



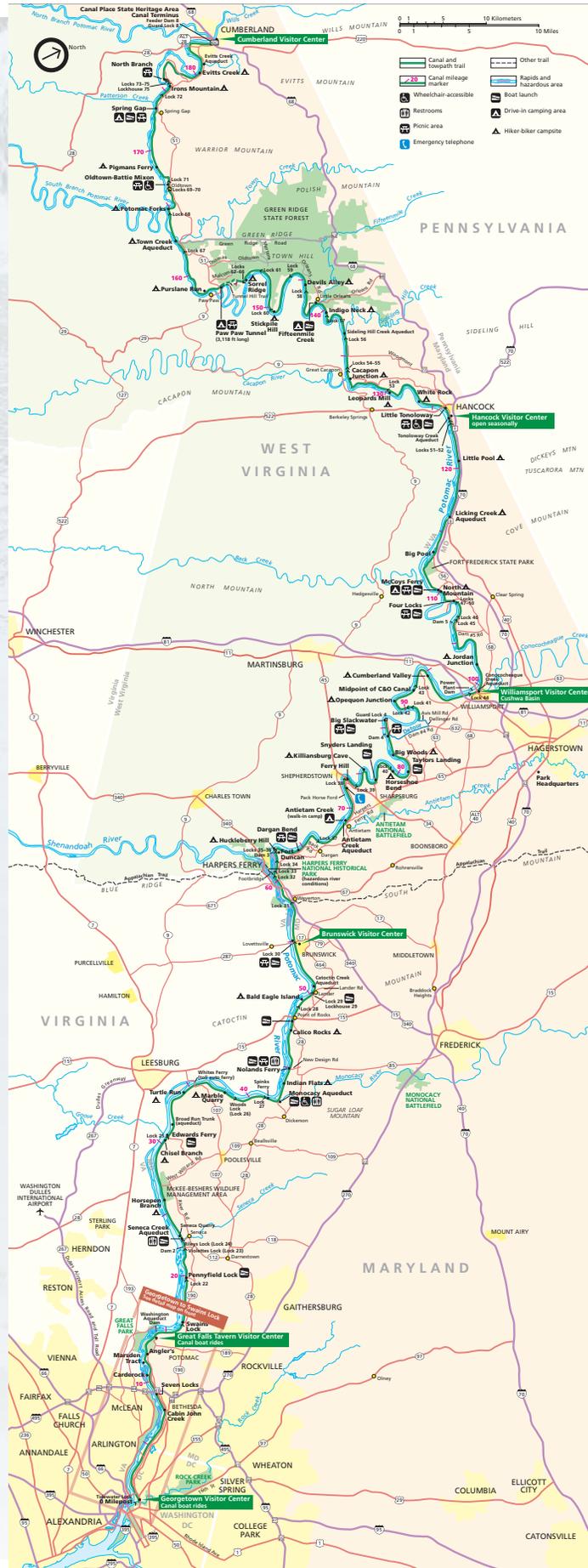
Foundation Document

Chesapeake and Ohio Canal National Historical Park

District of Columbia, Maryland, and West Virginia

July 2013





CONTENTS

Mission of the National Park Service	1
Introduction	2
Part 1: Core Components	3
Brief Description of the Park.	3
Park Purpose	4
Park Significance	5
Interpretive Themes	6
Fundamental Resources and Values	7
Other Important Resources and Values	10
Part 2: Dynamic Components	11
Special Mandates and Administrative Commitments	11
Assessment of Planning and Data Needs	11
Analysis of Fundamental Resources and Values	11
Analysis of Other Important Resources and Values	30
Identification of Key Parkwide or Major Issues and Associated Planning and Data Needs	38
Prioritization of Planning and Data Needs	39
Part 3: Preparers, Consultants, and Workshop Attendees	45
Appendix A: Enabling Legislation for Chesapeake and Ohio Canal National Historical Park . .	46
Appendix B: Related Federal Legislation, Regulations, and Executive Orders . . .	50
Appendix C: Inventory of Special Mandates and Administrative Commitments . .	52







Mission of the National Park Service

The mission of the National Park Service (NPS) is to preserve unimpaired the natural and cultural resources and values of the national park system, for the enjoyment, education, and inspiration of this and future generations.

The National Park Service is a bureau within the U.S. Department of the Interior. Although numerous national parks had been created earlier, it was not until August 25, 1916, that President Woodrow Wilson signed the act formally establishing the National Park Service to manage these sites.

The core values are a statement of the framework in which the National Park Service accomplishes its mission. They express the manner in which, both individually and collectively, the National Park Service pursues its mission. The following are NPS core values:

- *Shared stewardship:* We share a commitment to resource stewardship with the global preservation community.
- *Excellence:* We strive continually to learn and improve so that we may achieve the highest ideals of public service.
- *Integrity:* We deal honestly and fairly with the public and one another.
- *Tradition:* We are proud of it; we learn from it; we are not bound by it.
- *Respect:* We embrace each other's differences so that we may enrich the well-being of everyone.

The national park system continues to grow, and currently comprises 401 park units covering more than 84 million acres in every state, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands. These areas include national parks, preserves, monuments, battlefields, military parks, historical parks, historic sites, lakeshores, seashores, recreation areas, scenic rivers and trails, and the White House. The variety and diversity of national park system units throughout the nation require the same commitment to resource stewardship and management in order to ensure both the protection and enjoyment of these resources for future generations.

According to the NPS Public Use Statistics Office, approximately 22,000 diverse professionals work for the National Park Service, and each year approximately 281 million people visit the units of the national park system. To meet the needs of the American people, the National Park Service cooperates with partners and works with dedicated volunteers to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.





Introduction

Every unit of the national park system is required to have a formal statement of its core mission that will provide basic guidance for all planning and management decisions—a foundation for planning and management. Increasing emphasis on government accountability and restrained federal spending demand that all stakeholders are aware of the purpose, significance, interpretive themes, fundamental resources and values, and special mandates and administrative commitments of a park unit, as well as the legal and policy requirements for administration and resource protection that factor into management decisions.

The process of developing a foundation document provides the opportunity to gather together and integrate all varieties and hierarchies of information about a park unit. Next, this information is refined and focused to determine the most important attributes of the park. The process of preparing a foundation document aids park managers, staff, and stakeholders in identifying information that is necessary for future planning efforts.

A foundation document serves as the underlying guidance for all management and planning decisions for a national park unit. It describes the core mission of the park unit by identifying the purpose, significance, fundamental and important resources and values, interpretive themes, assessment of planning and data needs, special mandates and administrative commitments, and the unit's setting in the regional context.

The foundation document can be useful in all aspects of park management to ensure that primary management objectives are accomplished before addressing other factors that are also important, but not directly essential to achieving the park purpose and maintaining its significance. Thus, the development of a foundation document for Chesapeake and Ohio Canal National Historical Park is necessary to effectively manage the park over the long term and protect resources and values that are integral to the purpose and identity of the park unit.

This foundation document was developed as a collaborative effort among park staff, regional staff, and key partners, with the assistance of NPS Denver Service Center specialists. A workshop to facilitate this process was held on June 20–22, 2012, in Hagerstown, Maryland. A complete list of attendees and preparers is included in part 3 of this document.

The park atlas is an additional component of the foundation project. It is a geographic information system (GIS) product that can be published as a hard copy paper atlas and as electronic geospatial data in a Web-mapping environment. The purpose of the park atlas is to act as a reference for park projects and to facilitate planning decisions as a GIS-based planning support tool. The atlas covers various geographic elements that are important for park management such as natural and cultural resources, visitor use patterns, and facilities. It can be developed as part of a planning project (e.g., general management plan, foundation document), or designed as an independent product. The park atlas is available at <http://insideparkatlas.nps.gov/viewer/>.

Part 1: Core Components

All foundation documents include the following core elements:

The park purpose is the specific reason(s) for establishing a particular park. A park purpose statement is grounded in a thorough analysis of the legislation (or executive order) and legislative history of the park, and may include information from studies generated prior to the park's establishment. The purpose statement goes beyond a restatement of the law to clarify assumptions about what the law means in terms specific to the park.

The significance statements express why the resources and values of the park are important enough to justify national park designation. Statements of park significance describe why an area is important within a global, national, regional, and systemwide context. Significance statements are directly linked to the purpose of the park and are verified by data or consensus that reflect the most current scientific or scholarly inquiry and cultural perceptions because the resources and values may have changed since the park was established.

Interpretive themes connect park resources to relevant ideas, meanings, concepts, contexts, beliefs, and values. They support the desired interpretive objective of increasing visitor understanding and appreciation of the significance of park resources. In other words, interpretive themes are the most important messages to be conveyed to the public about the park. Interpretive themes are based on park purpose and significance.

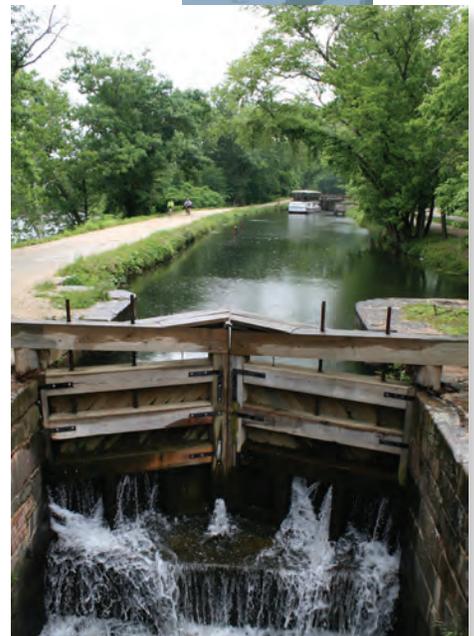
Fundamental resources and values are features, systems, organisms, processes, visitor experiences, stories, scenes, sounds, smells, or other attributes of the park that merit primary consideration during planning and management because they are essential to achieving park purpose and maintaining park significance.

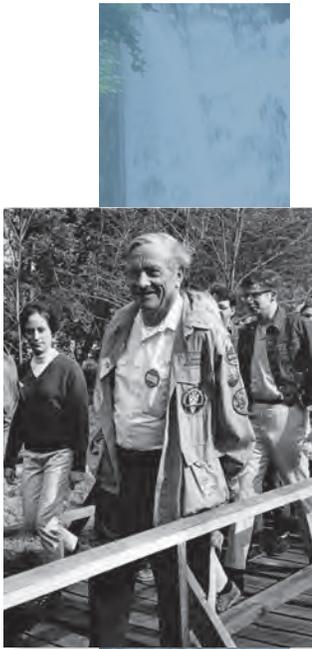
Other important resources and values are resources and values that are determined to be important and integral to park planning and management, although they are not related to park purpose and significance.

Brief Description of the Park

The Chesapeake and Ohio Canal (C&O Canal) began as a dream in the 1820s to access new fortunes in the West, at a time when U.S. prosperity depended on its waterways. Stretching along the Potomac River from Rock Creek at Georgetown in Washington, D.C., to Cumberland, Maryland, for 184.5 miles, the canal served as a major transportation corridor operating as a conduit for coal, lumber, and agricultural products to propel western development and satisfy demands from eastern U.S. markets. Construction on the canal began in 1828, which was intended to connect Chesapeake Bay to the Ohio River. Falling short of the original vision for the canal, construction ended in Cumberland in 1850 and the canal remained in operation until 1924.

Building the C&O Canal was one of the nation's most ambitious industrial projects of the time. Construction efforts provided thousands of jobs for immigrants and hundreds of families lived along the canal's extensive system of locks, aqueducts, culverts, and flumes. Its 74 lift locks raised canal boats from near sea level to an elevation of 605 feet at Cumberland. The hand-built 3,118-foot-long Paw Paw tunnel and Monocacy aqueduct, for example, are striking testimonies to the skill of canal engineers and craftsmen.





The canal suffered extensive flooding, railroad competition, American Civil War conflicts, and financial ruin. In a little less than 100 years, the C&O Canal was impacted by the competition of large commercial transportation companies in the West, the growth and decline of communities and businesses along the banks of the Potomac River, the fierce battles of the Civil War, and technological improvements that made use of canals obsolete. After the canal closed in 1924, it was neglected for nearly 30 years. The National Park Service was given jurisdiction of the canal in 1938. However, not until the early 1950s, when Supreme Court Justice William O. Douglas led a march to save the canal and towpath from becoming a modern parkway, was the park fully recognized for its valuable connection with the nation's past.

C&O Canal became a national monument in 1961, and in 1971, Public Law 91-664 established the Chesapeake and Ohio Canal National Historical Park “to preserve and interpret the historic and scenic features . . . and develop the potential of the canal for public recreation.” Further guidance was included in the introduction section of the 1976 general plan, which stated,

protecting for public enjoyment a historical park which will, more and more, become an outlet for urban seekers after outdoor recreation will be the difficult task facing the National Park Service in its stewardship of this limited resource.

Today, the remnants of the C&O Canal route, the spirit of its builders and operators, and a legacy of outdoor recreation and educational opportunities endure in this national park unit. Annually, millions of hikers, bicyclists, and runners enjoy the canal's 12-foot-wide towpath, originally built for mule travel, and the park's numerous access points, which provide visitors the opportunity to experience the rich history and natural resources of the Potomac River Valley. Watered sections of the canal provide further recreation for canoeists, boaters, and anglers.

Park Purpose

Purpose statements identify the specific reason for the establishment of a particular park. Purpose statements are crafted through a careful analysis of the enabling legislation and legislative history that influenced the development of Chesapeake and Ohio Canal National Historical Park, which was designated in 1971 when the initial enabling legislation was passed and signed into law (see appendix A for enabling legislation and subsequent amendments). The purpose statement reinforces the foundation for future park management administration and use decisions. The following purpose statement was based on the review of park legislation, previous management documents, and discussions with park staff:

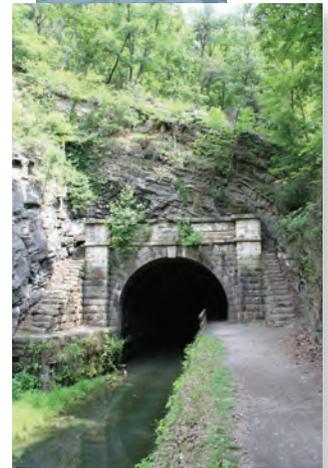
The purpose of the CHESAPEAKE AND OHIO CANAL NATIONAL HISTORICAL PARK is to preserve and interpret the 19th century transportation canal from Washington, D.C., to Cumberland, Maryland, and its associated scenic, natural, and cultural resources; and to provide opportunities for education and appropriate outdoor recreation.

Park Significance

Significance statements express why Chesapeake and Ohio Canal National Historical Park resources and values are important enough to merit national park unit designation. Statements of significance describe why an area is important within a global, national, regional, and systemwide context. These statements are linked to the purpose of the park unit, and are supported by data, research, and consensus. Significance statements describe the distinctive nature of the park and inform management decisions, focusing efforts on preserving and protecting the most important resources and values of the park unit.

The following significance statements have been identified for Chesapeake and Ohio Canal National Historical Park (please note that the statements are in no particular order):

1. The Chesapeake and Ohio Canal National Historical Park preserves and interprets 19th century canal transportation, civil engineering technology, and the evolution of a flat water transportation system in support of the industrial growth of the nation.
2. The Chesapeake and Ohio Canal National Historical Park contains more than 1,300 historic structures, including one of the largest collections of 19th century canal features and buildings in the national park system.
3. The Chesapeake and Ohio Canal National Historical Park preserves archeological evidence of 13,000 years of human habitation along the Potomac River.
4. Through preservation efforts that began in the 1950s, the Chesapeake and Ohio Canal National Historical Park towpath was transformed into one of the most heavily used recreational trails in the nation and serves as the backbone for national and regional trail systems.
5. The Chesapeake and Ohio Canal National Historical Park provides diverse recreational opportunities for millions of visitors annually, including numerous access points to the Potomac River, ranging from urban to rural settings.
6. The 15-mile-long Potomac Gorge, managed in part by the Chesapeake and Ohio Canal National Historical Park, is one of the most biologically diverse natural areas in the national park system.
7. Paralleling the Potomac River for 184.5 miles and travelling through four physiographic provinces, Chesapeake and Ohio Canal National Historical Park provides a natural buffer of forest, woodlands, prairies, and barrens and a wildlife corridor along the second-largest tributary to the Chesapeake Bay.
8. Interpretive and educational opportunities engage a diverse cross section of urban and rural communities along the length of the Chesapeake and Ohio Canal National Historical Park and were envisioned in the park's enabling legislation. Living history events, school programming, canal operations demonstrations, and a nationally renowned Canal Quarters program offer visitors the opportunity to experience different eras of the canal's existence.



Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park. They define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from—and should reflect—park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all of the park significances and fundamental resources and values.

Interpretive themes are an organizational tool that reveal and clarify meaning, concepts, contexts, and values represented by park resources. Effective themes are accurate and reflect current scholarship and science. They encourage exploration of the context in which events or natural processes occurred and the effects of those events and processes. They go beyond a mere description of the event or process to foster multiple opportunities to experience and consider the park and its resources. Themes help to explain why a park story is relevant to people not connected to a particular event, time, or place.

Themes offer park staff guidance to focus on relevant visitor experiences. What matters to the public is how these themes are represented through park services, media, programming, and facilities.

The following interpretive themes have been identified for Chesapeake and Ohio Canal National Historical Park:¹



- **Human Ingenuity:** The Chesapeake and Ohio Canal is a testament to human ingenuity and capacity to build an enduring transportation system that challenged natural obstacles, creating communities, connecting regions, and advancing European American expansion.
- **Transportation Heritage:** The Chesapeake and Ohio Canal plays a vital role in the nation’s transportation heritage—a catalyst for westward expansion and economic development—shaping industry, culture, recreation, and tourism for generations.
- **Life on the Canal:** Life on the Chesapeake and Ohio Canal during its construction and operation was fraught with challenges and life-threatening hazards in pursuit of uncertain rewards.
- **Change and Adaptation:** The prehistory and history of the Potomac Valley illustrates and reflects constant change and adaptation—the river’s impact on land, nature, and cultures within the valley, and the interaction between the cultures and their impact on the river valley.
- **Geology and Geography:** The unique convergence of geology and geography in the Potomac River Valley inspires a sense of awe and humility.
- **Place of Refuge:** The Chesapeake and Ohio Canal is a place of refuge from the modern world—a setting where one can be spiritually renewed and reconnected to past generations and the natural world.

¹ Source: Chesapeake and Ohio Canal National Historical Park Long-Range Interpretive Plan (2010)

Fundamental Resources and Values

Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to merit primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance.

The most important responsibility of NPS managers is to ensure the conservation of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. These qualities are called fundamental resources and values. Fundamental resources and values are closely related to legislative purpose, and are more specific than significance statements. FRVs help focus planning and management processes on what is truly significant about the park. If FRVs are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

This distinction is made to ensure that fundamental resources and values receive specific consideration in park planning processes because of their relationship to the park's purpose and significance.

The following fundamental resources and values have been identified for Chesapeake and Ohio Canal National Historical Park:

Historic Districts – Historic Structures – Archeology

Nominated to the National Register of Historic Places as a historic district, resources that contribute to the significance of the district include cultural landscapes, the canal prism, locks, lockhouses, section houses, aqueducts, culverts, dams, turning basin, masonry walls, weirs, and the Paw Paw tunnel. These resources range from fully functional structures and components to ruins. The historic district includes other cultural landscapes associated with the canal such as the Cushwa Warehouse and adjacent sites such as the Ferry Hill Plantation, Fort Duncan, and the Great Falls Tavern. In addition to the park's cultural landscapes and structures, prehistoric American Indian rock art has been documented at several locations within the park. These petroglyph discoveries represent a significant addition to the understanding of the prehistoric art of North America and its connection to American Indian belief systems.²

Towpath

The Chesapeake and Ohio Canal parallels the Potomac River and its towpath, which extends for 184.5 miles and is fundamental to the park for both its continuity and recreational qualities. Once used by mule teams to pull boats along the canal, the towpath provides uninterrupted, nonmotorized access to the entire length of the park, connecting visitors to historic structures, the natural environment, and many other experiences along the canal. The towpath serves as a backbone for numerous national and regional trail systems, such as the Capital Crescent Trail, Potomac Heritage National Scenic Trail, Western Maryland Rail Trail, Appalachian National Scenic Trail, and the Great Allegheny Passage.



² A multiyear archeological study conducted from 2003 to 2011 revealed a diverse collection of prehistoric and historic archeological sites within the park. The park's Archeological Sites Management Information System (ASMIS) database contains 284 archeological sites. The park contains 112,000-plus catalogued archeological artifacts.

Museum / Archival Collections

The Chesapeake and Ohio Canal played a central role in many lives, influencing the growth of canal towns and western expansion during the 19th century. An extensive collection of oral histories from the canal operators and families who lived and worked along the canal serves as a valuable resource for the interpretation and preservation of the canal.³ Company records, lockhouse log books, and shipping records also contribute to our understanding of the canal's history. These resources are a vital part of the canal story and enable visitors to make personal connections with the canal's impact on the lives and communities through which it passes.



Scenic Views Including Great Falls and the Potomac Gorge

In addition to 19,600 acres managed within park boundaries, the Chesapeake and Ohio Canal National Historical Park holds 254 scenic easements that preserve an additional 1,356 acres, which contribute to the integrity of the park's viewsheds and act as a buffer from adjacent development.



Located 15 miles from Washington, D.C., scenic views of the Great Falls section of the Potomac River offer visitors a stunning display of speed and force as the river rushes over a series of steep, jagged cliffs and flows onward through the narrow Mather Gorge and into the Potomac Gorge. As one of the park's most popular areas, visitors can access a prominent viewpoint from the Olmsted Island Overlook, which is a 5–10-minute walk from the Great Falls Tavern Visitor Center. Other notable views abound at the park, including the view from the Paw Paw Tunnel Hill Trail overlooking the Potomac River; the Paw Paw Bends; the view of the river along a section of Big Slackwater; the Cumberland cityscape; or the miles of the unique tree-lined towpath.

Recreational Opportunities

Numerous Potomac River access points and a variety of towpath activities provide recreational opportunities for millions of park visitors annually. Recreational activities such as day- and through-hiking, bicycling, running, canoeing, boating, fishing, birding, wildflower walks, morel mushroom hunting, rock climbing, and picnicking continue to entice large numbers of visitors to the park. Camping and an increase in through-rider and through-hiker activity (i.e., bicyclists and hikers completing the entire length of the canal towpath, as well as those connecting to the towpath from regional trails) highlight the park's diverse recreational opportunities.

In addition to the park's trails and water-based recreation, the Carderock area—northwest of Washington, D.C.—is a popular destination for rock climbers. It hosts a number of climbing routes on a cliff slab that rises abruptly from the edge of the Potomac River. The recreation area also includes highly utilized amenities such as a 200-person picnic pavilion, 30 picnic tables, a softball field, and horseshoe pits.



³ Ethnographic resources may also be found in recreational communities or adjacent communities if they have a long-standing history and use of certain sites. The scope of potential ethnographic resources would be identified in an ethnographic overview and assessment. The park's ethnographic resources may be broader than the oral history collection.

Biodiversity within the Potomac Gorge

The Potomac Gorge, which is partially managed by the park, is one of the most biologically diverse areas in the national park system. There are more than 113 rare, threatened, and endangered species documented in this area. The gorge serves as a meeting place for northern and southern species, midwestern and eastern species, and montane and coastal species. In addition, more than 25 discrete vegetation communities have been identified in the gorge. Of particular significance are the scoured bedrock floodplain and terrace communities, which are more extensive and well preserved at this site than anywhere else in the United States (Potomac Gorge Site Conservation Plan November 2001).

Natural Communities

The park's forested canopy, unique geology, and proximity to agricultural and natural areas comprise a wide range of habitat conditions that are fundamental to supporting diverse vegetation and wildlife communities. These include riparian areas like floodplain forests and wetlands that traverse the canal's path through the Upper Coastal Plain westward through portions of the Piedmont, Blue Ridge, and Ridge and Valley physiographic provinces. Within its boundaries, the park hosts native plant communities such as mid-Appalachian shale barrens, limestone forests, and some of the best examples of scoured bedrock terrace habitat in the eastern United States. Vegetation and wildlife common to these habitats and significant numbers of rare, threatened, and endangered species are represented. The park preserves the ecological integrity of these resources.

In addition to the natural areas mentioned above, the park owns three former Western Maryland Railroad (WMRR) tunnels that are known to contain the largest population of overwintering bats in the state of Maryland. Studies that began in 2005 indicate the WMRR tunnels are the only habitat (hibernacula) in the state of Maryland that have continued to remain free of white-nose syndrome, a disease that affects hibernating bats and is associated with extensive mortality of bats in the eastern United States.



Interpretation and Education

Interpretation of the Chesapeake and Ohio Canal National Historical Park's historic and scenic features is included in the park's enabling legislation. Ongoing interpretive and educational efforts highlight the park's diverse landscapes and offer visitors the opportunity to experience different eras of the canal's operation. With several million visitors annually, the Chesapeake and Ohio Canal National Historical Park provides programs ranging from the living history canal

boat and canal launch programs to lock demonstrations, guided hikes along the towpath, and Junior Ranger camps. In addition, the park's location within multiple "canal towns" allows staff to participate in local community events, including activities at Cumberland, Oldtown, Hancock, Williamsport, Sharpsburg, Harpers Ferry, Shepherdstown, and Brunswick. The park's lengthy boundary and proximity to approximately 1 million school-aged children also provides unique educational opportunities for diverse student audiences, representing urban and rural environments. The park leverages connections and partnerships with professional educators, universities, and other national, state, and local parks. Its robust volunteer program provides students with service learning opportunities that emphasize stewardship and conservation.



Other Important Resources and Values

Chesapeake and Ohio Canal National Historical Park contains other resources and values that may not be fundamental to the purpose and significance of the park, but are important to consider in management and planning decisions. These are referred to as other important resources and values.

Following are other important resources and values for Chesapeake and Ohio Canal National Historical Park:



Canal Towns

Fueled by the trade and commerce made possible by the Chesapeake and Ohio Canal, towns sprang up throughout the region as the nation expanded westward. Canal towns such as Hancock, Williamsport, Cumberland, Sharpsburg, Shepherdstown, Harpers Ferry, Point of Rocks, and Brunswick continue to play an important role for the canal, its history, and its future. The historic relationship between these towns and the Chesapeake and Ohio Canal presents a unique resource for developing partnerships and improving regional commercial connectivity.

Solitude

Comprising about 20,000 acres of land, the Chesapeake and Ohio Canal National Historical Park provides many opportunities for solitude. Winding through urban and rural communities along the north bank of the Potomac River, the value of solitude is an important contribution to the overall park experience. Solitude allows visitors to appreciate the history and natural surroundings of the canal.

Opportunity for Scholarship and Scientific Research

The park continues to increase its exposure in several high profile research disciplines. Archeological, paleontological, and geologic discoveries (i.e., cave and karst formations), for example, have greatly enhanced the knowledge base of these resources, and the park continues to expand its natural resources collections. In addition, the geographic nature of the park lends itself to several opportunities for climate change research, including plant and wildlife migration, invasive species trends, and changes in hydrologic patterns in the Potomac River and local tributaries, springs, and seeps. Such studies continue to expand scientific research and aid new interpretation and education programs.

Hydrologic Resources including Riparian Areas

Water is one of the park's most distinguishing features. There are 261 perennial streams documented within park boundaries, 3 water bodies (Little Pool, Big Pool, and Widewater), an estimated 54 miles of watered canal, 27 documented springs and seeps, and numerous other wetlands. Owing to the character of these hydrologic resources is a long history of flooding along the Potomac River—the second-largest tributary to the Chesapeake Bay. Flood events have caused millions of dollars in damages to historic structures along the canal, and a major flood in 1924 ultimately caused the Canal Company to cease operation. Flooding is also largely responsible for the extraordinary biological diversity of the park, whose floodplain habitat comprises approximately 85% of the unit. Riparian areas at the Chesapeake and Ohio Canal National Historical Park are extensive, well preserved, and contain numerous rare, threatened, and endangered species. There are four critically imperiled scoured bedrock communities and eight imperiled riparian communities, for example, that exhibit distinct hydrogeology and exceptional biodiversity.

Part 2: Dynamic Components

Part 2 consists of two components:

- special mandates and administrative commitments
- assessment of planning and data needs

These components may change after this foundation document is published and may need to be updated periodically.

Special Mandates and Administrative Commitments

Many of the management decisions for a park unit are directed or influenced by special mandates and administrative commitments with other federal agencies, state and local governments, utilities, and other partnering organizations. Special mandates are requirements specific to a park, which expand on or contradict the legislated purpose of the park unit. They are park-specific legislative or judicial requirements that must be fulfilled, along with the park purpose, even if the requirements do not relate to that purpose. Administrative commitments in general are agreements that have been reached through formal, documented processes, such as memoranda of agreement. These agreements can form a network of partnerships designed to fulfill the objectives of the park and facilitate working relationships with other organizations. All of these mandates and commitments either dictate some form of management action or will allow particular uses on park lands (e.g., permissible traditional uses, easements or rights-of-way, maintenance needs, use of park facilities or lands, or emergency service responses). Thus, these mandates and commitments are an essential component in the foundation document and in managing and planning for Chesapeake and Ohio Canal National Historical Park.

For more information about the existing commitments for the park, please see the inventory of special mandates and agreements in appendix C.

Assessment of Planning and Data Needs

Once park purpose and significance statements and fundamental resources and values have been identified, it is important to consider what additional information and planning tasks may be necessary to aid the National Park Service in its mission. The assessment of planning and data needs identifies any inherent conditions or threats contained in the gathered information and determines whether any additional planning steps, data needs, and management efforts may be necessary to maintain or protect the existing fundamental resources and values and other important resources and values.

There are three parts that make up the planning and data needs assessment:

1. analysis of fundamental resources and values
2. identification of key or major parkwide issues that need to be addressed by future planning
3. identification and prioritization of data and planning needs

The analysis of fundamental resources and values and identification of major issues leads up to and supports the identification and prioritization of needed plans and studies

Analysis of Fundamental Resources and Values

The analysis of fundamental resources and values articulates the importance of each fundamental resource and value, its current status, potential threats and opportunities, needed data, planning and management decisions, and relevant laws and NPS policies related to management of the resources.



Fundamental Resource or Value	Historic Districts – Historic Structures – Archeology
Relationship to Significance Statements	<ol style="list-style-type: none"> 1. The Chesapeake and Ohio Canal National Historical Park preserves and interprets 19th century canal transportation, civil engineering technology, and the evolution of a flat water transportation system in support of the industrial growth of the nation. 2. The Chesapeake and Ohio Canal National Historical Park contains more than 1,300 historic structures, including the largest collection of 19th century canal features and buildings in the national park system. 3. The Chesapeake and Ohio Canal National Historical Park preserves archeological evidence of 13,000 years of human habitation along the Potomac River.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Structures vary in condition and use, ranging from fully intact and operational to unstable. • Continual maintenance of the number and variety of structures continues to be a challenge for park staff. • List of classified structures inventory conditions every five years. • Recently updated National Register of Historical Places nomination (winter 2013). • Completed inventories of 5 of the 15 cultural landscapes of the park. <p>Trends</p> <ul style="list-style-type: none"> • Increased needs and demands for preservation efforts and maintenance of structures. • The park has successfully competed for American Recovery and Reinvestment Act of 2009 and Transportation Enhancement Program funding in the past and hopes to continue receiving special project funding. • The successful Canal Steward program has increased volunteer support and engagement throughout the park. • Through the partnership with the Canal Trust, the Canal Quarters Program allows the park to explore the adaptive reuses of some of the historic lockhouses and section houses.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Flooding presents a danger to park resources, operations, and safety. • Some of the historic culverts do not drain effectively, which presents ongoing challenges to control flood impacts. • The deferred maintenance of historic structures and canal features continues to create a backlog of repair and rehabilitation projects. • The park’s long, linear boundaries and staffing limitations make addressing vandalism and looting of historic structures an issue. • Instances of squatting in the more urban sections present a security and stability threat to resources. • Issues of climate change and air pollution continue to adversely impact these resources. • General vegetative growth and invasive species damage historic structures. • Lack of skilled craftspeople and historic preservation specialists to repair and maintain historic structures, as well as the high costs associated with this type of work. • Issues of lead and other hazardous building materials in historic structures. <p>Opportunities</p> <ul style="list-style-type: none"> • Increased partnership and volunteer support for park programs and operations. • Leasing historic structures provides potential revenue for their maintenance. • Increased interest in archeology and archeological interpretation throughout the park. • Opportunities exist for park staff to go through the Archeological Resource Protection Act and historic preservation training.

<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • Update the park’s administrative history to include the past 40 years (1972–2012). • Additional historic structure reports and assessments for numerous historic structures throughout the park. • Additional cultural landscape inventories and reports. • Structural engineering reports.
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Completion of the building utilization plan. • Park strategic plan. • Archeological management plan. • Resource stewardship strategy. • Climate change scenario planning.
<p>Laws and Policies That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • <i>Superintendent’s Compendium</i>, section 1.5 • <i>Superintendent’s Compendium</i>, section 1.6 • <i>Superintendent’s Compendium</i>, section 2.1 <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Director’s Order 12: <i>Conservation Planning, Environmental Impact Analysis, and Decision-making and DO-12 Handbook</i> • Director’s Order 28: <i>Cultural Resource Management</i> • Director’s Order 40: <i>Dam Safety & Security Program</i> • <i>NPS Management Policies 2006</i>, section 5.3, “Stewardship”



Fundamental Resource or Value	Towpath
<p>Relationship to Significance Statements</p>	<p>2. The Chesapeake and Ohio Canal National Historical Park contains more than 1,300 historic structures, including the largest collection of 19th century canal features and buildings in the national park system.</p> <p>4. Through preservation efforts beginning in the 1950s, the Chesapeake and Ohio Canal National Historical Park towpath was transformed into one of the most heavily used recreational trails in the nation and serves as the backbone for national and regional trail systems.</p> <p>5. The Chesapeake and Ohio Canal National Historical Park provides diverse recreational opportunities for millions of visitors annually, including access to the Potomac River along its entire length, ranging from urban to rural settings.</p>
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • The towpath requires continual maintenance and monitoring, placing high demands on park staff. <p>Trends</p> <ul style="list-style-type: none"> • Heavy summer use and high traffic along regional trail segments are projected to continue. • Pocketed congested areas, primarily around Washington, D.C., present challenges. • Overall increase in multiday use and through-hiking and biking. • Potomac River users and requests to accommodate river access continue to increase throughout the park.
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Inconsistent surface quality and grade exists throughout the majority of the park. • Flood events continue to threaten park resources, management response, and overall visitor safety. • Climate change and associated influences. • Deferred maintenance on many of the canal structures and the canal prism continues to seriously threaten the towpath. • Damage from authorized maintenance vehicles. • Heavy use sections receive extensive wear and tear through visitor traffic and high user demands. • Erosion of the towpath from heavy rain, seasonal runoff, and rock slides. • Encroachment from private properties impacts the visitor experience on the towpath. • Issue of effectiveness of historic culvert drainage is a concern. • Unauthorized social trails exist throughout the park. • Visitor safety concerns while running on the towpath in and near Washington, D.C. <p>Opportunities</p> <ul style="list-style-type: none"> • Development of a consistent, higher quality trail surface. • Increasing awareness of towpath and trail etiquette for multiple user groups. • There is potential to add appropriate access points and trails. • Increase Americans with Disabilities Act access and opportunities to improve universal design to accommodate all visitors within the park. • Better utilization of bike patrol and volunteer trail reports as a monitoring strategy.

<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • Outdoor trail standards—designation. • Comprehensive visitor use study. • Inventory of unauthorized trails. • Sign inventory and assessment. • Updated historic structures report.
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Resource stewardship strategy. • Comprehensive sign plan. • Comprehensive trail management plan. • Climate change scenario planning.
<p>Laws and Policies That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • <i>Superintendent's Compendium</i>, section 1.5 • <i>Superintendent's Compendium</i>, section 1.6 • <i>Superintendent's Compendium</i>, section 2.1 • <i>Superintendent's Compendium</i>, section 2.16 • <i>Superintendent's Compendium</i>, section 4.3 <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Director's Order 12: <i>Conservation Planning, Environmental Impact Analysis, and Decision-making</i> • Director's Order 28: <i>Cultural Resource Management</i> • Director's Order 42: <i>Accessibility for Visitors with Disabilities in National Park Service Programs and Services</i> • <i>NPS Management Policies 2006</i> <ul style="list-style-type: none"> • section 5.3 "Stewardship" • section 8.2 "Visitor Use" • section 9.2 "Transportation Systems and Alternative Transportation"



Fundamental Resource or Value	Museum / Archival Collections
<p>Relationship to Significance Statements</p>	<ol style="list-style-type: none"> 1. The Chesapeake and Ohio Canal National Historical Park preserves and interprets 19th century canal transportation, civil engineering technology, and the evolution of a flat water transportation system in support of the industrial growth of the nation. 2. The Chesapeake and Ohio Canal National Historical Park contains more than 1,300 historic structures, including the largest collection of 19th century canal features and buildings in the national park system. 3. The Chesapeake and Ohio Canal National Historical Park preserves archeological evidence of 13,000 years of human habitation along the Potomac River. 4. Through preservation efforts beginning in the 1950s, the Chesapeake and Ohio Canal National Historical Park towpath was transformed into one of the most heavily used recreational trails in the nation and serves as the backbone for national and regional trail systems.
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • No baseline knowledge of ethnographic resources. • Ongoing work includes documenting, researching, and cataloging existing park collections. • Archives and collections are in stable condition. • Climate control and monitoring are in good condition. • Three different accession books for the collection are maintained. <p>Trends</p> <ul style="list-style-type: none"> • There is an increasing awareness of need for oral/family histories related to the canal and the canal towns. • Regional changes in canal town communities and demographic changes will impact the opportunities to collect these oral histories in the future. • Increased interest in and use of park resources by recreational users and adjacent communities provides opportunities for engagement. • Volunteer interest in collecting histories continues to grow. • The park’s museum collection has not all been cataloged and there is a large backlog of cataloging due to the acquisition or donation of additional museum objects.
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Visitors illegally collecting artifacts from park property. • An aging population leads to the loss of primary resources and related oral histories as generations pass away. • There is a continual loss of family connections to the canal and its operations. • Concerns over the condition and access to the National Archives collections related to the canal. • Lack of staffing to properly catalog/curate park’s collections. <p>Opportunities</p> <ul style="list-style-type: none"> • Identification of park ethnographic groups and resources. • Development of new interpretive programming to share ethnographic stories with park visitors. • Volunteer interest in collecting oral histories continues to grow through, but not limited to, canal family reunions. • New social media continues to enhance the ability to collect and share information and ethnographic collections. • Outreach with numerous partners serves as an opportunity to grow and share collections. • Make collections accessible electronically to all park staff and the public. • Increased opportunity to teach the importance of archeology and site context.

<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • Update the administrative history to include the past 40 years (1972–2012). • Additional research is needed to address data gaps for locks, lockkeepers, and canal employee records. • Ethnographic resource report. • Data gaps for museum accession and catalog records.
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Ethnographic overview and assessment/resource report. • Collections management plan. • Collections condition assessment. • Interpretative development plan. • Updated scope of collections statement. • Structural fire management plan.
<p>Laws and Policies That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • <i>Superintendent's Compendium</i>, section 1.5 • <i>Superintendent's Compendium</i>, section 1.6 • <i>Superintendent's Compendium</i>, section 2.1 • <i>Superintendent's Compendium</i>, section 2.10 <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Director's Order 28: <i>Cultural Resource Management</i>, Ethnography Program • <i>NPS Management Policies 2006</i> <ul style="list-style-type: none"> • section 5.3.5.3 "Ethnographic Resources" • section 5.3.5.5.6 "Archives and Manuscripts"



Fundamental Resource or Value	Scenic Views Including Great Falls and the Potomac Gorge
Relationship to Significance Statements	<p>6. The 15-mile-long Potomac Gorge, managed in part by the Chesapeake and Ohio Canal National Historical Park, is one of the most biologically diverse natural areas in the national park system.</p> <p>7. Paralleling the Potomac River for 184.5 miles and travelling through four physiographic provinces, the Chesapeake and Ohio Canal National Historical Park provides a natural buffer of forest, woodlands, prairies, and barrens and a wildlife corridor along the second-largest tributary to the Chesapeake Bay.</p>
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Good—vegetation does not block views at established viewpoints and floods will continue to maintain the viewshed. • The park holds 254 scenic easements that contribute to the integrity of the park’s viewsheds. • Park and adjacent private land boundaries need to be clarified. <p>Trends</p> <ul style="list-style-type: none"> • Increasing development adjacent to park boundaries. • Encroachment issues are ongoing and most remain unresolved (e.g., increasing social trails from neighboring properties). • Subdivision development and regional growth is increasing. • Park’s urban interface increases potential for development impacts adjacent to boundaries. • Unidentified boundary lines have led to multiple instances of large tree cuttings/logging operations in the park. • Ongoing challenge to manage invasive vegetation to maintain scenic views. • Increasing requests for rights-of-way and access easements.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Increasing development adjacent to park boundaries, including communication towers (i.e., cell phone towers) can impact viewshed. • Potential utilities development (i.e., electrical transmission infrastructure) can impact viewshed. • Climate change and associated influences. • Nonnative invasive species threaten biodiversity. • Litter and graffiti can impact viewshed. • Helicopter use can impact viewshed. • Flood detritus can impact viewshed (especially at Olmsted Island). • Social trails threaten local biodiversity. • Floods threaten walkways leading to Olmsted Overlook, which are vulnerable to washouts. • Lost opportunities to acquire and protect adjacent lands due to lengthy acquisition process. • Staff turnover can lead to loss of continuity and lengthy relationship rebuilding processes with private landowners, agencies, organizations, etc., which can impact the overall success of building a robust, parkwide land protection program. • Stream erosion and sedimentation impacts due to development activities in certain areas of park. • Stormwater runoff impacts are intensified near areas of new development. • Political climate and related influences make land resources vulnerable to impacts.

<p>Threats and Opportunities (continued)</p>	<p>Opportunities</p> <ul style="list-style-type: none"> • Greater use of viewpoints that are not as heavily visited (i.e., Gold Mine Tract). • Implement the U.S. Geological Survey (USGS) / Jeff Marion trail study (2010), which recommended additional viewpoints in the gorge area and a formalized trail network. • Support national register nomination for the Potomac Gorge. • Improve communication with other federal, state, and local jurisdictions. • Manage the agricultural lease program in a manner that coincides with best management practices for farming and watershed protection. • Improve information and data sharing with neighboring jurisdictions.
<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • Comprehensive viewshed analysis (including analysis near Harpers Ferry, West Virginia). • Trail counters on Olmsted Bridge (to obtain visitation data at the viewpoint). • Parkwide boundary survey. • Parkwide wetland delineation. • Right-of-way inventory. • Inventory and map nonnative invasive species to inform parkwide management.
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Climbing management plan. • Comprehensive land protection plan (update). • Climate change scenario planning.
<p>Laws and Policies That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • Chesapeake and Ohio Canal National Historical Park Enabling Legislation (1971) • <i>Superintendent's Compendium</i>, section 1.5 • <i>Superintendent's Compendium</i>, section 4.30 <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Executive Order 11514, "Protection and Enhancement of Environmental Quality" • Director's Order 12: <i>Conservation Planning, Environmental Impact Analysis, and Decision-making and DO-12 Handbook</i> • <i>NPS Management Policies 2006</i> <ul style="list-style-type: none"> • section 4.4.2.4, "Management of Natural Landscapes" • section 1.6, "Cooperative Conservation Beyond Park Boundaries," provides for coordinated resource protection efforts that cross park boundaries or impact resources outside park boundaries • section 3.2, "Land Protection Methods," provides a variety of mechanisms to protect park resources, including acquisition and cooperative approaches • section 3.3, "Land Protection Plans," determines what lands need to be in public ownership and what means of protection are available to achieve the park unit's purpose



Fundamental Resource or Value	Recreational Opportunities
<p>Relationship to Significance Statements</p>	<p>4. Through preservation efforts beginning in the 1950s, the Chesapeake and Ohio Canal National Historical Park towpath was transformed into one of the most heavily used recreational trails in the nation and serves as the backbone for national and regional trail systems.</p> <p>5. The Chesapeake and Ohio Canal National Historical Park provides diverse recreational opportunities for millions of visitors annually, including access to the Potomac River along its entire length, ranging from urban to rural settings.</p>
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Good, but room to improve the visitor recreational experience. • Potomac River water quality is suitable for recreational uses and has continued to recover through industrial regulations and improvements over the past several decades. • Many visitors lack awareness that the recreational amenities they are using are within a national park system unit. • Park has developed improved boat ramps and river access (e.g., boat ramps at Fifteen Mile Creek and Point of Rocks). • Hiker/biker campgrounds have been continually improved throughout the park’s history. <p>Trends</p> <ul style="list-style-type: none"> • Overall visitation has increased 51.5% in the past six years (2008–2013), possibly due to an increase in regional residents’ use of the park and the extension of the Western Maryland Rail Trail. • Increase in through-riders (especially those riding from Pittsburgh, Pennsylvania, to Washington, D.C. on the Great Allegheny Passage Trail). • Increased organized group tours. • More cyclists in general. • Educational opportunities will probably increase (especially in the interpretation and education disciplines).⁴ • The park is actively implementing recreation management prescriptions and collecting trail use data through trail and vehicle counters to determine use trends and patterns.
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Visitor safety concerns while running on the towpath in and near Washington, D.C. • Flooding events have serious potential to damage recreational facilities (especially along the towpath). • Deferred maintenance threatens the integrity of recreational facilities in some areas (i.e., towpath and other recreation facilities). • Towpath damage from authorized vehicles and NPS administrative use. • Erosion impacts to towpath in heavy use sections. • Encroachments from adjacent private land uses can hinder the park’s full recreational integrity. • Maintaining wells to provide potable water is a challenge due to well locations, groundwater conditions, and impacts from flooding. This leads to inconsistent water sources along the canal and particularly affects through-riders and hikers. • Potential river contamination could impact fisheries and harm angling activities. • Potential budget cuts to state partners may harm potential to develop new boat ramp facilities. • Forest pests and diseases and other potential biological threats (i.e., West Nile virus, Lyme disease, etc.) could have various effects on visitors.

⁴Educational opportunities will be impacted by new environmental literacy standards. The park is in a position to help meet that need.

<p>Threats and Opportunities (continued)</p>	<ul style="list-style-type: none"> • Potential utilities development (i.e., electrical transmission infrastructure) could cause short-term detours or closures and impact viewsheds. • Management actions can restrict recreational activities for resource protection and safety purposes. • Adjacent development and associated activities may hinder some visitors’ experiences. • Beaver activity within the Palisades District can impact towpath recreation by causing retention of stream water that erodes the towpath and creates breaches and breaks in the continuity of the towpath. • Climate change and associated influences on recreational opportunities (flooding, warmer temperatures, drought, nonnative species). <p>Opportunities</p> <ul style="list-style-type: none"> • Recent towpath reconstruction in the Big Slackwater area provides improved safety and continuity for recreational activities. • Enhance NPS graphic identity program (Director’s Order 52) through the use of the arrowhead logo as well as at points of interest along river trails and hiker/biker campgrounds and on adjacent interstate highways. • Enhance awareness of local amenities in nearby historic canal towns. • Educational opportunities can be better integrated with recreational opportunities by providing education during recreational activities. • Increase use of waysides along the canal. • Improve trailheads / bulletin boards (need plan to replace several outdated bulletin boards). • Install utilities at drive-in campgrounds so that all drive-in campgrounds can have a campground host. • Install noniodine-based water treatment at both visitor and campground host campsites. • Make all campgrounds and day use areas priorities for adoption through the Canal Steward program. • Targeted tree maintenance and strategic hazard tree removals. • Develop methods to harden towpath without compromising historical character. • Improve opportunities for visitor recreation related to natural resource observation and enjoyment. • Actively pursue Track Trails / Healthy Parks Healthy People US effort to encourage more youth and local area residents to use the park for health benefits. • Other recreational opportunities include: birding, wildflower walks, morel hunting, and edible fruit and nut harvesting.
<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • Campground / day use inventory and assessment. • Sign inventory and assessment. • Enhance visitor experience at Hancock day use area expansion (identify wetland issues).
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Comprehensive sign plan. • Whites Ferry day use development concept plan (DCP). • Hancock day use area DCP (plan is currently in compliance stage). • Emergency access assessment (due to requests from counties; needs environmental assessment and the National Park Service needs to discuss this compliance process with counties). • Comprehensive trail management plan. • Climbing management plan for Carderock. • Climate change scenario planning.

<p>Laws and Policies that Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • Chesapeake and Ohio Canal National Historical Park Enabling Legislation (1971) • <i>Superintendent's Compendium</i>, section 1.5 • <i>Superintendent's Compendium</i>, section 1.6 • <i>Superintendent's Compendium</i>, section 2.10 • <i>Superintendent's Compendium</i>, section 2.11 • <i>Superintendent's Compendium</i>, section 2.15 • <i>Superintendent's Compendium</i>, section 2.16 • <i>Superintendent's Compendium</i>, section 2.20 • <i>Superintendent's Compendium</i>, section 2.23 • <i>Superintendent's Compendium</i>, section 2.50 • <i>Superintendent's Compendium</i>, section 2.51 • <i>Superintendent's Compendium</i>, section 4.30 <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Americans with Disabilities Act of 1990 (28 CFR 36) • Architectural Barriers Act of 1968 • Architectural Barriers Act Accessibility Standards 2006 • Director's Order 42: <i>Accessibility for Visitors with Disabilities in National Park Service Programs and Services</i> • <i>NPS Management Policies 2006</i> <ul style="list-style-type: none"> • section 8.2.2, "Recreational Activities" • section 8.2.2.1, "Management of Recreational Use" • NPS Concessions Management Improvement Act of 1998 • <i>National Park Service Transportation Planning Guidebook</i>
--	---

Fundamental Resource or Value	Biodiversity within the Potomac Gorge
<p>Relationship to Significance Statements</p>	<p>6. The 15-mile-long Potomac Gorge, managed in part by the Chesapeake and Ohio Canal National Historical Park, is one of the most biologically diverse natural areas in the national park system.</p> <p>7. Paralleling the Potomac River for 184.5 miles and travelling through four physiographic provinces, the Chesapeake and Ohio Canal National Historical Park provides a natural buffer of forest, woodlands, prairies, and barrens and a wildlife corridor along the second-largest tributary to Chesapeake Bay.</p>
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Dynamic overall. • "Focus on the Gorge" outreach program provided by The Nature Conservancy ended in summer 2011. • Weed Warrior volunteer efforts initiated by The Nature Conservancy are ongoing, but limited. As of 2012, efforts are being completed along the towpath. <p>Trends</p> <ul style="list-style-type: none"> • USGS studies are showing a decline in Potomac Gorge amphibian populations. • Potential increase in flood intensity due to climate change.

Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • U.S. Army Corps of Engineers access road to emergency intake in Chain Bridge Flats has changed the hydrology and vegetative composition of the flats. • Increased visitor use of the river has potential to impact sensitive gorge species. • Potential loss of vernal pools and impacts of climate change (flooding, warmer temperatures, drought, nonnative species). • Deer browsing and deer overabundance. • Nonnative species and forest pests threaten biodiversity. • River contamination threatens biodiversity. • Rock climbing activities can impact sensitive species. • Loss of a trail coordinator. <p>Opportunities</p> <ul style="list-style-type: none"> • Continue to develop new signage, which has improved the quality of interpretation and education opportunities in this area. • Maximize use of a trail coordinator (now vacant). • Develop exhibits for rare, threatened, and endangered species to increase visitor awareness of these sensitive resources. • Enhance partnership with The Nature Conservancy regarding implementation of management objectives for the gorge area. • Increased use of boardwalks. • Work with Potomac Appalachian Trail Club to improve trail management and focus visitation on a sustainable trail system.
Identified Data Needs	<ul style="list-style-type: none"> • Document phenology and compile historic data to identify trends within the park attributed to climate change.
Identified Planning Needs	<ul style="list-style-type: none"> • Implement the USGS/Jeff Marion trail study (2010). • Climate change scenario planning. • Deer management plan. • Resource stewardship strategy (revisit data collected since 2001).
Laws and Policies That Apply to the FRV, and NPS Policy-level Guidance	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • <i>Superintendent's Compendium</i>, section 2.1 <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Endangered Species Act of 1973, as amended • Director's Order 77: <i>Natural Resource Protection</i> • Executive Order 11990, "Protection of Wetlands" • <i>NPS Management Policies 2006</i> <ul style="list-style-type: none"> • section 2.1.2, "Scientific, Technical, and Scholarly Analysis," decision makers and planners will use the best available scientific and technical information and scholarly analysis to identify appropriate management actions for protection and use of park resources. • section 4.4.2, "Management of Native Plants and Animals"

Fundamental Resource or Value	Natural Communities
Relationship to Significance Statements	<p>7. Paralleling the Potomac River for 184.5 miles and travelling through four physiographic provinces, the Chesapeake and Ohio Canal National Historical Park provides a natural buffer of forest, woodlands, prairies, and barrens and a wildlife corridor along the second-largest tributary to Chesapeake Bay.</p>
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Vegetation—some areas are completely overgrown with invasive, nonnative species. • Vegetation—emerald ash borer has been documented within the park (emerald ash borer is an invasive beetle that tunnels under the bark of ash trees, disrupting food and water transport systems and eventually killing trees). • Wildlife—serious diseases and pests have been documented within or adjacent to the park, namely white-nose syndrome (bats); chronic wasting disease (a transmissible nervous system disease that primarily affects deer); and ranavirus (a disease that affects certain amphibian populations). <p>Trends</p> <ul style="list-style-type: none"> • Healthy native populations are generally declining throughout the park (the condition assessment, which is currently being produced, will discuss trends in detail). • Rare aquatic macroinvertebrates identified in park seeps and springs indicate stable populations. • Management actions have improved conditions in certain areas of the park, but the overall trend is declining as more nonnative and invasive species proliferate. • There has been an increase in visitation to certain geologically sensitive areas.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Proliferation of nonnative and invasive species. • Proliferation of forest pests and diseases (e.g., emerald ash borer, gypsy moth, and wooly adelgid). • Deer browsing and deer overabundance. • Certain NPS management and maintenance actions in natural communities. • Off-trail visitor use and recreational activities, such as large orienteering events. • Encroachments from private land uses (i.e., forest clear-cutting). • Aquatic vegetation within and along the canal prism (i.e., algae/vascular plants) is impacting visual quality and boat operations. • Climate change and associated influences on natural communities (flooding, warmer temperatures, drought, nonnative species). • Increased visitor use impacts to certain geologically sensitive areas. • Established social trails at Devil’s Eyebrow and numerous other locations within park boundaries. • Spelunkers are impacting sensitive cave resources. • Informal cave visitation has left trash in some caves; there is also graffiti, general wear and tear, damage to cave formations, and potential disruption of cave ecology, such as fire building activities from some visitors. <p>Opportunities</p> <ul style="list-style-type: none"> • Conduct strategic, controlled burns to enhance natural communities’ conditions. • Plant warm-season grasses and forbs to improve soil content, reduce erosion impacts, and provide wildlife habitat. • Support increased restoration efforts from the NPS Exotic Plant Management Team. • Engage volunteers to remove nonnative invasive species and restore certain areas (i.e., Weed Warriors). • Improve NPS administrative consistency in mowing and vegetation clearing activities. • If bats continue to remain free of white-nose syndrome within the Western Maryland Railroad corridor tunnels, scientists could research unique conditions of the tunnels that prevent the growth and spread of the disease.

<p>Threats and Opportunities (continued)</p>	<ul style="list-style-type: none"> • Implement recommendations from the West Virginia University cave and karst report. • Participate in cooperative weed management areas. • Improve condition of buffers through partnerships. • Participate in Chesapeake Bay watershed implementation plans.
<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • A strategy for planting trees/buffers in archeologically sensitive areas. • Inventory and map nonnative invasive species to inform parkwide management (especially where rare, threatened, and endangered species are threatened). • Inventory of rare, threatened, and endangered species; status of populations, maps, and threats identified and prioritized. • Parkwide rare, threatened, and endangered plant inventory—status of populations, maps, and threats identified and prioritized. • Continued studies of Western Maryland Railroad tunnels (within park) and their role as white-nose syndrome-free bat habitat. • Comprehensive wildlife survey. • Collect visitor use information in specific park locations (i.e., day use inventory and assessment). • Parkwide boundary survey. • Inventory of sensitive geologic areas and stabilization needs.
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Vegetation management plan (plan would address desired conditions for specific areas of the park and include best management practices and standard operating procedures [SOPs] for maintenance and resource management program areas). • Strategies for managing aquatic vegetation within and along canal prism (while complying with Clean Water Act, National Pollutant Discharge Elimination System requirements, and Maryland Department of the Environment requirements). • Comprehensive climate change impacts plan/study. • Deer management plan (Montgomery County, Maryland, has demanded action regarding deer management). • Comprehensive land protection plan (update). • Vulnerability assessment of species at risk (needed to maintain critical migration and dispersal corridors through the landscape across ecologically connected boundaries). • Resource stewardship strategy.
<p>Laws and Policies That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • <i>Superintendent’s Compendium</i>, section 2.1 <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Director’s Order 77: <i>Natural Resource Protection</i> • Executive Order 11514, “Protection and Enhancement of Environmental Quality” • Endangered Species Act of 1973, as amended • Executive Order 13112, “Invasive Species” • <i>NPS Management Policies 2006</i> <ul style="list-style-type: none"> • section 4.1, “General Management Concepts,” manage natural resources to maintain all components and processes of naturally evolving park resources • section 4.8.1, “Protection of Geologic Processes,” requires the National Park Service to allow natural geologic processes to proceed unimpeded • section 4.8.2, “Management of Geologic Features,” requires the National Park Service to protect geologic features from adverse effects of human activity • section 4.4.1, “General Principles for Managing Biological Resources,” requires the National Park Service to maintain as parts of the natural ecosystems of parks of all native plants and animals • section 4.4.2, “Management of Native Plants and Animals,” states that whenever possible, natural processes will be relied upon to maintain native plant and animal species and influence natural fluctuations in populations of these species • See appendix C for a detailed list of agreements

Fundamental Resource or Value	Interpretation and Education Opportunities
<p>Relationship to Significance Statements</p>	<ol style="list-style-type: none"> 1. The Chesapeake and Ohio Canal National Historical Park preserves and interprets 19th century canal transportation, civil engineering technology, and the evolution of a flat water transportation system in support of the industrial growth of the nation. 2. The Chesapeake and Ohio Canal National Historical Park contains more than 1,300 historic structures, including the largest collection of 19th century canal features and buildings in the national park system. 3. The Chesapeake and Ohio Canal National Historical Park preserves archeological evidence of 13,000 years of human habitation along the Potomac River. 4. Through preservation efforts beginning in the 1950s, the Chesapeake and Ohio Canal National Historical Park’s towpath was transformed into one of the most heavily used recreational trails in the nation and serves as the backbone for national and regional trail systems. 6. The 15-mile-long Potomac Gorge, managed in part by the Chesapeake and Ohio Canal National Historical Park, is one of the most biologically diverse natural areas in the national park system. 7. Paralleling the Potomac River for 184.5 miles and travelling through four physiographic provinces, the Chesapeake and Ohio Canal National Historical Park provides a natural buffer of forest, woodlands, prairies, and barrens and a wildlife corridor along the second-largest tributary to the Chesapeake Bay. 8. Interpretive and educational opportunities engage a diverse cross-section of urban and rural communities along the length of the Chesapeake and Ohio Canal National Historical Park and were envisioned in the park’s enabling legislation. Living history events, school programming, canal operations demonstrations, and a nationally renowned Canal Quarters program offer visitors the opportunity to experience different eras of the canal’s existence.
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Since 2009 there has been a drop in interpretation/education staff from 19.3 full-time equivalent (FTE) to 13 FTE. • Visitor groups include those seeking natural, historical, recreational, educational, and volunteering/service learning opportunities. • The majority of education programs are not directly linked to curriculum standards and many programs focus only on canal history. • Washington County school curriculum has a focus on the canal history. • Many schools near the park are classified as title I and represent urban and rural environments. • Primary locations for engaging school children are Great Falls, Williamsport, and Cumberland. • NPS maintenance staff is often the first form of interaction that visitors have with agency personnel. • Interests and pressure from outside agencies and their actions continue to impact the identity of the canal as a national park. • Because of its proximity to Washington, D.C., the park faces national and local political pressure and scrutiny. • More formalized inventories have been conducted that aid in the preservation of resources and the stories of the canal (i.e., GIS, archives, various electronic data). • The tradition of the Justice William O. Douglas reunion hike continues (the hike is held every five years).

<p>Current Conditions and Trends (continued)</p>	<p>Trends</p> <ul style="list-style-type: none"> • In order to reach the 97% of visitors who do not enter park visitor centers, the park will expand its nonpersonal interpretation by using the latest technologies, such as cell based interpretation, mobile applications and mobile web systems. • Fewer youth are engaged in formal park education and interpretive programming. • New technologies are changing the way visitors access information, which emphasizes the importance of technology-based programming opportunities. • The park hopes to engage more broadly in NPS systemwide educational opportunities (i.e., America’s Great Outdoors, Let’s Move Outside, etc.). • There are shifting perceptions about the importance of the outdoors, fitness, and recreational opportunities. • Building constraints are projected to continue. • Changing visitor expectations and interactions will require staff flexibility. • Continued pressure from adjacent communities for additional access to the Potomac River. • Continued pressure for the development of additional emergency boat access. • Increasing demands for recreational opportunities and special use permitting. • The park continues to persevere in the spirit of its original visionaries.
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • New technology is outcompeting traditional park programs for visitor attention and interest. • Inconsistent method for marketing and reserving education programs varies per site and inconsistent resources/instructions provided to teachers in preparation for field visits. • Transportation funding is an obstacle for most school districts to plan an educational field trip to the park. • Loss of the park’s institutional knowledge base could weaken its ability to interpret the canal’s historic tenets of perseverance, diminish its skills needed to repair the canal from floods, and threaten the ability to resist outside competing interests for development. • Loss of original canal advocates, such as Justice Douglas, and declining interest in the reunion hike. • Loss of the original federal advisory commission for the canal. • Seasonally low water levels can hinder the park’s ability to deliver interpretive canal boat program demonstrations. • The park needs more consistency and a greater level of engagement with area schools. <p>Opportunities</p> <ul style="list-style-type: none"> • Increased training opportunities and resources such as computers, books, literature, and specialized classes to all staff in interpretation and education. • Utilize variety of new technologies (e.g., park website and social media sites) in interpretation and education programs. • Explore funding opportunities and conduct a cost analysis of various student transportation methods. • Expand online education resources that teachers can incorporate in curriculum throughout the school year. • Identify funding opportunities to support a temporary education assistant position to help facilitate the education strategic plan and support a parkwide education program. • Establish an education website with easy to use reservation system, online education program menu, and site-specific information to better prepare teachers and students for their visit.

<p>Threats and Opportunities (continued)</p>	<p>Opportunities (continued)</p> <ul style="list-style-type: none"> • Develop an education committee composed of teachers, professors, partners and parks, and foster relationships with education institutions. • Leverage partnerships to obtain additional data and information on visitation and the success level of current education programs. • Reaching new audiences and untapped markets could provide an opportunity to increase visitation and relevancy. • Work with communities (i.e., canal towns) to develop diversity of education programs and opportunities. • Strengthen volunteer programs and internships to fill staffing shortfalls and help deliver interpretive programs. • Education and training for new park staff to instill connections with the national park system and updated training programs for existing staff. • Foster a new generation of conservationists through interpretation and education programs within the park. • Develop park programs and experiences (i.e., multiyear student engagement and children’s gardens). • Update and republish the park handbook. • Use of nonpersonal services could be developed throughout the park (e.g., smartphone apps, wayside exhibits, and cell phone-based tours).
<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • Comprehensive visitor use study. • Update park administrative history to include the past 40 years (1972–2012). • Develop administrative histories of the different C&O Canal associations and partner groups. • Collect additional oral histories from preservation associations, advisory commission, and other partner groups.
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Park strategic plan. • Interpretative development plan. • Diversity and inclusion plan (in process). • Canal town effort (planning for relationships)—needs more organization. • Develop a research paper that identifies what “perseverance” means to the canal today.
<p>Laws and Policies That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • None identified <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Director’s Order 6: <i>Interpretation and Education</i> • NPS <i>Management Policies 2006</i>, section 7.1, “Interpretive and Educational Programs”



Analysis of Other Important Resources and Values

The analysis of other important resources and values articulates their importance, current condition, potential threats, and related issues or data that warrant consideration and additional analysis for planning and management decisions. Included in the analysis is the identification of relevant laws and NPS policies related to management of the resources. The analysis of other important resources and values and identification of issues leads up to and supports the identification and prioritization of needed plans and studies.

Other Important Resource or Value	Canal Towns
<p>Relationship to Significance Statements</p>	<ol style="list-style-type: none"> 1. The Chesapeake and Ohio Canal National Historical Park preserves and interprets 19th century canal transportation, civil engineering technology, and the evolution of a flat water transportation system in support of the industrial growth of the nation. 3. The Chesapeake and Ohio Canal National Historical Park preserves archeological evidence of 13,000 years of human habitation along the Potomac River. 5. The Chesapeake and Ohio Canal National Historical Park provides diverse recreational opportunities for millions of visitors annually, including access to the Potomac River along its entire length, ranging from urban to rural settings.
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Good working relationships exist with numerous canal towns—Cumberland, Hancock, Williamsport, Sharpsburg, Shepherdstown, Harpers Ferry, Brunswick, and Point of Rocks. • Rivers, Trails, and Conservation Assistance Program grants support numerous partnerships and canal town-related programs. • Visitor-friendly experiences exist inside and outside the park boundaries. • Training and awareness within the surrounding communities about the park and numerous park users has had positive results. • Softening borders between the canal and the surrounding towns with a good signage program has been successful. <p>Trends</p> <ul style="list-style-type: none"> • Relationships with canal towns are getting stronger and are mutually beneficial. • Increased visitation to the park and the canal towns. • Towns are becoming advocates for the park as these communities realize their economic potential to partner with the park. • Continual changes in local zoning and future town management may impact the success of these partnerships. • Park management is focusing more attention on canal town communities, which serve as gateways to the park.



<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Shifting economic climate and long-term viability of these communities. • Funding constraints related to operating multiple visitor centers. • Increased competition from other regional tourism interests. • Climate change and associated influences on infrastructure and visitor use patterns (flooding, warmer temperatures, drought, nonnative species). <p>Opportunities</p> <ul style="list-style-type: none"> • Canal Town Partnership support for park program staffing. • Developing fully integrated signage and interpretation with all canal towns along the entire length of the park. • Town to town connectivity and the potential to increase partnerships between different groups (including potential ethnographic groups). • Increase advocacy, awareness, and recruitment of new volunteers. • Educational programming at elementary schools (i.e., 4th-grade Maryland history curriculum). • Town council meeting attendance and engagement with local governments.
<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • Inventory of local archives, museum, and photo collections. • Development of an extensive oral history program to include canal town stories.
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Comprehensive sign plan. • Comprehensive trail management plan. • Climate change scenario planning.
<p>Laws and Policies That Apply to the OIRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • None identified <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Director’s Order 75: <i>Civic Engagement and Public Involvement</i> • NPS <i>Management Policies 2006</i>, section 1.10, “Partnerships”



Other Important Resource or Value	Solitude
Relationship to Significance Statements	5. The Chesapeake and Ohio Canal National Historical Park provides diverse recreational opportunities for millions of visitors annually, including access to the Potomac River along its entire length, ranging from urban to rural settings.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Sections of the park remain rural and secluded, which continues to provide opportunities for solitude. • Conservation and agricultural easements continue to buffer the park from outside encroachment and noise. <p>Trends</p> <ul style="list-style-type: none"> • Increasing visitation and recreational use. • Regional growth and development continues in multiple areas adjacent to the park.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Encroachments from adjacent private land and public road uses can hinder opportunities for solitude in the park. • Desire for increased recreational opportunities and access to the Potomac River could potentially threaten some existing areas that provide solitude. • Increased demands by users seeking certain types of experiences may lead to conflicts with visitors seeking solitude. • Night skies pollution. • Sound pollution. <p>Opportunities</p> <ul style="list-style-type: none"> • Seek additional conservation and agricultural easements along the length of the canal to incorporate areas that may provide solitude for visitors. • Develop methods to disperse uses throughout the park.
Identified Data Needs	<ul style="list-style-type: none"> • Comprehensive visitor use study. • Comprehensive viewshed analysis. • Comprehensive community engagement strategic plan.
Identified Planning Needs	<ul style="list-style-type: none"> • Comprehensive trail management plan. • Comprehensive land protection plan (update).
Laws and Policies That Apply to the OIRV, and NPS Policy-level Guidance	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • None identified <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Director’s Order 47: <i>Soundscape Preservation and Noise Management</i> • <i>NPS Management Policies 2006</i>, section 8.2, “Visitor Use”

Other Important Resource or Value	Opportunity for Scholarship and Scientific Research
<p>Relationship to Significance Statements</p>	<p>3. The Chesapeake and Ohio Canal National Historical Park preserves archeological evidence of 13,000 years of human habitation along the Potomac River.</p> <p>6. The 15-mile-long Potomac Gorge, managed in part by the Chesapeake and Ohio Canal National Historical Park, is one of the most biologically diverse natural areas in the national park system.</p> <p>7. Paralleling the Potomac River for 184.5 miles and traveling through four physiographic provinces, the Chesapeake and Ohio Canal National Historical Park provides a natural buffer of forest, woodlands, prairies, and barrens and a wildlife corridor along the second largest tributary to the Chesapeake Bay.</p>
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Resource base provides expanded opportunities for study in many research disciplines. • The park is studying cave and karst resources more intensively.⁵ • Known paleontological resources are in stable condition (the majority of these resources are not yet threatened from visitor use, but social trails and associated erosion could become an impact). • Ecosystem complexity and variability in space and time make detection of long-term trends in climate and the environment difficult but necessary for resource preservation and protection. • The park lacks region-specific science on current and expected impacts from climate change. <p>Trends</p> <ul style="list-style-type: none"> • Ongoing flora and fauna studies are expanding the overall knowledge base and research breadth of the park. • Expanded knowledge of park resources is increasing the value of the interpretation and education programs. • The park is greatly expanding its knowledge base of paleontological, cave, and karst features. • The park manages, on average, 25–30 active research permits throughout the park annually.



⁵ A West Virginia University research project began in 2010. The study was completed in 2012 and provides information about conditions in park caves and maps of each resource.

<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Visitor use can cause unintended impacts near certain research sites. • Potential vandalism may occur at certain research sites. • Invasion of nonnative species makes the park a less desirable site for scientific research. <p>Opportunities</p> <ul style="list-style-type: none"> • Build relationships with outside organizations for research and exhibition of objects. • Strengthen research relationships with universities, high schools, academics, and others to develop effective management for park resources. • The park’s unique biological and physiological composition provide opportunities for climate change research, including plant and wildlife migration, invasive species trends, visitor use trends, and changes in hydrologic patterns in the Potomac River and local tributaries, springs, and seeps. • Monitoring park resources provides opportunities for citizen science. • Advanced paleontological and geologic research projects. • Numerous rare, threatened, and endangered species have been identified through researchers’ efforts, increasing the ability to protect these park populations. • Bat research in the former Western Maryland Railroad tunnels regarding prevention and spread of white-nose syndrome.
<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • Vulnerability assessments of species at risk. • Scenario planning for climate change.
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Resource stewardship strategy. (Additional planning needs would come from the resource stewardship strategy. The resource stewardship strategy would also provide decision makers at all organizational levels with the best available science and scholarship to understand novel conditions, threats, and risks to the park’s priority resources.) • State of the park report.
<p>Laws and Policies That Apply to the OIRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • None identified <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> <ul style="list-style-type: none"> • section 2.1.2, “Scientific, Technical, and Scholarly Analysis,” says decision makers and planners will use the best available scientific and technical information and scholarly analysis to identify appropriate management actions for protection and use of park resources • section 4.8.2.1, “Paleontological Resources and Their Contexts,” emphasizes inventory and monitoring; encourages scientific research; directs parks to maintain confidentiality of paleontological information • National Parks Omnibus Management Act of 1998 (16 USC 5937) adds a research component to the NPS mandate and protects the confidentiality of the nature and specific location of paleontological resources and objects • 36 CFR 2.1 (a)(1)(iii) prohibits destroying, injuring, defacing, removing, digging, or disturbing paleontological specimens • Paleontological Resources Preservation Act of 2009 (16 USC 470 et seq.) provides for management and protection of paleontological resources on federal lands

Other Important Resource or Value	Hydrologic Resources Including Riparian Areas
<p>Relationship to Significance Statements</p>	<p>6. The 15-mile-long Potomac Gorge, managed in part by the Chesapeake and Ohio Canal National Historical Park, is one of the most biologically diverse natural areas in the national park system.</p> <p>7. Paralleling the Potomac River for 184.5 miles and travelling through four physiographic provinces, the Chesapeake and Ohio Canal National Historical Park provides a natural buffer of forest, woodlands, prairies, and barrens and a wildlife corridor along the second largest tributary to the Chesapeake Bay.</p>
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Flood events are largely responsible for the park’s biological diversity, creating flood-adapted habitats such as floodplain forests and scourbars. • Floodplain habitat comprises approximately 85% of the park. • Variable—certain riparian areas within the park are in good condition, while others are threatened or degraded to various degrees. • The park has hundreds of acres of wetlands, but they have not been fully characterized. • Degraded groundwater conditions exist in Brunswick, Maryland, adjacent to the CSX Corp. rail yard (it is unknown if groundwater has been impacted by other CSX sites in the park or near the Garden State Tannery). <p>Trends</p> <ul style="list-style-type: none"> • Flood events continue to impact hydrologic resources, adding to the park’s long history of flooding along the Potomac River. • Variable—some threats have an accelerated potential to cause serious impacts to sensitive riparian resources (i.e., failure of aging municipal and industrial infrastructure near park boundaries), while ongoing threats, such as hazardous materials spills, are substantial concerns for managing riparian areas.
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • U.S. Army Corps of Engineers concrete impoundment at Chain Bridge Flats has disrupted hydrology and is impacting the rare plant communities that are dependent on the scour effect experienced during floods. • Point source pollution such as petrochemicals, hazardous materials spills, and various discharges from adjacent industrial and municipal activities (e.g., aging District of Columbia Water and Sewer Authority Potomac/Dulles interceptors and sewer lines can potentially fail, which could contaminate hydrologic resources). • Aging waterlines can lead to potential chlorine infusion, which would impact water quality and riparian habitat. • Climate change and associated influences on hydrologic resources (flooding, warmer temperatures, drought, nonnative species). • Water quality—there are various known pollution sources that may impact riparian integrity. • Areas of impounded water can cause erosion impacts due to wave action. • Nonpoint pollution impacts, such as toxic spills on adjacent highways and railways. • Nonnative invasive species proliferation. • Pests and diseases. • NPS development and maintenance can impact riparian areas.

<p>Threats and Opportunities (continued)</p>	<p>Opportunities</p> <ul style="list-style-type: none"> • General partnership opportunities to protect resources (i.e., federal, state, and local agencies and nongovernmental organizations). • Participation in regional initiatives (i.e., Chesapeake Bay Watershed Initiative) • Work with adjacent counties to develop watershed implementation plans and total maximum daily load pollutant levels. • Improve relationship with CSX Corp. (railroad) to monitor potential spills. • Improve relationships with industries along the Potomac River. • Improve relationship and response protocol with state troopers. • Continue to develop and implement wetland restoration efforts at appropriate locations in the park. • Continue to foster a water quality monitoring program in the park with local schools. • Conduct climate change monitoring studies. • Participate in NPS “A Call To Action” (item 22—Scaling Up [promote large landscape conservation]).
<p>Identified Data Needs</p>	<ul style="list-style-type: none"> • Wetland surveys. • Dam monitoring. • Updated plant surveys. • Inventory of water quality in high erosion streams. • Comprehensive wetland monitoring.
<p>Identified Planning Needs</p>	<ul style="list-style-type: none"> • Wetland restoration feasibility study. • Flood preparedness and response plan. • Aquatic invasive species management plan. • Further development of a water quality monitoring plan. • Climate change scenario planning. • Comprehensive sewage spills standard operating procedure. • Emergency response plans and protocol with key industries and agencies (especially CSX Corp. regarding potential railroad spills and District of Columbia Water and Sewer Authority regarding potential interceptor failure).
<p>Laws and Policies that Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Park-specific Laws or Policies</p> <ul style="list-style-type: none"> • <i>Superintendent’s Compendium</i>, section 2.1 <p>NPS Policy-level Conditions</p> <ul style="list-style-type: none"> • Executive Order 11990, “Protection of Wetlands” • Director’s Order 77: <i>Natural Resource Protection</i> • Endangered Species Act of 1973, as amended • <i>NPS Management Policies 2006</i> <ul style="list-style-type: none"> • section 2.1.2, “Scientific, Technical, and Scholarly Analysis,” says decision makers and planners will use the best available scientific and technical information and scholarly analysis to identify appropriate management actions for protection and use of park resources • section 4.6.1, “Protection of Surface Waters and Groundwaters” • section 4.6.3, “Water Quality” • section 4.6.5, “Wetlands” • section 4.6.6, “Watershed and Stream Processes”

Identification of Key Parkwide or Major Issues and Associated Planning and Data Needs

All parks face a variety of issues that must be addressed now or through future planning. An issue is a point or matter that must be decided. A key parkwide or major issue may raise questions regarding park purpose and significance, or there may be other questions of importance that, in the judgment of NPS staff, need to be addressed in future planning.

Following are key or major issues and associated planning and data needs for Chesapeake and Ohio Canal National Historical Park:

- **Regional Development.** With sections of the park near the Washington, D.C., metropolitan area, the Chesapeake and Ohio Canal National Historical Park staff faces many issues related to regional growth. The encroachment of new development and subdivisions continues to threaten park lands and surrounding viewsheds. Water runoff and potential impacts to water quality continue to be heavily influenced by regional development.
- **Flooding.** Historically, flooding and flood control have been major issues for the canal. Flood events will continue to challenge park management. Aging infrastructure and deferred maintenance on many of the canal locks, culverts, weirs, and the canal prism present ongoing challenges to control of flood impacts. Dam monitoring and safety are other important issues related to flood control. The District of Columbia Water and Sewer Authority Potomac/Dulles interceptors have aging infrastructure, which could affect park resources.
- **Invasive Species and Forest Diseases.** Nonnative and invasive species pose a challenge to the park and the management of its cultural and natural resources. Nonnative invasive plant species have overgrown many areas in the park and threaten not only native plant species and biodiversity, but also the stability of historic structures in the park. The deadly white-nose syndrome is likely to wipe out most of the bat populations in the park. The emerald ash borer beetle has been identified as an impending threat to plant species in the park and its presence has the potential to impact local ash trees.
- **Boundary Issues.** Spanning 184.5 miles, the Chesapeake and Ohio Canal National Historical Park is a linear park whose boundaries range from dense urban centers to rural landscapes. This long and narrow park boundary presents numerous management challenges as the park covers multiple jurisdictions. Boundary issues impact multiple jurisdictions. The park also manages numerous scenic and agricultural easements that require administrative time and resources.
- **Increasing Recreational Demands.** Lying parallel to the Potomac River, the Chesapeake and Ohio Canal National Historical Park faces increased demands for recreational use and river access. In addition to the towpath's popularity and regionally important recreation values, the path provides access to several regional trail systems. The park also provides key public access points to the Potomac River. Demand for river and trail access continues to increase.



Prioritization of Planning and Data Needs

This section prioritizes the need for future plans and studies or research for Chesapeake and Ohio Canal National Historical Park. It provides a comprehensive review and prioritization of plans and data needed to maintain and protect the park's fundamental (and other important) resources and values, as well as address key parkwide and other major issues. The planning and data needs were ranked according to several criteria, which are described below. Based on these criteria, plans and studies were grouped into categories of high, medium, and low. This information will be used by parks, regional offices, and the NPS Washington Office to determine priorities and consider the future funding needs of the park unit.

Related to an FRV?	Data Needs	Priority (H, M, L)	Notes
Yes	Sign inventory and assessment	High	<ul style="list-style-type: none"> Inventory and assessment can be completed by Chesapeake and Ohio Canal National Historical Park staff. Note: Comprehensive sign plan would follow the inventory and assessment.
Yes	Western Maryland Railroad Tunnels – bat study	High	<ul style="list-style-type: none"> Research is ongoing with U.S. Fish and Wildlife Service and the State of Maryland. State of Maryland has obtained NPS research permits.
Yes	Inventory of rare, threatened, and endangered species	High	
Yes	Inventory and map nonnative invasive species to inform parkwide management	High	
No	Comprehensive boundary survey	High	<ul style="list-style-type: none"> Ongoing need. Staffing limitations disrupt continuity and create challenges for completing this task.
Yes	Trail counters on Olmsted Bridge	Medium–High	<ul style="list-style-type: none"> Purpose is to obtain visitation data at viewpoint.
Yes	Campground / day use inventory and assessment	Medium–High	
No	Right-of-way inventory	Medium–High	<ul style="list-style-type: none"> Timing issue. Needs constant updating.
Yes	Comprehensive visitor use study	Medium	<ul style="list-style-type: none"> Would include parkwide user capacity analysis.
Yes	Administrative history (update)	Medium	<ul style="list-style-type: none"> Update existing document.

Related to an FRV?	Data Needs	Priority (H, M, L)	Notes
Yes	Parkwide rare, threatened, and endangered plant study	Medium	<ul style="list-style-type: none"> • Park needs to update its baseline data for rare, threatened, and endangered plant species populations (ongoing).
Yes	Vulnerability assessment of species at risk	Medium	
No	User capacity analysis	Medium	<ul style="list-style-type: none"> • Would include a parkwide analysis. • Analysis would focus on towpath capacity.
Yes	Historic structure reports / assessments	Low–High (range)	<ul style="list-style-type: none"> • High priority for structures facing immediate threats. • High priority structures include: Ferry Hill, Towpath, Lockhouse, Paw Paw Tunnel.
Yes	Cultural landscape inventories	Low–High (range)	<ul style="list-style-type: none"> • High priority for cultural landscapes facing immediate threats. • High priority areas include: Hancock. • Medium priority areas include: Carolton Manor Farms; Chesapeake and Ohio Canal; Cumberland; and the Western Maryland Rail Trail. • Low priority areas include: Abner Cloud House; Antietam Village; Ferry Hill; Fort Duncan / Christian Smith; Farmstead; Oldtown; Point of Rocks; and Two Locks.
Yes	Cultural landscape reports	Low–High (range)	<ul style="list-style-type: none"> • High priority for cultural landscapes facing immediate threats. • High priority areas include: Four Locks.
Yes	Engineering reports – national register structures	Low–High (range)	<ul style="list-style-type: none"> • High priority for national register structures facing immediate threats.
Yes	Comprehensive viewshed analysis	Low	<ul style="list-style-type: none"> • Analysis would include a detailed evaluation of the Harpers Ferry viewshed.
Yes	Aerial GIS analysis of adjacent land uses	Low	
Yes	Comprehensive wildlife survey	Low	
Yes	Comprehensive wetland monitoring	Low	
No	Inventory of water quality in high erosion streams	Low	<ul style="list-style-type: none"> • Inventory would address water quality and quantity issues. • Inventory would indicate federal standards.

Related to an FRV?	Data Needs	Priority (H, M, L)	Notes
Yes	Ethnographic overview and assessment / resource report	Low	<ul style="list-style-type: none"> • Park needs to know of regional ethnographer availability. • Report would include background research on descendants identification. • Report would attempt to fill data gaps related to ethnographies of locks and lockkeepers; research needed at National Archives. • Report would include oral history program to include canal town stories.
Yes	Enhancing Visitor Experience at Hancock, MD, Mile 122.12 – 124.59 – Environmental Assessment	(Ongoing)	<ul style="list-style-type: none"> • Analyzing wetland data is one of the primary needs for this area of the park. • Plan is currently in compliance stages.
Yes	Updated plant surveys	(Ongoing)	<ul style="list-style-type: none"> • Surveys need to be updated.
No	Document phenology and compile historic data to identify trends within the park attributed to climate change	Medium	
No	Dam monitoring	Medium	

Related to an FRV?	Planning Needs	Priority (H, M, L)	Notes
Yes	Resource stewardship strategy (RSS)	High	<ul style="list-style-type: none"> • RSS would include comprehensive, parkwide, desired conditions for key resources. • RSS would include climate change scenarios.
Yes	Canal quarters environmental assessment	High	<ul style="list-style-type: none"> • Plan is in process.
Yes	Park strategic plan	High	<ul style="list-style-type: none"> • Component of NPS "A Call To Action."
Yes	Wetland restoration feasibility study	High	<ul style="list-style-type: none"> • Noted as the first step in the Hancock environmental assessment. • Potential wetland restoration activities would impact other park projects and plans.
Yes	Comprehensive sewage spills SOP	High	<ul style="list-style-type: none"> • Critical need to ensure protection of municipal resources. • Plan can be completed by Chesapeake and Ohio Canal National Historical Park staff.
Yes	Emergency response protocol with industrial neighbors	High	<ul style="list-style-type: none"> • Plan would include emergency response protocol with neighboring industries, such as the railroad, highway departments, power plants, water treatment plants, utilities operators, and other neighbors that utilize rights-of-way within or adjacent to park boundaries.
Yes	Deer management plan	High	<ul style="list-style-type: none"> • Plan would respond to requests by local jurisdictions for management action. • Deer overabundance triggers safety issues (regional management issue). • Deer overabundance has high impact on regional vegetation dynamics.
Yes	Climate Change Scenario Planning	Medium	<ul style="list-style-type: none"> • To occur in conjunction with the resource stewardship strategy.
Yes	Museum collections condition assessment	Medium	<ul style="list-style-type: none"> • Assessment would address condition of museum collections. • Assessment would address deficiencies in the handling and storage of the collections.
Yes	Comprehensive emergency access assessment	Medium	<ul style="list-style-type: none"> • Plan would respond to requests of local jurisdictions and neighboring NPS units for action on emergency access issues. • Plan would address use of boat ramps for search and rescue operations. • Plan would address access improvements.

Related to an FRV?	Planning Needs	Priority (H, M, L)	Notes
Yes	Comprehensive sign plan	Medium	<ul style="list-style-type: none"> Plan would be developed after sign inventory and assessment is completed. Goal is to incorporate consistent signage parkwide and reduce signage where appropriate.
Yes	Collections management plan	Medium	<ul style="list-style-type: none"> Park does not possess core museum documents.
Yes	Archeological management plan	Medium	<ul style="list-style-type: none"> Extensive inventory is complete. Park has good baseline data.
Yes	Comprehensive trail management plan	Medium	<ul style="list-style-type: none"> Plan would include analysis of the USGS/Jeff Marion's trail study (2010). Plan would address strategies related to managing social trail impacts. Plan would include comprehensive inventory of unauthorized trails. Note: park has submitted Project Management Information System funding statement and has indicated concerns about impacts during large events in the Great Falls area. Plan would address trail connections, signs, and continuity with regional and local trail plans. Plan would adhere to outdoor trail standards.
Yes	Vegetation management plan	Medium	<ul style="list-style-type: none"> Plan would include parkwide desired conditions. Management strategies would integrate with potential development of an RSS.
Yes	Carderock climbing management plan	Medium	<ul style="list-style-type: none"> Seek joint funding for plan with George Washington Memorial Parkway.
No	Flood preparedness and response plan	Medium	
No	Comprehensive land protection plan (update)	Medium	<ul style="list-style-type: none"> Update existing plan. Limited funds available for acquisitions.
No	Scenic byway corridor management plan	Medium	<ul style="list-style-type: none"> Park has requested funding assistance.
Yes	Interpretive development plans	Low-High (range)	<ul style="list-style-type: none"> Williamsport is a high priority. Hancock is a low priority. Tier from the long-range interpretive plan (2010).

Related to an FRV?	Planning Needs	Priority (H, M, L)	Notes
Yes	Whites Ferry day use development concept plan	Low	
Yes	Buildings utilization plan (completion)	(Ongoing)	<ul style="list-style-type: none"> • Ongoing, draft plan began production in 2010. • Compliance challenges in the section 106 process have stalled completion of a final plan. • Potential building removals and safety and maintenance considerations remain concerns.
No	Park asset management plan	(Ongoing)	<ul style="list-style-type: none"> • Plan is in process.
No	Diversity and inclusion plan	(Ongoing)	<ul style="list-style-type: none"> • Plan is in process. • Plan includes outreach and employment objectives.
No	Canal place master plan (update)	(Ongoing)	<ul style="list-style-type: none"> • This planning effort is underway.
No	Further development of a water quality monitoring plan	Medium	
No	Aquatic invasive species management plan	High	

Part 3: Preparers, Consultants, and Workshop Attendees

This foundation document was developed as a joint effort among park staff, the Denver Service Center Planning Division, and the NPS National Capital Region. A workshop was held from June 20–22, 2012, at park headquarters in Hagerstown, Maryland.

Workshop Attendees

Chesapeake and Ohio Canal National Historical Park

- John Adams, Safety Officer
- Kevin Brandt, Superintendent
- Brian Carlstrom, Deputy Superintendent
- Michelle Carter, Natural Resources Program Manager
- Brad Clawson, Chief Ranger
- Josh Cunningham, Law Enforcement
- Danny Filer, Volunteer Coordinator
- Curt Gaul, Western District Interpretive Ranger
- Peggie Gaul, Youth Programs Coordinator
- John Hitchcock, Planner
- Dave Hixon, Acting Chief of Maintenance
- Rebecca Jameson, Acting Palisades Supervisory Ranger
- Hollie Lynch, Education Coordinator
- Rick McDonald, Maintenance Supervisor
- John Noel, Chief of Interpretation and Education
- Mike O’Connell, Environmental Protection Specialist
- Todd Stanton, Law Enforcement
- TJ Stottlemeyer, Engineering Technician
- Chris Stubbs, Chief of Resources Management
- Lynne Wigfield, Compliance Officer
- Ahna Wilson, Cultural Resource Program Manager

National Capital Region

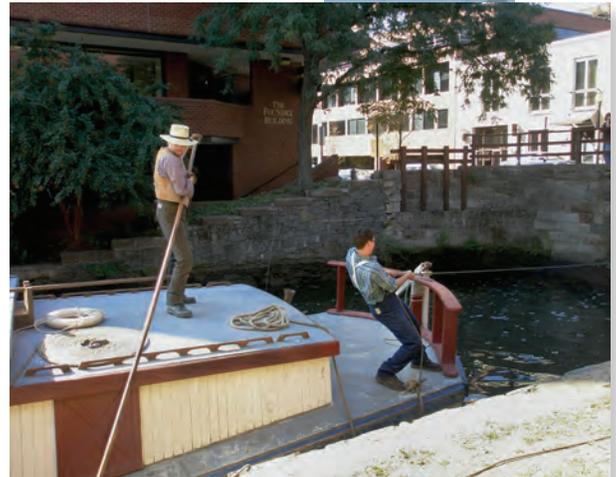
- Sue Hansen, Chief of Interpretation
- David Hayes, Regional Planner
- Mike O’Connell, Environmental Protection Specialist

Preparers

- Greg Jarvis, Project Manager,
NPS Denver Service Center Planning Division
- Steve DeGrush, Natural Resource Specialist,
NPS Denver Service Center Planning Division
- Justin Henderson, Cultural Resource Specialist,
NPS Denver Service Center Planning Division

Consultants

- Nancy Shock, Foundation Coordinator,
WASO Park Planning and Special Studies
- Pam Holtman, Quality Assurance Coordinator,
WASO Park Planning and Special Studies
- Melody Bentfield, Contract Librarian,
NPS Denver Service Center Planning Division



Appendix A: Enabling Legislation for Chesapeake and Ohio Canal National Historical Park



Chapter I—Proclamations

Proc. 3391

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this 18th day of January in the year of our Lord nineteen hundred and [SEAL] sixty-one, and of the Independence of the United States of America the one hundred and eighty-fifth.

DWIGHT D. EISENHOWER

By the President:

CHRISTIAN A. HERTER,
Secretary of State.

Proclamation 3391

ESTABLISHING THE CHESAPEAKE AND OHIO CANAL NATIONAL MONUMENT, MARYLAND

WHEREAS by deed of September 23, 1938, the United States acquired from the Receivers of the Chesapeake and Ohio Canal Company certain lands, together with all appurtenances thereunto belonging, known as the Chesapeake and Ohio Canal; and

WHEREAS since September 23, 1938, such lands have been administered and protected by the Department of the Interior through the National Park Service; and

WHEREAS, by section 2 of the act of Congress approved June 8, 1906 (34 Stat. 225), the President of the United States is authorized "in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and may reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected"; and

WHEREAS the Chesapeake and Ohio Canal is of historic and scientific interest, and historic structures and objects of scientific interest are situated upon the lands thereof:

NOW, THEREFORE, I, DWIGHT D. EISENHOWER, President of the United States of America, by virtue of the authority vested in me by section 2 of the

act of June 8, 1906, 34 Stat. 225 (16 U.S.C. 431), do proclaim that, subject to valid existing rights, there is hereby reserved and set apart as a national monument, to be known as the Chesapeake and Ohio Canal National Monument, that portion of the property now owned by the United States and acquired by it under the said deed of September 23, 1938, which extends from Cumberland, Maryland, to a location 100 feet downstream from the first culvert above the Seneca aqueduct, the monument hereby established containing approximately 4,800 acres.

The said deed of September 23, 1938, is recorded in the land records of the County of Allegany, Maryland, in Book R.J. No. 181 at Folio 603, of the County of Washington, Maryland, in Book No. 207 at Folio 575, of the County of Frederick, Maryland, in Book No. 414 at Folio 245 fc., and of the County of Montgomery, Maryland, in Book No. 638 at Folio 76. Detailed maps of the Chesapeake and Ohio Canal property, consisting of 15 rolls prepared by B. F. Mackall, are on file with the Director, National Park Service, Washington, D.C., and the Superintendent of the Chesapeake and Ohio Canal Project in Hagerstown, Maryland.

Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, deface, or remove any feature of this monument and not to locate or settle upon any of the lands reserved by this proclamation.

The Chesapeake and Ohio Canal National Monument shall be supervised, managed, and controlled in accordance with the act of Congress entitled "An Act To Establish a National Park Service, and for Other Purposes," approved August 25, 1916 (39 Stat. 535), and acts supplementary thereto and amendatory thereof, including the act of September 22, 1950 (64 Stat. 905), and the act of August 1, 1953 (67 Stat. 359).

Nothing in this proclamation is intended to prejudice the use of the Chesapeake and Ohio Canal National Monument for such works as the Congress may hereafter authorize for municipal and domestic water supply, navigation, flood control, drainage, recreation, or other beneficial purposes.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this eighteenth day of January in the year of our Lord nineteen hundred and [SEAL] sixty-one and of the Independence of the United States of America the one hundred and eighty-fifth.

DWIGHT D. EISENHOWER

By the President:

CHRISTIAN A. HERTER,
Secretary of State.

1978

PUBLIC LAW 91-664—JAN. 8, 1971

[84 STAT.]

GUARANTEE FEES

SEC. 9. The Secretary shall prescribe a guarantee fee in connection with each loan guaranteed under this Act which shall be collected from the railroad upon repayment of the loan guaranteed. Such fee shall be in an amount that the Secretary estimates to be necessary to cover the administrative costs of carrying out the provisions of this Act with respect to such loan. Sums realized from such fees shall be deposited in the Treasury as miscellaneous receipts.

REPORTS

Annual reports to President and Congress.

SEC. 10. The Secretary shall make an annual report to the President and the Congress with respect to his activities pursuant to this Act, including an evaluation of the financial conditions of railroads which have outstanding certificates guaranteed under this Act. The Secretary shall also make a report to the President and the Congress on the financial condition of each railroad having a loan guaranteed under this Act ninety days after the making of such guarantee and annually thereafter throughout the existence of such loan.

Approved January 8, 1971.

Public Law 91-664

AN ACT

January 8, 1971
[H. R. 19342]

To establish and develop the Chesapeake and Ohio Canal National Historical Park, and for other purposes.

Chesapeake and Ohio Canal Development Act.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act shall be known as the "Chesapeake and Ohio Canal Development Act".

DEFINITIONS

SEC. 2. As used in this Act—

- (a) "Park" means the Chesapeake and Ohio Canal National Historical Park, as herein established.
- (b) "Canal" means the Chesapeake and Ohio Canal, including its towpath.
- (c) "Secretary" means the Secretary of the Interior.
- (d) "State" means any State, and includes the District of Columbia.
- (e) "Local government" means any political subdivision of a State, including a county, municipality, city, town, township, or a school or other special district created pursuant to State law.
- (f) "Person" means any individual, partnership, corporation, private nonprofit organization, or club.
- (g) "Landowner" means any person, local government, or State owning, or on reasonable grounds professing to own, lands or interests in lands adjacent to or in the vicinity of the park.

ESTABLISHMENT OF PARK

Boundaries.

SEC. 3. (a) In order to preserve and interpret the historic and scenic features of the Chesapeake and Ohio Canal, and to develop the potential of the canal for public recreation, including such restoration as may be needed, there is hereby established the Chesapeake and Ohio Canal National Historical Park, in the States of Maryland and West Virginia and in the District of Columbia. The park as initially established shall comprise those particular properties in Federal ownership, containing approximately five thousand

two hundred and fifty acres, including those properties along the line of the Chesapeake and Ohio Canal in the State of Maryland and appurtenances in the State of West Virginia designated as the Chesapeake and Ohio Canal National Monument, and those properties along the line of the Chesapeake and Ohio Canal between Rock Creek in the District of Columbia and the terminus of the Chesapeake and Ohio Canal National Monument near the mouth of Seneca Creek in the State of Maryland. The boundaries of the park shall be as generally depicted on the drawing entitled "Boundary Map, Proposed Chesapeake and Ohio Canal National Historical Park," in five sheets, numbered CHOH 91,000, and dated October 1969, which is on file and available for public inspection in the offices of the National Park Service, Department of the Interior: *Provided*, That no lands owned by any State shall be included in the boundaries of the park—

(1) unless they are donated to the United States, or

(2) until a written cooperative agreement is negotiated by the Secretary which assures the administration of such lands in accordance with established administrative policies for national parks, and

(3) until the terms and conditions of such donation or cooperative agreement have been forwarded to the Committees on Interior and Insular Affairs of the United States House of Representatives and Senate at least sixty days prior to being executed.

The exact boundaries of the park shall be established, published, and otherwise publicized within eighteen months after the date of this Act and the owners of property other than property lying between the canal and the Potomac River shall be notified within said period as to the extent of their property included in the park.

(b) Within the boundaries of the park, the Secretary is authorized to acquire lands and interests therein by donation, purchase with donated or appropriated funds, or exchange, but he shall refrain from acquiring, for two years from the date of the enactment of this Act, any lands designated on the boundary map for acquisition by any State if he has negotiated and consummated a written cooperative agreement with such State pursuant to subsection (a) of this section.

COOPERATIVE AGREEMENTS

SEC. 4. The Secretary shall take into account comprehensive local or State development, land use, or recreational plans affecting or relating to areas in the vicinity of the canal, and shall, wherever practicable, consistent with the purposes of this Act, exercise the authority granted by this Act in a manner which he finds will not conflict with such local or State plans.

ACCESS

SEC. 5. (a) The enactment of this Act shall not affect adversely any valid rights heretofore existing, or any valid permits heretofore issued, within or relating to areas authorized for inclusion in the park.

(b) Other uses of park lands, and utility, highway, and railway crossings, may be authorized under permit by the Secretary, if such uses and crossings are not in conflict with the purposes of the park and are in accord with any requirements found necessary to preserve park values.

(c) Authority is hereby granted for individuals to cross the park by foot at locations designated by the Secretary for the purpose of gaining access to the Potomac River or to non-Federal lands for hunting purposes: *Provided*, That while such individuals are within

1980

PUBLIC LAW 91-664—JAN. 8, 1971

[84 STAT.

the boundaries of the park firearms shall be unloaded, bows unstrung, and dogs on leash.

ADVISORY COMMISSION

Establishment.

SEC. 6. (a) There is hereby established a Chesapeake and Ohio Canal National Historical Park Commission (hereafter in this section referred to as the "Commission").

(b) The Commission shall be composed of nineteen members appointed by the Secretary for terms of five years each, as follows:

(1) Eight members to be appointed from recommendations submitted by the boards of commissioners or the county councils, as the case may be, of Montgomery, Frederick, Washington, and Allegany Counties, Maryland, of which two members shall be appointed from recommendations submitted by each such board or council, as the case may be;

(2) Eight members to be appointed from recommendations submitted by the Governor of the State of Maryland, the Governor of the State of West Virginia, the Governor of the Commonwealth of Virginia, and the Commissioner of the District of Columbia, of which two members shall be appointed from recommendations submitted by each such Governor or Commissioner, as the case may be; and

(3) Three members to be appointed by the Secretary, one of whom shall be designated Chairman of the Commission and two of whom shall be members of regularly constituted conservation organizations.

(c) Any vacancy in the Commission shall be filled in the same manner in which the original appointment was made.

(d) Members of the Commission shall serve without compensation, as such, but the Secretary is authorized to pay, upon vouchers signed by the Chairman, the expenses reasonably incurred by the Commission and its members in carrying out their responsibilities under this Act.

(e) The Secretary, or his designee, shall from time to time but at least annually, meet and consult with the Commission on general policies and specific matters related to the administration and development of the park.

(f) The Commission shall act and advise by affirmative vote of a majority of the members thereof.

(g) The Commission shall cease to exist ten years from the effective date of this Act.

ADMINISTRATION AND APPROPRIATIONS

SEC. 7. The Chesapeake and Ohio Canal National Historical Park shall be administered by the Secretary of the Interior in accordance with the Act of August 25, 1916 (30 Stat. 535; 16 U.S.C. 1, 2-4), as amended and supplemented.

39 Stat. 535.

SEC. 8. (a) Any funds that may be available for purposes of administration of the Chesapeake and Ohio Canal property may hereafter be used by the Secretary for the purposes of the park.

(b) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act, not to exceed \$20,400,000 for land acquisition and not to exceed \$17,000,000 (1970 prices) for development, plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuations in construction costs as indicated by engineering cost indices applicable to the types of construction involved herein.

Approved January 8, 1971.





Appendix B: Related Federal Legislation, Regulations, and Executive Orders

Legislation and Acts

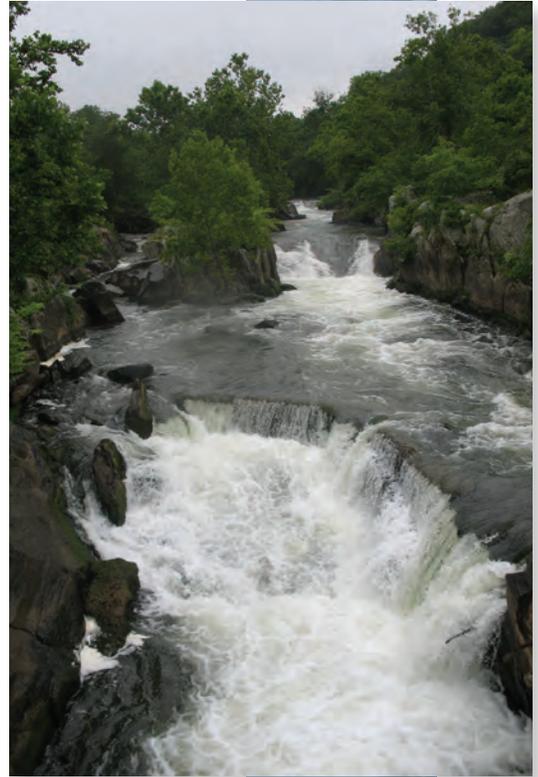
Archeological and Historical Preservation Act of 1974
Archeological Resources Protection Act of 1979
Clean Air Act of 1977
Clean Water Act of 1972
Comprehensive Environmental Response and Compensation and Liability Act (CERCLA) of 1984, as amended
Department of Transportation Act of 1966
Endangered Species Act of 1973, as amended
Historic Sites Act of 1935
National Environmental Policy Act of 1969
National Historic Preservation Act of 1966, as amended
National Parks Omnibus Management Act of 1998
NPS Organic Act of 1916
National Trust Act of 1949
Native American Graves Protection and Repatriation Act of 1990
Oil Protection Act of 1990
Redwood Act of 1978, amending the NPS Organic Act
Resource Conservation and Recovery Act (RCRA) of 1976, as amended

Code of Federal Regulations

Title 36, Chapter 1, Part 1, General Provisions
Title 36, Chapter 1, Part 2, Resource Protection, Public Use, and Recreation
Title 36, Chapter 1, Part 4, Vehicles and Traffic Safety
Title 36, Chapter 1, Part 5, Commercial and Private Operations

Executive Orders

Executive Order 11514, “Protection and Enhancement of Environmental Quality”
Executive Order 11593, “Protection and Enhancement of the Cultural Environment”
Executive Order 11988, “Floodplain Management”
Executive Order 11990, “Protection of Wetlands”
Executive Order 12003, “Energy Policy and Conservation”
Executive Order 12088, “Federal Compliance with Pollution Control Standards”
Executive Order 12372, “Intergovernmental Review of Federal Programs”
Executive Order 12898, “General Actions to Address Environmental Justice in Minority Populations and Low-Income Population”
Executive Order 13007, “Indian Sacred Sites”
Executive Order 13112, “Invasive Species”
Executive Order 13175, “Consultation and Coordination with Indian Tribal Governments”
Executive Order 13186, “Responsibilities of Federal Agencies to Protect Migratory Birds”
Executive Order 13352, “Facilitation of Cooperative Conservation”
Executive Order 13423, “Strengthening Federal Environmental, Energy, and Transportation Management”



NPS Management Policies 2006

NPS Director's Orders

- Order 6: Interpretation and Education*
- Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making and DO-12 Handbook*
- Order 18: Wildland Fire Management*
- Order 24: NPS Museum Collections Management*
- Order 28: Cultural Resource Management*
- Order 47: Soundscape Preservation and Noise Management*
- Order 77: Natural Resource Protection*
- Order 77-1: Wetland Protection*
- Order 77-2: Floodplain Management*
- Order 77-8: Endangered Species*

Appendix C: Inventory of Special Mandates and Administrative Commitments

Special Mandates

Name	Mandate Type	Start Date	Expiration Date	Stakeholders	Purpose
Scenic easements	Covenant	Perpetual	Perpetual	Adjacent landowners	<ul style="list-style-type: none"> Protect park viewsheds
Utility rights-of-way	Right-of-way; authorized by legislation	Varies	Varies	Utilities	<ul style="list-style-type: none"> Allow utilities to cross park boundaries

Administrative Commitments

Name	Agreement Type	Start Date	Expiration Date	Stakeholders	Purpose
Canal Place	Cooperative agreement	2011	2016	Canal Place Authority (a Maryland Heritage Area)	<ul style="list-style-type: none"> Cooperate on planning for Canal Place area; transfer funds for planning process
Bear Island	General agreement	10/15/2012	10/15/2017	The Nature Conservancy	<ul style="list-style-type: none"> Establish cooperative management of co-owned portion of Bear Island
Western Maryland Rail Trail	Cooperative agreement	11/2000	11/2025	Maryland Department of Natural Resources	<ul style="list-style-type: none"> Establish maintenance and law enforcement on the rail trail
Capital Crescent Trail					
Agricultural use permits	Special use permit	Varies	3–5 years	Farmers	<ul style="list-style-type: none"> Protect historic viewsheds
Leasing historic structures	Lease	Varies	Varies	Local citizens, adjoining governmental bodies	<ul style="list-style-type: none"> Protect historic structures
Canal Trust	Cooperative agreement	9/11/12	9/11/17	C&O Canal Trust	<ul style="list-style-type: none"> Establish cooperative agreement to support park programs
Canal quarters cooperative agreement	Cooperative agreement	7/7/12	8/6/17	C&O Canal Trust	<ul style="list-style-type: none"> Establish cooperative management of canal quarters
Friends agreement	General agreement	12/10/08	12/10/13	C&O Canal Trust	<ul style="list-style-type: none"> Establish friends agreement

Name	Agreement Type	Start Date	Expiration Date	Stakeholders	Purpose
Abner Cloud House	Cooperative agreement	2008	2033	Colonial Dames of America	<ul style="list-style-type: none"> Establish maintenance and use of the Abner Cloud House
Lockhouse 8	General agreement	8/2001	8/2026	Potomac Conservancy	<ul style="list-style-type: none"> Establish maintenance and use of Lockhouse 8
Eelways	Interagency agreement	8/1/2011	12/31/2016	U.S. Fish and Wildlife Service	<ul style="list-style-type: none"> Develop, maintain, and monitor eel passages on dams 4 and 5
Maintenance for seven Georgetown bridges	Maintenance	About 1940	Never, unless rights to bridges are transferred to the National Park Service	District of Columbia (District Department of Transportation)	<ul style="list-style-type: none"> Maintenance agreement
Cooperative land management	(Not formalized)	(Not established)	(Not established)	George Washington Memorial Parkway	<ul style="list-style-type: none"> Shared management of adjacent parcels
Hydroelectric power generation on dams 4 and 5	Supplemental agreement	1/1/2010	12/31/2019	Potomac Edison	<ul style="list-style-type: none"> Allow use of historic dams for power generation, including maintenance of dams
Washington Canoe Club	Lease	6/2012	6/2013	NPS Director, Washington Canoe Club, Old Georgetown Board	<ul style="list-style-type: none"> Allow club use of certain parts of clubhouse and surrounding clubhouse grounds
Washington Field Biologists Club	General agreement	3/5/1959	(Expires only if the club terminates or if it violates the terms of the general agreement)	Washington Field Biologists Club, scientific community, Patuxent wildlife research center, USGS	<ul style="list-style-type: none"> Allow club use of the island for scientific research

Name	Agreement Type	Start Date	Expiration Date	Stakeholders	Purpose
Law enforcement	Jurisdictional agreements	2012	2017	Allegany County, Washington County, Frederick County, Montgomery County governments, State of Maryland	<ul style="list-style-type: none"> • Agreements that grants concurrent jurisdiction to county law enforcement agencies on parkland with their prospective counties
National Capital Planning Commission	Project review agreement	None	Never	Montgomery County, towns within county	<ul style="list-style-type: none"> • Any work within jurisdiction of group on park lands must be presented for approval
Old Georgetown Board	Project review agreement	None	Never	Georgetown community, Washington, D.C.	<ul style="list-style-type: none"> • Any work within jurisdiction of group on park lands must be presented for approval
Maryland-National Capital Park and Planning Commission (MNCPPC)	Project review agreement	None	Never	MNCPPC, Montgomery County	<ul style="list-style-type: none"> • Any work within jurisdiction of group on park lands must be presented for approval
U.S. Commission of Fine Arts	Project review agreement	None	Never	Georgetown, Washington, D.C., community	<ul style="list-style-type: none"> • Any work within jurisdiction of group on park lands must be presented for approval
Girl Scouts of the United States of America	Informal agreement	None	None	Girl Scouts of the United States of America	<ul style="list-style-type: none"> • Living history programs at Riley's Lockhouse



**National Capital Region Foundation Document Recommendation
Chesapeake and Ohio Canal National Historical Park**

June 2013

This Foundation Document has been prepared as a collaborative effort between park and regional staff and is recommended for approval by the National Capital Regional Director.

Kevin J. Bantz
RECOMMENDED
Superintendent, Chesapeake and Ohio Canal National Historical Park

June 15, 2013
Date

John E. White
APPROVED
Regional Director, National Capital Region

July 26, 2013
Date



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

CHOH 412/119725

July 2013

Foundation Document • Chesapeake and Ohio Canal National Historical Park

