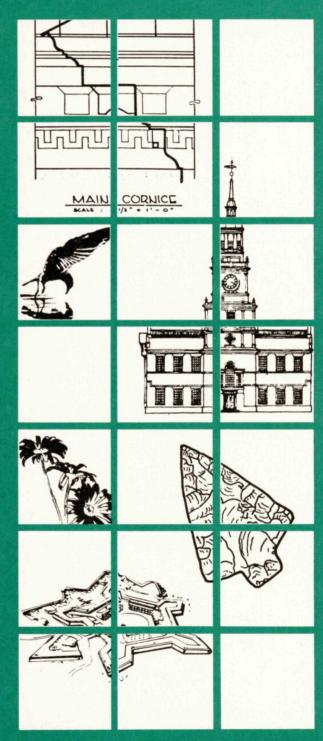
PARTNERS IN RESEARCH
A Catalog of Potential Research Projects

History
Archeology
Natural & Social Science
Historic Architecture

National
Park Areas
of the
Mid-Atlantic Region



Introduction

The National Park Service was established by Congress in 1916 as an agency of the Department of the Interior to promote and regulate the use of Federal areas known as national parks and monuments. The mission of the National Park Service is to manage these areas "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

The Mid-Atlantic Regional Office, located in Philadelphia, Pennsylvania, is the central administrative and senior management office for 26 park units in a five-state area (Pennsylvania, Virginia, West Virginia, Maryland, Delaware and portions of New Jersey in the Pinelands and the Delaware Water Gap). The diversity of these parks is reflected in their individual designations as national parks, national monuments, national seashores, national historical parks, national battlefields, national recreation areas, national memorials, and so on.

This publication was developed by the Mid-Atlantic Region to foster and solicit university, independent, and interagency cooperative research on a variety of park resource issues. The research needs of each Mid-Atlantic Regional park have been summarized and listed to identify areas of potential mutual interest.

Many of these Mid-Atlantic Regional parks face complex environmental, visitor-use, and cultural resource management problems, such as rapid declines in native wildlife populations, significant vegetation changes, critical air and water quality problems, expanding numbers of visitors, land-use conflicts along park boundaries, and deterioration of historic buildings, grounds, and structures. Consequently, there is a great need for research in the environmental, biological, architectural, archeological, and social sciences, and support services. Park managers depend on such research to (1) bet-

ter manage and protect the resources of the parks (2) improve public understanding of the critical preservation and protection issues involved in national park management and (3) make administrative and support service decisions that will facilitate and enhance mission and accomplishment.

In order to improve the protection and management of park resources, the Mid-Atlantic Region supports programs of research on the natural and cultural values of park areas. The Offices of the Regional Scientist, Historian, Archeologist, Historical Architect, Curator, Information Management Chief, and others, provide the necessary programmatic and field support to park areas. Park research priorities, documented in Resource Management Plans, are carefully evaluated and developed into regional priorities to distribute available program funds and personnel time.

Although the Service's yearly funding allocations are usually adequate to program research on the most critical and time-urgent resource management problems, other important park research contributions come in the form of cooperative and free independent activities by various public and private sources. These outside contributions provide an important supplement to our research programs and have significantly broadened the base for acquiring scientific information in the Region. For lower priority research needs for which funds are not available, the National Park Service encourages donated research time and looks forward to the independent research provided by qualified individuals. Depending on the priority of the management problem, various levels of park logistical support and/or park or regional funding can be available. In addition, park lands provide protected study sites with known histories of management practices and natural disturbances and conditions.

Using the Information

This document is intended to serve as a useful reference for qualified investigators from other federal and state agencies, universities, and independent research institutions. It identifies and summarizes the current cultural, natural, and social science research needs of the parks of the Mid-Atlantic Region.

Please review this updated list and refer to it as you develop your own research interests, those of your graduate students, or those of your agency or institution. The National Park Service is always interested in receiving cooperative, free, independent assistance in conducting its research efforts. If your planned research interests and activities complement our listed needs, we encourage you to contact either the superintendent(s) of the appropriate park(s) or the following regional personnel for further details concerning the specific project(s) and the possibilities and advantages of conducting independent or cooperative research in the parks of the Mid-Atlantic Region.

NATIONAL PARK SERVICE

Mid-Atlantic Region Philadelphia, PA 19106

Cultural Resource Research

Mr. John Bond Chief, Planning and Preservation Services Division (215) 597-7097

Natural/Social Science Research

Mr. Chris Andress Chief, Resources Management and Visitor Protection Division (215) 597-7057

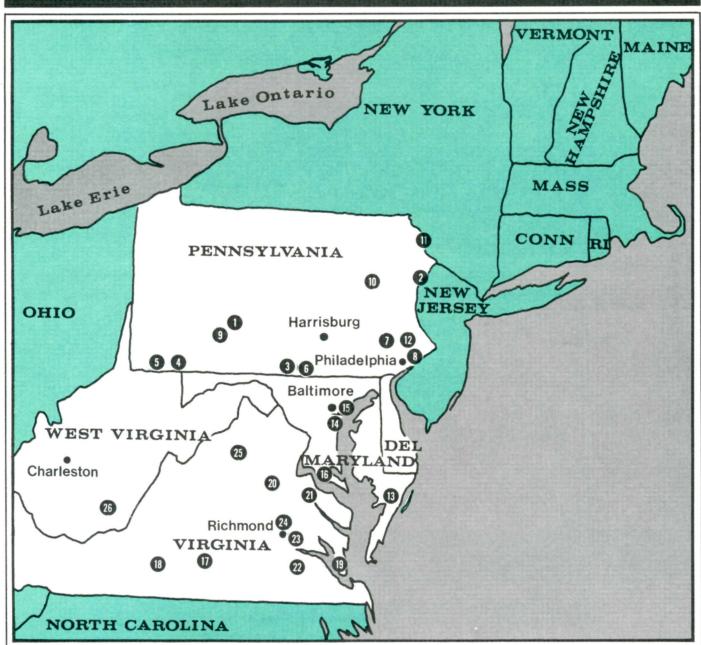
We welcome the opportunity to discuss our cultural, natural, and social science research programs and how they are operated consistent with National Park Service management policies and park objectives. If you have any questions, please don't hesitate to let us know.

RESEARCH PUBLICATIONS

A vital part of the Mid-Atlantic Region's research activities is an active publication program that disseminates current historic, administrative, archeological, natural, and social science information to park managers, researchers, and visitors. These publications provide for the retention and documentation of research information and make possible more complete in-house and peer evaluation of results and recommendations.

The cultural, natural, social science, and support services research needs listed in the subsequent section discuss specific park resource preservation, interpretation, or management concerns. A research study addressing one of these concerns would document the needed basic data and/or management recommendations in one of the various National Park Service handbooks, guides, or reports. The information in the Appendix briefly describes the purpose and required content of these documents and provides an idea of the associated research study requirements. The research efforts listed under the heading "Cultural Research Resource Needs" is a representative sample of what is needed in each park.

National Parks of the Mid-Atlantic Region



PENNSYLVANIA

- 1 Allegheny Portage Railroad National Historic Site
- 2 Delaware Water Gap National Recreation Area
- 3 Eisenhower National Historic Site
- 4 Fort Necessity National Battlefield
- 5 Friendship Hill National Historic Site
- 6 Gettysburg National Military Park
- 7 Hopewell Furnace National Historic Site
- 8 Independence National Historical Park
- 9 Johnstown Flood National Memorial
- 10 Steamtown National Historic Site
- 11 Upper Delaware Scenic and Recreational River
- 12 Valley Forge National Historical Park

MARYLAND

- 13 Assateague Island National Seashore
- 14 Fort McHenry National Monument and Historic Shrine
- 15 Hampton National Historic Site
- 16 Thomas Stone National Historic Site

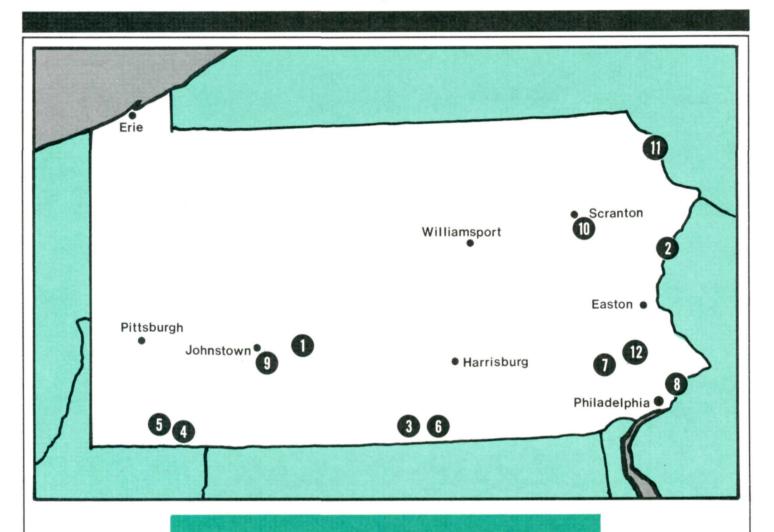
VIRGINIA

- 17 Appomattox Court House National Historical Park
- 18 Booker T. Washington National Monument
- 19 Colonial National Historical Park
- 20 Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park
- 21 George Washington Birthplace National Monument
- 22 Petersburg National Battlefield
- 23 Richmond National Battlefield Park
- 24 Maggie L. Walker National Historic Site
- 25 Shenandoah National Park

WEST VIRGINIA

26 New River Gorge National River

Pennsylvania



PENNSYLVANIA

- 1 Allegheny Portage Railroad National Historic Site
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- 8 Independence National Historical Park
- 9 Johnstown Flood National Memorial
- 10 Steamtown National Historic Site
- 11 Upper Delaware Scenic and Recreational River
- 12 Valley Forge National Historical Park



Allegheny Portage Railroad National Historic Site

PARK DESCRIPTION

From 1834 to 1855, canalboats on railroad cars were lifted and lowered from one level to another by stationary steam engines to transport passengers and cargo across the Allegheny Mountain Divide. Traces of the railroad crossing and many of the original structures can still be seen today. The Lemon House, built about 1831 near the summit of Allegheny Mountain, was a tavern and rest stop for passengers. Other features include incline planes 1, 6, 8, and 10; stone culverts; stone railroad ties; excavated engine house foundations; the Skew Arch Bridge; and the Staple Bend Tunnel. P.O. Box 247. Cresson, Pa., 16630: 814-886-81761

CULTURAL RESOURCE RESEARCH NEEDS

Park Administrative History

National Park Handbook

Historic Structure Preservation Guide — Lemon House

Historic Structure Preservation Guide — Engine Houses 6 and 8

Historic Structure Preservation Guide — Staple Bend Tunnel

Historic Structure Preservation Guide — Skew Arch Bridge

Historic Structure Preservation Guide — Culverts along Historic Railroad Trace

Historic Resource Study — Update of existing study

Special History Study — Pennsylvania Canal

Historic Structure Report — Engine Houses 6 and 8

Historic Structure Report — Staple Bend Tunnel

Historic Structure Report — Skew Arch Bridge

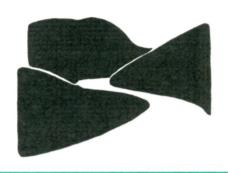
Archeological Survey

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Native Vegetation Restoration—Examine alternatives for control and eradication of exotic plant species at Staple Bend Tunnel Unit and recommend methods for establishment and maintenance of native species.

Acid Precipitation Monitoring Program— Establish an acid precipitation monitoring program and study effects on the park's natural resources.

Delaware Water Gap National Recreation Area



PARK DESCRIPTION

This 71,000 acre, 38-mile-long, scenic national recreation area lies along the Pennsylvania and New Jersey banks of the Delaware River. Farm sites and rural villages lie in the relatively unspoiled flatlands along the river. Trails lead to remote scenic natural areas of waterfalls, hidden lakes, and hemlock ravines. The river flows through the famous gap in the Kittatinny Ridge at the southern end of the park. [Bushkill, PA 18324; 717-588-2435]

CULTURAL RESOURCE RESEARCH NEEDS

Park Administrative History

Historic Structure Preservation Guides— Studies are needed for the numerous historic houses and farms in the park.

Historic Resource Study — Montague Township, New Jersey

Special History Study — Land use prior to federal acquisition

Special History Study — History of recreation and the resort industry

Special History Study — Copper mining

Special History Study — Forts of the French and Indian War period

Special History Study — History of transportation

Special History Study — Logging and rafting on the Delaware River

Historic Structure Reports — Studies are needed for the numerous historic houses and farms in the park.

Archeological Survey

National Register Nominations — Research supply data for the completion of nomination forms for known archeological resources.

Museum Collection — Identify objects and make recommendations for their disposition.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Wildlife Habitat Evaluation — Identify habitat requirements of the park's native fauna and assess existing conditions in relation to those needs.

Fire as an Ecological Component — Determine effects of fire on flora and fauna, determine fuel loads in different vegetation types, and research the use of fire to meet various resource management objectives.

Backcountry Visitor Use Analysis — Develop and implement data collection methods for base line inventory, future monitoring, and impact analyses of backcountry trail use.

Agricultural and Pastoral Scene Management

— Develop viable alternatives for maintenance of historic and scenic vistas to preserve the open scene character of the area.

- Air Quality Base Line Inventory and Monitoring A research and monitoring program is needed to determine levels of pollutants and impacts on natural resources and visitor use.
- Survey of Fauna Conduct a species inventory, including rare and endangered species, determine population densities and distribution, and critical habitats.
- **Survey of Wetlands** Site check National Wetlands Survey information, conduct surveys for other existing wetlands, delineate boundaries on 1:400 base maps, and describe habitat, acreage, and values.

Effects of Agricultural Practices on Wildlife

 Determine effects of various agricultural practices such as establishing turnrows, hedgerows, and cutbacks on resident wildlife populations.

- **Agricultural Pest Management** Monitor weeds, diseases and insect pests in agricultural and orchard areas and develop an integrated approach to pest management in problem areas.
- Visitor Use Survey Collect and compile demographic characteristics and sociological information regarding park visitors and their experiences.
- **Exotic Flora Survey** Inventory the population densities and distribution of exotic plant species and identify potential impacts to native flora.

PARK SUPPORT RESEARCH NEEDS

Bibliographical Research — Develop citation lists, with document location, for published and unpublished results of all cultural/natural/social science research activities within or related to Delaware Water Gap NRA.

Eisenhower National Historic Site



PARK DESCRIPTION

This site preserves the Gettysburg home and farm of General Dwight D. Eisenhower, thirty-fourth President of the United States. Originally purchased as a retirement residence in 1950, the farm served as a haven from the pressure of official duties during Eisenhower's two terms in the White House. It continued to serve as Mamie Eisenhower's home after the General's death in 1969. The site was opened to the public in 1980. [R.D. 9; Gettysburg, PA 17325; 717-334-1124].

CULTURAL RESOURCE RESEARCH NEEDS

Historic Structure Report—Eisenhower House and Barn

Historic Structure Report—Eisenhower Show Barn

Historic Structure Report — Farm Number Two, including house, barn, and outbuildings

Historic Structure Preservation Guide — Studies are needed to provide guidelines for maintenance and preservation of the buildings and structures associated with the site.

Cultural Landscape Report — Survey, inventory, and map the historic trees, flower beds, and shrubbery associated with the site.

Historic Resource Study Supplement — Update existing historic resource study which provides a base for all interpretation and cultural resource management of the site.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Survey of Flora—Inventory vascular plant species and analyze plant communities.

Survey of Fauna—Inventory animal species and study population densities and distributions.

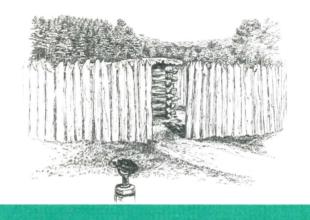
Acid Precipitation Impact Study — Collect base line information on air quality and study long range effects on park resources.

Air Quality Monitoring and Impact Study — Collect base line information on air quality and study long range effects on park resources and visitor experiences.

PARK SUPPORT RESEARCH NEEDS

Fire Protection and Physical Security Analysis — Identify deficiencies and recommend solutions parkwide.

Fort Necessity National Battlefield



PARK DESCRIPTION

This is the site of the opening battle of the French and Indian War, fought by England and France for control of the North American continent. In 1754, George Washington experienced his first military encounter and his only military surrender. Braddock's Grave, Mount Washington Tavern, and a reconstructed Fort Necessity are the main park features. [R.D. 2, Box 528; Farmington, PA 15437; 412-329-5512]

CULTURAL RESOURCE RESEARCH NEEDS

Park Administrative History

Cultural Resources Base Map

Historic Resource Study

Special History Study — Jumonville Glen, site of George Washington's first military encounter

Archeological Survey — Update and expand existing survey to include entire park.

Archeological Survey and Base Map — A study is needed for the route of Braddock Road.

Oral History — Interview local residents and former employees of the previous Fort Necessity State Park.

Special History Study — History of the Provincial Virginia Regiment

Historic Structure Preservation Guide — Create a guide for the Mount Washington Tavern.

Special History Study — History of the Independent Company of French Marines

Special History Study — History of the Independent Company of South Carolina

Special History Study — Travel, taverns, and use of Braddock's Road during 1755-1820

Historic Structure Report — Update of original report for Mount Washington Tavern

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Survey of Flora and Fauna — Inventory species and analyze community and population characteristics.

Water Resources Monitoring — Collect data on quantity and quality of surface and subsurface water resources.

Great Meadows Study — Determine the 1754 extent and characteristics of the Great Meadows and study past land use impacts.

Air Quality Monitoring — Develop a program to monitor air quality and study effects on the park resources and visitors.

PARK SUPPORT RESEARCH NEEDS

Geographical Information Systems — Digitize park information into an automated computer mapping system to integrate data such as historic resources and land use, vegetative cover, wildlife habitat and geological features.

Information Management — Refine existing use of computer software and hardware to benefit park operations in compliance with NPS policies and procedures, and in cooperation with the regional office.

Title Search — Survey deeds of past land ownership to determine mineral rights for existing park lands.



Friendship Hill National Historic Site

PARK DESCRIPTION

This site tells the story of Albert Gallatin and his role in helping to shape the developing nation. Gallatin, Secretary of the Treasury (1801–1813), built his house here in 1789 on a high bluff along the Monongahela River. Four major additions were made to the original brick house by Gallatin and later owners. This 660-acre site of interspersed meadows and woodlands also contains a wide variety of plant and animal communities and geographic features. [c/o Fort Necessity National Battlefield, R.D. 2, Box 528; Farmington, PA 15437; 412-725-9190].

CULTURAL RESOURCE RESEARCH NEEDS

Special History Study - The intellectual world of Albert Gallatin; correspondence with American and European Enlightenment thinkers and scientists

Oral History — Conduct interviews with former occupants, employees, and neighbors of Friendship Hill.

Special History Study — A further look at the development of New Geneva from 1801 to 1849

Cultural Landscape Report — Develop base maps of vegetative scene during the period 1789-1832, and recommend management actions for restoring and maintaining the historic scene.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Survey of Fauna — Inventory animal species and study population densities and distributions.

Air Quality Monitoring — Establish base line data on air quality, and study effects on park cultural and natural resources.

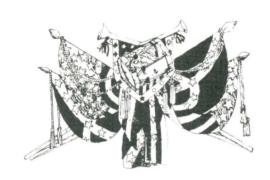
Acid Precipitation Monitoring Program — Establish an acid precipitation monitoring program and study the effects on park cultural and natural resources.

Riverbank Erosion Study — Study geology of bluffs along the Monongahela River, examine erosion patterns, and predict future erosion rates and effects on cultural resources.

PARK SUPPORT RESEARCH NEEDS

Information Management — Expertise and assistance is needed to organize and create computer data files of various types, including museum collections, visitor use statistics, and maintenance, and to digitize maps for a geographical information system.

Gettysburg National Military Park



PARK DESCRIPTION

This park commemorates the site of a major battle which took place as the Confederate army advanced into Pennsylvania and the scene of the inspirational address by President Abraham Lincoln. The great Civil War battle fought here July 1-3, 1863, repulsed the second Confederate invasion of the North. Thousands of Union dead are buried in the park's cemetery. The tilled and pastured fields look much the same today as they did at the time of the fighting. [R.D. 1; Gettysburg, PA 17325; 717-334-1124].

CULTURAL RESOURCE RESEARCH NEEDS

National Park Handbook

Cultural Resources Base Map — Consolidation and update of existing base maps

Troop Movement Base Map — Revision of troop position and movement maps

Historic Structure Preservation Guides — Studies are needed to guide preservation maintenance for the numerous historic defense works, buildings, memorials, monuments, gravestones, and fences.

Historic Structure Report — Patterson House
 Historic Structure Report — Bushman Farm, including house, barn, and outbuildings

Historic Structure Report — G. Weikert Farm, including house, barn, and outbuildings

Historic Structure Report — Wills Farm, including house, barn, and outbuildings

Historic Structure Report — Codori Farm, including house, barn, and outbuildings

Historic Structure Report — Sherfy Farm, including house and barn

Historic Structure Report — Klingle Farm, including house, barn, and outbuildings

Historic Structure Report — Cobean Farm, including house and barn

Historic Structure Report — Culp Farm, including house, barn, and outbuildings

Historic Structure Report — Biggs Farm, including house, barn, and outbuildings

Historic Structure Report — McPherson Barn

Historic Structure Report — McClean House

Historic Structure Report — Hummelbaugh Farm, including house and barn

Historic Structure Report — Slyder Farm, including house, barn, and outbuildings

Historic Structure Report — Trostle Farm, including house, barn, and outbuildings

Historic Structure Report — Spangler Farm, barn, and outbuildings

Topographic Surveys — Numerous historic sites

Historic Grounds Report — Survey, inventory, and mapping of historic trees

Catalogue Curatorial Collection
Archeological Survey and Base Map
Cultural Landscape Study — Parkwide

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Visitor Use Study — Study visitor use and impact during the spring, fall and winter seasons.

Survey of Flora — Complete inventory and checklist of all vascular plants.

Survey of Fauna — Complete inventory and checklist of mammals, birds, reptiles, amphibians, and insects.

Historic Woodlot Restoration — Determine location, size, composition, and uses of the historic woodlot sites; inventory current plant species composition; and recommend management programs for restoration and perpetuation of desired conditions.

Gettysburg

Air Quality Monitoring/Impact Study — Collect base line information on air quality and study effects on park flora and visitor experiences.

Historic Tree Study — Identify 1863 trees parkwide.

PARK SUPPORT RESEARCH NEEDS

Fire Protection and Physical Security Analysis — Identify deficiencies and recommend alternative solutions parkwide.

Hopewell Furnace National Historic Site



PARK DESCRIPTION

This is one of the finest surviving examples of a rural American 19th century iron plantation. More than 80,000 stoves were made in its cold-blast charcoal-burning furnace. Cannon and shot made at Hopewell supplied Revolutionary forces. The complex includes the blast furnace and auxiliary structures which have been restored as closely as possible to their appearance in 1820-1840. [R.D. 1, Box 345; Elverson, PA 19520; 215-582-8773]

CULTURAL RESOURCE RESEARCH NEEDS

- Park Administrative History Research and prepare a history of the park's development and administration from 1935 to present.
- **Archeological Survey** Survey and map the Hopewell Furnace lands with the locations of such features as roads, charcoal hearths, ruins, and pre-historic sites.
- Special History Study Boarding Houses Most iron plantations, including Hopewell, had boarding houses. A study is needed on the furnishings, lifestyles, and operation of boarding houses at southeastern Pennsylvania furnaces.
- Special History Study Schooling Prior to construction of a school at Hopewell in 1836, paid tutors provided education. A study of schooling at area furnaces in the early-mid 19th century is needed.
- Cultural Landscape Report Hopewell has numerous historic roads, charcoal hearths, and other features which are being reclaimed by nature. An evaluation of these features with recommendations for preservation is needed.
- Special History Study Marketing of Iron Products — Hopewell's iron was marketed as far north as Portsmouth, NH, and as far south as

New Orleans. The marketing network for southeastern Pennsylvania's furnaces needs to be explored.

- Special History Study Furnace Lands During the 112 years of Hopewell's operating life the Furnace property varied from 3,900 to 8,000 acres. The expansion and contraction of land ownership through the years needs to be traced with a series of maps prepared.
- Special History Study Early Anthracite Iron Industry Hopewell's anthracite iron furnace is the earliest known to survive. The rise and decline of this short-lived industry should be researched with attention to southeastern Pennsylvania.
- Special History Study Civil War Iron Production The ironworks of southeastern Pennsylvania produced a great quantity of iron for the Union forces. This contribution should be researched and analyzed.
- Special History Study The Pennsylvania to Virginia Connection Mark Bird, Charles Brooke, Thomas Mayberry, and other Pennsylvania ironmasters developed furnaces in Virginia. The reasons and patterns for this development need to be traced.
- Furnace Community Study The Hopewell Furnace complex was the center of a larger area with social and economic interrelationships of various types.
- Collections Research Research for documents pertinent to Hopewell in various repositories is needed. An example is Hagley Museum which has the Reading Railroad Collection of documents. Hopewell is known to have shipped goods on the Reading and sold iron to the company.

Hopewell Furnace

- **Cemetery Research** Within a ten mile radius of Hopewell there are many historic cemeteries. Information on the Hopewell workers and their families who are buried within needs to be compiled.
- **Agricultural History Study** A detailed study of the animal and plant types, cultivation methods, tools used, and other related aspects of early 19th century agriculture in the area is needed.
- Family History Studies There were many important families in the 112-year history of Hopewell. Names such as Care, Painter, and Brooke were common for three or more generations. Family history studies are needed for these and other significant families.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

- **Air Quality Monitoring** Establish base line data, monitor pollutant levels, and study impacts on park natural and cultural resources.
- **Ecology of White-tailed Deer** Determine population levels, movement patterns, distribution, health, and habitat utilization.
- **Survey of Fauna** Inventory animal species and study population distributions, densities, habitats, and dynamics.

- Water Quality Monitoring Establish base line data on the quality of surface and groundwaters and develop a monitoring program.
- **Woodland Regeneration** Study effects of woodcutting and charcoal-making activities on forest succession and vegetation species composition.
- **Exotic Vegetation Map** Develop a base map of the current distribution of major exotic plant species and determine threats to native species.
- **Exotic Vegetation Control** Research methods to control known problem exotic plants such as Japanese honeysuckle.
- White-tailed Deer Browsing Impacts Establish a transect and/or enclosure system to estimate impacts of browsing on vegetation regeneration and succession.
- Woodland Clearing Study Most of the current woodlands at Hopewell were repeatedly clear cut for charcoal. A study is needed to predict the environmental impacts of re-establishing this historic land use practice for selected portions of the existing woodlands.

Independence National Historical Park



PARK DESCRIPTION

The Declaration of Independence and Constitution of the United States, adopted in Independence Hall, one of the seventeen historic buildings in this park, laid the foundation of our national government. Other park structures and properties in old Philadelphia associated with the American Revolution include the Liberty Bell, Congress Hall, Old City Hall, the First and Second Banks of the United States, Franklin Court, and the Deshler-Morris House in Germantown. [313 Walnut Street, Philadelphia, PA 19106; 215-597-7120].

CULTURAL RESOURCE RESEARCH NEEDS

- Special History Study Executive Branch, 1790-1800
- **Special History Study** U.S. Supreme Court, 1790-1800
- **Special History Study** U.S. House of Representatives, 1790-1800
- Special History Study War Department, 1790-1800
- Special History Study Navy Department, 1798-1800
- Special History Study U.S. Treasury Department, 1790-1800
- Special History Study Prelude to independence: The Continental Congress, May to July 1776
- Special History Study The Second Continental Congress, 1776-1781
- **Special History Study** The Second Continental Congress and military action, 1775-1783

- Special History Study The Second Continental Congress, diplomacy of war and peace, 1775-1783
- **Special History Study** The Second Continental Congress, 1781-1783
- **Special History Study** Life in 18th Century Philadelphia
- Special History Study Use of Independence Square and its buildings in the 19th and 20th Centuries
- Special History Study Pennsylvania State Government, 1732-1800
- Special History Study Philadelphia Municipal Government, 1775-1800
- **Special History Study** First and Second Banks of the United States
- **Special History Study** 18th Century Germantown
- Special History Study Franklin Court print shop
- **Special History Study** The writing of the Articles of Confederation
- Special History Study Philadelphia: Seat of Government, 1775-1800
- **Historic Structure Report** Carpenter's Hall
- Historic Structure Report Gloria Dei Church
- **Historic Structure Report** Christ Church
- **Historic Structure Report** St. George's Church
- **Historic Structure Report** St. Joseph's Church
- Historic Structure Report Free Quaker Meeting House

Independence

Historic Structure Report — 314-320 Market Street Houses

Historic Structure Report — Pemberton House

Historic Structure Report (physical history and analysis section) — Todd House Necessary and Yard

Historic Structure Report — Graff House

Historic Structure Report — Fling-McIlvane House

Historic Structure Report (historical data section) — Merchants' Exchange

Historic Grounds Report — Franklin Court

Cultural Landscape Report — A study to determine the historically appropriate landscaping plan for the Edgar Allan Poe house is needed with recommended long-term management and maintenance programs.

Special History Study — Origin and growth of national political parties, 1789-1800

Special Study – Edgar Allen Poe NHS – Archeology of Brandywine Street

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Pigeon Management — Evaluate effects of visitor actions and park management programs on pigeon population densities and habitats, analyze resulting management problems, and make recommendations for integrated management procedures.

Visitation Survey — Survey and evaluate visitation to the Edgar Allen Poe NHS.

PARK SUPPORT RESEARCH NEEDS

Exhibit Evaluation — Evaluate the effectiveness/visitor acceptance of the "Promise of Permanency" exhibit.

Employee Retention — Search for and compile research done on federal employee retention to use as base line data for a study of park ranger retention.

Johnstown Flood National Memorial



PARK DESCRIPTION

This memorial Park preserves the remains of the South Fork Dam, the collapse of which caused the 1889 flooding of Johnstown. [c/o Allegheny Portage Railroad National Historic Site; P.O. Box 247; Cresson PA, 16630; 814-886-8176].

CULTURAL RESOURCE RESEARCH NEEDS

Park Administrative History

National Park Handbook

Cultural Resources Base Map

Historic Structure Preservation Guide — South Fork Dam

Acid Precipitation Monitoring Program— Establish an acid precipitation monitoring program and study the effects on park cultural resources.



Steamtown National Historic Site

PARK DESCRIPTION

Steamtown National Historic Site includes the former Delaware, Lackawanna and Western Railroad Yard of approximately 40 acres located in Scranton, PA, along with approximately 32 miles of historic railroad right-of-way between Scranton and Pocono Summit, PA. The railyard consists of remains of a roundhouse, switchyard and associated buildings, tracks and materials. The National Park Service has become the steward of a collection of 35 locomotives and 78 other work and passenger cars. The Comprehensive Management Plan for the site has been completed. [P.O. Box 1280; Scranton, PA 18501-1280; 717-343-0760]

CULTURAL RESOURCE RESEARCH NEEDS

Archeological Survey — Conduct industrial archeological survey of park.

Inventory Historical Records — Inventory and organize historical railroad records presently stored at the site.

Inventory Museum Objects — Inventory and organize collection of museum objects presently stored at the site. Oral History — Interview individuals who worked in the railyard or on the Delaware, Lackawanna and Western Railroad prior to and following its merger with the Erie.

Cultural Resources Base Map — Excursion line from Scranton to Pocono Summit, PA

Historic Structure Preservation Guides — Studies are needed for all historic park structures.

Historic Railroad Locomotive Reports — All locomotives in the park collection

Historic Railroad Preservation Guides — Studies are needed to provide guidelines for maintenance and preservation of the park's collection of locomotives.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Economic Impact Study — Identify the economic impacts of Steamtown on surrounding property values, the city and the region.

Visitor Use Study — Evaluate potential levels, types, and characteristics of visitor use for the site.



Upper Delaware Scenic and Recreational River

PARK DESCRIPTION

The 75-mile-long river corridor, which is approximately 2 miles wide, has a distinctive rural character, with wooded slopes and hillsides, open fields, and clustered residential and commercial areas. The free-flowing Upper Delaware along the Pennsylvania-New York border is managed through the cooperative efforts of the National Park Service and affected local and state governments; there is to be only minimal federal land acquisition for river access sites. [P.O. Box C; Narrowsburg, NY 12764-0159; 717-729-7135].

CULTURAL RESOURCE RESEARCH NEEDS

Historic Structure Reports — Examine the feasibility of adaptive reuse for the numerous privately owned historic buildings.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Survey of Aquatic Flora — Document the existing plant species occurring in the Delaware River and determine their distribution.

Instream Flow Study — Examine the effects of temperature and flow rate changes of the New York City reservoirs on the Delaware River ecosystem and visitor activities and use.

PARK SUPPORT RESEARCH NEEDS

Geographical Information System — Determine data information and analysis needs for improving interagency cooperation and monitoring of resource and development issues affecting the scenic river, and enter all current resource and development data into a computer-accessible format.

Valley Forge National Historical Park



PARK DESCRIPTION

Site of the Continental Army's bitter winter encampment, 1777-1778, the park contains General Washington's headquarters, a variety of monuments, lines of entrenchment, and re-creations of log huts and cannon used by colonial troops. In the center of the park lies the Grand Parade where General von Steuben rebuilt the army and where news of the French alliance was announced on May 6, 1778. [Valley Forge, PA 19481-0953, 215-783-1045].

CULTURAL RESOURCE RESEARCH NEEDS

- **Historic Structure Preservation Guides**—Studies are needed for all historic park structures.
- **Special History Study** Land titles and land division at time of encampment
- Special History Study The industrial community at Valley Forge, 1750-1790
- Special History Study 19th century communities of Valley Forge and Port Kennedy
- **Special History Study** Industrial Activity on Valley Creek
- **Special History Study** Medical practices and hospital organization during the encampment
- **Historic Structure Reports** Studies are needed for many park structures.

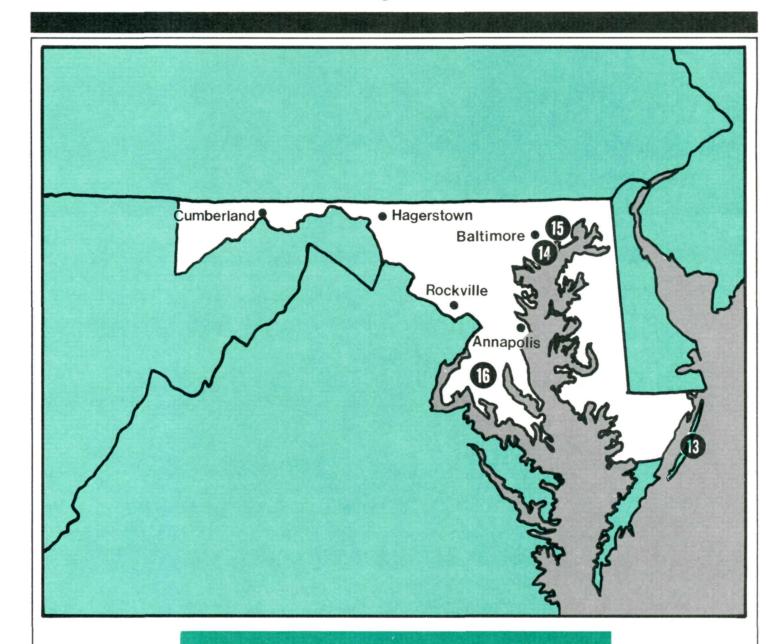
NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

- **Survey of Flora and Fauna** Inventory park's plant and animal species; determine critical habitat for rare and endangered species; and incorporate survey data into computerized data base.
- **Exotic Plant Control** Investigate methods for control of Canada thistle, Japanese honeysuckle and Oriental bittersweet.
- **Ecological Effects of Acid Rain** Study impact of acid precipitation on the park's natural and cultural resources.
- **Environmental Impact of Air Pollution** Investigate effects of air pollutants on plants and animal communities, and cultural resources.
- **Gypsy Moth** Research the effects of gypsy moth on forest ecology.
- **Canada Goose Population Dynamics** Inventory the population, examine habitat utilization, and determine impact on park's resources.
- **Dendrochronology** Determine age of specimen trees and historic structures.

PARK SUPPORT RESEARCH NEEDS

Adjacent Land Use — Study use of properties adjacent to park; identify threats to park resources; investigate zoning and construction regulations; prepare land use map.

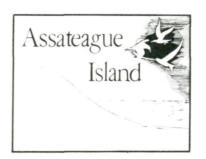
Maryland



MARYLAND

- 13 Assateague Island National Seashore
- 14 Fort McHenry National Monument and Historic Shrine
- 15 Hampton National Historic Site
- 16 Thomas Stone National Historic Site

Assateague Island National Seashore



PARK DESCRIPTION

Within the authorized boundaries of this 37-mile barrier island along the Maryland and Virginia coastline, the National Park Service administers a majority of the Maryland lands and assists the US Fish & Wildlife Service with recreation management on the Toms Cove Hook section of Chincoteague National Wildlife Refuge in Virginia. The famous wild ponies roam freely throughout the island's beaches, dunes, pine forests, and bayside marshes. The island and bay vegetation provides a rich diet and attractive habitat for numerous migratory waterfowl. [Rt. 2, Box 294; Berlin, MD 21811; 301-641-1441].

CULTURAL RESOURCE RESEARCH NEEDS

- **Shipwreck Survey**—Locate, identify, and survey underwater and terrestrial shipwreck sites.
- **Oral History**—Interview local individuals who visited, lived, or worked on Assateague prior to national seashore establishment.
- **Historic Structure Report**—Assateague Beach Coast Guard Station Complex
- Historic Photograph Survey and File Development Locate, inventory, and acquire, where feasible, historic photographs of Assateague Island. Emphasis on human history although pertinent natural history should not be ignored.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

- **Game Species Surveys** Document status and distribution of species subjected to hunting pressure.
- Impacts of Recreational Activities Document levels and distribution of use, study long-term effects on barrier island environment in comparison to natural disturbance impacts, and establish limits of acceptable environmental change.
- **Habitat Utilization Studies** Identify significant barrier island habitat types and the degree of utilization by various wildlife species.
- Reptile Survey and Ecological Study Conduct a survey of reptile species and their utilization of the barrier island environment with special emphasis on habits and distribution of the hog-nosed snake.
- Breeding Bird Survey Conduct a comprehensive survey of all bird species nesting on the Maryland portion of Assateague Island.
- Visitor Survey Analysis Socio-economic data on park visitors was collected over a recent one-year period but the survey data has not yet been analyzed. Develop data files and computerized maps of visitor activities.
- **Fire Ecology** Research historical fire occurrence and fire ecology in the barrier island system and establish fire regimes for the park.

Long-term Ecological Monitoring — Evaluate past inventory and monitoring initiatives to identify missing elements of base line data. Develop monitoring protocols for key ecological components.

White-tailed/Sika Deer Interactions — Assess current herd conditions and determine if the exotic sika deer is adversely affecting the native white-tailed deer.

Feral Equid Pedigree and Genetic Conditions — Describe lineage of feral ponies and assess reproductive characteristics of individuals and the herd as a whole. Describe population in terms of age, sex, sexual maturity, band organization, color, and approximate size.

Feral Equid Management — Based on previous research regarding chemical fertility control and population dynamics, develop a strategy for herd management. Water Quality Data Analysis — In future years, a significant quantity of data on bay water quality will have been accumulated through routine monitoring. This data will need to be analyzed to identify trends and problems.

Natural History Database Files — Develop data files for occurrences of park flora and fauna.

PARK SUPPORT RESEARCH NEEDS

Geographic Information System — Implement a comprehensive GIS plan and program for the park. Themes should include elevation, bathymetry, vegetation, jurisdictional boundaries, hydrologic features, soils, and development.



Fort McHenry National Monument and Historic Shrine

PARK DESCRIPTION

The star-shaped fort commemorates the successful American defense against a British fleet in 1814 which inspired the writing of "The Star Spangled Banner." The grounds within the fort contain restored guardhouses, barracks, and headquarters. [Fort McHenry National Monument and Historic Shrine; Baltimore, MD 22230; 301-962-4290].

CULTURAL RESOURCE RESEARCH NEEDS

Park Administrative History — Update

Historic Structures Report — Civil War Powder Magazine

Historic Resource Study — Update information from existing report completed in 1958.

Oral History — Interview veterans who were either stationed or hospitalized at Fort McHenry during 1918-1923.

Oral History — Interview veterans who were stationed at Fort McHenry during 1923-1933 and 1943-1946.

Oral History — Interview National Park Service personnel who worked at the park during 1933-1967.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Acid Precipitation Impact Study — Conduct research into the effects of acid precipitation on the natural and cultural resources at Fort McHenry and compile reference material for use of the staff.

Hampton National Historic Site



PARK DESCRIPTION

Hampton, the home of Charles Ridgely, Governor of Maryland from 1815 to 1818, is one of the largest and most ornate mansions built during the latter part of the 18th century. The mansion, outbuildings, and terraced formal gardens on the site's 60-acre grounds are remnants of a vast agricultural and industrial estate owned by the Ridgely family. [535 Hampton Lane; Towson, MD 21204; 301-823-7054].

CULTURAL RESOURCE RESEARCH NEEDS

Park Administrative History

Cultural Resources Base Map

Historic Structure Preservation Guides — Studies are needed for all park buildings.

Historic Resource Study — Farm complex

Oral History—Interview family members who lived or visited Hampton in the 20th Century.

Oral History—Interview National Park Service personnel and personnel who worked at the site while it was being managed by a private organization.

Historic Structure Reports — Some farm complex buildings

Historic Structure Reports — Hampton mansion outbuildings

Historic Grounds Report — Hampton mansion gardens and grounds

Archeological Survey

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Mitigation of Groundwater Source Diversion — Study interrupted drainage patterns along I-695 and make recommendations for corrective actions necessary to restore formal gardens and maintain vegetative screen.

Air Quality Monitoring and Effects — Establish base line air quality data and study impacts of pollutants on park flora and visitor experience.

Visitor Use Impacts — Collect base line impact data and determine acceptable levels and distribution of visitor use.

Thomas Stone National Historic Site



PARK DESCRIPTION

Preserves Habre-De-Venture, the home-site of Thomas Stone, youngest member of the Maryland delegation to sign the Declaration of Independence. Stone lived on this plantation from 1771 until his death in 1787. The house is considered to be one of the best examples of Colonial Maryland architecture, but was severely damaged due to fire in 1977. The park is not open to the public at present. [c/o George Washington Birthplace National Monument; [RR 1, Box 717; Washington's Birthplace, VA 22575; 804-224-1732].

CULTURAL RESOURCE RESEARCH NEEDS

Historic Structure Preservation Guide

Historic Structure Report

Historic Furnishings Report

Cultural Landscape Report

Archeological Survey

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Survey of Flora—Inventory existing vascular plant species and analyze plant communities.

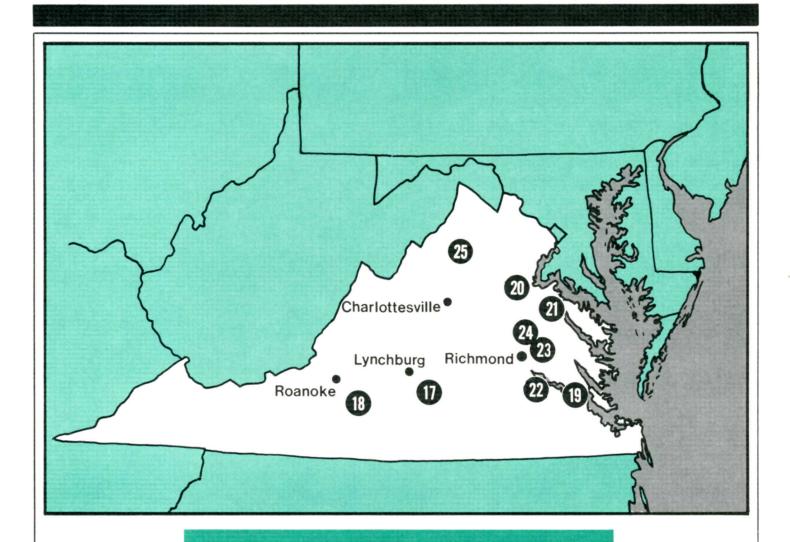
Survey of Fauna—Inventory animal species, study population densities and distribution, and identify critical habitat.

Monitor Air Quality — Collect base line air quality data.

Develop Ecosystem Maps—Draw thematic overlay maps of plant communities, wildlife habitat and movement patterns, topography, soils, boundaries, easements and rights-of-way.

Monitor Water Quality — Collect base line water quality data from creeks and monitor water quality to detect changes which may result from increased development adjacent to the park.

Virginia



VIRGINIA

- 17 Appomattox Court House National Historical Park
- 18 Booker T. Washington National Monument
- 19 Colonial National Historical Park
- 20 Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park
- 21 George Washington Birthplace National Monument
- 22 Petersburg National Battlefield
- 23 Richmond National Battlefield Park
- 24 Maggie L. Walker National Historic Site
- 25 Shenandoah National Park

Appomattox Court House National Historical Park



PARK DESCRIPTION

Here, on April 9, 1865, General Robert E. Lee surrendered the Confederacy's largest field army to Lieutenant General Ulysses S. Grant, commander of all Union forces. The buildings in the village have been restored and/or reconstructed. [P.O. Box 218; Appomattox, VA 24522; 804-352-8987].

CULTURAL RESOURCE RESEARCH NEEDS

Park Administrative History

Cultural Resources Base Map — Document land use and ownership.

Historic Structure Report (architectural data section) — Clover Hill Tavern

Archeological Survey — Base Map

Historic Structure Report — Williams Cabin

Cultural Landscape Report — Identify, evaluate, and determine appropriate management options.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Air Quality Monitoring and Effects — Establish base line air quality data and study impact of pollutants on park resources.

Survey of Fauna — Inventory animal species and study population densities and distributions.



Booker T. Washington National Monument

PARK DESCRIPTION

This is the birthplace and early childhood home of the famous black leader and educator Booker T. Washington, who was born into slavery in 1856. Washington founded Tuskegee Institute and became an acknowledged leader, promoting agricultural, industrial, and business education. The 220-acre tobacco farm, the Burroughs Plantation, is partially restored to its 19th century appearance. [Rt. 3, Box 310; Hardy, VA 24101; 703-721-2094 or 703-721-3700]

CULTURAL RESOURCE RESEARCH NEEDS

National Park Handbook

Park Administrative History — Update of existing document

Special History Study—Booker T. Washington Genealogy—Research and document ancestors of Booker T. Washington and his descendants including wives, and children; research and document his siblings.

Special History Study—Burroughs' Slaves— Research and document where they came from and where they went.

Special History Study—Sparks Cemetery— Research and document the history of this pre-1850's slave cemetery.

Special History Study—Heirloom Seeds— Research and document seed varieties used in Franklin County, Virginia, between 1850-1865.

Historic Structure Preservation Guides for:

Slave Cabin

Blacksmith Shop

Tobacco Barn

Corn Crib

Horse Barn

Smokehouse

Chicken Lot

Oral History—Interview current and retired park staff concerning various aspects of park history and operations.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Scene Preservation Screening — Identify fastgrowing, native species as plant screening for the eastern park boundary to protect the visual historic scene from encroaching adjacent development.

Colonial National Historical Park



PARK DESCRIPTION

This park encompasses most of Jamestown Island, site of the first permanent English settlement; Yorktown, scene of the culminating battle of the American Revolution in 1781; the 23-mile Colonial Parkway connecting these and other colonial sites; and Cape Henry Memorial, which marks the approximate site of the first landing of Jamestown's colonists in 1607. [P.O. Box 210; Yorktown, VA 23690; 804-898-3400].

CULTURAL RESOURCE RESEARCH NEEDS

Cultural Resources Base Map

Historic Resource Study — Includes Jamestown Island, Colonial Parkway, Yorktown, Yorktown Battlefield, and Green Spring Plantation

Cultural Landscape Reports — Reports are needed for 17 locations, including Jamestown Town Site, Yorktown Encampment Areas, Moore House, and Cape Henry.

Archeological Surveys—Studies are needed for Jamestown Island, Colonial Parkway, Yorktown, Yorktown Battlefield, and Green Spring Plantation.

Park Administrative History—This park was the first historic site activated within the National Park System. Its administrative history will not only deal with the complexities of creating a park of this magnitude but also with pioneer activities in the fields of historic preservation and interpretation.

Inventory and Monitoring — Establish a program to collect base line data and monitor changes in the park's cultural resources.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Ecology of White-tailed Deer — Determine deer population numbers, distribution and health movement patterns, and habitat utilization.

Mosquito Management Study—Identify local breeding areas, survey larvae and adult populations, monitor visitor complaints, and evaluate alternative integrated management methods.

Chigger and Tick Management Study—Survey chigger and tick population densities, identify suitable habitats, correlate to visitor use activities, and recommend alternative integrated management methods.

Jamestown Island Research Project — Identify 1607 configuration of Jamestown Island, document flora and fauna of historic period, study excavated artifacts, and research the history of Indian and European occupation of the Island.

Acid Deposition Impact Study — Establish base line data on deposition acidity to determine effects on park cultural and natural resources.

Inventory and Monitoring — Establish a program to collect base line data and monitor changes in the park's natural resources.

- **Open Fields Management** Establish a program to manage the park's open historical/agricultural fields.
- **An Historic Vegetation Study** Develop historic vegetation base maps for the park.
- **Fire Effects Research** Determine effects of fire on the park's flora, fauna, air and water quality, and measure fuel loads in the different park vegetation zones.
- Vegetation Management Research the use of different vegetation management techniques, including fire, to meet various resource management objectives.
- **Survey of Fauna** Inventory animal species and study population densities, distribution and critical habitats.
- **Exotic Flora Survey** Inventory and map the population densities and distribution of exotic

- plants, identify the impacts of exotics on native flora, and prepare recommendations for alternative management techniques to control exotics.
- **Survey of Flora** Inventory different species and analyze plant communities.
- **Wetlands Inventory** Survey parkwide wetlands, classify and prepare mapped data base.

PARK SUPPORT RESEARCH NEEDS

Database Development and Management —

Provide technical assistance in development of dBASE IV database management system for natural resource base line inventories and monitoring, dealing with agricultural use, fire and vegetation management, air quality monitoring, and integration with geographic information systems in compliance with NPS policy and procedures.



Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park

PARK DESCRIPTION

Portions of four major Civil War battlefields—Fredericksburg, Chancellorsville, The Wilderness, and Spotsylvania Court House—and several smaller sites comprise the park. A large Georgian mansion known as Chatham, which stands on Stafford Heights across the Rappahannock River from Fredericksburg, served as a Union command post and field hospital during the battle. [P.O. Box 679; Fredericksburg, VA 22401; 703-373-4461].

CULTURAL RESOURCE RESEARCH NEEDS

Park Administrative History — Update

Cultural Resources Base Map — Chatham

Cultural Resources Base Map — Historic traces at the four battlefields

Cultural Resources Base Map — Earthworks

Historic Structure Preservation Guide — Scene restoration and preservation of Sunken Road/Stone Wall, Fredericksburg Battlefield

Historic Resource Study — Fredericksburg
Battlefield

Historic Resource Study — Chancellorsville Battlefield

Historic Resource Study — Spotsylvania Battlefield

Special History Study — 1862-1863 Winter Encampments

Historic Structure Report — Harrison House, Spotsylvania Battlefield

Historic Structure Report — Tapp House, Wildnerness Battlefield

Historic Structure Report — Spindle House, Spotsylvania Battlefield

Historic Structure Report — Stevens House, Fredericksburg Battlefield

Historic Structure Report — Wellford Furnace, Chancellorsville Battlefield

Historic Structure Report — Howison House, Fredericksburg Battlefield

Historic Structure Report — Innis House, Fredericksburg Battlefield

Cultural Landscape Report — Chatham Manor

Cultural Landscape Report — Fredericksburg National Cemetery

Archeological Survey

Historic Resource Study — Wilderness Battlefield

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Development of a Geographical Information System — Develop an automated computer information system that would integrate such geographic information as historic land use, present land use in adjacent areas, vegetative cover, and potential wildlife habitat.

Agricultural Pest Management — Study integrated pest management alternatives for application in agricultural areas to reduce reliance on chemical control.

Air Quality Monitoring — Determine levels of various pollutants and their effect on natural and cultural resources in this rapidly developing area.

Wildlife Habitat Suitability Indices — Study the application of existing habitat suitability indices in predicting the presence or absence of various wildlife species.

Survey for Sensitive Species — Survey for presence of "sensitive" plant and animal species, and identify critical habitats.

PARK SUPPORT RESEARCH NEEDS

Law Enforcement — Study impacts of rapid urban growth as it relates to visitor and resource protection. Develop incident statistics and project staffing needs with emphasis on boundary encroachments, wildlife poaching, and archeological resources degradation.

Information Management — Organize and input data on museum collections in the park.

George Washington Birthplace National Monument



PARK DESCRIPTION

Birthplace of the first president of the United States. The park includes a memorial mansion and gardens, a colonial living farm, and the tombs of his father, grandfather, and great grandfather. The original birthplace home on his father's Popes Creek plantation burned in 1779. [RR 1, Box 717; Washington's Birthplace, VA 22575; 804-224-1732].

CULTURAL RESOURCE RESEARCH NEEDS

Park Administrative History

Cultural Resources Base Map

Special History Study—Operation of a tidewater tobacco farm

Special History Study—George Washington's boyhood at Popes Creek

Historic Furnishings Report—Spinning and Weaving Room

Historic Furnishings Report—Farm Workshop

Cultural Landscape Report

Archeological Survey

Oral History — Interview National Park Service personnel who worked at the park during 1931 to present.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Monitor Pesticide Residues—Test non-target flora and fauna for presence of pesticides used in park pest management program.

Study Shoreline Geology—Study geology of Potomac River cliffs, examine erosion patterns and predict future erosion rates.

Develop Ecosystem Map — Draw thematic overlay maps of plant communities, wildlife habitat and movement patterns, shoreline changes, soils, boundaries, easements and rights-of-way.



Petersburg National Battlefield

PARK DESCRIPTION

This park commemorates the scene of a desperate ten-month campaign in 1864-65 between the armies of Generals Grant and Lee during the Civil War. Various fortifications along the siege line and the Confederate defense line have been preserved. The park also includes City Point in Hopewell, Va., where Grant made his headquarters at Appomattox Manor for the final ten months of the war. [P.O. Box 549; Petersburg, VA 23804; 804-732-3531].

CULTURAL RESOURCE RESEARCH NEEDS

- **Cultural Resources Base Map** Survey and mapping of historic earthworks in existence today, including elevations, as base line data for evaluation of Earthwork Management Program.
- **Special History Study** The participation of U.S. Colored Troops in the Petersburg campaign
- Special History Study Military communications methods used in the Petersburg Campaign such as signal towers, telegraph, couriers, river and bay steamers
- **Special History Study** Sutler operations during the Petersburg Campaign
- **Special History Study** Desertion from the ranks, the extent and effect upon both armies
- Special History Study Naval operations relating to the Petersburg siege the James River Squadron, the blockading fleet, transport of troops and material
- **Special History Study** Supply operations at City Point, the sources of material, the means of transport, and route taken

- Archeological Digs Three house sites are located along the Dimmock line the Jordan, Friend and Dunn houses have not been dug. The Friend house survived the Siege of Petersburg, only to be razed after World War I.
- **Curriculum Guide** Prepare a curriculum guide to enable school teachers to use Petersburg National Battlefield as a field classroom. Include a pre-visit, on-site, and post-visit instructional material.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Urban Impacts on Resources and Operations

- Examine impacts of surrounding urban growth and recreational demands on park resources, visitor enjoyment, and park operations.
- **Air Quality Monitoring** Establish a program to collect base line data, monitor air quality, and study effects on park visitors and resources.
- **Fauna Survey** Establish base line data for all animal species, native and exotic, and determine their relative abundance.
- **Flora Survey** Conduct a base line survey to identify all native and exotic species and their relative abundance.
- **Rare Species Inventory** Collect information on presence of rare, threatened, and endangered species and identify their critical habitats.

PARK SUPPORT RESEARCH NEEDS

Urban Impacts on Resources and Operations

— Examine impacts of surrounding urban growth and recreational demands on park resources, visitor enjoyment, and park operations.

Richmond National Battlefield Park



PARK DESCRIPTION

This park preserves sites of several attempts by Federal armies to capture the Confederate capital during the Civil War. Two attempts came almost within sight of the city—McClellan's 1862 Peninsular Campaign and Grant's 1864 Richmond Campaign. Chimborazo Visitor Center occupies the site of the Confederacy's largest hospital, Chimborazo General. Nine battlefield sites contain earthwork fortifications, trails, and interpretive exhibits. [3215 E. Broad Street; Richmond, VA 23223; 804-226-1981].

CULTURAL RESOURCE RESEARCH NEEDS

Historic Resource Study — Beaver Dam Creek Unit

Historic Resource Study — Design, construction, armament, and Civilian Conservation Corps changes to earthworks

Park Administrative History — Update

Historic Structures Preservation Guide — Garthright House, Watt House — two historic buildings on Cold Harbor and Gaines Mill Battlefields need guidance documents to direct the preservation, and maintenance of these Civil War structures to prevent further deterioration of irreplaceable historic fabric.

Oral History — Interview current and retired park staff concerning various aspects of park history and operations.

Cultural Resources Base Map

Cultural Landscape Reports — Studies are needed for all sites, including the historic vegetative/forestry scene.

Special History Study — U.S. black troops in the Richmond campaign

Special History Study — Military activities around Drewry's Bluff after May 1862

Archeological Survey

Historic Structures Report — Garthright House, Watt House

Historic Resource Study — Chimborazo Hospital

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Survey of Fauna — Inventory animal species and examine population densities and distributions.

Historic Scene Restoration — Recommend alternative management actions for restoring and maintaining the historic vegetation scene.

Air Quality Monitoring — Establish a program to collect base line data, monitor air quality, and study its effects on park resources.

Inventory and Monitoring — Establish a program to collect base line data and monitor changes in the park's natural resources.

Beaver Dam Creek Study — Study the changes in stream flow and aquatic ecology and determine methods to reduce flooding of the area.

Visitor Use Surveys — Document origins, activities and expectations of visitors to the park.

Water Chemistry Study — Collect base line data on groundwater and park streams to establish their current condition.

Fire as a Management Tool in Vegetation Manipulation — Determine effects of fire in manipulating vegetation, determine fuel loads in different vegetation types, and recommend fire management programs to meet various resource management objectives.

Forestry Management and Scene Restoration

— Determine historic scene and forest composition, inventory current vegetation, and recom-

mend management programs for restoration and perpetuation of desired conditions.

Drewry's Bluff Erosion Study — Study geology and soils of bluffs along the James River at Ft. Darling, examine erosion patterns and vegetation composition, predict future erosion rates and effects on cultural resources, and recommend actions to mitigate erosion.



Maggie L. Walker National Historic Site

PARK DESCRIPTION

This site is located in the Jackson Ward National Historic Landmark District of Richmond, Virginia. There are six National Park Service-owned properties, including the Maggie L. Walker House, which was the home of the first black woman president of an American bank. The house is of Victorian-Italianate style, with a Colonial Revival porch added during the Walker period. [c/o Richmond National Battlefield Park; 3215 E. Broad Street; Richmond, VA 23223; 804-226-1981].

CULTURAL RESOURCE RESEARCH NEEDS

Cultural Resources Base Map

Historic Resource Study

Historic Furnishings Report

Cultural Landscape Report

Oral History — Interview current and retired park staff concerning various aspects of park history and operations.

Collection Preservation Guide — Information is needed to ensure the proper maintenance for collections of rare books, personal papers, furniture, and decorations.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Visitor Use Surveys — Document origins, activities, and expectations of visitors to Maggie L. Walker National Historic Site.

Shenandoah National Park



PARK DESCRIPTION

The 105-mile Skyline Drive winds through hard-wood forests along the crest of this outstanding portion of the Blue Ridge Mountains and offers spectacular vistas of historic Shenandoah Valley and the Piedmont. Miles of ridges and valleys, hills and hollows, laced with sparkling streams and waterfalls, support an abundance of wildlife. [Luray, VA 22835; 703-999-2243].

CULTURAL RESOURCE RESEARCH NEEDS

Cultural Resources Base Map

Historic Structure Preservation Guide — Camp Hoover

Historic Structure Preservation Guide — Corbin Cabin

Historic Structure Preservation Guide — Simmons Gap Mission

Historic Structure Preservation Guide — Massanutten Lodge

Historic Structure Preservation Guide — Big Meadows Lodge resource management programs

Historic Structure Preservation Guide — Dickey Ridge Visitor Center

Historic Structure Preservation Guide — Lewis Mountain Lodge

Historic Structure Preservation Guide — Headquarters Complex

Historic Structure Preservation Guide — Old Skyland Cabins

Historic Structure Preservation Guide — Skyline Drive Historic Resource Study

Historic Structure Report — Camp Hoover

Historic Structure Report — Corbin Cabin

Historic Structure Report — Simmons Gap Mission

Historic Structure Report — Old Skyland cabins

Historic Structure Report — Skyline Drive

Oral History Compilation — Combine a subject matter index of the 180 oral history interviews of individuals who once lived in, or were involved in the development of, Shenandoah National Park.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Ecological Effects of Air Pollution—Determine what plant species are being affected, how they are being affected and to what degree, and examine possible impacts on ecosystem dynamics.

Survey of Flora—Extensive quantitative sampling of the flora is needed to classify, delineate, and map plant communities on a level appropriate for resource management programs.

Ecology of Brook Trout — Study brook trout population dynamics and habitat requirements and effects of fishing pressures and competition from exotic trout species.

Fish-for-Fun Policy Evaluation — Evaluate and compare brook trout population dynamics between fish-for-fun streams and streams where harvesting is permitted.

Salamander Study — Examine the effects of gypsy moth defoliation on isolated populations of the Shenandoah Salamander.

Shenandoah

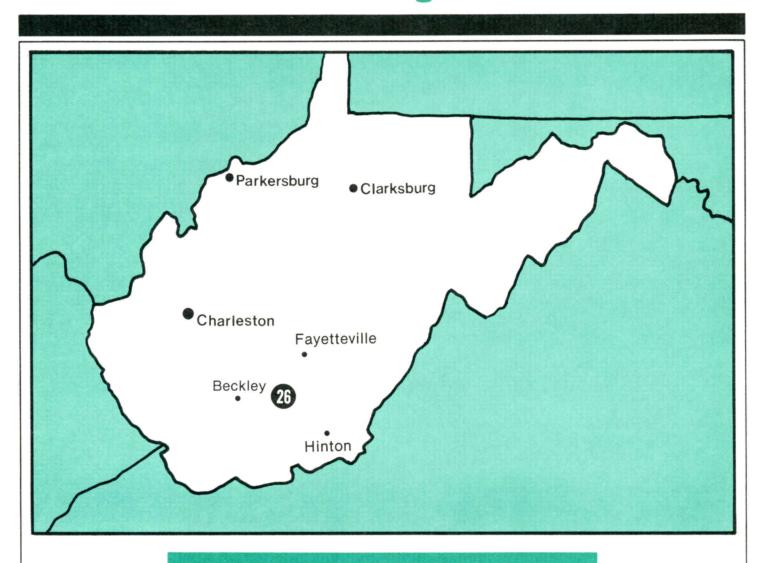
- Acid Deposition Impacts on Aquatic Resources—Examine effects of acid precipitation on streams and associated fish, amphibian, and aquatic reptile populations to determine long-term ecological impacts.
- **Bobcat Population Survey**—Determine population size, distribution, and dynamics and establish a population monitoring system.
- White-Tailed Deer Browsing Impacts— Establish transect or exclosure system to estimate vegetation utilization and examine browsing effects on plant community succession.
- **Trail System Carrying Capacity**—Analyze physical parameters of trails and camping areas to determine visitor use capabilities and maintenance requirements.
- **Ginseng Population Survey**—Study abundance, status, and distribution of American ginseng and establish monitoring plots or transects.
- **Exotic Flora Study**—Study old homesite areas to identify the distribution of exotic plant species and examine the role and influence of these exotics in the ecosystem.

PARK SUPPORT RESEARCH NEEDS

Software Programs — Develop software programs to handle management problems — communications, data base management and project management; data input into existing programs; and networking of microcomputers.

- **Search Management** Perform statistical analyses of park search data to identify various search patterns, person, etc.
- **Emergency Medical Services** Develop a software program to assist quality assurance on the basic Emergency Medical Training model.
- **Fire Management** Analyze park fire data to pinpoint problem areas, analysis of park vegetation types for targeting increased prescribed fire, etc.
- **Tourism Impact** Analyze the economic impact of tourism on the eight counties bordering Shenandoah National Park.
- **Evaluate Interpretive Programs** Develop a process for evaluating the effectiveness of interpretive programs in achieving management objectives.
- Assess Community Outreach Program Assess the needs, objectives, methods, and receptivity of a community outreach program in the area surrounding Shenandoah National Park.
- Cultural Data Management Complete data bases for Shenandoah National Park's museum study collections, interpretive library, historic photograph file, and park archives.
- Inventory Zirkle Archive Inventory and provide archival treatment for the Zirkle file, ten linear feet of original documents pertaining to the development of Shenandoah National Park.

West Virginia



WEST VIRGINIA

26 New River Gorge National River





New River Gorge National River

PARK DESCRIPTION

A rugged, whitewater river, flowing northward through deep canyons, the New River is among the oldest rivers on the continent. The freeflowing 52-mile section from Hinton to Fayetteville is abundant in natural, scenic, historic, and recreational values. In October 1988 Congress designated a 25-mile section of the Gauley River as a National Recreation Area and an 11-mile section of the Bluestone as a National Scenic River. [137 1/2 Main Street; P.O. Box 1189; Oak Hill, WV 25901; 304-465-0508]

Cultural Resources Base Map

- **Special History Study** History of the railroad industry
- **Special History Study** History of the mining industry
- Special History Studies History of the timber industry; community histories of selected, towns and sites.
- Historic Structure Reports Thurmond C&O Railroad Depot, Prince Store and Hinton Depot
- **Oral History** Interview long-time area residents concerning general history.
- **Archeological Survey** McKendree
- Curatorial Services Set up the initial museum and curatorial collections for the National River.
- Inventory of Cultural Resources Perform initial inventory of cultural resources within the Gauley River National Recreation Area and Bluestone National Scenic River.

NATURAL/SOCIAL SCIENCE RESEARCH NEEDS

Scenic Roadway — Conduct a feasibility study for a McKendree Scenic Roadway specifying natural and cultural features.

- Water Quality Monitoring To complement and expand current water quality monitoring program, weekly measurements are needed on fecal and total coliform bacteria, pH and other parameters. Park laboratory equipment may be used.
- Collection of Site Impact Information Assist with the inventory of existing campsites along the New River Gorge National River and monitor user-caused impacts to resources.
- Air Quality Effects Survey Conduct survey to determine the extent of ozone and sulfur dioxide damage to park vegetation.
- Impacts of Acid Precipitation Establish research program to determine if acid precipitation is causing damage to the park's flora and fauna
- **Exotic Flora** Conduct survey of location and extent of exotic flora and develop recommendations for removal.
- **Develop Trails System Plan** Map and plan the development of hiking and horse trails in the National River.
- Review of Literature Conduct review of natural resource literature and conduct basic inventory of natural resources within the Gauley River National Recreation Area and Bluestone National Scenic River.

PARK SUPPORT RESEARCH NEEDS

Management and Geographic Information Systems — Implement an automated system, using park's IBM XT computer to store, retrieve, and analyze geographic and inventory data for park resource management applications in compliance with NPS policy and procedures.

Appendix

The Park Administrative History is a history of a park as an institutional entity. Updated periodically, it contains a brief discussion of the event, person, association, or values commemorated by the park and a history of the site and its acquisition by the National Park Service, including an assessment of the ownership or management of the site along with a discussion of the impacts on the resources. It also gives a description and analysis of the origin. establishment, development, and administration of the park, including a detailed discussion of the legislation establishing the park and the origin and rationale for key management decisions with reference made to planning documents, historic resource studies, and other history research reports that resulted in major management decisions.

National Park Handbooks are compact introductions to the natural and historic places administered by the National Park Service. They are designed to promote understanding and enjoyment of the parks. Each is intended to be informative reading and a useful guide before, during, and after a park visit.

The List of Classified Structures (LCS) is an inventory of all above-grade historic and prehistoric structures that have archeological, historical, architectural/engineering, and/or cultural value in which the Service has or will acquire any legal interests. The list serves to assist park managers in planning and programming appropriate treatment and in recording decisions regarding listed structures.

Cultural Resources Base Maps, including historical and archeological base maps, are basic documents for planning and design. They show areas that have been surveyed and inventoried for cultural resources and locate all extant (and no longer extant but relevant) cultural resources.

The Historic Structure Preservation Guide is used by park maintenance personnel as a reference for programming, continued housekeeping, and routine and cyclic preservation maintenance. The guide provides the information needed to ensure the orderly, timely, and proper inspection and maintenance of the park's historic structure and its furnishings. In addition, it provides a means for evaluating the park's maintenance activities, ascertaining their strengths and weaknesses, and adopting appropriate corrective measures. The guide is usually prepared at the conclusion of treatment and is tailored to the individual needs of an historic or prehistoric structure and the structure's historic furnishings. It is the official document guiding all preservation and maintenance activities.

The Historic Resource Study (HRS) includes a comprehensive collection, evaluation, and presentation of data and research findings concerning all of an area's historic resources (including structures, sites, objects, districts, complexes, and historic functions). The HRS identifies and evaluates all historic resources and applies the National Register criteria for evaluation. It also supplies data for the completion of National Register nomination forms and for the Cultural Sites Inventory and the List of Classified Structures. A resource study can also make recommendations concerning the interpretation of the historic resources or develop the historical background and significance of resources not previously studied.

The Special History Study includes data, research findings, and recommendations similar to those found in an Historic Resource Study. However, rather than describing and evaluating all the park's cultural resources, a Special History Study focuses on one historic aspect or theme in a park.

The Historic Structure Report consists of the collection, presentation, and evaluation of anthropological/archeological, historical, and architectural/engineering research findings on an historic or prehistoric structure and its setting, along with recommendations for treatment and use. It is written at the level necessary to determine and execute the recommended treatment, i.e., preservation, restoration, or reconstruction. It analyzes and records all periods of construction, modification, source materials, building techniques, other evidence of use, and the cultural and social setting and history. It can present alternatives for treatment based on fabric investigation.

The Historic Furnishings Report researches the historic appearance of furnishings and, when appropriate and justifiable, directs the accurate refurnishing of all or part of an historic or prehistoric structure to reflect the period or periods of historical significance. An implementation section is included when, and only when, it has been determined that sufficient information exists to refurnish the structure with a minimum of conjecture.

Cultural Landscape Report (CLR) identifies evaluates, and determines appropriate management options for cultural landscapes, i.e., historic scenes, historic sites, historic designed landscapes, and historic vernacular landscapes. The report collects, presents, and evaluates documentary and field survey findings, and proposes options for management. The CLR includes four sections: administrative data, documentary data, field survey data, and analysis and recommendations.

The Natural or Social Science Research Report documents and summarizes the results of a biological, physical, or social science project. It is designed to meet the specific needs of a resource management problem and usually consists of a literature review and/or bibliography of existing information, an inventory of basic resource data, or the findings, conclusions, and recommendations of a scientific study.

The Archeological Survey consists of a complete field inventory to record as many of the archeological resources in a specified study area as possible, using state-of-the-art archeological procedures. It provides accurate, professionally thorough, and detailed descriptions and records of the resources located, all plotted on maps of a scale large enough to be useful to management and future researchers. The report also includes an appropriate analysis of surface materials and sub-surface testing to enable evaluation of resources and planning for further action.

National Catalog of Museum Objects is a centralized ongoing inventory of all museum collections in the National Park Service. NPS is required to locate and inventory objects under its jurisdiction and nominate to the Secretary of the Interior those that appear to qualify for listing on the National Register of Historic Places.

Collection Management Plan is designed to assist each park in improving its museum collection management program. A team of museum professionals from outside the National Park Service conducts an on-site assessment of a unit's museum collection and facilities, comparing them with specified standards and the "NPS Museum Handbook". Each plan is tailored to assist a park or center in solving its unique collections management problems.

Collection Storage Plan focuses on solving a park's museum storage problem. A storage plan is a component of a Collection Managment Plan and can be used as a document especially designed to solve urgent collection storage problems before a Collection Management Plan is prepared, or to design a new collection storage facility. A collection Storage Plan results from an onsite assessment and reports on a park's museum collection, existing storage conditions; identifies NPS curatorial standards for storing objects; describes acceptable storage alternatives; and recommends one preferred alternative.

Collection Condition Survey is designed to report, following a visual inspection, the condition of all or a part of a museum collection. It records object conditions, creates a base line reference for future assessment of object deterioration, and identifies objects in need of treatment according to degree of urgency.

Exhibit Plan evolves from the Interpretive Prospectus and provides the label copy, list of objects to be exhibited and detailed design and construction plans for an exhibit. It must take into

consideration the preservation needs of objects while on exhibit.

Geographic Information Systems (GIS) integrates digital mapping and data base technology by allowing spatial information, including maps, graphs and charts, to be digitized and transferred into a series of overlays. The data can then be combined and integrated on a computer for scientific modeling and analysis. The National Park Service requires that the GIS be implemented by either of two agency-approved software programs.