 years or more. The recent rate of change is generally estimated to be approximately one foot per century, although local rates are sometimes higher in the mid-Atlantic region. While these changes are gradual, they have the potential to affect some of the water resources of the park earlier than other areas because of the comparatively low elevations typical of much of the park lands. Climate change may accelerate the rate of sea level rise and it may also result in alteration of the amount of annual rainfall in the region. While all of these changes are subject to considerable scientific debate at present, the potential risks for park resources need to be considered in development of management plans. Increased inundation and increased rainfall may lead to changes in the character of biotic communities along the park's surface water courses. Salinities may increase along tidal reaches. Erosion may increase along both inland water courses and along exposed tidal shores. If groundwater levels rise, nontidal wetland areas may expand. While none of these changes can be predicted with certainty at present, monitoring the status and trends of both resources and relevant parameters such as relative sea level are critical for development of long-term management strategies in support of the park's conservation and interpretive goals.

Description of Recommended Project or Activity

There is no alteration of management practices which is practical or prudent in response to these processes at the current time. Nevertheless, establishing baseline conditions and monitoring change from the perspective of developing appropriate management strategies is prudent. Colonial National Historical Park should initiate cooperative efforts to monitor local sea level and climate parameters in order to develop trends assessments in support of management planning. The park should undertake initial risk assessments for water resources based on the currently available predictions for changes in sea level, temperature, rainfall and storm occurrence. The initial assessment will develop ranges of potential impacts which can be subsequently narrowed as trend information becomes available from monitoring efforts.

Establishment of basic sea level and climate monitoring programs can probably be most efficiently accomplished by establishing cooperative analytical efforts with academic and governmental entities currently involved in monitoring these parameters. (e.g. the Virginia Institute of Marine Science for sea level, the Office of the State Climatologist for climate parameters). This will require a minimum of effort and expense.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
		Total:	0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 4:	RES	One-time	40.00	0.00
		Total:	40.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-601.303
Last Update: 02/27/96 Priority: 0
Initial Proposal: 1994

Title : INVENTORY AND SITE ASSESSMENT OF EROSION AND SEDIM.

Sub-title: RELATED PROBLEMS

Funding Status: Funded: 97.00 Unfunded: 10.00

Servicewide Issues : N20 (BASELINE DATA)
N12 (WATER FLOW)

Cultural Resource Type:
N-RMAP Program codes : Q00 (Water Resources Management)
Q01 (Water Resources Management)

10-238 Package Number :

Problem Statement

Erosion, sedimentation and associated water quality impacts have been identified as an important problem affecting park natural and cultural resources in the Colonial National Historic Park. Theimplementation of the Chesapeake Bay regulations in Virginia, and stronger erosion and sedimentation regulations and enforcement has highlighted problems both within and from outside the park. Natural erosion processes occur at varying but relatively slow rates in the varied natural and cultural
environments of the park. But there are greatly accelerated erosion and sedimentation rates being caused by anthropogenic activities both within and outside the park that are degrading park resources. Sheet erosion is common throughout the park in the areas heavily used by visitors where visitor impacts or improper soil and vegetation management result in bare and compacted soil. Informal trails initiated by users on steep terrain and poorly designed and maintained formal trails are an
important source of small gully erosion on steep hillsides. Concentrated stormwater runoff from parking lots and roadways is maintaining very high rates of erosion in gullies and stream channels atseveral locations. Road construction and development activities adjacent to the park has caused erosion and sedimentation problems within the park. It has the continuing potential for producing destructive erosion and/or sedimentation within the park. Bank erosion is a serious problem at several locations along the James River and York River shorelines within the park. All of these erosion processes contribute to nonpoint source pollution of the streams within and downstream of the park.

The park has aggressively dealt with special use permittees related to right-of-way grants, passing through and/or adjacent to the park, to insure minimum impact during construction and maintenance. Some requests have been denied or modified because of potential impacts. Also the park has been in consultation with local jurisdictions as they prepare storm water reviews and new plans. As the park has identified problems it has tried to deal with them .

Description of Recommended Project or Activity

Park management has taken several actions to address some of the important erosion and sedimentation problems. Changes to park mowing practices have been initiated to improve vegetative
cover. More work is needed in this area. Management activities have been initiated to control the informal trails and resultant erosion on the Yorktown Bluffs (COLO-I-004.000 and 004.200. A specific project has been developed to address the shoreline erosion along the James and York Rivers (COLO-N-601.504). The park has been active dealing with adjacent land use protection activities (COLO-I-007.00). Review of proposed adjacent development proposals, rezoning cases, and coordination with local and state jurisdictions will continue, with periodic review of local and state erosion and sedimentation control and storm water management regulations.

However, the full scope of the erosion and sedimentation problems in the park is unknown as is the extent of management activities needed to address those problems is unknown. To ensure the maximum effectiveness in addressing these problems, the park is preparing a comprehensive inventory of erosion and sedimentation problems within and adjacent to the park. Initial inquiries with local, state, federal (including WASO-WRD) authorities, and university researchers could not locate any applicable comprehensive procedures for quantifying these types of problems. A cooperative agreement has been executed with North Carolina State University, College of Forest Resources, Dr. James Gregory. Dr. Gregory is a recognized authority on urban hydrology, soils, wetlands, forestry, and erosion and sedimentation and storm water management. A graduate student in hydrology is preparing her master thesis based on this project.

The project addresses the need to inventory and monitor erosion and sedimentation problems in the park and to identify applicable, or develop, specific management practices for the various types of problems. The project is: (1) developing a methodology for identifying, inventorying, and monitoring erosion and sedimentation problems, (2) apply that methodology to develop an inventory for COLO, (3) develop management practices to ameliorate the identified problems in and around the park, and (4) develop a long-term monitoring program (5) prepare an Erosion Sedimentation Management System manual for other parks to use and build upon (6) conduct a training workshop on the manual, process, and revegetation techniques and best management practices (7) prepare poster session and make presentations at professional societies.

A peer technical review committee has been created involving local, state, and federal specialist in the field, including Va. Dept of Forestry, the US Forest Service, US Natural Resource Conservation Service, the USEPA Chesapeake Bay program, the VA. Dept of Conservation and Recreation-Soil and Water Conservation Division, the National Biological Service, and local Colonial Soil and Water Conservation District.

Objectives of this project include:

1. Review and summarize the literature on erosion and sedimentation inventory and monitoring.
2. Review and summarize the federal, state, and local agencies, policies, regulations, and contacts involved in erosion and sedimentation management. Review and summarize National Park Service (NPS) policies and plans for erosion and sedimentation management.
3. Develop and document a general (quantifiable) methodology for erosion and sedimentation inventory and monitoring (ESIM) that can be utilized in a variety of national park settings, and incorporated into the Colonial's GIS. The final manual will allow any park to adapt the system to their individual needs and capabilities, including paper based system, a database system, or a combination of the above with GIS.
4. Apply the ESIM methodology in the Colonial National Historical Park (COLO) and provide to COLO an inventory with digital database and GIS maps of specific erosion and sedimentation problems, methods for long-term monitoring the problems, and recommended actions needed for amelioration of broad classes of endemic problems and specific severe problems (including associated surveys or research needed).
5. Provide a training workshop for NPS personnel on utilizing ESIM and methods for amelioration of erosion and sedimentation problems.

The proposed schedule for completion of the above objectives are:

October - December 1995: Conduct activities for objectives 1 and 2. Visit to COLO for preliminary familiarization with the park and the types of erosion and sedimentation problems. Develop preliminary outline for the ESIM approach.

October 1994 - May 1995: Continue activities for objectives 1 and 2. Visit COLO as needed to conduct an inventory of erosion and sedimentation problems. Continue work on developing ESIM.

May 1995 - August 1995: Complete objectives 1 and 2 and draft report on those objectives. Complete the inventory of erosion and sedimentation problems at COLO including recommended monitoring and ameliorative actions needed.

September 1995 - May 1996: Complete development of the full ESIM methodology and draft the ESIM document. Develop syllabus for training workshop.

June - August 1996: Conduct training workshop for NPS personnel. Draft project final report.

The park has provided approximately 75% of the first year funding with additional assistance from regional science. All but $5000 has been funded for the second year. The park has also provided field and GIS support for the project, along with housing and office space. NCSU has provided reduced overhead and the principal investigators time at no cost.
Additional funding of $5000 is needed to provided for a professional writer\editor\graphic designer to prepare the final ESIM manual, and a poster session for use at professional meetings. The additional funds will also allow the use of color copies in the final ESIM, which will be much more effective than black and white photos.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1994:	PKBASE-NR	MON	Recurring	4.00	0.10
1995:	PKBASE-NR	RES	One-time	25.00	0.20
	RG-NS-RES	RES	One-time	8.00	0.00
	UNIV-COLL	RES	One-time	17.00	0.00
			Subtotal:	50.00	0.20
1996:	UNIV-COLL	RES	One-time	17.00	0.00
	PKBASE-NR	MON	Recurring	10.00	0.20
			Subtotal:	27.00	0.20
1997:	PKBASE-NR	MON	Recurring	4.00	0.10
1998:	PKBASE-NR	MON	Recurring	4.00	0.10
1999:	PKBASE-NR	MON	Recurring	4.00	0.10
2000:	PKBASE-NR	MON	Recurring	4.00	0.10
			Total:	97.00	0.90

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	5.00	0.00
	INT	One-time	5.00	0.00
		Subtotal:	10.00	0.00
		Total:	10.00	0.00

Compliance codes : EXCL (CATEGORICAL EXCLUSION)
Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-601.401
Last Update: 02/27/96 Priority: 1
Initial Proposal: 1993

Title : DEVELOP GEOLOGICAL MAPS

Funding Status: Funded: 2.00 Unfunded: 0.00

Servicewide Issues : N20 (BASELINE DATA)

Cultural Resource Type:

N-RMAP Program codes : G00 (Geologic Resources Management)

10-238 Package Number :

Problem Statement

An understanding of surface and subsurface geology of lands in and around Colonial National Historical Park is fundamental to understanding the unit's hydrology. The topography and the geologic framework controls the patterns and flow of subsurface water. The characteristics and functions of the confining units in aquifer systems are likewise defined by the geologic structure.

Numerous geologic studies have taken place throughout the Peninsula (see Chapter 3 of COLOs Water Resources Management Plan). The most recent effort to map the surface geology and stratigraphy of the area(Mixon et al., 1989) revised earlier maps, but was published at a 1:250,000 scale, which minimizes the effectiveness of the product for use in hydrologic studies and park management applications. While providing useful information, larger scale mapping is necessary in order to develop management options for water-related issues including nonpoint source and storm water runoff not covered by the NPDES program, erosion & sedimentation issues (COLO-N-601.303), groundwater monitoring (COLO-N-601.100), shallow water aquifer delineations (COLO-N-601.402), and the monitoring of springs, seeps, and ephemeral streams (COLO-N-601.501).

Description of Recommended Project or Activity

Large scale mapping of the surface geology of the park and surrounding region is being completed by Dr. R. Berquist, Office of State Geologist, assigned to the Department of Geology, College of William and Mary. This will be published at a scale of 1:24,000.

Mapped information will be transferred to a digital record for inclusion in the park's GIS database. It is expected that the park and surrounding environs will be digitized into the park's GIS through the field technical support center at North Carolina State University. The availability of digital data will fortify future hydrologic surveys.

There is no cost to the park for mapping of geologic units. The cost to digitize the final geologic maps will depend on the extent of the area digitized. It is anticipated that 0.2 FTEs and $7,000 will be required to transfer the mapped data to digital format for the park.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1996:	PKBASE-NR	RES	2.00	0.05
		Total:	2.00	0.05

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
	Total:	0.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-601.410
Last Update: 02/21/99 Priority: 1
Initial Proposal: 1994

Title : DELINEATE REGIONAL SHALLOW AQUIFER

Sub-title: YORKTOWN

Funding Status: Funded: 53.00 Unfunded: 175.00

Servicewide Issues : N20 (BASELINE DATA)

Cultural Resource Type:
N-RMAP Program codes : Q00 (Water Resources Management)
Q01 (Water Resources Management)

10-238 Package Number :

Problem Statement

Colonial National Historical Park (COLO) IS located within the Coastal Plain of Virginia, on the York-James Peninsula between the York River and the James River. The park is bordered by two large estuaries, the York River and the James River, which drain into the Chesapeake Bay estuary. More than 33 miles of shoreline along the James and York rivers bounds the park. In addition, 24.4 miles of perennial streams and 30.9 miles of intermittent streams and drainages flow through the park. A complex network of streams with substantial acreage of salt and freshwater marshes crisscross park lands. Over 2,482 acres (27% of the park's area) of wetlands have been delineated. In addition, extensive wetlands surround the park. The second highest number of rare, threatened, and endangered species (RTE) (14), for National Park System units in Virginia, are found in COLO. The wetlands also provide important nursery grounds for juvenile fishes, nesting areas for waterfowl and Colonial wading birds, and habitats for RTE species. The park is located in four counties and three cities. Colonial NHP is surrounded by residential, commercial, industrial military, parks, watersheds, and agricultural complexes. The park is in one of Virginia's most rapidly growing population centers--the Hampton Roads metropolitan area (population 1.4 million - 1990 U.S. Census).

The park is responsible for conserving terrestrial and aquatic habitats affected by the shallow groundwater resources of the park lands and surrounding areas. Park staff developed a Water Resources Management Plan (WRMP) to guide the conservation of park resources. The information obtained and the project statements developed in the WRMP have been added to the park's Resource Management Plan (RMP). An assessment of the shallow aquifer system is identified as the number one unfunded critical need in the WRMP and RMP, particularly because of the potential impact of groundwater on the complex network of streams, sinkholes and extensive wetlands in and adjacent to the park. Also the question of impacts from adjacent USN hazmat sites is not clearly understood. The relation between ground water and surface water is easily recognized in this area, and the potential for water resource contamination is high. Also, surface water readily enters and recharges the ground water via numerous sinkholes. Also, ground water discharges to springs, seeps, streams, and wetlands located throughout the park and adjacent lands.

Since Colonial National Historical Park is not hydrologically isolated from any of the surrounding areas, effective management of park water resources requires an ecosystem (regional) approach coordinating with local, state and federal regulatory and planning programs. To be effective in providing guidance and/or recommendations to those programs, the park must have a much better understanding of the structure and functioning of the hydrologic system in which it exists. While surface hydrology has been inventoried and partially assessed, the shallow groundwater resources of the park and surrounding areas have not. The nature and extent of locally recharged shallow aquifers that are important to nontidal wetlands and riparian resources are not understood.

The park is located within four USGS hydrological units and 49 subbasin drainages.

U.S. Geological Survey reports provide only deep aquifer information on the regional hydrogeology and the ground-water quality in James City and York counties. None of these USGS reports are specific to the regional shallow aquifer system proposed for study here. Many aquifer names in the Harsh (1980) report is outdated and the hydrogeologic framework requires revision to reflect the reevaluation of the aquifer system presented in the more recent USGS reports on the hydrogeology of Eastern York County. The introduction of pollutants via septic-system effluent, fertilizer application, pesticide use, old hazardous waste disposal sites, fuel depots and leaking underground storage tanks, salt-water intrusion, and road salting are all potential ground-water contaminant pathways. Other than one USGS report (Richardson and Brockman, 1992), little information regarding trends in groundwater withdrawals, groundwater quality, or future demands in the surrounding jurisdictions is available.

Researchers from the Virginia Institute of Marine Science have completed a study investigating the effects of adjacent urban and agricultural development on the shallow ground water and selected surface water resources of the park. The final draft report is now being prepared. Testing indicates potential local sources of ground-water contamination from nitrate and ammonia at several sites next to the park.

Also, the USGS has studied the springs and seeps of Yorktown, including water quality parameter testing and age dating. Research is on-going on the adjacent Grafton Pond Sinkhole Complex of the Newport News Waterworks. The USN, Yorktown Naval weapons Station is having a hydrogeological study conducted by the USGS as part of the hazmat, superfund investigations.
The Virginia State Geologist office is completing field research to update past geological studies and preparing a digital 1:24000 geological map of the park and its surrounding environs. Also the US Army Corp of Engineers and the US Fish and Wildlife Service is interested in conducting research in the Grafton Pond Sinkhole Complex. This complex is in and adjacent to the Yorktown unit of the park. Approximately 35% of the complex is located within the park. This complex has been identified as one of the most biological diverse areas in Virginia with its extensive sinkholes. Many RTE species have been found in the adjacent sinkhole areas. The US Army Corp of Engineers has proposed this area as a Special Area Management Program with the suspension of all nationwide general permitting.

The park is adjacent to numerous hazardous waste disposal sites belonging to the Commonwealth of Virginia and the U.S. Navy. Extensive site investigations have been or are now being conducted on all these properties under the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Superfund Amendments Reauthorization Act (SARA) of 1986, and Leaking Underground Storage Tank regulations. Although studies are underway at all these sites' the impacts to COLO and the proposed study area resources are not well understood.
The park has accomplished a reasonably complete and current inventory of surface water bodies, wetlands, vegetative cover, and roads within the park boundaries. The park, James and York Counties, and the US Navy have conducted RTE surveys. The USDA Natural Resource Conservation Service has digitally mapped soils and intermittent streams for the park's GIS. The Virginia Institute of Marine Science under a cooperative agreement with the park developed GIS databases dealing with floodplains, Chesapeake Bay regulatory areas, subbasin drainages, adjacent land use zoning, along with a detailed 1:4000 shoreline. The park, under cooperative agreement with North Carolina State University, is converting adjacent counties digital topography, building footprints, tax parcel maps, roads and impervious surface to the park GIS data format. The Virginia State Geologist is completing a digital 1:24000 geology map for the region. **Missing from a comprehensive inventory of water resources in the park is more information on the location and behavior of USTs, springs, seeps, and shallow aquifers. There is limited or no quantitative or qualitative information on the behavior of these resources.**

Description of Recommended Project or Activity

In order to achieve its management objectives, the park needs more information about the structure and function of its hydrologic systems and water dependent environments than is currently available. COLO requires a comprehensive descriptive study to define the extent and function of the hydrogeological setting of the regional shallow groundwater system, springs, seeps, and geology effecting the park. In addition to an assessment of shallow groundwater resources, park managers will need additional information about the relation between the park and adjacent land use impacts on ground water quality. These elements are important to the long term management, planning and protection of park resources. This project is directly related to on-going RTE studies, wetland function studies, and hazardous materials clean-up investigations on adjacent US Navy lands. Knowledge about these elements will also contribute significantly to the ability of the park staff to influence management of lands outside the park through an increased understanding, generated through this proposed shallow ground-water study, of potential impacts on park resources.
The purpose of this project is twofold. First, the project will define the hydrogeologic framework of the shallow aquifer system (<200 ft in depth) for the park and the surrounding areas in James City, Surrey, and York counties; and the cities of Newport News and Williamsburg. Second, the project will conduct a study of the known springs, seeps, and USTs in and adjacent to the park, other than Yorktown, which has already been done.

FY99-01, year one is concentrating in the Yorktown Unit of the park. The unfunded portion for year two and three is $100,000 to support the Interagency Agreement with the USGS to conduct and coordinate this study.

FY2002 would expand the above project to the rest of the park.

The project proposes to address these water resource issues by:

1 Contacting COLO staff and geology researchers at William and Mary to identify the location of the known sinkholes, springs, seeps in and adjacent to the park; to locate the major sinkholes, springs and seeps with a global positioning system; and to incorporate this information in the park's geographic information system (GIS) data base.
2 Use the GIS to associate and assess sinkhole, spring and seep location data with topographic, land-use, and geologic features; Geologic features will be assessed from a 1:24,000 geologic map for the park and region, being completed by the State of Virginia geologist. Contributing land use settings will be identified from 1:24,000 maps, cooperators GIS databases, and remote sensed imagery data.

3 Water samples will be collected from selected springs, seeps, wells and shallow ground water, using standard USGS sampling techniques, to provide information regarding vulnerability of shallow ground water, springs, and seeps to landuse impacts within their subbasin drainages (watersheds). These analyses will also aid in determining recharge areas and source aquifers and aid in planning spill control measures for shallow ground water, springs and seeps. Specific analytes and parameters of interest are field parameters (temperature, specific conductance, pH, and dissolved oxygen), hardness (as calcium carbonate), calcium, magnesium, sodium, potassium, alkalinity, sulfate, chloride, fluoride, dissolved solids, nutrients, iron, and manganese. Also water samples would be analyzed for common anions and cations, dissolved gases, and freon isotopes. The freon isotopes will be analyzed to conduct ground-water-age dating. This analysis will provide information regarding vulnerability of springs and down gradient water to degradation from land-use impacts within their watersheds.

4 Also, review and compile water quality data readily accessible from computer (and hard copy) files and reports at the Virginia Departments of Environmental Quality, Health, and Divisions of Mineral Resource and Emergency Services; US Navy, Colonial NHP, College of William and Mary, and from county and city governments in the study area.

5 Enter appropriate hard copy data collected into the nationwide USGS STORET water quality database.

6 Review drillers' logs, geologic logs, geophysical logs, and water sample results from wells and boreholes on record with the USGS, Colonial NHP, Virginia Division of Mineral Resources, Virginia Department of Transportation, Virginia Department of Environmental Quality, Virginia Department of Health, Virginia Department of Emergency Services, U.S. Navy, College of William and Mary, and county and local governments within the study area.

7 Digitize any geophysical log data and diagram and digitize selected borehole data from the COLO area that are not in digital form. Digitized logs will be incorporated into the park's GIS data base in cross-section format.

8 The hydrogeologic framework for the study area will be constructed. Cross sections of digitized geophysical logs will be used to correlate log signatures characteristic of hydrogeologic unit contacts in the shallow aquifer system throughout the COLO study area. Apparent hydrogeologic unit contacts from the geophysical logs will be adjusted where necessary to match hydrogeologic unit groupings identified from water quality data. These hydrogeologic unit contacts will be referenced to mean sea level to generate point-coverage altitude maps of the top of each hydrogeologic unit. The altitude points will be contoured to generate contour altitude maps of the top of each hydrogeologic unit. Thickness contour maps of each hydrogeologic unit will be generated from the cross sections by the same method used to generate the altitude maps. Additional thickness points will be determined from contour-line intersections identified in composite overlays of sequential overlying and underlying hydrogeologic-unit altitude maps. Altitude maps of the top of each hydrogeologic unit and thickness maps of each unit will be prepared from cross sections of the geophysical and geologic logs throughout the study area.

9 Refine the hydrogeologic framework of the shallow aquifer system in the study area and prepared a detailed report describing it.

10 Develop recommendations for future research, long term environmental monitoring, management actions and initiatives, and educational outreach.

Beneficial uses of this project include development of baseline information on the role and nature of the regional shallow aquifer, and applications for inventory and monitoring wetlands, endangered species, hazardous materials investigations and clean-ups from adjacent US Navy and State of Virginia NPL and UST sites, and detection of trends in resources critical to the park conservation and interpretive objectives. The mapped information will be used as a guide in conjunction with known potential pollution threats to springs, seeps, streams, and groundwater quality throughout the park. This information will have application to other RMP project statements dealing with surface and groundwater (COLO-N-601.402, 601.503), wetland functioning and assessment (COLO-N-601.502), state regulatory process (COLO-N-601.201), development of a long term environmental monitoring program (602-N-603), and adjacent land use activities (COLO-I-007.000).

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1996: PKBASE-NR	RES	One-time	12.00	0.10
SVC-OTHER	RES	One-time	26.00	0.00
		Subtotal:	38.00	0.10
1997: PKBASE-NR	RES	One-time	5.00	0.10
1998: PKBASE-NR	RES	One-time	5.00	0.10
1999: PKBASE-NR	RES	One-time	5.00	0.10
		Total:	53.00	0.40

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Year 2: RES	One-time	50.00	0.00
Year 3: RES	One-time	50.00	0.00
Year 4: RES	One-time	75.00	0.00
	Total:	175.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : NHPA ((106) NAT. HIST. PRES.)
EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-601.412
Last Update: 02/21/99 Priority: 13
Initial Proposal: 1997

Title : DELINEATE SHALLOW AQUIFER
Sub-title: OTHER THAN YORKTOWN

Funding Status: Funded: 0.00 Unfunded: 150.00

Servicewide Issues : N11 (WATER QUAL-EXT)
N20 (BASELINE DATA)

Cultural Resource Type:

N-RMAP Program codes : Q00 (Water Resources Management)

10-238 Package Number :

Problem Statement
(No information provided)

Description of Recommended Project or Activity
(No information provided)

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
		Total:	0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 3:	RES	One-time	75.00	0.00
Year 4:	RES	One-time	75.00	0.00
		Total:	150.00	0.00

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: Research only

Project Statement COLO-N-601.502
Last Update: 02/21/99 Priority: 14
Initial Proposal: 1994

Title : DETERMINATION OF THE FUNCTIONS & VALUES OF PARK
Sub-title: WETLAND ENVIRONMENTS

Funding Status: Funded: 53.00 Unfunded: 139.00

Servicewide Issues : N20 (BASELINE DATA)

Cultural Resource Type:
N-RMAP Program codes : Q00 (Water Resources Management)
Q01 (Water Resources Management)

10-238 Package Number :

Problem Statement

Colonial National Historical Park (COLO) has completed an update of its wetlands inventory. It is presently converting and importing the newest NWI data into the park's GIS. Special emphasis on this conversion is expanding the non-tidal wetland information within the park's GIS project boundaries.
Researchers from VIMS and ECSU are conducting some limited HGM and EPA funded Palustrine wetland hydrology studies.The park includes extensive tidal and nontidal wetlands and managing these systems is critical to the park's resource management objectives. Furthermore, the park's wetlands are connected to larger aquatic (and wetland) environments. In addition to knowing the location and type of wetlands within the park, effective management and compliance with state and local regulatory programs will require increased insight to the functions of these systems. Understanding the role of wetlands within the larger park system is essential to planning for future use and development of park resources. This information will be particularly critical in areas where use change is considered as the park continually reassesses its objectives for historical interpretation, conservation and public recreation. Because wetlands are integral elements in the hydrologic system of the park, and its surrounding environs, modification of hydrology or wetland structure may result in changes to other park elements. For example, clearing some wooded wetlands to provide more accurate representations of historic conditions may alter surface and groundwater conditions affecting adjacent upland communities or surface water communities. Habitat quality for selected plant or animal species may be affected and local water quality may be impacted. This is not to imply that any change would be detrimental. However, it will be essential for the park to appropriately assess all potential impacts in order to satisfy both regulatory concerns and its own management objectives.

Description of Recommended Project or Activity

First, the park needs to reclassify its extensive GIS wetlands database using the approved USFWS Cowardin system. At present individual wetland units are identified only by the ecological system and class is in the GIS database. This subproject would update the classfication to include the full Cowardin system inlcuding ecological subsystem, class, subclass, and modifying terms. This information is critical to conduct effective wetland assessement and functioning studies. The project would also assess the completeness of the park's present wetland GIS database, and identify and map submerged aquatic vegetation (SAV). It is proposed this project be conducted by under a cooperative agreement addendum with the Va. Institute of Marine Science (VIMS), Wetlands Program. It is anticipated this project would take approximately .3 FTE, and $7000.

The park should undertake a project to analyze the functions/values of wetlands within its boundaries. The analysis should address the multiple roles each wetland can play within the context of the park setting (habitat, water quality modifier, hydrologic modifier, aesthetic/educational, etc.). The objective should be assessment of the individual and cumulative significance of wetlands within the park. The assessment should use currently available methods and should summarize information in a format which can be used both for planning and interpretive purposes. This should include identification of hydrologic conditions and requirements of individual vegetation assemblages. This documentation will allow the park to predict potential impacts to wetlands from alterations in hydrologic regimes. Therefore, there is a strong cause/effect link between this project statement and project statement numbers drainage problems COLO-N-601.303 and inventory springs, seeps, ephemeral streams and ponds 601.501.

The existing inventories of wetlands should be used as a foundation for change detection analysis, and monitoring should be conducted periodically on a minimum cycle of once every five years. More frequent monitoring may be necessary in park areas adjacent to urban expansion projects outside the park where anthropogenic alterations in hydrology could pose a threat to wetland resources. Similarly, restoration of park lands to historic states could also constitute a change in wetland conditions, and the monitoring efforts should keep abreast of these changes. The NOAA's Coastal Change Analysis Program (CCAP), also referred to as Coastwatch, provides seasonal coverage of landuse and landcover in the Bay region. These scenes have maximum resolutions of 30 meters which limits their utility in park management applications. However, in the absence of funding resources to monitor more frequently, CCAP data can provide gross changes in regional vegetation patterns.

The park is requesting special funding to conduct a five-year reevaluation of the vegetation cover of the park, including wetlands. This would be conducted under cooperative agreement(s) and would entail interpretation of new aerial photography, and ground interpretation. Regular inventory and monitoring of wetlands will require either additional park staffing or a cooperative agreement with an academic institution for employment of a graduate student.

The park will also request FY98 WRD-wetlands funds to study the impact to vegetation of wetlands of Yorktown by deer browsing.

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1995:	UNIV-COLL	RES	One-time	15.00	0.00
1996:	UNIV-COLL	RES	One-time	5.00	0.00
1997:	PKBASE-NR	MON	Recurring	3.00	0.10
1998:	PKBASE-NR	MON	Recurring	10.00	0.20
1999:	PKBASE-NR	MON	Recurring	10.00	0.20
2000:	PKBASE-NR	MON	Recurring	10.00	0.20
			Total:	53.00	0.70

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	RES	One-time	9.00	0.30
Year 2:	RES	One-time	20.00	0.00
	RES	One-time	35.00	0.00
		Subtotal:	55.00	0.00
Year 3:	RES	One-time	20.00	0.00
	RES	One-time	35.00	0.00
		Subtotal:	55.00	0.00
Year 4:	MON	One-time	20.00	0.00
		Total:	139.00	0.30

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)
Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-601.503
Last Update: 02/21/99 Priority: 1
Initial Proposal: 1995

Title : SURFACE WATER QUALITY TRENDS MONITORING/RISK

Sub-title: ASSESSMENT

Funding Status: Funded: 15.00 Unfunded: 125.00

Servicewide Issues : N11 (WATER QUAL-EXT)
N20 (BASELINE DATA)

Cultural Resource Type:
N-RMAP Program codes : Q00 (Water Resources Management)
Q01 (Water Resources Management)

10-238 Package Number :

Problem Statement

The quality of the surface waters within and adjacent to Colonial National Historical Park (COLO) affect the type and quality of the riparian and aquatic biotic communities which are found in the park. While there is little that the park can do in management of its lands which will significantly affect the quality of its surface water resources, it is important that COLO maintain some record of conditions to support analysis of water resource trends. Correlation of water quality changes with management practices in adjacent land areas outside the park is also extremely useful when COLO seeks to coordinate its management objectives with management programs of surrounding localities (see COLO-I-007.000).

Description of Recommended Project or Activity

NPS-WASO-WRD is reviewing all surface and ground water information on the park and prepareing recommendations for LTEM program.

There are a number of existing water quality monitoring programs, but none of them currently collect samples in areas particularly useful for COLO analytical purposes. Nevertheless each of the programs (invcluding the Department of Environmental Quality, the State Health Department and the Chesapeake Bay Program Citizen monitoring programs) represent an opportunity for effective collaboration and potential reduction in costs for COLO data collection efforts. The objective should be development of long term data sets which can be geo-referenced using the park's GIS. Establishing and maintaining a basic water quality monitoring program for surface wters in the park could reasonably be coordinated with groundwater monitoring programs. The surface water inventory and monitoring program would also include macroinverterbrate indexes, besides standard parameters customized for the different potential threats.

The park should also undertake a water quality degradation risk assessment by looking at current and planed conditions in the watersheds which include significant park resources. A useful preliminary assessment of areas posing the greatest threats to local water quality can be developed using the potential pollutant loading calculations promulgated by the Chesapeake Bay Local Assistance Department as part of their regulatory program. These calculations are based on a model pollutant (phosphorus) and use some very generalized assumptions about the relationship betwen land use and pollutant loadings. Despite the generic nature of the calculations, they do provide useful guidance in planning management strategies. COLO would be much more effective in representing its resource management interests in local regulatory decisions if ti was armed with a site specific information base developed with the same approach employed by the local programs.

It should not be necessary to undertake these analyses in all the watersheds covering COLO holdings initially. The most critical areas are those at the western end of the park surrounding Jamestown Island and estending east to the Williamsburg area. These are the areas under the most intense development pressure, and therefore these are the areas where change in land use and potential degradation of surface water quality is most imminent.

The risk assessment for park watersheds would be completed by a cooperator/consultant, using information in the GIS daga base and additional remote sensing information. This would include all the sub-basins within the park.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1995:	PKBASE-NR ADM	Recurring	2.00	0.05
1996:	PKBASE-NR ADM	Recurring	1.00	0.00
1997:	PKBASE-NR ADM	Recurring	3.00	0.10
1998:	PKBASE-NR ADM	Recurring	3.00	0.10
1999:	PKBASE-NR ADM	Recurring	3.00	0.10
2000:	PKBASE-NR ADM	Recurring	3.00	0.10
		Total:	15.00	0.45

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	MON	One-time	50.00	0.00
Year 3:	MON	One-time	50.00	0.00
Year 4:	RES	One-time	25.00	0.00
		Total:	125.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-601.504
Last Update: 02/21/99 Priority: 1
Initial Proposal: 1994

Title : SHORELINE STABILITY/EROSION MONITORING

Funding Status: Funded: 170.00 Unfunded: 2770.00

Servicewide Issues : N20 (BASELINE DATA)

Cultural Resource Type:
N-RMAP Program codes : G00 (Geologic Resources Management)
G05 (Shoreline Management)

10-238 Package Number :

Problem Statement

Colonial National Historical Park has over 40 miles of shoreline, along the James and York Rivers with different erosion problems. In the past, sections of the park shoreline have received erosion stabilization with seawalls, riprap, and other structures. While this has helped to stabilize these areas, in some cases (such as along Jamestown Island) these measures have caused accelerated erosion in other areas. The Virginia Institute of Marine Science (VIMS) and the Army Corp of Engineers has conducted research on shoreline erosion control within the park. Also, the Virginia Shoreline Erosion Advisory Service has provided technical advise for beach revegetation projects. The current shorelines (1967, 72, 90)of the park have been entered into the parkwide GIS.

Different parts of the park shoreline have received some shoreline hardening during the past 50 years. Jamestown Island continues to suffer from loss of shoreline with resultant lost of cultural and natural resources. Beaches and shoreline along both rivers have been lost or greatly reduced from recent hurricanes and northeasters. Historic sites, such as Civil War earthworks have been impacted with resultant lost of resource.

A fundamental assessment of the stability and condition of the park's shoreline is lacking. As a result, the processes and influences which have brought the shoreline to its current state
are not well understood. This is of particular concern from a management perspective especially when historic, cultural, and natural resources are potentially at risk due to their proximity to the shore zone.

The most comprehensive shoreline analysis currently available for the park compares the 1850's hydrographic charts of the Coast and Geodetic Survey with the more recent topographic shoreline surveys (1950-1968) (Byrne and Anderson, 1982). The shoreline was divided into reaches which sectioned the shoreline into process similar response groups - erosional or accretional. The rate of shoreline change over the time period studied was
reported on a reach by reach basis and normalized to represent erosion/accretion rates per year. Findings indicate that erosion rates along the James and York River shorelines
adjacent to the park range from 0 to 1.9 ft/yr. The study, however, did not investigate shoreline conditions along the tributaries within these two principal watersheds.

In addition, the Shoreline Situation Report for James City County, Virginia (Hobbs et al.,1975) and the Shoreline Situation Report for York County, Virginia (Anderson et al., 1975) presents additional information on the condition and stability of the shore. Again, these studies targeted only the primary waterways of the Chesapeake Bay, and therefore, the tributaries contiguous to the James and York Rivers were not included.

The Hampton Roads Planning District are completing a multi-year study of shoreline conditions, losses and uses. Information for the park will be entered into the GIS when it is received.

With increasing loses and concern the park convened a meeting to look at shoreline conservation issues. Participants included the specialist from the National Biological Survey, Va. Institute of Marine Science, Army Corp of Engineers, and the Hampton Roads Planning District along with park management. The park is currently working with VIMS and the Corp to develop a proposal for the detailed studying of shoreline conservation issues and possible alternatives. This project is planned as part of a combined cooperative agreement and Interagency agreement.

Description of Recommended Project or Activity

The park is currently developing, with the Va. Institute of Marine Science (VIMS),the Army Corp of Engineers (ACOE), and the USGS, Biological Resource Division (BRD) a proposal for a multi-year study of shoreline conservation issues. The five year shoreline conservation project will cost approximately $185,000 during FY97, FY98 and FY99. Cost for FY2000 and 2001 would be approximately $50,000 each. Any mitigation actions are not included in the above figures.

The objectives for this project include: review cultural, natural, and infrastructure resources at risk from shoreline erosion, approach shoreline conservation from a holistic approach looking at multiple protection strategies, be sensitive in developing alternatives to cultural, natural and aesthetic values at risk. The first year would concentrate on Jamestown Island and begin the development of a long-term monitoring (LTEM) program for sites along the park shoreline. Year two and three would expand the project to the James and York river shorelines of the park. Issues of sea level rise would also be investigated.

There is already much information on available along these rivers from previous studies done within and outside the park on general wave and wind climatology. But this information needs to be quantified. The project would also determine long-term shoreline change patterns, establish shoreline monitoring sites, and prioritize shore reaches and develop alternatives for the different reaches.

Then as the different plans are developed the park would conduct appropriate NEPA compliance involving scoping and public input. Based on the outcome of NEPA compliance management would choose appropriate alternatives for mitigation and secure funding.

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1994:	PKBASE-NR	RES	One-time	5.00	0.00
1995:	PKBASE-NR	RES	Recurring	1.00	0.00
1996:	PKBASE-NR	RES	Recurring	2.00	0.05
1997:	PKBASE-NR	MON	Recurring	10.00	0.20
1998:	NON-NPS-O	RES	One-time	132.00	0.00
	PKBASE-NR	MON	Recurring	5.00	0.10
	PKBASE-NR	ADM	One-time	5.00	0.10
			Subtotal:	142.00	0.20
1999:	PKBASE-NR	MON	Recurring	5.00	0.10
	PKBASE-NR	ADM	One-time	5.00	0.10
			Subtotal:	10.00	0.20
			Total:	170.00	0.65

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	ADM	One-time	50.00	0.00
Year 2:	RES	One-time	80.00	0.00
	ADM	One-time	75.00	0.00
	MIT	One-time	150.00	0.00

	Subtotal:	305.00	0.00	
Year 3:	RES	One-time	25.00	0.00
	MIT	One-time	2300.00	0.00
	ADM	One-time	75.00	0.00
	Subtotal:	2400.00	0.00	
Year 4:	MON	One-time	15.00	0.00
	Total:	2770.00	0.00	

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-601.512
Last Update: 02/21/99 Priority: 1
Initial Proposal: 1998

Title : DETERMINE FUNCTIONS & VALUES OF PARK WETLANDS

Sub-title: GRAFTON SINKHOLE COMPLEX

Funding Status: Funded: 30.00 Unfunded: 12.00

Servicewide Issues : N20 (BASELINE DATA)
N17 (BIODIVERSITY)

Cultural Resource Type:
N-RMAP Program codes : Q00 (Water Resources Management)
Q01 (Water Resources Management)

10-238 Package Number :

Problem Statement

The park contains approximately 40 sinkholes, ephermeral ponds. These are park of large complex referred to as the Grafton Pond Sinkhole Complex. Most of the complex is on Newport News Waterworks lands. Part of that area has been designated a Virginia natural register area. An ecological classification system, inventory and management plan has been prepared for the Waterworks lands. Several T&E species were found on those lands.

The Sinkhole Complex is considered one of the most ecologically significant areas in Virginia.

Description of Recommended Project or Activity

An CA with Va Div of Natural Heritage has been executed for them to conduct a biological and physical inventory of the approximately 40 sinkholes on parklands in Yorktown that are part of the larger Grafton Pond Sinkhole Complex. This phase will take two years and will be followed up with the preparation of a management plan based on the findings.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1999:	PKBASE-NR RES	One-time	30.00	0.00
		Total:	30.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	ADM	One-time	12.00	0.00
		Total:	12.00	0.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-602.000
Last Update: 02/21/99 Priority: 4
Initial Proposal: 1992

Title : MONITORING AND MITIGATION OF RTE SPECIES

Funding Status: Funded: 55.00 Unfunded: 32.00

Servicewide Issues : N02 (T&E ANIMAL)
N03 (T&E PLANTS)

Cultural Resource Type:

N-RMAP Program codes : OTH (Other)

10-238 Package Number :

Problem Statement

NPS Management Policies states:

The National Park Service will identify and promote the conservation of all federally listed threatened, endangered, or candidate species within park boundaries and their critical habitats...The National Park Service also will identify all state and locally listed threatened, endangered, rare, declining, sensitive, or candidate species that are native to and present in the parks, and their critical habitats...All management actions for protection and perpetuation of special status species will be determined through the park's resource management plan...management and monitoring programs should be coordinated with other state and federal agencies.

Also, major program objectives include:

*determining numbers of individuals, threats to the species, condition, and population trends.
*manage endangered, threatened, and candidate species, and their critical habitats, in conformance with the Endangered Species Act, recovery plans, and other appurtenant documents.
*ensure that park operations do not adversely impact endangered, threatened, candidate, or sensitive species and their critical habitats, within or outside the park.
*to the extent possible, ensure that activities, projects, or programs outside the park do not adversely impact endangered, threatened, candidate, or sensitive species and their critical habitats within the park.
*integrate to the fullest extent possible park management actions with other federal, state, and private recovery efforts.
ensure appropriate consideration of federal and state listed species and other special status species in all plans and NEPA documents.

In 1992 the Virginia Department of Natural Heritage completed the RTE and critical habitat survey of the park, and adjacent jurisdictions and US Navy bases. Fourteen RTE resources were identified within the park, and an additional eight outside the park, but within the zone of influence. In August 1993 the park contracted with the Virginia Division of Natural Heritage for a phase IV RTE survey. This survey will prepare detailed monitoring recommendations for the different RTE species and critical habitats. Also, digital GIS compatible databases will be updated.

Description of Recommended Project or Activity

NPS Management Policies direct..."Superintendents will develop agreements with other federal, state, and local agencies, native American authorities, and private landowners where appropriate to coordinate plant and animal management activities...In addition, superintendents will seek the cooperation of others in minimizing the impacts of outside influences...and other means of preserving and protecting park resources..."

It is the park's intention to secure permanet increase to ONPS funding to enter into a cooperative agreement with the Va. Dept. of Natural Heritage (VDNH) to continue long-term monitoring of these RTE species ($8000 per year est). The Natural Heritage Program is already actively involved with the in inventorying and monitoring RTE's. It is the park's desire to coordinate these activities with the local jurisdictions and US Navy to insure a regionwide protection plan of RTE's. The park is presently working with the VDNH, under a contract, to complete a detailed RTE Management, Monitoring, and Protection Plan.

As deemed necessary the park will also contract for special RTE surveys as part of environmental assessment activities.

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-NR	MON	Recurring	2.00	0.00
	NRPP	MON	One-time	4.00	0.00
			Subtotal:	6.00	0.00
1993:	PKBASE-NR	MON	Recurring	2.00	0.00
1994:	PKBASE-NR	RES	One-time	1.00	0.00
	PKBASE-NR	MON	Recurring	3.00	0.10
			Subtotal:	4.00	0.10
1995:	PKBASE-NR	RES	One-time	3.00	0.10
	PKBASE-NR	MON	Recurring	3.00	0.00

	PKBASE-OT RES	One-time	2.00	0.05
		Subtotal:	8.00	0.15
1996:	PKBASE-NR MON	One-time	4.00	0.05
	PKBASE-NR MON	One-time	15.00	0.05
		Subtotal:	19.00	0.10
1997:	PKBASE-NR MON	Recurring	4.00	0.10
1998:	PKBASE-NR MON	Recurring	4.00	0.10
1999:	PKBASE-NR MON	Recurring	4.00	0.10
2000:	PKBASE-NR MON	Recurring	4.00	0.10
		Total:	55.00	0.75

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 1:	MON	One-time	8.00	0.00
Year 2:	MON	Recurring	8.00	0.00
Year 3:	MON	Recurring	8.00	0.00
Year 4:	MON	Recurring	8.00	0.00
		Total:	32.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-603.000
Last Update: 02/21/99 Priority: 9
Initial Proposal: 1996

Title : DEVELOP LONG TERM ENVIRONMENTAL MONITORING PROGRAM

Funding Status: Funded: 35.00 Unfunded: 170.00

Servicewide Issues : N20 (BASELINE DATA)

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : C00 (Collections and Data Management)
C03 (GIS/Data Management)

10-238 Package Number :

Problem Statement

Resource management decisions must sometimes be made in the Park without a thorough understanding of the effects of these decisions on the natural resources. The management policies of the National Park Service state that baseline inventory data describing the natural resources under its stewardship will be conducted and monitored at regular intervals to detect or predict changes.

The policy of the National Park Service (NPS) pertaining to inventory and monitoring is to collect baseline inventory data on the natural and cultural resources and systems under its stewardship; and to conduct long-term monitoring to detect, or predict changes. This includes information on the presence, distribution and condition of the park's flora and fauna, water, soils, air natural and cultural features and condition, land cover, natural processes and external and internal threats. This inventory and monitoring policy has established a guideline for the purpose of listing the kinds and frequencies of activities that take place in the park.

The park does not now have a consolidated natural resources base inventory and monitoring program which would provide management with the information to manage the park's natural resources wisely to insure their future integrity. However, the park does have a few of the elements of a sound inventory and monitoring program. The park has recently had completed a Rare, Threatened, and Endangered Species and Critical Habitat Survey. The park is also involved in a parkwide groundwater study of urban impacts. There is spotty water quality (mostly surface only) and quantity information. A digital soils survey has been complete. There are species list for flora and fauna. The park is working with the Williamsburg Bird Club to create a new bird checklist. The State of Virginia conducts an annual neotropical bird survey along the parkway. The State is also preparing a detailed monitoring plan for RTE's. The GIS has developed a forest cover map, hydrology, wetlands, shoreline, near surface geology, watersheds, floodplains, cultural resources, ROW's, wildlife sightings, fire history, some exotic species and IPM problems. It is time for the park to do a new vegetative cover delineation using a final NPS protocal and State of Virginia digital orthophotoquads that should be ready in 1995. Also, an active ad hoc photographic monitoring program has been conducted of park fields.

Elements of this inventory will include: water quality and quantity data; chemical (ph & conductivity of rainfall); geophysical (event records, meteorologic data, geologic & hydrologic maps); biological (species inventory, biological maps, photographic records); and anthropological (park use maps, human activities, land ownership, visitor demographics, livestock use, legal matters, education activities, regional land use planning, social science studies.) To accomplish the goals of a baseline inventory the park needs to acquire information on forest condition, historic scene, water quality and supply (surface and groundwater) and regional land use planning. Inventories are required of aquatic resources, and a photographic record of the park. Park information on land ownership, climatic data, air quality and human activities needs to be consolidated.

Planning efforts would identify inventory requirements as stated above and prioritize those activities which will necessitate funding requests and outside assistance. Other planning would consolidate information that the park already possesses into a computerized data base system.

Description of Recommended Project or Activity

The proposal is to assemble under a cooperative agreement a peer review group involving university and NPS specialist to review the park's current inventory and monitoring activities. They would compare this against NPS standards, park funding and FTE's, and make a series of recommendations for the establishment of a long-term environmental monitoring program, along with the necessary information management needs and interface to the park's GIS.

The second phase would be the development of inventory and monitoring protocols dealing with flora, fauna, RTE's, wetlands, water quality, erosion and sedimentation, photographic recording etc. This would include a prioritizing of I&M needs in light of park staffing and funding.

The third phase would be the testing of protocols and refinement of current I&M actions.

The long-term success of this LTEM program will require both NPS staffing and funding for cooperative research efforts with local, state, and federal cooperators; university researches; volunteers, and private environmental organizations.

Long-term increase to ONPS would add 2FTE biological technicians.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1996:	PKBASE-NR ADM	Recurring	1.00	0.00
1997:	PKBASE-NR RES	Recurring	3.00	0.10
	PKBASE-NR MON	Recurring	5.00	0.10
		Subtotal:	8.00	0.20
1998:	PKBASE-NR RES	Recurring	3.00	0.10
	PKBASE-NR MON	Recurring	5.00	0.10
		Subtotal:	8.00	0.20
1999:	PKBASE-NR RES	Recurring	3.00	0.10
	PKBASE-NR MON	Recurring	5.00	0.10
		Subtotal:	8.00	0.20
2000:	PKBASE-NR RES	Recurring	5.00	0.10
	PKBASE-NR MON	Recurring	5.00	0.10
		Subtotal:	10.00	0.20
		Total:	35.00	0.80

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 3:	RES	One-time	50.00	0.00
Year 4:	MON	One-time	120.00	2.00
Total:			170.00	2.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-603.100
Last Update: 02/21/99 Priority: 12
Initial Proposal: 1996

Title : DEVELOP LONG TERM ENVIRONMENTAL MONITORING PROGRAM

Sub-title: DEVELOP INFO MGMT SYSTEM

Funding Status: Funded: 100.00 Unfunded: 150.00

Servicewide Issues : N20 (BASELINE DATA)
N24 (OTHER (NATURAL))

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : C00 (Collections and Data Management)
C03 (GIS/Data Management)

10-238 Package Number :

Problem Statement

At present park data from inventory and monitoring is available in mapped, and digital-spatial and non-spatial format. In digital format it is entered into Wordperfect, dBase, and ATLAS*GIS. There is no systematic means to link the different data formats or to conduct standard analysis for change detection, compliance with standards, or regular updating.

Description of Recommended Project or Activity

Based on the final long term environmental monitoring program report, and the park's GIS, a database management information system would be designed to integrate the spatial and non-spatial data needs of the park. The final system would include appropriate analysis systems for the data collected. The system would be based on compatibility with the current NPS database management systems and GIS.

After completion of the development of integrated database management system, under a cooperative agreement, the park would need to add a database manager position (1-FTE, GS-11) to the ONPS.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1997:	PKBASE-NR ADM	Recurring	10.00	0.20
1998:	PKBASE-NR ADM	Recurring	10.00	0.20
1999:	PKBASE-NR ADM	Recurring	15.00	0.30
2000:	PKBASE-NR ADM	Recurring	20.00	0.40
2001:	PKBASE-NR ADM	Recurring	15.00	0.20
2002:	PKBASE-NR ADM	Recurring	15.00	0.20
2003:	PKBASE-NR ADM	Recurring	15.00	0.20
		Total:	100.00	1.70

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 3:	RES	One-time	75.00	0.00
Year 4:	ADM	One-time	75.00	1.00
		Total:	150.00	1.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-604.000
Last Update: 04/12/99 Priority: 3
Initial Proposal: 1992

Title : HIRE PLANT ECOLOGIST AND INVENTORY AND MONITORING M

Funding Status: Funded: 157.00 Unfunded: 310.00

Servicewide Issues : N20 (BASELINE DATA)
N08 (CULT LANDSCAPE)

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : S00 (Science Consultation and Oversight)

10-238 Package Number :

Problem Statement

At present the only base funding is for the GS-12, Natural Resource Management Specialist, a GS-11 GIS specialist and some funds for supplies and materials. The natural resource management specialist has developed and directly administers a complex program dealing with environmental assessments and inspection; public relations including newsletters, articles, speeches; conducts training; coordinates with many different cooperators and park staff; and plans and executes short and long-term programs related to the natural resources. The GIS Specialist is a new position that administers a highly developed park based GIS program. Other needs are met through VIP's, and special funding. All the administration, programs, research, and monitoring, so far, have been conducted over the past six years with soft monies generated from different NPS special funds.

To be able to continue these established programs, and meet our responsibilities under the Endangered Species Act, Clean Water Act, NPS Policy, and other federal, state, and local laws and regulations the natural resource management and science program needs additional full-time personnel and funding for long-term cooperative research, inventory and monitoring, and education dealing with flora, fauna, water quality, wetlands, endangered species, etc.

This project will assist in meeting major deficiencies in staffing, future office and storage space; and base funding for research, inventory and monitoring, supplies and materials. These major deficiencies greatly hamper the Division's ability to carry-out basic programs and meet long-term management goals. This funding correlates with requested increases to base funding for the operation of the GIS program, and establishment of a comprehensive long-term environmental monitoring program.

Description of Recommended Project or Activity

Funding will allow for the addition of:

Year One - 1 FTE, GS-11 ($100,000) plant ecologist. This position would support multiple project statements dealing with invasive spp. mitigation, flora monitoring; management of park earthworks, grounds, fields, shorelines; shoreline revegetation; wetland understanding and protection, RTE monitoring. Funding would also support graduate students and some special projects.

Year two - would add 1FTE (GS-12, $110,000) to be used to implement and oversee the development, implementation and operation of a long-term monitoring program for the park, including, field research, field work regarding the natural resource management program, as outlined in the RMAP program.

The position would work with inventory and monitoring programs dealing with water and air quality; rare, threatened, and endangered species (RTE's); critical habitat protection of the extensive wetlands in the park; open fields management of the park's 1,100 acres; erosion and sedimentation programs along the 75 miles of river and stream boundaries; flora and fauna inventory and monitoring e.g. fisheries surveys, deer and small mammal population trend surveys, exotic flora mapping and removal, oversight of special use permittees and ROW permittee projects.. Funding beyond salaries, for the first year would be used for training, travel, and equipment and supply purchases. After the first year it would be used for training, travel, and research projects, including IA's and cooperative agreements.

Year three -funding increase to ONPS, would be used to establish a cooperative education gradaute student position with a local universities, .5 FTE, either in wetland science or natural resource management ($25,000). An increase to ONPS funding would also be used to cover the increase of salary cost for the Supervisory, Natural Resource Management Specialist position as the increasing complexities of his/her position would require ($5,000)

Additional one time funding of $50,000 would be used to buy necessary support equipment, scientific instrucments, PC, vehicle, supplies and materials to support the permanent position.

After the first year, additonal funding increase to ONPS would also be used for long-term cooperative agreements for monitoring related to endangered species, surface and ground water quality, wetlands, fisheries, flora, fauna, and erosion and shoreline erosion, sedimentation, stormwater management, ($75,000).

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992: PKBASE-NR	ADM	Recurring	20.00	0.40

1993:	PKBASE-NR ADM	Recurring	22.00	0.40
1994:	PKBASE-NR ADM	Recurring	20.00	0.40
1995:	PKBASE-NR ADM	Recurring	20.00	0.40
1996:	PKBASE-NR ADM	Recurring	15.00	0.30
1997:	PKBASE-NR ADM	Recurring	20.00	0.40
1998:	PKBASE-NR ADM	Recurring	20.00	0.40
1999:	PKBASE-NR ADM	Recurring	20.00	0.40
		Total:	157.00	3.10

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	MON	One-time	100.00	1.00
Year 3:	MON	One-time	110.00	1.00
	MON	One-time	75.00	0.00
		Subtotal:	185.00	1.00
Year 4:	RES	One-time	25.00	0.50
		Total:	310.00	2.50

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.7

Project Statement COLO-N-605.000
Last Update: 02/05/98 Priority: 7
Initial Proposal: 1995

Title : DEER RESEARCH, MONITORING, MITIGATION

Funding Status: Funded: 36.00 Unfunded: 75.00
Servicewide Issues : N20 (BASELINE DATA)
N-RMAP Program codes : W00 (Wildlife Management)
W02 (Native Aquatic Animal Management & Monitoring)

Problem Statement

The population of native white-tail deer in the park and surrounding area has grown to levels where deer management has become a significant local issue. Some local residents and local govt. officials are expressing frequent concerns about deer populations, based primarily on the issues of safety (deer/vehicle collisions and lyme disease) and landscape damage to vegetation in residential areas located within and adjacent to the park. Deer mgmt. issues are beginning to receive local media attention. Large herds of deer are observed throughout the park, especially in the Yorktown unit. Deer are frequently observed in Yorktown at all hours of the day even in developed and residential areas of the park. The park's 9500 acres plus adjoining military and city park land provide abundant habitat for deer. About 500 citizens have private homes located within the park, with several thousand more in subdivisions adjacent to the park. The result has been the same urban deer mgmt. issues encountered throughout the eastern U.S.

Impacts of deer on the park's natural and cultural resources are not well known or documented from a scientific standpoint. Social science data on local attitudes about deer is not available. Valid information on area deer populations is not available. Distinctive browse lines are evident along field/forest ecotones. Based on limited data, state biologists believe the area has not yet reached its biological carrying capacity for deer.

As a result of pressure from local residents, the York County Administrator has formed a deer management task force to study deer issues and make recommendations to county govt. for possible deer mgmt. actions. The NPS is a participant in this group, along with citizens and other federal, state and local land management agencies. Sufficient information is needed to for the NPS to make valid judgements about appropriate NPS management actions on this issue.

Description of Recommended Project or Activity

The park has several objectives related to urban deer impacts. They include:
1. Determining local attitudes about deer and deer management options.
2. Determining impacts in the Village of Yorktown and environs from deer herds on flora, landscaping, and public safety.
3. Developing information on deer populations trends for the park and surrounding lands.
4. Improved communications to staff and neighbors on deer issues and concerns, NPS policy and actions.

5. Researching impacts to natural habitats of natural heritage occurrences from deer browsing, as identified in the park's RTE management plan prepared by the Virginia Natural Heritage Division.
6. Determining any impacts from deer on the park's cultural resources and cultural landscape.

It is the park's intention that any deer related research would be conducted as part of a regional study involving other state, regional, local agencies, and interested parties.

The recommended first step is to cooperate in social science research on local public attitudes about deer and deer mgmt. options. The York County Deer Mgmt. task force plans to conduct such a study during 1998. As a major landowner in the area, it is imperative that the NPS be an active participant in this study, including sharing in funding.

A second step may be a limited study of the deer population which is affecting the core developed area of the village of Yorktown. This data is needed to make informed decisions about the impacts of this subset of the park's deer herd and possible management options for this herd, which resides almost exclusively on NPS property, but which has significant impacts on the 300 residents living within this area of the park.

Development of appropriate compliance documents (EA or EIS) will be required to guide future deer mgmt. actions, and will require either funding or staff beyond current park resources.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1996:	PKBASE-NR	ADM	Recurring	6.00	0.10
1997:	PKBASE-NR	ADM	Recurring	6.00	0.10
1998:	PKBASE-NR	ADM	Recurring	6.00	0.10
1999:	PKBASE-NR	MON	Recurring	6.00	0.10
2000:	PKBASE-NR	MON	Recurring	6.00	0.10
2001:	PKBASE-NR	MON	Recurring	6.00	0.10
			Total:	36.00	0.60

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	MON	One-time	25.00	0.00
Year 3:	MON	One-time	25.00	0.10
Year 4:	RES	One-time	25.00	0.10
		Total:	75.00	0.20

Compliance codes : EXCL (CATEGORICAL EXCLUSION)
Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-606.000
Last Update: 02/21/99 Priority: 5
Initial Proposal: 1994

Title : DEVELOP VC NAT'L RES. EXHIBITS, HANDOUTS, SLIDE PRG

Funding Status: Funded: 36.00 Unfunded: 175.00

Servicewide Issues : N24 (OTHER (NATURAL))

Cultural Resource Type: COMB (Combination)

N-RMAP Program codes : I00 (Interp. of Natural Resource Issues)

10-238 Package Number :

Problem Statement

The interpretation of natural resources management is now recognized as critical to the long-term protection of parks. Integrating resource protection and management issues into interpretive programming is not new to the National Park Service (NPS), but has gained in importance as the public has become more environmentally aware. The park affects the surrounding communities as the communities affect the parks. Colonial NHP depends on the support of an informed clientele. Informed people can intelligently support resource management programs and necessary legislation. Interpreting research results and resource management issues to the public should be an important part of the park's interpretive program, and helps the Park meet management goals.

The past park's interpretive efforts have been centered on cultural resources. The park and the Service has a critical need to serve as environmental stewards and advocates. Environmental interpretation has been an important role of the NPS for decades. It is time for Colonial to become more proactive in telling the story and importance of its natural resources, its relationship to historical story, and the role the visiting public and local community can play in protecting these resources and similar ones in the region and nation. The protection of these resources are tied to problems of air and water pollution, biodiversity, waste minimization and management, recycling, erosion and sedimentation problems, and control of exotic species. These issues are illustrated in, but not limited to, the national parks. This is a tremendous opportunity to provide information to the public on real problems facing not only the parks, but the rest of the world.

Description of Recommended Project or Activity

The Natural Resource Manager has provided lengthy memo and feedback on the long-term interpretative planning for the park. He has recently been invited to, and participated in, wayside planning and planning for Jamestown.

Visitor center and wayside exhibits dealing with the above issues and how they relate to park resources and the general public would be development. Also, the results of different inventory and monitoring programs, research, and mitigation projects would be explained. Special site bulletins, and slide programs would be developed and available for in-park and off-site use. The park's Natural Resource Irregular News would be continued. A slide\video program on the park's natural resources dealing with the above issues would also be developed.
A possible handbook on natural resources of the park would be prepared. The parks NRM-GIS website would be upgraded.

The use of park interpreter's, natural resource specialist, and VIP would add allow the addition of special natural resource interpretation programs.

BUDGET AND FTEs:

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1994:	PKBASE-NR	INT	One-time	3.00	0.10
1995:	PKBASE-NR	INT	Recurring	2.00	0.10
	VOL-INDEP	INT	Recurring	1.00	0.00
			Subtotal:	3.00	0.10
1996:	PKBASE-NR	INT	Recurring	2.00	0.10
1997:	PKBASE-NR	INT	Recurring	3.00	0.10
	VOL-INDEP	INT	Recurring	1.00	0.10
			Subtotal:	4.00	0.20
1998:	PKBASE-NR	INT	Recurring	5.00	0.10
	VOL-INDEP	INT	Recurring	1.00	0.10
			Subtotal:	6.00	0.20
1999:	PKBASE-NR	INT	Recurring	5.00	0.10
	VOL-INDEP	INT	Recurring	1.00	0.10
			Subtotal:	6.00	0.20
2000:	PKBASE-NR	INT	Recurring	5.00	0.10

VOL-INDEP INT	Recurring	1.00	0.10
	Subtotal:	6.00	0.20
2001: PKBASE-NR INT	Recurring	5.00	0.10
VOL-INDEP INT	Recurring	1.00	0.10
	Subtotal:	6.00	0.20
	Total:	36.00	1.30

----------UNFUNDED----------

Activity	Fund Type	Budget ($1000s)	FTEs
Year 1: INT	One-time	25.00	0.00
Year 2: INT	One-time	75.00	0.00
Year 3: INT	One-time	75.00	0.00
	Total:	175.00	0.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM6 APP. 7.4 B(3)

PROJECT NUMBER: COLO-N-607/000

Title: SURVEY AND RANK INVASIVE PLANTS AND DEVELOP INTEGRATED MANAGEMENT

FUNDING STATUS: Funded: 6,000.0 Unfunded: 75,000

SERVICEWIDE ISSUES: Non-native Plants

PROBLEM STATEMENT:

Park and natural resource managers recognize the invasion of non-indigenous plants as one of the most serious threats to the integrity of natural systems, rare communities and species, and animal habitat. Although many non-native plants are innocuous, some can spread rapidly and retard or redirect plant succession, replace native taxa and plant assemblages and interfere with restoration efforts,. NPS policy calls for the control of non-natives if they threaten park resources or public health. The impact of invasive plants is a major concern of the park, the NPS, but of the nation as a whole. Due to the high cost of control and possible epidemics caused by non-indigenous species, Congress commissioned the Office of Technology Assessment to prepare a report *Harmful Non-Indigenous Plants in the United States* (1993). The threat of non-indigenous plants to public lands and other natural areas was recognized in this report. The National Park Service rated the exotic species control, as the second highest national information need in response to the USGS Biological Resource Division request for such information need priorities.

The management of invasive non-native plants requires a long-term commitment of park resources. The park needs information on what non-natives occurs within or adjacent to parks, what impact these species have or potentially could have on park resources, and the feasibility of control. Armed with this information, informed decisions can be made as to which non-native plants should be controlled and which should be monitored. Non-native plant management plans can then be developed and implemented.

Colonial NHP location adjacent to a major, growing urban population present ever increasing threats to cultural and natural resources from urbanization, visitor activity and criminal activity. Exotic species are invading parklands including wetlands, and critical habitats for rare, threatened, and endangered species. The park natural resources includes over 2,100 acres of wetlands, 5600 acres of forest, 1100 acres of fields, 55 miles of riparian zones (perennial and intermittent streams) and 30+ miles of river shoreline. The park is home to 16 natural heritage occurrences including eagles, great blue heron and egret rookeries, and numerous migratory waterfowl. The park lies within the coastal plain of Virginia with direct hydrological links to the greater Chesapeake Bay and watershed.

Many of the park's long term GPRA goals are directly related to this request. By 2002 the park will have an operating GIS database that is available to park personnel and shared with other cooperators and interested parties…The database will include applicable past research…including 70% of the NPS phase 1 basis inventory and monitoring databases. New research will be added within one year of completion…the location, condition and significance of 90% of the park's cultural resources are known; school systems, academic institutions, organizations, visitors and life-long learners recognize and use the park to enhance learning; streamlined procedures have been designed and implemented to ensure an appropriate and efficient compliance process for all projects which occur in the park… Related Natural Resource Strategic Plan Goals for the Northeast Region include: *identify the vital signs of park ecosystems and will seek to understand their natural range of variation.*

This information and actions is essential for Colonial NHP with high priority given to those species that are known to pose significant threat to park resources and can reasonably be expected to be successfully controlled. At a recent regional meeting of natural resource managers, the issue of non-native plants ranks the highest among issues of most concern. At Colonial problems are already present with:

TABLE 1. Invasive exotic plant species found in COLO

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SCIENTIFIC NAME	**COMMON NAME**
Ailanthus altissima	tree of heaven
Albizia julibrissin	mimosa
Berberis thunbergii	barberry
Cirsium arvense	Canadian thistle
Cirsium vulgare	bull thistle
Festuca elatior	tall fescue
Hedera helix	English ivy
Lespedeza cuneata	Chinese lespedeza
Ligustrum sinense	privet
Lonicera japonica	Japanese honeysuckle
Microstegium vimineum	eulalia
Paulownia tomentosa	princess tree
Phragmites australis	common reed
Phyllostachys aurea	bamboo
Pueraria lobata	kudzu
Rosa multiflora	multiflora rose
Sorghum halepense	Johnson grass

TABLE 2. Invasive exotic species not found in COLO but likely to be present.

SCIENTIFIC NAME	COMMON NAME
Artemesia vulgaris	mugwort

Arundo donax	Giant reed
Carex kobomugi	Asiatic sand sedge
Celastrus orbiculatus	bittersweet
Centaurea maculosa	spotted knapweed
Coronilla varia	crown-vetch
Dioscorea batatas	cinnamon vine
Glechoma hederacea	gill over-the-ground
Perilla frutescens	--
Polygonum cuspidatum	Japanese knotweed

During the past few years the Virginia Division of Natural Heritage has been providing exotic, invasive species information while conducting RTE surveys of parklands. The park, in FY98, will begin the inventory of invasive species using temporary biological technicians. The park has also been in contact with Mr. Randy Westbrook, USDA, APHIDS regarding technical support in preparing a plan. Mr. Westbrook is assigned to the DOI to develop an agency and federalwide invasive species program. Mr. Westbrook has offered his assistance to the park.

DESCRIPTION OF RECOMMENDED PROJECT OR ACTIVITY:

The proposed project is to survey all of Colonial NHP for the presence, distribution, and abundance of invasive non-natives or those species identified as causing significant threat or those having the potential to spread rapidly. Existing floras, vegetation studies, and vegetation maps will be used as starting point. The system developed by Hiebert (Hiebert and Stubbendieck, 1993) and employed by Stubbendieck (Stubbendieck et al., 1992) and Stumpf et al., 1995) will be employed to separate innocuous species from noxious and to rank noxious species based upon level of threat and feasibility of control. Abstracts will be prepared for those species determined to pose significant threats to park resources. The information base developed will be used to develop management goals, to identify and select management alternatives, and to develop action plans for each park and adjacent area as appropriate. Formal decision tools will be selected and employed for this phase of the project.

Study Design

Phase 1 Survey Park: This phase will include a survey of existing information on the flora of the park, reconnaissance field surveys and creation of a preliminary list of non-native plants. During the inventory phase, invasive species will be mapped, GPS'd and entered into the park's GIS program. Student interns, VIP's, and temporary employees will be used during this inventory gathering phase. Also, information from the Virginia Division of Natural Heritage and the World Web will be collected.

Phase 2 Ranking of Non-native Plants:

The next phase will include a literature search for information on the ecology, biology, and control methods for each exotic species. This information along with field survey data will be used to complete the ranking forms. Species abstracts will be completed for those species found to pose a significant threat to park resources. Abstracts will include information on the taxonomic description, ecology and biology, distribution, control measures used, and pertinent references.

Phase 3 Development of Non-native Management Plans:

Formal processes will be used to formulate goals and objectives, identification and selection of alternatives, and formulation of evaluation/monitoring procedures. Public education needs and methods will be identified and selected.

In collaboration with the park natural resource manager, control strategies will be developed as a part of the IPM plan. As mentioned previously the implementation of these plans will require substantial commitment of park resources. It is anticipated that a request for funds for implementation will be requested from the Repair-Rehab Program. The IPM plans will contain prescriptive management for implementation by park resource management or maintenance personnel.

BUDGET AND FTEs:

----------FUNDED----------

	Source	Activity	Fund Type	Budget ($1000s)	FTEs
1997:	PKBASE-NR	MON	Recurring	4.00	0.10
1998:	PKBASE-NR	MON	Recurring	9.00	0.60
1999:	PKBASE-NR	MON	Recurring	4.00	0.10
	RG-RM-NAT	RES	One-time	27.00	1.00
	PKBASE-NR	ADM	One-time	5.00	0.00
			Subtotal:	36.00	1.10

2000:	PKBASE-NR MON	Recurring	4.00	0.10
2001:	PKBASE-NR MON	Recurring	4.00	0.10
2002:	PKBASE-NR MON	Recurring	4.00	0.10
		Total:	61.00	2.10

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	RES	One-time	32.00	1.00
		Total:	32.00	1.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EA (ENV. ASSESSMENT)

Explanation: 516 DM6 APP. 7.4 E(8)

Project Statement COLO-N-608.000
Last Update: 02/21/99 Priority: 7
Initial Proposal: 1992

Title : FAUNA INVENTORY AND MONITORING

Funding Status: Funded: 66.40 Unfunded: 185.00

Servicewide Issues : N20 (BASELINE DATA)

Cultural Resource Type:
N-RMAP Program codes : W00 (Wildlife Management)
W02 (Native Aquatic Animal Management & Monitoring)

10-238 Package Number :

Problem Statement

Baseline population data for many faunal species in the Park is incomplete, or totally lacking. Accurate population assessments of mammals, fish, reptiles, amphibians, and insects, including natural fluctuation of numbers, are complicated by the transient and/or secretive life styles of many species.

Wildlife observations totaling over 3,500 have been collected and entered into the GIS. Most of this data is for Jamestown Island. Additionally thousands of observations need to be entered into the database. A wildlife observation application has been developed for the GIS.

Also, two fishery studies have been conducted covering Yorktown and Jamestown Island under an interagency agreement with the USFWS. A third and final inventory of park fisheries will be conducted during FY94-95.

Finally, the breeding bird atlas and neotropical bird syrveys are conducted annually in the park. An agreement is being developed with the Williamsburg Bird Club to provide an updated bird survey, bird checklist handout, and on-going annual Christmas counts, and completion of park wildlife observation forms for rare, uncommon, and occassional wildlife seen in the park.

Description of Recommended Project or Activity

Develop and maintain a faunal population database. Existing information should be evaluated for validity and entered. Current and future research projects should contain objectives to provide population information if appropriate. Field monitoring surveys should be conducted to supplement existing information. The different surveys should become part of the proposed LTEM program. Information should be shared with local and state agencies. Opportunities for cooperative efforts covering the wider Peninsula should be explored and encouraged. Interagency agreements, graduate thesis, and VIP's would be used to conduct surveys. Species checklists should be updated as necessary. Population distribution maps will continue to be developed in the Geographic Information System (GIS).

Overall management of the wildlife program would include the addition in year 3, of 1-FTE wildlife biologist (GS-11, $75,000), then funding used for IA's/cooperative agreements ($50,000 per year), training/travel/supplies ($10,000 per year); and the addition of 1FTE biological technician ($50000). Inventory surveys will include small mammals, reptiles, amphibians, invertebrates, and macroinverterbrates in aquatic environments. Also, monitoring programs would continue for fish populations, breeding bird and neotropical bird surveys.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	RG-NS-RES MON	One-time	7.50	0.00
	PKBASE-NR MON	One-time	2.90	0.10
		Subtotal:	10.40	0.10
1993:	PKBASE-NR MON	One-time	5.00	0.10
1994:	PKBASE-NR MON	One-time	10.00	0.20
1995:	PKBASE-NR MON	One-time	5.00	0.10
1996:	PKBASE-NR MON	Recurring	3.00	0.05
1997:	PKBASE-NR MON	Recurring	6.00	0.10
1998:	PKBASE-NR MON	Recurring	15.00	0.10
1999:	PKBASE-NR MON	Recurring	6.00	0.10
2000:	PKBASE-NR MON	Recurring	6.00	0.10
		Total:	66.40	0.95

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	MON	One-time	75.00	1.00
	ADM	One-time	10.00	0.00
		Subtotal:	85.00	1.00
Year 3:	MON	One-time	50.00	1.00
	MON	One-time	50.00	0.00
		Subtotal:	100.00	1.00
		Total:	185.00	2.00

(Optional) Alternative Actions/Solutions and Impacts
(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM6 APP. 7.4 E

Project Statement COLO-N-609.000
Last Update: 02/21/99 Priority: 8
Initial Proposal: 1992

Title : FLORA INVENTORY AND MONITORING

Funding Status: Funded: 44.00 Unfunded: 110.00

Servicewide Issues : N20 (BASELINE DATA)

Cultural Resource Type:
N-RMAP Program codes : V00 (Vegetation Management)
V02 (Native Aquatic Plant Management and Monitoring)

10-238 Package Number :

Problem Statement

Hundreds of species have been recorded from within the Park boundary, although not all of these are native to the Park. Continued development along the Park boundary can alter vascular plant distribution, abundance, and overall diversity. The threat of introduced alien plant species is also heightened. National Park Service Management Policies state that "the NPS will assemble baseline inventory data describing the natural resources under its stewardship and will monitor those resources at regular intervals to detect or predict changes."

To a great extent the kinds and diversity of plant life in a given area define and govern the entire biotic community. Thus, knowledge of an area's flora is fundamental for the park to carry out its management commitments for the lands under its stewardship. These commitments include not only preservation of the natural environment but also preservation of historical structures such as earthworks and fortifications which are widespread throughout the park's landscape.

The park continues to collect some flora information from other studies, e.g. RTE survey's, environmental assessments, undergraduate and graduate student projects from local universities, NPFLORA. But a more comprehensive survey is needed to complete the flora inventory so that other projects can proceed, e.g. exotic species inventory and management, comprehensive landscape planning, fire management.

Description of Recommended Project or Activity

What is needed is a more thorough inventory of park flora, and a determination of the condition of the park's flora. This is necessary to assist in the development of forest, fire, cultural landscape, exotic species identification and control, and earthworks management plans. These plans are basic to management's commitment to the preservation of the lands under its stewardship. This information would be entered into the GIS and management plans.

The project would involve a three-five year period to inventory current flora, including trees, shrubs, and herbaceous plants. A series of temporary plots will be developed to summarize vegetation by cover and understory type, density, dominance, and abundance. The results from this inventory would be compared to the 1935, 1940 forest inventory of the Yorktown and Jamestown areas of the park. This project would be done under cooperative agreements with area universities. The long term monitoring could be handle more easily by the addition of a plant ecologist and graduate student, and cooperative agreements (see below)

Also, aerial photography would be used to create new GIS vegetaion maps and compared to the 1990 GIS project (Year1, 2-$50,000@; Year 3-$35,000). This GIS work would be based on the national vegetation mapping guidelines and standards. Inventory data will be entered into pre-approved dBase databases for incorporation into the park's GIS.

"Natural plant communities change constantly. For a park to manage its natural (cultural) resources effectively, managers need to know what natural changes are expected and the anticipated directions, and rates of change. They also need to recognize changes which are human-influenced and may disrupt a park's...environment. The establishment of permanently marked plots for long-term monitoring is the best way to provide the information by which change can be detected...monitoring will also provide the baseline data against which new management strategies and actions can be evaluated..." (Russell). A long-term monitoring plan would be designed and tested. A subset of the above plots will be developed into a series of long-term monitoring plots.

An increase to ONPS base would allow for additional IA's and cooperative agreements ($50,000). Also a 1FTE biological technician ($50,000), along with support for equipment, training, and travel ($10,000), would be added to assist the plant ecologist. The plant ecologist would be added under COLO-N-607.000, Exotic Species.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
1992:	PKBASE-NR ADM	Recurring	4.00	0.10
1993:	PKBASE-NR ADM	Recurring	4.00	0.10
1994:	PKBASE-NR ADM	Recurring	4.00	0.10
1995:	PKBASE-NR MON	Recurring	4.00	0.10
1996:	PKBASE-NR MON	Recurring	4.00	0.10
1997:	PKBASE-NR MON	Recurring	8.00	0.20
1998:	PKBASE-NR MON	Recurring	8.00	0.20
1999:	PKBASE-NR MON	Recurring	8.00	0.20
		Total:	44.00	1.10

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 2:	ADM	One-time	10.00	0.00
	RES	One-time	50.00	1.00
		Subtotal:	60.00	1.00
Year 3:	MON	One-time	50.00	0.00
		Total:	110.00	1.00

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

Project Statement COLO-N-610.000
Last Update: 02/27/96 Priority: 18
Initial Proposal: 1997

Title : AIR QUALITY MANAGEMENT, MONITORING, ACID DEPOSITN

Funding Status: Funded: 0.00 Unfunded: 80.00

Servicewide Issues : N20 (BASELINE DATA)
N14 (AIR POLLUTION)

Cultural Resource Type: COMB (Combination)
N-RMAP Program codes : A00 (Air Resources Management)
A02 (Air Quality Monitoring)

10-238 Package Number :

Problem Statement

Colonial NHP is concerned with air pollution and its potential detrimental effects on the Park's resources and the visitor experience. Air pollution generated within the Park boundaries includes wind blown soil and dust, construction activities, smoke from residential fireplaces, automobile emissions and infrequent forest fires. Traffic on Colonial Parkway is probably the major internal contributor to Park air pollution. The Parkway has become a major commuter route from Gloucester and Yorktown to Williamsburg. An average of 175,000 vehicles per month use the Parkway for non-recreational purposes. This compares with an average recreational use of the Park of 70,000 vehicles per month (based on monthly traffic counts.)

External air pollution sources are those which originate outside the Park's boundaries. These are the major sources of air pollution affecting Colonial National Historical Park. The Park is located in an urban area of increasing size and population. The Park is affected by regional air pollution generated by surrounding residential and industrial land uses. It is possible that the Park may be adversely effected by air pollution sources thirty to hundreds of miles from its borders.

For ozone the Norfolk-Virginia Beach-Newport News, VA. area has been declared an ozone non-attainment area based on l988 data. There were four recorded exceedances in 1988. For 1989 the region was within standards for ozone. For 1990, 1991 the region exceeded ozone levels.
*

In addition to localized pollution sources, there are many potential regional influences on Park air quality. These regional influences include Richmond area industrial plants, Hopewell chemical industries, and Providence Forge and West Point wood and pulp production plants. In the Hampton Roads area sources include automobile traffic, residential use (fireplaces, wood stoves, furnaces), and industrial uses (boilers, oil refinery, electric power generation, airplanes, ships, gas stations, and dry cleaning operations). Other possible regional influences include ship building, air traffic, pulp paper production, power generation, chemical factories and other industrial production plants.

Description of Recommended Project or Activity

The park objectives for an air quality management program are:

Determine the types, extent, and sources of air pollution and its impact upon cultural and natural resources. Increase coordination with the Virginia Department of Air Pollution Control. Increase public education and information programs on air pollution impacts upon the park resources.

The park's planned course of action will be a multi-faceted approach to air quality management in the park. The program, depending on funding, will consist of bio-monitoring, in-park monitoring of selected air pollutants and meteorological conditions. Also included will be research on air pollution impacts on park cultural and natural resources. Interpretive programs to inform visitors and the community of park air quality issues will be developed. External relations with the state of Virginia concerning regional air quality problems and permits will be increased. An in-park air quality program will provide for more effective management and protection of park resources. This course of action will provide the most useful baseline and monitoring information and promote further investigation into air pollution effects on park AQRVs. For a full discussion consult the park's Air Quality Management Plan.

BUDGET AND FTEs:

----------FUNDED----------

Source	Activity	Fund Type	Budget ($1000s)	FTEs
Total:			0.00	0.00

----------UNFUNDED----------

	Activity	Fund Type	Budget ($1000s)	FTEs
Year 4:	MON	One-time	80.00	0.50
Total:			80.00	0.50

(Optional) Alternative Actions/Solutions and Impacts

(No information provided)

Compliance codes : EXCL (CATEGORICAL EXCLUSION)

Explanation: 516 DM2 APP. 2, 1.6

ASSESSMENT OF ENVIRONMENTAL IMPACTS

Broad resource management issues and concerns are addressed in the Park's General Management Plan/Development Concept Plan (GMP). The General Management Plan's environmental assessment (EA) meets all National Environmental Policy Act (NEPA) requirements for the overall management decisions incorporated in that plan, and as long as the selected alternatives in this plan are in harmony, all compliance actions required by Section 102 of the National Environmental Policy Act will have been satisfied.

Decision to Prepare Site-Specific Environmental Assessments

In some cases, the EA prepared for the GMP did not include a detailed site-specific evaluation of the actual location where the construction or activity was to occur. As each action listed in the GMP is considered for accomplishment, it must be determined if adequate site-specific work has been accomplished. When in doubt, additional evaluation of the site will be conducted.

Planning and management of the Park needs will change over time. As is the case with all plans, the 1993 GMP will slowly become outdated. Once apparently, simple solutions to a problem may turn out to be more complex than originally contemplated. As time progresses, the need for additional evaluation of alternatives to GMP approved actions will become increasingly necessary. The need for additional NEPA evaluation will be documented in each project statement.

It is anticipated that most NEPA actions will take place during the process of approving specific action plans. In this way, the public will be better able to focus on the specific issue in question rather than being expected to understand and comment on an entire Resource Management Plan.



APPENDIX A CULTURAL RESOURCES SUMMARY SHEET

Summary Chart for Archeological Sites

This information will not be available until the Cultural Sites Inventory and Archeological Assessment and Inventories for the park are funded and completed.

Summary Chart for Structures

The current LCS will be updated and revised next Fiscal Year. This will allow for the accurate preparation of this chart.

Summary Charts for Objects

This information is not yet complete.

Summary Charts for Cultural Landscapes

Insufficient data to prepare charts

APPENDIX B CULTURAL RESOURCE MANAGEMENT ACTION PLANS and ACCOMPLISHMENTS

No current plans in place

1. The bibliographical and event database for Jamestown Island is now complete.

2. The photogrammetry project for the Glasshouse Ruins is complete and data has been digitized into the park's GIS.

3. The preservation study for the Glasshouse Ruins is completed and implemented to the extent possible.

4. Final reports from five-year Jamestown Island Archaeological Assessment are being prepared



APPENDIX C NATURAL RESOURCE MANAGEMENT ACCOMPLISHMENTS

Table 13 Action Plans and Projects for Natural Resource Management

Plan Title	Year Completed
Agricultural Special Use Plan	1992
Air Quality Management Plan for Colonial NHP	1991
Conservation Plan for Natural Heritage Occurrences of Colonial NHP	1998
Creation of natural resource management World Wide Website	1997
Develop Parkwide GIS Program	1990-current
Eagle and Heron Monitoring , Parkwide	1997
Endangered Species Inventory of Wormley Pond and Cheatham Pond5	1998
Endangered Species Inventory of Yorktown Creek	1944
Endangered Species Survey , Parkwide	1995
Faunal Survey of Green Spring	1999
Fisheries Inventories Studies, 1988-1998	1998
Flora survey of Green Spring	1998
Geographic Information System Plan	1993, 1996
Initial Invasive Flora Inventory	1998
Johnson Grass Plan	1990
Model Air Quality Plan for the National Park Service	1991
Procite bibliography of park's natural resource library, map files	1997
Yorktown Onion Enhancement Study	1994
Johnson Grass Control Study	199
Resource Management Plan	1995
Water Quality Study of Yorktown Creek	1996-1998
Water Resources Management Plan	1994

5 Endangered species surveys also includes general report on invasive species.

APPENDIX D CURRENT NATURAL RESOURCE MANAGEMENT PROJECTS

Table 14 Current Natural Resource Projects

Project Title	Expected completion date
Field Management Plan for Faunal Biodiversity	1999
Guidelines for GIS Spatial Themes, Associated Attribute Tables, Metadata and Cartography, revision	1999
Hydrogeological Framework of Yorktown	2001
Invasive Species Inventory, parkwide	1999
Invasive Species Mitigation Plan	2000
Resource Management Plan, revision	1999
Shoreline Conservation Plan for the James River Section of Colonial NHP	1999
Yorktown Sinkholes, Biotic And Abiotic Inventory	2000



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