



Foundation Document

Hopewell Furnace National Historic Site

Pennsylvania

July 2017



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
Fundamental Resources and Values	6
Other Important Resources and Values	7
Interpretive Themes	8
Part 2: Dynamic Components	9
Special Mandates and Administrative Commitments	9
Special Mandates.	9
Administrative Commitments.	10
Assessment of Planning and Data Needs	10
Analysis of Fundamental Resources and Values	10
Analysis of Other Important Resources and Values	26
Identification of Key Issues and Associated Planning and Data Needs	30
Planning and Data Needs	32
Part 3: Contributors	37
Hopewell Furnace National Historic Site	37
NPS Northeast Region	37
Other NPS Staff	37
Appendixes	38
Appendix A: Secretarial Order and Subsequent Amendment for Hopewell Furnace National Historic Site.	38
Appendix B: Northeast Region Interpretive Theme Matrix	39
Appendix C: History of Historic Structures at Hopewell Furnace National Historic Site	45



Mission of the National Park Service

The National Park Service (NPS) preserves 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 cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The NPS core values are a 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 NPS core values are:

- **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 Service is a bureau within the Department of the Interior. While numerous national park system units were created prior to 1916, it was not until August 25, 1916, that President Woodrow Wilson signed the National Park Service Organic Act formally establishing the National Park Service.

The national park system continues to grow and comprises more than 400 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 units include, but are not limited to, national parks, 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 park units throughout the nation require a strong commitment to resource stewardship and management to ensure both the protection and enjoyment of these resources for future generations.



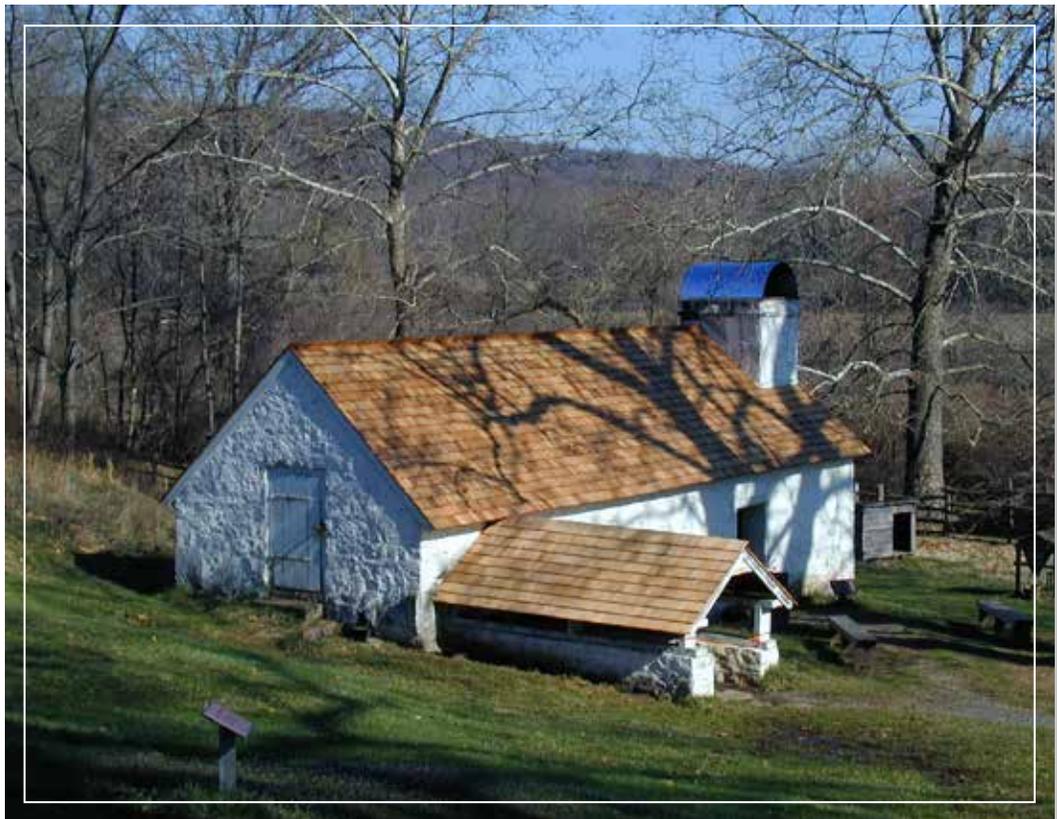
The arrowhead was authorized as the official National Park Service emblem by the Secretary of the Interior on July 20, 1951. The sequoia tree and bison represent vegetation and wildlife, the mountains and water represent scenic and recreational values, and the arrowhead represents historical and archeological values.

Introduction

Every unit of the national park system will have a foundational document to provide basic guidance for planning and management decisions—a foundation for planning and management. The core components of a foundation document include a brief description of the park as well as the park’s purpose, significance, fundamental resources and values, other important resources and values, and interpretive themes. The foundation document also includes special mandates and administrative commitments, an assessment of planning and data needs that identifies planning issues, planning products to be developed, and the associated studies and data required for park planning. Along with the core components, the assessment provides a focus for park planning activities and establishes a baseline from which planning documents are developed.

A primary benefit of developing a foundation document is the opportunity to integrate and coordinate all kinds and levels of planning from a single, shared understanding of what is most important about the park. The process of developing a foundation document begins with gathering and integrating information about the park. Next, this information is refined and focused to determine what the most important attributes of the park are. The process of preparing a foundation document aids park managers, staff, and the public in identifying and clearly stating in one document the essential information that is necessary for park management to consider when determining future planning efforts, outlining key planning issues, and protecting resources and values that are integral to park purpose and identity.

While not included in this document, a park atlas is also part of a foundation project. The atlas is a series of maps compiled from available geographic information system (GIS) data on natural and cultural resources, visitor use patterns, facilities, and other topics. It serves as a GIS-based support tool for planning and park operations. The atlas is published as a (hard copy) paper product and as geospatial data for use in a web mapping environment. The park atlas for Hopewell Furnace National Historic Site can be accessed online at: <http://insideparkatlas.nps.gov/>.



Part 1: Core Components

The core components of a foundation document include a brief description of the park, park purpose, significance statements, fundamental resources and values, other important resources and values, and interpretive themes. These components are core because they typically do not change over time. Core components are expected to be used in future planning and management efforts.

Brief Description of the Park

Hopewell Furnace National Historic Site encompasses 848 acres of land in southeastern Pennsylvania and is surrounded by French Creek State Park. The furnace site straddles the border between Berks and Chester Counties and stands astride French Creek, a tributary of the Schuylkill River, which flows from the Appalachian Mountains across the Pennsylvania Piedmont and empties into the Delaware River at Philadelphia, 40 miles from Hopewell.

Southeastern Pennsylvania had already become known for its furnaces, forges, and bloomeries by the time Mark Bird began his iron-making operations at Hopewell about 1771. Bird actively supported the American Revolution and served as deputy quartermaster for the Continental Army, and it is likely that Hopewell Furnace supplied cannon and shot for the American forces. Due to the financial difficulties of Bird and other early owners, Hopewell Furnace was sold several times in the 18th century before being purchased by the Buckley and Brooke families in 1800. These families retained ownership of the property until the federal government purchased it in 1935. The furnace reached its peak of production and prosperity during the 1830s under the direction of manager Clement Brooke and went out of blast for the final time in 1882.

During its period of operation, which lasted from 1771 to 1883, the iron-making complex at Hopewell comprised several buildings, including the furnace, wheel house, bridge house, charcoal storehouse, connecting shed, cast house, employee housing, barns, and various sheds and shops. The operation produced pig iron and cast iron products such as stove plates and kettles, employing, for most of its history, the cold-blast method of iron production and using charcoal for fuel. In this process, a blast of cold air provided by bellows or blowing tubs intensified the furnace's heat to smelting temperature. Cold-blast furnaces required certain natural resources—iron ore, wood to make charcoal, limestone for the smelting process, and water to power the blast machinery—that were readily available in the Schuylkill Valley.

The large tracts of land and numerous workers needed for such an operation resulted in the development of iron-making villages, of which Hopewell Furnace is an example. Similar to the agricultural plantations of the southern United States, these communities sought self-sufficiency. They provided housing and food for workers; raw materials, technical expertise, and machinery for production; and marketing and transportation systems to deliver products for sale. The landscape of Hopewell Furnace during its period of operation was therefore many times larger than the national historic site. Thousands of acres provided fuel for the furnace, ore, limestone, farms, and other housing. The landscape provided the needs for an industrial operation and a community of more than 100 people.

Hopewell Furnace National Historic Site includes representative examples of most of the kinds of structures—restored or reconstructed—that were present when the furnace was in operation. Numerous other historic resources associated with the furnace operation, such as farmsteads and charcoal hearths, are also extant outside the boundaries of the historic site on former furnace land.

Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for Hopewell Furnace National Historic Site was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development. The park unit was designated by Secretarial Order of August 3, 1938 (3 FR 2039), pursuant to the Historic Sites Act of August 21, 1935 (49 Stat. 666), and given the name of Hopewell Village National Historic Site (see appendix A for Secretarial Order and subsequent amendment). The park unit was redesignated Hopewell Furnace National Historic Site by Secretarial Order effective September 19, 1985. The purpose statement lays the foundation for understanding what is most important about the park.

HOPEWELL FURNACE NATIONAL HISTORIC SITE preserves the late 18th and 19th century setting of an iron-making village, including the charcoal-fueled furnace, and its natural and cultural resources. This village illustrates the essential role of industrialization in the growth of the early United States.



Park Significance

Significance statements express why a park's resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of Hopewell Furnace National Historic Site, and are supported by data, research, and consensus. Statements of significance describe the distinctive nature of the park and why an area is important within a global, national, regional, and systemwide context. They focus on the most important resources and values that will assist in park planning and management.

The following significance statements have been identified for Hopewell Furnace National Historic Site. (Please note that the sequence of the statements does not reflect the level of significance.)

1. Hopewell Furnace National Historic Site interprets an early iron-making village that operated from 1771 to 1883. Its buildings, associated landscape, and its people illustrate the American industrial past. Together, the site's structures and landscape maintained their completeness through many distinct time periods and a wide variety of uses.
2. Hopewell Furnace National Historic Site possesses an extensive documentary collection of company records that reveal the daily business operations and activities of the people who lived and/or worked at the furnace.
3. Historically, Hopewell's flowing water, forest, and geology provided the necessary resources for the development of a cold blast furnace operation. Today, the preservation of the natural setting and its biodiversity provide a high quality environment that has not been overwhelmed by modern intrusions.
4. Hopewell Furnace National Historic Site is part of the "Hopewell Big Woods" that is within the congressionally designated ecologically unique Highlands region: an asset for public recreation and unique scientific, cultural, and natural resources.



Fundamental Resources and Values

Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park’s legislative purpose and are more specific than significance statements.

Fundamental resources and values help focus planning and management efforts on what is truly significant about the park. One of the most important responsibilities of NPS managers is to ensure the conservation and public enjoyment of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. If fundamental resources and values are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

The following fundamental resources and values have been identified for Hopewell Furnace National Historic Site:

- Historic Buildings and Structures.** Hopewell Furnace is a charcoal-fueled, cold-blast furnace village complex that was originally constructed by Ironmaster Mark Bird in 1770–1771. During its period of operation, which lasted from 1771 to 1883, the iron-making complex at Hopewell comprised numerous buildings, including the furnace, wheel house, bridge house, charcoal storehouse, connecting shed, reconstructed cast house, the Ironmaster’s House, three tenant houses, a boarding house, three outlying tenant/farm houses, and various sheds and shops. The operation produced pig iron and cast iron products such as stove plates and kettles, employing, for most of its history, the “cold-blast” method of iron production and using charcoal for fuel. The national historic site includes representative examples of most of the kinds of structures—restored or reconstructed—that were present when the furnace was in operation. It remains one of the most complete examples of an early American iron furnace operation.
- Collections.** Hopewell Furnace has a very complete collection of ledgers and other records of the furnace operations and employee purchases. These records provide insight into the business and the lives of employees and their families throughout much of the 19th century. In addition, there is a substantial collection of historic furnishings, tools, and archeological artifacts from numerous archeological excavations in the park.
- Cultural Landscape Associated with the Iron-Making Village.** Hopewell Furnace showcases an early American industrial landscape from natural resource extraction to enlightened conservation. The communities of Hopewell Furnace sought to be mostly self-sufficient. They modified the landscape to provide housing and food for workers; raw materials, technical expertise, and machinery for production; and marketing and transportation systems to deliver products for sale. The cultural landscape includes the cultural and natural resources that are associated with the iron-making community that exist today. These include the historic roads, trails, vegetation, small-scale features, spatial organization, and historic viewsheds. The current cultural landscape, shaped by past and present human activities, still provides for people today, with resources such as open space, scenic views, drinking water, bird habitat, dark skies, and scenic rivers.
- Visitor Understanding of Early Iron Industry.** Hopewell Furnace plays a critical role in teaching 21st century visitors about America’s industrial past. In America’s industrial infancy, tall stone structures venting smoke and flames were a familiar part of the rural landscape in southeastern Pennsylvania. These charcoal-fueled iron furnaces produced the versatile metal crucial to the nation’s growth. For more than a century, Hopewell was one of hundreds of “iron plantations” built around this technology. During both war and peace generations of ironmasters, craftsmen, and workers produced iron goods ranging from cannon and shot to the well-known Hopewell stove and domestic items such as pots and sash weights. Shared social and family bonds in an atmosphere of reasonable cooperation made these plantations stable and productive communities, the base on which America’s iron and steel industry was founded.

- **Natural Resources.** Hopewell Furnace is at the center of the larger Hopewell Big Woods—one of the last largely unbroken contiguous forests remaining in southeastern Pennsylvania. Stewardship of natural resources ensures that the park and region remain rich in plant and animal biodiversity. Hopewell Furnace plays an important role in maintaining the exceptional resources of the Hopewell Big Woods, including hundreds of plant and bird species, mature forests, unique wetlands, and clean streams. These resources in turn provide open space, drinking water, and opportunities for visitors. The Hopewell Big Woods area is an Important Mammal Area as designated by the Pennsylvania Game Commission and contains the French Creek Piedmont Forest Block Important Bird Area as designated by the National Audubon Society. In addition, French Creek Scenic River was designated by the Commonwealth of Pennsylvania as a State Wild and Scenic River and an Exceptional Value Waterway. The historic site is at the headwaters of French Creek and that part of the creek within Hopewell Furnace National Historic Site is a state-designated Exceptional Value Waterway, so designated to preserve the water quality and habitats of the stream.

Other Important Resources and Values

Hopewell Furnace National Historic Site contains other resources and values that are not fundamental to the purpose of the park and may be unrelated to its significance, but are important to consider in planning processes. These are referred to as “other important resources and values” (OIRV). These resources and values have been selected because they are important in the operation and management of the park and warrant special consideration in park planning.

The following other important resources and values have been identified for Hopewell Furnace National Historic Site:

- **Connectivity Corridors.** Hopewell Furnace National Historic Site manages the natural, cultural, and recreational resources inside the park that link connectivity corridors to the larger landscape beyond park boundaries. The existing area of the historic site is a small part of the area that was historically owned and used by the furnace. Other organizations such as French Creek State Park, the Pennsylvania Game Commission, and the Natural Lands Trust are custodians of the largely contiguous habitats that have not been fragmented by development. This collective ownership by conservation organizations represents critical and connected natural habitats and recreational uses that should be considered and managed on a landscape level.
- **Civilian Conservation Corps Sites and Stories.** The Civilian Conservation Corps (CCC) resources at Hopewell Furnace National Historic Site are an integral link between the early iron industry and ongoing preservation and interpretation of these important resources. The CCC and other New Deal relief program workers performed archeological work and stabilized many buildings at Hopewell Furnace National Historic Site before the program ended in 1942. The work of the Civilian Conservation Corps to preserve and restore park resources was a significant component in the early establishment of the park. The impact of the Civilian Conservation Corps on this site is part of the rich history that is Hopewell Furnace. In addition to their work in the Village, there are several buildings and structures within Hopewell Furnace National Historic Site that were built by the Civilian Conservation Corps. They include three structures used to support maintenance functions and structures built for the Baptism Creek Picnic Area.

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 park significance statements and fundamental and other important resources and values.

Interpretive themes are an organizational tool that reveal and clarify meaning, concepts, contexts, and values represented by park resources. Sound 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. Interpretive themes go beyond a mere description of the event or process to foster multiple opportunities to experience and consider the park and its resources. These themes help explain why a park story is relevant to people who may otherwise be unaware of connections they have to an event, time, or place associated with the park. The park staff worked with regional staff to develop an interpretive theme matrix. The full matrix can be found in appendix B.

The following interpretive themes have been identified for Hopewell Furnace National Historic Site:

- The cycles of Hopewell Furnace’s growth and recession in the 18th and 19th centuries demonstrate the impacts of industrialization, the growth of the labor pool, and the development of consumer culture, profoundly influencing the United States, a story that resonates with the reality of life in contemporary America.
- The use of land around Hopewell Furnace, as well as the Furnace’s fortunes and demise, reflect society’s changing views over time of economic forces and values from resource extraction and agriculture to conservation and recreation.
- The archive of Hopewell Furnace’s extensive business records provides an unusual look in the lives of everyday people, the shape of early American industrialization, and its impact on its people.
- The men of the Civilian Conservation Corps helped create the park while participating in President Franklin D. Roosevelt administration’s recreation development program to create jobs at a time of high unemployment.



Part 2: Dynamic Components

The dynamic components of a foundation document include special mandates and administrative commitments and an assessment of planning and data needs. These components are dynamic because they will change over time. New special mandates can be established and new administrative commitments made. As conditions and trends of fundamental and other important resources and values change over time, the analysis of planning and data needs will need to be revisited and revised, along with key issues. Therefore, this part of the foundation document will be updated accordingly.

Special Mandates and Administrative Commitments

Many management decisions for a park unit are directed or influenced by special mandates and administrative commitments with other federal agencies, state and local governments, utility companies, partnering organizations, and other entities. Special mandates are requirements specific to a park that must be fulfilled. Mandates can be expressed in enabling legislation, in separate legislation following the establishment of the park, or through a judicial process. They may expand on park purpose or introduce elements unrelated to the purpose of the park. Administrative commitments are, in general, agreements that have been reached through formal, documented processes, often through memorandums of agreement. Examples include easements, rights-of-way, arrangements for emergency service responses, etc. Special mandates and administrative commitments can support, in many cases, a network of partnerships that help fulfill the objectives of the park and facilitate working relationships with other organizations. They are an essential component of managing and planning for Hopewell Furnace National Historic Site.

Special Mandates

In 1946 (approved by the president on December 18, 1946, and accepted by the Commonwealth of Pennsylvania on March 31, 1947), the United States transferred 5,350 acres of the French Creek Recreation Demonstration Area to the Commonwealth of Pennsylvania. In this Deed to Commonwealth of Pennsylvania, the federal government reserved two rights: the right to sufficient water for filling a mill race and operating a water wheel and rights to certain minerals should they be found within the land transferred to the Commonwealth.

Subject to all easements, rights-of-way, licenses, leases, and outstanding interests in, upon, across or through said property which have heretofore been granted or reserved by the United States of American or its predecessors in title. Reserving, however, unto the United States, the right to conduct from and upon the lands hereby conveyed, sufficient water from streams and reservoirs on the arid lands to fill any mill race now existing or restored or which may hereafter be reconstructed and restored for the purpose of operating a mill within the Hopewell Village National Historic Site.

There are reserved to the United States any uranium, thorium or other materials in the lands hereby conveyed which are or may be determined to be peculiarly essential to the production of fissionable materials, whether or not of commercial value, together with the right through its authorized agents at any time to enter upon the lands and prospect for, mine, and remove the same.

Administrative Commitments

- When established by the Roosevelt administration, pole agreements existed on lands that became Hopewell Village National Historic Site. There are several expired agreements concerning rights-of-way for communication and electrical lines. In the past, special use agreements existed with Metropolitan Edison Company and Bell Telephone. Staff at Hopewell Furnace National Historic Site are initiating a review of this situation to negotiate new agreements that would protect park resources and reflect current conditions.
- Annual special use permits have been granted to farmers to hay 10 fields and are renewed on a year-to-year basis. The permit fee is paid in hay or by mowing other fields. The number and location of fields has varied during the past decade from as few as 7 fields to as many as 12.
- An agreement was made between the former Bethesda Church congregation and the National Park Service for burial rights in the Bethesda Church Cemetery. The last known person with rights to be buried in Bethesda Cemetery, Mrs. Mary Busenkell, was interred in the 1990s. Through further discussion with the current Bethesda Church congregation, which now worships in a different facility, it has been determined that no other congregants have the right for future burial within the cemetery. This agreement will be confirmed in writing.

Assessment of Planning and Data Needs

Once the core components of part 1 of the foundation document have been identified, it is important to gather and evaluate existing information about the park's fundamental and other important resources and values, and develop a full assessment of the park's planning and data needs. The assessment of planning and data needs section presents planning issues, the planning projects that will address these issues, and the associated information requirements for planning, such as resource inventories and data collection, including GIS data.

There are three sections in the assessment of planning and data needs:

1. analysis of fundamental and other important resources and values
2. identification of key issues and associated planning and data needs
3. identification of planning and data needs (including spatial mapping activities or GIS maps)

The analysis of fundamental and other important resources and values and identification of key issues leads up to and supports the identification of planning and data collection needs.

Analysis of Fundamental Resources and Values

The fundamental resource or value analysis table includes current conditions, potential threats and opportunities, planning and data needs, and selected laws and NPS policies related to management of the identified resource or value.



Fundamental Resource or Value	Historic Buildings and Structures
Related Significance Statements	Significance statements 1 and 2.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Dead wood in the vicinity of buildings creates fire hazards, especially within the wildland-urban interface. • Maintenance of historic structures is continuously needed, including cyclic maintenance of all buildings (painting and roof replacement), safety repairs (loose steps, broken railings), storm damage (rain or snow), and wear from daily use. • Mold is a chronic problem for many structures within the park. • There is a lack of accessibility in the village landscape, in the structures, and from the visitor center to the village. Accessibility is being included in current planning to improve access. There is a second parking lot in the lower part of the village that provides accessibility to the village. • There are limitations for access from the main entrance to the village and within the village for visitors with mobility impairments. The road down to the village is difficult to navigate due to its slope and surface. The path from the mansion to the visitor center has very high steps and awkward hand rails. Park staff are available to bring visitors into the village by electric cart. • The current park configuration represents different periods in history. • Individual pieces of buildings are deteriorating and staff are working to keep as much of original fabric as possible. • A lack of modern communication facilities (i.e., internet and telephone) hampers productivity. <p>Trends</p> <ul style="list-style-type: none"> • Wooden structures are deteriorating. • Leasing and alternative uses of structures such as the Nathan Care House and the barn are being considered. Reoccupying historic structures would promote better maintenance and care. • Electric, water, and septic utilities are outdated and need repair and updating.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • The village was built in what is now known to be a flood plain. Water intrusion, surface runoff, underground springs, and flooding of French Creek pose significant threats to certain structures. Runoff and groundwater are eroding roads, retaining walls, and foundations. Periodic flooding inundates the cast house and the Spring House, and the resulting high water table causes problems in the tenant houses. • Constant levels of high moisture, combined with inadequate heating, ventilation, and air-conditioning systems, have resulted in high levels of mold in the Ironmaster's Mansion. Additionally, a lack of climate and pest control causes damage to artifacts on exhibit. • Curatorial housekeeping, including training and planning for the care of interiors and buildings, is lacking. Curatorial housekeeping is needed to maintain houses and to monitor for pests. • Deferred maintenance is a threat especially with regard to building envelopes (roofs and walls are not adequately maintained). • Currently, the maintenance funding gap to maintain low Asset Priority Index (API) assets, a servicewide trend, threatens park resources including historic structures.

Fundamental Resource or Value	Historic Buildings and Structures
<p>Threats and Opportunities</p>	<p>Threats (continued)</p> <ul style="list-style-type: none"> • Upkeep of structures within the village has been prioritized but more attention is needed on the planning and execution of projects. • Many historic structures are unoccupied and deteriorating. • The danger of losing the historic fabric due to continuous replacement of original and historic fabrics is a threat if repairs, including window replacement, are not done in a thoughtful manner. • A fire suppression system is needed. • An after-hours security system is needed. • Known and unknown hazardous materials, such as lead and asbestos, should be assessed. • There is a lack of staff to perform project and resource management. • The slow response time for a structural fire threatens the park’s historic structures. • Climate change may increase extreme storms, flooding, and erosion, which threaten historic structures. <p>Opportunities</p> <ul style="list-style-type: none"> • Improve communication technology and security in a way that is consistent with and protects the original fabric. • Increase volunteers to provide more tours and better accessibility to the village. • Capitalize on project funding through programs such as Student Conservation Association and Hands On Preservation Experience (an employment program for youth). • Increase number of interpretive offerings throughout Hopewell Village including tours of structures, living history demonstrations, and increased use of building spaces to serve programs. • Collaborate with larger museum community to identify new ways of interpreting historic houses and sites. • Prioritize structures to inform organized and systematic maintenance. • Develop adopt-a-building program. • Develop consistency in cleaning of historic structures. • Provide vocational training for park staff to improve skills for future rehabilitation of stone walls and other historic structures. • Use Volunteers-in-Parks (VIP) and youth groups to address program and resource management. • Alternative and adaptive reuse of historic structures to help generate income, cover the costs of maintenance of structures, and keep structures occupied. This could have added benefit of bringing life to the village. • Train youth to restore park resources, such as dry stone masonry, and create career paths for outside partners and youth who have historic restoration skills. • Expand interpretation of structures to increase public understanding and appreciation. • Train VIP participants in historic housekeeping for additional VIP opportunities. • Use second floor of Ironmaster’s House to support interpretive programming and media. • Use historic structure report to guide alterations and adaptive reuse. Adaptive reuse can help protect against loss of historic fabric. • Implement leasing program for a select number of historic structures. Use of certain structures would provide an income source for maintenance and allow for remediation of lead paint prior to occupation. • Provide more open access to all visitors where it can be done without damaging the resource. • Use three-dimensional imaging to allow visitors into inaccessible places.

Fundamental Resource or Value	Historic Buildings and Structures
<p>Related Resources</p>	<ul style="list-style-type: none"> • Community sites: Six Penny Creek Community. • Iron mines and limestone quarries: These resources were procured within a 5-mile radius of Hopewell Furnace. Former mines included Hopewell Mine, Jones Mine, and Warwick Mine. • Transportation: There are numerous remnants of the Schuylkill River Canal on private property. The Alleghany Aqueduct is preserved by Berks County Parks and Recreation. The Schuylkill River Trail follows the former right-of-way of the Philadelphia and Reading Railroad. • Family mansions: The Bird Family mansion is preserved as the Birdsboro Community Center. Mark Bird established Hopewell Furnace in 1771. • Related investment properties. • CCC-era structures: The Baptism Creek area of Hopewell Furnace National Historic Site preserves a picnic pavilion, bridge abutments, drinking fountains, and fire pits for the CCC era. French Creek State Park, adjacent to Hopewell Furnace, preserves the Six Penny and Hopewell Dams, three group campsites, the fire tower, fire watchman's cabin, and a small picnic area and pavilion at the fire tower. • Saugus Iron Works National Historic Site. • Hay Creek Valley Historical Association (Joanna Furnace). • Cornwall Furnace State Historic Site. • National Iron and Steel Museum. • French Creek State Park. • Historic Society of Pennsylvania (owner of the 1782 ledger). • Berks History Center (ledgers). • Pennsylvania State Archives (ledgers). • Chester County Historic Society (ledgers).
<p>Existing Data and Plans Related to the FRV</p>	<ul style="list-style-type: none"> • Housekeeping plan (update). • Historic furnishings report, cast house (2003). • Historic furnishings report, Tenant House No. 2. • Historic resource study (2004). • List of Classified Structures database (2015). • Cultural landscape report (1997). • Collection management report (1997). • Cultural landscape inventory (2003). • Historic structure reports.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • National register nominations (update). • Update Facility Management Software System and Project Management Information System databases for project funding. • Three-dimensional mapping of village buildings. • Hazardous materials assessments (update). • Historic structure reports (update). • Condition assessments for roads, drainage, and utilities. • Condition assessments for buildings. • Hazardous tree risk survey. • Climate change vulnerability assessment. • Update GIS data.

Fundamental Resource or Value	Historic Buildings and Structures
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Emergency response plan for collections. • Historic structures management plan. • Accessibility self-evaluation and transition plan. • Long-range interpretive plan (underway). • Tree risk management plan. • Planning for adaptation to climate change. • Park asset management plan.
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • National Historic Preservation Act of 1966, as amended (54 USC 300101 et seq.) • Historic Sites Act of 1935 • Archeological and Historic Preservation Act of 1974 • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Executive Order 13287, "Preserve America" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS Management Policies 2006 (chapter 5) "Cultural Resource Management" • Director's Order 28: <i>Cultural Resource Management</i> • <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> • <i>The Secretary of the Interior's Standards for the Treatment of Historic Properties</i> • Director's Order 100: <i>Resource Stewardship for the 21st Century</i> • Director's Policy Memorandum 12-02, "Applying National Park Service Management Policies in the Context of Climate Change" • Director's Policy Memorandum 14-02, "Climate Change and Stewardship of Cultural Resources" • Director's Policy Memorandum 15-01, "Addressing Climate Change and Natural Hazards for Facilities"



Fundamental Resource or Value	Collections
Related Significance Statements	Significance statement 2.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Storage facilities for some collections (other than ledgers) are inappropriate. Issues include lack of environmental controls, location in flood plain, and lack of security. • All ledgers are in a stable controlled environment. • The Ironmaster's House does not have fire suppression or humidity controls. <p>Trends</p> <ul style="list-style-type: none"> • Digitized ledgers with embedded ownership information are in the process of being posted in a searchable portal in the National Park Gallery. • Staff and volunteers are indexing ledgers as available and more will be indexed over time.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Damage from lack of environmental control and water are substantial threats to collection items stored and displayed in the historic buildings. Much of the collection is housed in buildings in the village core and faces a number of management issues. The cast house and Tenant House #1 are in the floodplain and items in those structures could be damaged by flooding. • Lack of interest and research limit the potential value of the collection and the opportunity to further understand the relationship among works and the financial operations of the furnace. • Inadequate security and protection in historic structures could result in theft of artifacts on display. • Improper storage of some collections (mold, mildew, pest damage and/or no climate control) could result in damage to those collections. • Outdated ceiling heating in the Ironmaster's House poses a fire threat. • There is no fire suppression system in museum storage. • Underutilization and interpretation of the collections threatens to make collections irrelevant. <p>Opportunities</p> <ul style="list-style-type: none"> • Encourage increased research and digital access. • Work with National Park Gallery to display ledger pages. • Coordinate with other institutions that own Hopewell Furnace ledgers. • Create special changeable exhibit in the visitor center to connect visitors with Hopewell stories and themes. • Make collections publicly accessible on the web through virtual exhibit or podcast. • Recruit more long-term volunteers for museum work and curatorial activities (housekeeping of exhibits, deaccession work, scanning collections). • Additional data mining including text recognition on digital files to run data searches. • Expand interpretive programming using ledger data and other pieces in the collection to develop audience and increase relevance to visitors.
Related Resources	<ul style="list-style-type: none"> • 1772 Mark Bird Stove (partner owned).
Existing Data and Plans Related to the FRV	<ul style="list-style-type: none"> • Hopewell Furnace National Historic Site administrative history.

Fundamental Resource or Value	Collections
Data and/or GIS Needs	<ul style="list-style-type: none"> • Comprehensive collections inventory.
Planning Needs	<ul style="list-style-type: none"> • Scope of collections statement (update). • Furnishings plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Historic Sites Act of 1935 • Museum Properties Management Act of 1955, as amended <p>NPS Policy-level Guidance (NPS <i>Management Policies 2006</i> and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (chapter 5) "Cultural Resource Management" • Director's Order 24: <i>NPS Museum Collections Management</i> • NPS <i>Museum Handbook</i>, parts I, II, and III • Director's Order 28: <i>Cultural Resource Management</i> • Director's Order 100: <i>Resource Stewardship for the 21st Century</i> • <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i>



Fundamental Resource or Value	Cultural Landscape Associated with the Iron-Making Village
Related Significance Statements	Significance statements 1 and 3.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • The park is buffered on three sides by conservation lands including state park lands, state game lands, and a national lands trust. • Known archeology resources within the park including CCC-era components are poorly documented. • Defined pastures are maintained as open fields through mowing and the use of special use permits. • A significant amount of time and fiscal resources are used by volunteers to manage Hopewell's farm program. • Although the apple orchard is a big draw during picking season and brings a lot of people into the park, it has not been maintained consistently for a long period of time. • Historic road traces are currently used as modern access roads, but they are historic resources and are being eroded. The roads are in need of maintenance. • The Pennsylvania Lighting Council promotes appropriate municipal lighting that does not negatively affect the night sky. • A memorandum of understanding with a contract farmer governs haying operations. • Sections of split rail fence in areas around the village are in significant disrepair. <p>Trends</p> <ul style="list-style-type: none"> • There is an increase in the number of volunteers and interns but most are there for special events and they are not being used effectively during regular park hours. In addition, using volunteers require a great amount of park staff time. • Recreational use (i.e., hikers, trail use) is increasing. • The apple orchard is in declining condition because of the health and age of the trees. Some lack of maintenance over the years, staffing issues, and cedar apple rust are contributing factors. • Tracts of land adjacent to other public lands near the historic site have been purchased and gone into conservation easements. Organizations include the Trust of Public Lands, the French and Pickering Creeks Conservation Trust, and French Creek State Park.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Resources are being damaged by graffiti and vandalism to signs, social trail use, and visitors entering the historic area after hours. • Cultural resources in the Baptismal Creek area are being damaged and there currently is no funding for protection and restoration of these resources. • Minor ancillary resources in more remote areas of the historic site are being damaged. These resources are listed in the Archeological Sites Management Information System database but as a low priority. As recreation opportunities increase these resources will require more active monitoring and protection. • There is an increased risk of fire due to the amount of dead and down woody debris. • Several historic buildings are in the French Creek flood plain and are at risk from flooding and water damage. • Inadequate funds servicewide threaten preservation of vernacular large-scale cultural landscapes. • Small-scale features in the cultural landscape are being lost due to lack of funding.

Fundamental Resource or Value	Cultural Landscape Associated with the Iron-Making Village
<p>Threats and Opportunities</p>	<p>Threats (continued)</p> <ul style="list-style-type: none"> • Inadequate funds servicewide threaten preservation of vernacular large-scale cultural landscapes. • Several invasive species (both present and nearby) threaten resources in the landscape including Mile-a-minute weed (<i>Persicaria perfoliata</i>), Oriental bittersweet (<i>Celastrus orbiculatus</i>), garlic mustard (<i>Alliaria petiolata</i>), spotted lanternfly (<i>Lycorma delicatula</i>), and emerald ash borer (<i>Agrilus planipennis</i>). • Parts of CCC structures in the Baptismal Creek picnic area are now part of a wetland. • Climate change may increase extreme precipitation and heat events, flooding, erosion, invasive species, and cause a northward shift in species ranges, all of which threaten to alter the cultural landscape. • Incompatible development outside of park boundaries, such as the proposed race track and housing developments, could affect the park's soundscape and night sky. <p>Opportunities</p> <ul style="list-style-type: none"> • Explore existing NPS instruments to pursue proactive partnerships with neighbors and coordinate landscape management with organizations and land trusts. • Improve identification and protection of CCC resources. • Work closely with the state to monitor dam and bridge abutments of French Creek. • Increase interpretation and education in the apple orchard during apple picking season when visitation to the park increases. • Use volunteers to organize events and assist with day-to-day operations. For example, the charcoal room, Civil War demonstration, and astronomy demonstration night starfest could be organized and coordinated primarily by volunteers. Staff and volunteers could conduct a condition assessment of the cultural landscape. In addition, natural resources staff could work with volunteers for invasive species control and monitoring. • Develop program for hikers as they enter the park to share the story of the park and recruit additional volunteers. • Explore alternatives to execute the farm program and apple orchard operation to maintain this important piece of the Hopewell story. • Provide new opportunities for park staff education and new opportunities for interpretation and education of archeological resources. • Revisit cultural landscape inventory and report to determine if they are up to date and being implemented into the maintenance of the landscape. • Increase social media presence of the park to improve education on Hopewell's unique resources and landscape. • Partner with local government to protect park's viewshed, airshed, and dark night sky. • Integrate cultural landscape preservation with operational natural resource needs. For example, protection of high water quality should be incorporated into farm operations planning and management. • Develop career path for employees with landscape preservation skills. • Increase visitor education opportunities regarding ecosystem protection. • Cooperate with neighboring jurisdictions to improve preservation efforts. • Study changing landscape over time to better understand relationships between people and nature and the role of the environment and human behavioral practices.

Fundamental Resource or Value	Cultural Landscape Associated with the Iron-Making Village
Threats and Opportunities	<p>Opportunities (continued)</p> <ul style="list-style-type: none"> • Evaluate use of existing cultural landscape report to manage and restore Hopewell's cultural landscapes. • There is often a large disparity between recorded history of workers by their employers and the lives that they actually lived. There are opportunities to enhance understanding and improve interpretation of the people who lived at Hopewell Furnace. A realistic window into those lives is best achieved through archeology. • There are many structures, such as the Boone House and those associated with the Brison complex, that are no longer standing. Again, an understanding of the actual (as opposed to recorded) use of property by the inhabitants can only be best determined through archeology. • Use archeological reports from the 1960s to inform public programming related to Hopewell Village.
Existing Data and Plans Related to the FRV	<ul style="list-style-type: none"> • Cultural landscape inventory for Hopewell Furnace landscape (2003). • Cultural landscape report (1997). • Mapping of ash trees for emerald ash borer (ongoing). • List of Classified Structures database (2015). • Test Excavations at the School House and Tenant House No. 2, June 1–13, 1967, Hopewell Village National Historic Site. • Excavations at the Schoolhouse, HOFU, June 27–July 1, 1969. • Excavations at Springhouse and Smokehouse, HOFU, Elverson, PA. Hopewell Village National Historic Site. • Archeological Tests at Tenant House No. 1 and Environs, May 20–June 8, 1968. • Hopewell Furnace National Historic Site archeological overview and assessment. • Phase I Archeological Testing In Advance of New Sign Installation, Hopewell Furnace National Historic Site. Elverson, Pennsylvania. • Phase I Archeological Testing Regrade, Stabilize, and Pave Unpaved Section of Back Entrance Road. Hopewell Furnace National Historic Site. Elverson, Pennsylvania.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Orchard condition assessment (update). • Inventory hazard trees and identify and inventory invasive species. • CCC-era archeological survey. • Comprehensive collections inventory. • Climate change vulnerability assessment. • Ethnographic overview and assessment.
Planning Needs	<ul style="list-style-type: none"> • Erosion control plan for French Creek and historic road traces. • Farm management plan. • Apple orchard treatment plan. • Planning for adaptation to climate change.

Fundamental Resource or Value	Cultural Landscape Associated with the Iron-Making Village
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • National Historic Preservation Act of 1966, as amended (54 USC 300101 et seq.) • Archeological and Historic Preservation Act of 1974 • National Invasive Species Act of 1996 • Executive Order 13112, "Invasive Species" • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS <i>Management Policies 2006</i> and <i>Director's Orders</i>)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (chapter 5) "Cultural Resource Management" • Director's Order 28: <i>Cultural Resource Management</i> • NPS <i>Natural Resource Management Reference Manual 77</i> • Director's Order 100: <i>Resource Stewardship for the 21st Century</i> • <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> • <i>The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> • Director's Policy Memorandum 12-02, "Applying National Park Service Management Policies in the Context of Climate Change" • Director's Policy Memorandum 14-02, "Climate Change and Stewardship of Cultural Resources"



Fundamental Resource or Value	Visitor Understanding of Early Iron Industry
Related Significance Statements	All significance statements.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • The park lacks a dynamic online presence on both social media and its website. • Interpretive programming at the historic site is static. Many programs have been offered for years. • Casting demonstrations in the cast house are intermittent and mostly in the summer. • Some interpretive materials including waysides and audio recordings in the village are outdated. Approximately one-third of existing waysides are in poor condition. <p>Trends</p> <ul style="list-style-type: none"> • There is reduced interest in schools visiting Hopewell Furnace National Historic Site. • Visitor expectations regarding access to the web and social media and what visitors see and do on-site are changing. • The increased use of volunteers and interns requires an increased amount of time for training and administration by limited staff.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Staff are focusing on the visitor center at the expense of other sites. There are no regular activities in the cast house and a lack of staff in the village to hold visitor interest or to encourage visitors to return to the site. • Wayfinding signage and signage off surrounding roads and along park boundaries are poor. • Training for seasonal interpretive staff and volunteers is insufficient. • Park outreach is diminished by limited use of social media. • Existing programs do not make a compelling case for relevance. <p>Opportunities</p> <ul style="list-style-type: none"> • Increase opportunities for visitors, volunteers, and interns to engage in the broader story of Hopewell. • Seek opportunities to enhance self-guided tour and self-led tour experience. • Integrate natural resources into interpretation. For instance, improve nature and science section on the park's website. • Increase awareness of Hopewell Furnace National Historic Site at other NPS units and expand outreach to include non-NPS industrialization sites, specifically Pennsylvania iron-related sites that tell similar stories. • Work with Friends of Hopewell Furnace and regional land trusts and conservancy groups to maintain consistent messaging on social media and websites. • Use the NPS Teacher-Ranger-Teacher program to expand educational opportunities. • Improve use of staff time to extend park reach to neighboring communities. • Improve computer networking and use of Wi-Fi for visitors. • Expand interpretation to include topics such as the setting and location of the park.
Existing Data and Plans Related to the FRV	<ul style="list-style-type: none"> • Waysides (underway). • Visitor study (2002). • Alternative transportation system study (2009). • Iron and steel heritage tourism strategic management plan (2002).
Data and/or GIS Needs	<ul style="list-style-type: none"> • Visitor use survey.

Fundamental Resource or Value	Visitor Understanding of Early Iron Industry
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Wayside exhibit plan. • Long-range interpretive plan (underway). • Wayfinding plan (comprehensive signage plan). • Cultural and natural resources lesson plan. • Web and social media plan.
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Americans with Disabilities Act of 1990 • Architectural Barriers Act of 1986 • “Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines” (36 CFR 1191) <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director’s Orders)</p> <ul style="list-style-type: none"> • NPS Management Policies 2006 (chapter 7) “Interpretation and Education” • NPS Management Policies 2006 (chapter 8) “Use of the Parks” • NPS Management Policies 2006 (chapter 9) “Park Facilities” • Director’s Order 6: <i>Interpretation and Education</i> • Director’s Order 42: <i>Accessibility for Visitors with Disabilities in National Park Service Programs and Services</i> • NPS Transportation Planning Guidebook



Fundamental Resource or Value	Natural Resources
Related Significance Statements	Significance statements 3 and 4.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Natural resources are part of the story of Hopewell Furnace and are a critical piece of the visitor experience. • Water quality conditions, including physical, chemical, and habitat parameters, are monitored by the NPS Mid-Atlantic Inventory and Monitoring Network and are generally in good condition. • Air quality, night sky, and acoustic parameters are all considered to be poor; however, air quality and acoustic conditions are based on interpolated regional data that are not specific to the park. The historic site has relatively good night sky viewing for a park so close to urban areas and is listed by the Pennsylvania Lighting Council as a dark sky conservation area. • Forest conditions are monitored by the NPS Mid-Atlantic Inventory and Monitoring Network and are considered to be of moderate concern; however, conditions are substantially better than those of most other parks in the network. The park's forest is at the center of the larger Hopewell Big Woods, a rare contiguous forest community that is part of the Schuylkill Highlands, and connectivity with the larger forest is good. • Most animal communities are in good condition; however, some significant data gaps are present in the assessments. For example, white-tailed deer were only recently added to the species list for the park. <p>Trends</p> <ul style="list-style-type: none"> • Water quality is stable. • Forest condition is assessed on a rotational basis by the NPS Mid-Atlantic Inventory and Monitoring Network, and monitoring has not been conducted for long enough to determine a trend. • Because other animal communities are not monitored and baseline inventories were completed more than 10 years ago, trends could not be identified. • Most air quality, night sky, and acoustic parameters have not been evaluated to determine trends with the exception of ozone, which is improving.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Nonnative invasive species (plant and animal) threaten biodiversity and species composition. • Disease introduction into sensitive habitats—such as snake fungal disease, ranavirus, and chytrid fungus—can be devastating to groups of organisms, ecosystems, or individual species. • Poaching. • Activity on Hopewell Lake could introduce contaminants to French Creek that would flow into the park and degrade water quality. • Lake drawdown could impact creek flow and spillway overflow could increase creek temperature. • Runoff from the barnyard into French Creek increases nutrients in the waterway that can degrade water quality. • Impoundments represent a threat to the natural resources of the park as they alter French Creek from its natural condition by changing discharge patterns and water quality parameters (e.g., increase water temperature), acting as a barrier to fish passage, and limiting sediment supply. • Climate change may increase extreme precipitation and heat events, flooding, erosion, invasive species, and cause a northward shift in species ranges.

Fundamental Resource or Value	Natural Resources
<p>Threats and Opportunities</p>	<p>Threats (continued)</p> <ul style="list-style-type: none"> • Pests and pathogens that affect forest canopy trees are a threat, e.g., emerald ash borer has been identified in Berks County in 2014, and is probably already in Chester County though it has not been registered yet. • Deer densities may be increasing in the park and surrounding landscape, and pose a threat to vegetation and the long-term sustainability of the forest canopy through reduced seedling regeneration. <p>Opportunities</p> <ul style="list-style-type: none"> • Create education programs for biodiversity, rare species, and dark sky. • Develop formal partnership with university programs for park research. • Develop volunteer bird-monitoring programs. • Encourage visitor engagement through the iNaturalist.org program. • Develop internal NPS opportunities for habitat restoration paired with regional experts. • Improve wetland condition. • Cooperation with state and local partners on conservation issues that transcend park boundaries. • Cooperation with community planning and zoning development to protect park resources and viewsheds. • The Hopewell Big Woods, in collaboration with the Schuylkill Highlands, is also seeking Dark Sky Reserve status from the International Dark-Sky Association.
<p>Existing Data and Plans Related to the FRV</p>	<ul style="list-style-type: none"> • Natural resource condition assessments. • Wetland mapping and assessment (2015). • Forest condition monitoring (annual, by NPS Mid-Atlantic Inventory and Monitoring Network). • Water quality monitoring (annual, by NPS Mid-Atlantic Inventory and Monitoring Network). • Park visitation and climate change (2015).
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Species lists (updated). • GIS vegetation layer (updated). • Rare plant survey for additional rare and endangered species. • Collaborative monitoring of migration of species across park’s boundary. • Finalize desired conditions for all natural resources. • Continued and expanded vital signs monitoring. • Deer abundance and distribution survey. • Climate change vulnerability assessment. • Collect threatened and endangered species data. • Natural resources condition determinations.
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Resource stewardship strategy. • Vegetation management plan. • Priorities and direction plan for natural resource management in a cultural landscape. • Management plans and goals to protect rare, threatened, and endangered species. • Planning for adaptation to climate change. • Collaborative monitoring plan.

Fundamental Resource or Value	Natural Resources
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Federal Noxious Weed Act of 1974, as amended (7 USC 2801 et seq.) • Clean Air Act (42 USC 7401 et seq.) • Clean Water Act of 1972 • Bald and Golden Eagle Protection Act (16 USC 668) • Endangered Species Act of 1973 • Highlands Conservation Act of 2004 • Lacey Act, as amended (16 USC 3371-3378) • Migratory Bird Treaty Act of 1918 • National Environmental Policy Act of 1969 (42 USC 4321) • National Invasive Species Act of 1996 • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" • National Flood Insurance Program • Pennsylvania Scenic Rivers Act, of May 1982 (PL 1277, Act No. 283) <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (chapter 4) "Natural Resource Management" • Director's Order 18: <i>Wildland Fire Management</i> • Director's Order 24: <i>NPS Museum Collections Management</i> • Director's Order 77-2: <i>Floodplain Management</i> • NPS <i>Natural Resource Management Reference Manual 77</i> • NPS <i>Reference Manual 18: Wildland Fire Management</i> • Director's Order 100: <i>Resource Stewardship for the 21st Century</i> • Director's Policy Memorandum 12-02, "Applying National Park Service Management Policies in the Context of Climate Change"



Analysis of Other Important Resources and Values

Other Important Resource or Value	Connectivity Corridors
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Horse-Shoe Trail extends from Valley Forge National Historic Park to the Appalachian National Scenic Trail near Hershey, Pennsylvania, and passes through Hopewell Furnace National Historic Site. • Lenape Trail is inadequately marked for visitors (insufficient trail blazes). • Park boundary markers are fading and need repair. This situation creates a safety risk during hunting season. • Partners are currently advertising trail connections from Hopewell Big Woods into the park. • The NPS Mid Atlantic Inventory and Monitoring Network forest condition is categorized as “caution.” The most recent monitoring metric indicated an “improving condition,” but only two monitoring cycles have been completed and provide insufficient information to determine a trend. • Although French Creek has high quality water, there is a need to maintain high water quality. • Water quality within park boundaries is not being managed. • Plentiful understory and debris in many parts of the park forest increase fire risk. • Trail maintenance is inconsistent in the park and on adjacent lands. <p>Trends</p> <ul style="list-style-type: none"> • Water condition is moderate to good within the park and the trend is stable. • Decreases in hunting on adjacent lands may change deer populations within the park. • Bike riding on Hopewell Big Woods Trail may be increasing. • Trails are poorly signed and visitor understanding of trail locations and allowed uses is suffering. • Accessibility is increasing on trails. • Partners are implementing a regional trails program; increased planning by outside partners is creating a greater desire for connectivity between park and adjacent land use partners. • The demand for recreational opportunities is increasing.
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • There is the potential for unsafe trail conditions due to increased fire risks, decrease in overall trail maintenance and signage upkeep, and branch fall. • Because the park is within the center of many other trails, the risk of invasive species coming into park is increasing. Invasive species threaten biodiversity and forest integrity. • Development of surrounding areas is increasing forest fragmentation, which impairs the forest community. • Inappropriate use of trail connections degrades both resources and connections. • Global climate change has the potential to affect all resources. <p>Opportunities</p> <ul style="list-style-type: none"> • Better signage of trails and permitted uses. • Shared interpretive and educational programs with partners and volunteers. • Increased wayside exhibit panels. • Create an adopt-a-trail program. • Encourage increased diversity in visitation. • Additional interpretation, such as the use of a roving interpreter or organized trail hikes, to target trail users. • Development of programs and plans with adjacent properties to manage across boundaries. • Prescribed fire to remove excess fuels from forests in park. • Increase work with Hopewell Big Woods partners and identify additional partners.

Other Important Resource or Value	Connectivity Corridors
Existing Data and Plans Related to the OIRV	<ul style="list-style-type: none"> • Adjacent lands study (1997). • Horse-Shoe Trail protection plan (1990).
Data and/or GIS Needs	<ul style="list-style-type: none"> • Hazardous tree risk survey. • Inventory hazard trees and identify and inventory invasive species. • Visitor use survey. • Deer abundance and distribution survey. • Boundary survey. • Forest survey. • Climate change vulnerability assessment.
Planning Needs	<ul style="list-style-type: none"> • Partnership action strategy. • Comprehensive trail management plan. • Tree risk management plan. • Landscape level management plan (for habitats and species corridors). • Visual resource management plan. • Planning for adaptation to climate change. • Wayfinding plan (comprehensive signage plan).
Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the OIRV</p> <ul style="list-style-type: none"> • Clean Air Act (42 USC 7401 et seq.) • Clean Water Act of 1972 • Endangered Species Act of 1973, as amended • Highlands Conservation Act of 2004 • Migratory Bird Treaty Act of 1918 • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS Management Policies 2006 (chapter 4) "Natural Resource Management" • NPS Natural Resource Management Reference Manual 77 • Director's Policy Memorandum 12-02, "Applying National Park Service Management Policies in the Context of Climate Change"



Other Important Resource or Value	Civilian Conservation Corps Sites and Stories
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • In 1994, the Baptism Creek Picnic Shelter and Concession Building was determined to be eligible for inclusion as a contributing resource in Hopewell Furnace’s national register documentation due to its association with Franklin Delano Roosevelt’s New Deal programs, specifically the Civilian Conservation Corps. • Two camps of CCC workers were established in the area to build roads, trails, shelters, and fireplaces. Camp SP-17 was constructed in what is now French Creek State Park. Camp SP-7 was constructed north of the furnace complex where the historic site’s maintenance complex now stands. • Three structures related to Camp SP-7 are used in support of maintenance activities. Although they are connected to the historic camp, they are not high priority assets. • The parking area for the Baptism Creek recreation area is open on a periodic basis for events and activities. The area can be accessed via Hopewell’s trail system. • The small watershed of Baptism Creek is both a high quality aquatic habitat and a high quality water source. • As part of a larger national initiative regarding the promotion of environmental education, the Baptism Creek area was recommended for designation as an environmental study area in 1968. A teacher’s guide was in place by 1978 and the area was actively used for environmental education until the early 1980s. The environmental study area program has not been promoted since the mid to late 1980s. • The 1994 revision to the Hopewell Furnace national register nomination identifies Baptism Creek as a contributing resource. <p>Trends</p> <ul style="list-style-type: none"> • Structures in Baptism Creek area continue to show signs of deterioration. • The structures that support maintenance functions will continue to be used but are minimally maintained.
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • The Baptism Creek buildings are not used and are in poor condition. • The CCC Picnic Shelter, when compared to structures integral to the significance of Hopewell Furnace, is rated relatively low in the FMSS database. Funding is not available for its maintenance. • Although three of the CCC camp buildings are used, there is no public access and the buildings are in poor condition. Due to low rankings of the buildings within the FMSS database, care will be minimal and the buildings will continue to deteriorate. <p>Opportunities</p> <ul style="list-style-type: none"> • Increase the interpretive profile of the CCC story and better integrate into interpretive media and programs. • Examine potential reuse of the CCC camp structures. • Connect the CCC stories and resources within the boundaries of Hopewell Furnace to those in French Creek State Park—same era, similar stories. • Develop programs or media that highlights CCC work in Hopewell Village. • Fabricate temporary exhibition, in collaboration with the Friends of Hopewell Furnace, that tells the Hopewell’s CCC story. • The area provides opportunities for environmental education and natural resource research.

Other Important Resource or Value	Civilian Conservation Corps Sites and Stories
Related Resources	<ul style="list-style-type: none"> • French Creek State Park. • Other NPS units with CCC structures (Shenandoah National Park, Acadia National Park, Catoclin Mountain Park, Prince William Forest Park, etc.). • Pennsylvania State Parks with CCC structures (Blue Knob State Park, Hickory Run State Park, Laurel Hill State Park, and Raccoon Creek State Park).
Existing Data and Plans Related to the OIRV	<ul style="list-style-type: none"> • Historic resource study 2004.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Confirm existing GIS data for CCC structures and buildings and update as needed. • CCC-era archeological survey.
Planning Needs	<ul style="list-style-type: none"> • Long-range interpretive plan (underway). • Historic structures management plan. • Historic leasing plan.
Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the OIRV</p> <ul style="list-style-type: none"> • National Historic Preservation Act of 1966, as amended (54 USC 300101 et seq.) • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Executive Order 13287, "Preserve America" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (chapter 5) "Cultural Resource Management" • Director's Order 28: <i>Cultural Resource Management</i> • Director's Order 100: <i>Resource Stewardship for the 21st Century</i> • <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> • <i>The Secretary of the Interior's Standards for the Treatment of Historic Properties</i> • Director's Policy Memorandum 12-02, "Applying National Park Service Management Policies in the Context of Climate Change" • Director's Policy Memorandum 14-02, "Climate Change and Stewardship of Cultural Resources" • Director's Policy Memorandum 15-01, "Addressing Climate Change and Natural Hazards for Facilities"



Identification of Key Issues and Associated Planning and Data Needs

This section considers key issues to be addressed in planning and management and therefore takes a broader view over the primary focus of part 1. A key issue focuses on a question that is important for a park. Key issues often raise questions regarding park purpose and significance and fundamental and other important resources and values. For example, a key issue may pertain to the potential for a fundamental or other important resource or value in a park to be detrimentally affected by discretionary management decisions. A key issue may also address crucial questions that are not directly related to purpose and significance, but that still affect them indirectly. Usually, a key issue is one that a future planning effort or data collection needs to address and requires a decision by NPS managers.

The following are key issues for Hopewell Furnace National Historic Site and the associated planning and data needs to address them:

- **Accessibility.** Accessibility has been a park focus for the past 20 years. Significant program enhancements have been accomplished such as written transcriptions for the audios in exhibit buildings, Braille transcriptions of the park brochure and map, and captions for the park’s introductory film and demonstration videos. More recently, improvements to the accessibility of the visitor center have been made, and an accessible parking area and pathway were constructed in the lower village. A “Ranger in Your Pocket” program is being developed to make park interpretive programs audibly available to all visitors. Despite these accomplishments, more remains to be done.

Although the main part of the visitor center is now accessible, an accessible pathway to the public restrooms is needed. A topographic survey is needed to provide ground elevations of critical areas such as the public restrooms and the Ironmaster’s House to enable planning for accessible pathways. A golf cart is currently used to assist mobility impaired people to access the historic village, and its use could be enhanced by having level drop-off areas connected to an accessible pathway leading to each exhibit site.

- *Associated planning and data needs:* Accessibility self-evaluation and transition plan

- **Uncontrolled Storm Water.** Primary visitor access from the visitor center to the village follows an unpaved lane down a relatively steep grade. The multi-acre uphill area is the source of large amounts of stormwater that flow down the lane, causing erosion and creation of tripping hazards; gradual widening of the graveled area through deposition; and bringing unwanted moisture to historic structures.

Remnants of previous stormwater control structures are visible and a 2011 U.S. Army Corps of Engineers study recommended: regrading and/or rebuilding park’s road system to obtain proper drainage, including removing much of the gravel area and replacing it with turf; clearing existing swales and redirecting storm water to the swales; reconnecting existing drainage ditches; rehabilitating one existing culvert and installing three new culvert crossings; repairing pipes as needed; installing subtle uphill weirs to infiltrate storm water.

- *Associated planning and data needs:* Erosion control plan for French Creek and historic road traces, condition assessments for roads, drainage, and utilities

- **Maintenance Capital Investment Strategy.** Hopewell Furnace National Historic Site has a remarkable density of cultural resources, particularly historic structures, in an 848-acre park with a \$1.4 million operating budget. The park has 85 structures listed in the National Register of Historic Places. Collectively, many of these buildings are the backbone of a fundamental resource—the village at Hopewell Furnace. Many of the historic buildings currently are vacant, and they have more than \$34 million in deferred maintenance. The nonhistoric facilities, roads, trails, and utilities have additional maintenance backlog. The park’s national register documentation, completed in 1985, identifies a 112-year period of significance that includes the full furnace operational period. The park lacks a general management plan or other comprehensive management plan that sets a framework for prioritizing resources and historic structures. A key issue is how to develop a plan for the management of historic building preservation in a tightening budget environment. How should buildings and building needs be prioritized given limited operational and project dollars? Which buildings should be used for interpretive or administrative use (including housing)? What opportunities might exist for adaptive reuse of structures including leasing or use by partners that would generate revenue to preserve historic structures and/or transfer maintenance responsibilities to other parties and provide public access? Finding appropriate and self-sustaining uses for the historic structures is critical to the protection of these fundamental resources.

 - *Associated planning and data needs:* Historic structures management plan, historic leasing plan, park asset management plan (update), condition assessments for buildings, national register nominations (update), historic structure reports (update), National Register of Historic Places Determination of Eligibility for CCC resources

- **Hopewell Big Woods.** The Hopewell Big Woods is considered the largest remaining continuous forest tract in southeastern Pennsylvania and is part of the federally designated Highlands area. The Hopewell Big Woods conservation area comprises approximately 73,000 acres of land in northern Chester County and southern Berks County; however, only about 13,000 acres of contiguous Hopewell Big Woods are permanently protected. Hopewell Big Woods protects the headwaters of exceptional value waterways, is high-quality habitat for regional wildlife, including several state and federally listed species, and is a popular destination for recreational visitors. Hopewell Furnace National Historic Site is at the center of the 13,000 acres of protected area that includes French Creek State Park, Pennsylvania State Game Lands No. 43, and lands held in conservation easement by the Natural Lands Trust. The Natural Lands Trust is the lead agency managing the Hopewell Big Woods partnership, a group of about 30 private and public organizations (including Hopewell Furnace National Historic site) that was formed in 2001 to encourage the conservation, protection, and awareness of the Hopewell Big Woods and its resources. The partnership coordinates resource protection and stewardship activities between landowners and advances the conservation goals listed in the Hopewell Big Woods’ landscape stewardship plan. As a member of the partnership, the national historic site benefits from coordinated landscape level resource management and protection; however, it is a struggle to find an appropriate role in the partnership that is realistic based upon current staffing and other management needs. Partnership goals and initiatives need to be balanced with the national historic site’s other management activities and, for a park with limited staff, involvement in such a partnership can be time consuming and at the expense of other projects. Additionally, the Hopewell Big Woods partnership increasingly seeks more NPS involvement as its other partner resources continue to be stretched. Clarifying an appropriate role for Hopewell Furnace National Historic Site that considers other park management activities is needed to help eliminate unrealistic expectations by the partnership and to focus the park’s resource management activities.

 - *Associated planning and data needs:* Partnership action strategy

- **Expand Interpretive Opportunities.** Although data collected in the annual visitor survey indicated that visitors enjoy their visit to Hopewell Furnace, visitation has remained stagnant the last several years and has declined by half since the 1990s. Beyond being a pretty place, the relevance of Hopewell Furnace to 21st century audiences is not readily apparent for many visitors. Additionally, the current interpretive experience is static; programs and events have remained relatively unchanged for quite a few years.

Ways to intellectually and emotionally connect 21st century visitors to the themes of Hopewell Furnace National Historic Site need to be identified. Many of today's social and economic issues reflect the stories and experiences at Hopewell Furnace National Historic Site, especially in the furnace's heyday in the first half of the 19th century. Race relations, gender roles, and developing and failing industrial infrastructure illuminate similarities between then and now.

New strategies must be developed and implemented to reach the diverse communities in the region through both on- and off-site programming and an enlivened visitor experience. This could include providing more opportunities for visitor interaction in Hopewell Village, dialogic programming, digital communication and social media, robust self-guided interpretation, enhanced educational programming, and opportunities with partners both on- and off-site. Enhanced marketing and outreach is also key. Nearby French Creek State Park, a half-mile walk away, receives 775,000 demographically diverse visitors and could provide opportunities for engagement and partnership right outside Hopewell Furnace National Historic Site's door.

- *Associated planning and data needs:* Long-range interpretive plan (underway), web and social media plan, cultural and natural resources lesson plans

Planning and Data Needs

To maintain connection to the core elements of the foundation and the importance of these core foundation elements, the planning and data needs listed here are directly related to protecting fundamental resources and values, park significance, and park purpose, as well as addressing key issues. To successfully undertake a planning effort, information from sources such as inventories, studies, research activities, and analyses may be required to provide adequate knowledge of park resources and visitor information. Such information sources have been identified as data needs. Geospatial mapping tasks and products are included in data needs.

Items considered of the utmost importance were identified as high priority, and other items identified, but not rising to the level of high priority, were listed as either medium- or low-priority needs. These priorities inform park management efforts to secure funding and support for planning projects.



Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes
FRV, OIRV	Wayfinding plan (comprehensive signage plan)	H	This plan would address areas inside and outside the historic site to provide adequate wayfinding to the site from different access points including neighboring properties and trails, primary approach roads, and regional highways. It should also address appropriate on-site interpretive signage.
FRV, OIRV, Key Issue	Historic structures management plan	H	This plan would address the management and preservation of historic buildings and structures in a tightening budget environment. Finding appropriate and self-sustaining uses for the historic buildings and structures is critical to the protection of these fundamental resources.
FRV, OIRV, Key Issue	Historic leasing plan	H	This plan would explore alternative uses for historic and nonhistoric structures, such as leasing, alternative use by partners, rethinking which buildings are used for housing, and options to share facilities with the state. This plan is also needed to define the core resources of the farm and provide guidance to achieve management goals.
FRV, Key Issue	Park asset management plan (update)	H	The updated plan should address park asset management including optimizer bands.
FRV, Key Issue	Erosion control plan for French Creek and historic road traces	H	One of the historic roads is currently being used for modern access; this plan would inventory roads and determine appropriate uses, stabilization, preservation plans. It would also address erosion control regarding French Creek.
FRV, OIRV, Key Issue	Long-range interpretive plan (underway)	H	A new plan is to be released in the fall of 2017.
FRV	Update GIS data	H	In the past, data sets were scattered across different projects. The park currently has data sets that are not consolidated and also incomplete. Data are needed to move forward with trail plans, archeological surveys, and other planning efforts.
FRV, Key Issue	Web and social media plan	H	This would fulfill the NPS requirement to have a strategic plan in place before using social media so that the park can continue use of social media sites.
FRV, Key Issue	Accessibility self-evaluation and transition plan	M	This plan would assess the accommodation of people with disabilities and would address safe access to the historic site's grounds and structures. The plan should recommend actions to achieve accessibility goals.
FRV, Key Issue	Cultural and natural resources lesson plans	M	These plans would align with state curriculum to strengthen partnerships with local schools.
FRV	Wayside exhibit plan	M	This plan is needed to guide completion of interpretive signage. This plan would contribute to improving visitor experience and interpretation and address accessibility within the park.
OIRV	Comprehensive trail management plan	M	This plan would address existing conditions and new trails and new signage.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes
OIRV	Landscape level management plan (for habitats and species corridors)	M	This plan should address landscape management of the region.
FRV, OIRV	Planning for adaptation to climate change	M	Integrate climate change considerations into park planning frameworks.
FRV	Farm management plan	M	
FRV	Vegetation management plan	M	
FRV	Collaborative monitoring plan	L	This plan should be developed in collaboration with park partners to address migration of species across boundaries.
FRV	Resource stewardship strategy	L	This plan should be developed after data collection on desired conditions for natural resources has been completed.
FRV	Scope of collections statement (update)	L	This plan is needed to address the national historic site's museum collections.
FRV, OIRV	Tree risk management plan	L	This plan should be developed after completion of the hazardous tree risk survey.
OIRV	Visual resource management plan	L	This plan should identify the important view corridors for the park and protection of the most important views and vistas within the.
OIRV, Key Issue	Partnership action strategy	L	The strategy would create a framework for collaboration with the park's partners to enhance opportunities for visitors and for stewardship of resources.
FRV	Emergency response plan for collections	L	This plan would address protection of the park's museum collections.
FRV	Furnishings plan	L	This plan would be developed for the historic structures within the park that contain historic furnishings.
FRV	Apple orchard treatment plan	L	



Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes
FRV, Key Issue	Condition assessments for buildings	H	This assessment should also address update FMSS and generating PMIS statements for project funding (see appendix C).
FRV, Key Issue	National register nominations (update)	H	The current nominations need to be updated with recent scholarship and corrections.
FRV	Comprehensive collections inventory	H	Conservation and condition assessment inventory.
FRV, Key Issue	Historic structure reports (update)	H	Updated reports for John Church House, Thomas Lloyd House, barn, blacksmith shop, office store, boarding house, and tenant houses are needed.
FRV	Three-dimensional mapping of village buildings	M	This mapping would aid interpretation and accessibility of Hopewell Village.
FRV	Hazardous materials assessments (update)	M	These assessments of historic structures should address asbestos, soil / lead abatement, and general hazardous materials.
FRV, OIRV	Hazardous tree risk survey	M	
FRV, OIRV	Climate change vulnerability assessment	M	Assess vulnerability of park natural and cultural resources and assets to climate change.
FRV	Rare plant survey for additional rare and endangered species	M	
FRV	Species list (updated)	M	Wetlands were surveyed for rare plants in 2015 and this effort should be expanded to other park habitats.
FRV	Finalize desired conditions for all natural resources	M	Desired conditions are needed before development of resource stewardship strategy.
FRV	Continued and expanded vital signs monitoring	M	
FRV	GIS vegetation layer (update)	L	
FRV,OIRV	Visitor use survey	L	This survey should include visitor counts and demographic profiles to understand current visitor activities (including biking).
FRV, OIRV	Deer abundance and distribution survey	L	
OIRV	Boundary survey	L	

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes
FRV	Collect threatened and endangered species data	L	Coordinate monitoring and management of threatened and endangered species with adjacent property owners.
FRV	Orchard condition assessment (update)	L	
OIRV	Confirm existing GIS data for CCC structures and buildings and update as needed	L	
OIRV, Key Issue	National Register of Historic Places Determination of Eligibility for CCC resources	L	
FRV, OIRV	Civilian Conservation Corps-era archeological survey	L	Conduct archeological survey of the CCC camp footprint.
FRV, OIRV	Inventory hazard trees and identify and inventory invasive species	L	
FRV	Condition assessments for roads, drainage, and utilities	L	
FRV	Ethnographic overview and assessment	L	To improve understanding and documentation of the Bethesda Church descendant community.
FRV	Collaborative monitoring of migration of species across park's boundary	L	

Part 3: Contributors

Hopewell Furnace National Historic Site

Gabrielle Berry, Natural Resource Intern
 David Blackburn, Site Manager, Hopewell Furnace National Historic Site
 Frances Delmar, Chief of Interpretation
 Norman Feil, Interpretive Park Ranger
 Tim Fogal, Buildings and Utilities Supervisor
 Deirdre Gibson, Chief of Planning and Resource Management
 Kate Hammond, (former) Superintendent, Hopewell Furnace National Historic Site and Valley Forge National Park
 Christine Hawthorne, Interpretive Park Ranger
 Frank Hebblethwaite, Interpretive Park Ranger
 Kate Jensen, Ecologist
 Joe King, Engineering Equipment Operations Supervisor
 Josh Kirleis, Administrative Support Assistant
 Tim Laragy, Maintenance Worker
 Patrick Madden, Business Manager
 Dona McDermott, Archivist
 Jenn McMenamin, Facility Manager
 Becky Ross, Cultural Resource Manager
 Amy Ruhe, Natural Resource Manager
 Alan Schulze, Visitor Use Assistant
 Nicholas Shollenberger, Maintenance Laborer
 Darlene Stephens, Interpretive Park Ranger
 Paul Stephens, Historical Architect and Accessibility Coordinator
 Norma Thrower, Museum Technician
 John Turck, Archeologist/GIS
 Mike Valora, Chief Ranger
 John T. Waterman, Law Enforcement Ranger / Risk Management Manager
 Lofton Wiley, Law Enforcement Supervisor
 Pamela Zesotarski, Facility Management System Specialist

NPS Northeast Region

Joanne Blacoe, Interpretive Planner
 Eric Bretkreutz, Chief, Historic Structures Research and Documentation
 Allen Cooper, Senior Planner
 Joy Pietschmann, Interpretive Media Project Manager

Other NPS Staff

Melody Bentfield, Contract Librarian (former), Denver Service Center—Planning Division
 Tamara Delaplane, Project Manager, Denver Service Center—Planning Division
 Pam Holtman, Quality Assurance Coordinator, WASO Park Planning and Special Studies
 Aleksandra Pitt, Project Specialist, Denver Service Center—Planning Division
 Nancy Shock, Foundation Coordinator, Denver Service Center—Planning Division
 Judith Stoesser, Contract Editor, Denver Service Center—Planning Division
 Brian D'Agosta, Contract Visual Information Specialist, Denver Service Center—Planning Division

Appendixes

Appendix A: Secretarial Order and Subsequent Amendment for Hopewell Furnace National Historic Site

TITLE 35—PARKS AND FORESTS

NATIONAL PARK SERVICE

ORDER DESIGNATING THE HOPEWELL VILLAGE NATIONAL HISTORIC SITE, PENNSYLVANIA

Whereas the Congress of the United States has declared it to be a national policy to preserve for the public use historic sites, buildings and objects of national significance for the inspiration and benefit of the people of the United States, and

Whereas certain lands and structures in Hopewell Village, Pennsylvania, including the old furnace, mansion house, blacksmith shop, etc., by reason of their relationship to the colonial history of the United States, have been declared by the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments to be a historic site of national significance, and

Whereas the United States has acquired the above-mentioned lands and structures:

Now, therefore, I, E. K. Burlew, Acting Secretary of the Interior, under and by virtue of the authority conferred upon the Secretary of the Interior by Section

2 of the Act of Congress approved August 21, 1935 (49 Stat. 666), do hereby designate the following-described lands, with the structures standing thereon, to be a national historic site, having the name "Hopewell Village National Historic Site":

National Park Service

Hopewell Furnace National Historic Site; Notice of Park Name Change

AGENCY: National Park Service; Hopewell Furnace National Historic Site.

ACTION: Notice of park name change.

SUMMARY: Notice is hereby given that effective September 19, 1985, Hopewell Village National Historic Site which was designated by Secretarial Order of August 3, 1938 (3 FR 2039), pursuant to the Historic Sites Act of August 21, 1935 (49 STAT. 666) is hereby redesignated by Secretarial Order as Hopewell Furnace National Historic Site.

SUPPLEMENTARY INFORMATION:

Historically, the area was never known as Hopewell Village. During the period of furnace operations (1771-1883), the industrial complex was referred to on maps and by merchants dealing with the furnace as "Hopewell Furnace" or "Hopewell". Therefore, the redesignation of Hopewell Village National Historic Site to Hopewell Furnace National Historic Site will describe the significance of the site more effectively.

Dated: December 9, 1985.

James W. Coleman, Jr.,

Regional Director, Mid-Atlantic Region

[FR Doc. 85-30306 Filed 12-20-85; 8:45 am]

BILLING CODE 4310-70-M

Appendix B: Northeast Region Interpretive Theme Matrix

About the Interpretive Theme Matrix: An interpretive theme matrix is a chart that shows the detail and scope of stories that can be told in a park within the framework of the park’s interpretive themes. The matrix offers an easy way for people to see the concepts and stories that are represented by the park’s interpretive themes. It is especially useful as a guide for partners, park staff, and others who develop interpretive programming and media.

The concepts, ideas, and topics listed here represent some examples of types of stories that could illustrate the concepts. They are not all-inclusive (in fact, they could never be) nor are they intended to exclude any topic. A park interpretive theme is successful only if other topics and stories could be included within it.

Theme 1: Iron and Industry	
The cycles of Hopewell Furnace’s growth and recession in the 18th and 19th centuries demonstrate the impacts of industrialization, the growth of the labor pool, and the development of consumer culture, profoundly influencing the United States, a story that resonates with the reality of life in contemporary America.	
<i>This theme is about:</i> The founding of Hopewell Furnace; products produced by the furnace including the Hopewell plate stove; Hopewell’s place as an economic driver for the region; changes in manufacturing technology over time and how new technologies are developed and old ones improved in terms of needs and wants; the cycles of industry that led to the furnace company leaving Hopewell; Hopewell as a model for understanding industrialization, labor, modern business practices, and the development of consumer culture in the history of the United States; and the ways that the history of civilization is linked to technological development.	
Concepts	Topics and Stories
<p>Iron Industry</p> <ul style="list-style-type: none"> Compare, contrast, and place the Hopewell Furnace story into context with other early American furnaces and the dozens of Pennsylvania and regional iron furnaces. Trace the history and growth of the furnace at Hopewell. Describe how Hopewell started as a small furnace run and financed by Mark Bird and produced products for local consumption as well as for the Continental government. Trace how Hopewell Furnace grew to be a part of a larger and more complex investment and management portfolio of industrial activities with regional, national, and international markets. Place Hopewell Furnace into context as an early American industry. Connect with other industries and iron furnaces in early America (such as 17th century predecessor Saugus Iron works in Massachusetts). Rank Pennsylvania’s (and, southeastern Pennsylvania’s) early iron industry (18th and 19th centuries) compared to other regions and states. Describe the “collaborative management” of southeastern Pennsylvania furnaces; furnaces working to complement each other rather than work in direct competition. Compare and contrast American iron production with production in Great Britain at the same period. Demonstrate how charcoal was made and how it fueled the iron furnaces. Describe the cold blast process of making iron; why it was at one time cutting-edge and how and why it became an older technology. Describe the origin and evolution of iron blast technology in Pennsylvania and especially in southeastern Pennsylvania. Link to the ways new technologies are developed and old ones improved in today’s world. Connect the patriotic political views of Mark Bird to ordnance contracts with the Colonial Navy during the American Revolution. (Later, due to financial difficulties, Mark Bird closed Hopewell Furnace and sold it.) Trace the fortunes and cycles of the furnace; how, during the late 18th century and early 19th century, it was bought and sold by a succession of owners and not financially successful again until 1820, with the first profitable blasts since the end of the 18th century occurring around 1820. Describe settlement of water rights litigation in the early 1820s, increasing the furnace capacity in the late 1820s, the furnace’s most profitable period of operation. 	<ul style="list-style-type: none"> The Hopewell plate stove Mark Bird Saugus Iron Works Charcoal Anthracite coal Ordnance contracts American Revolution Civil War Brooke Family French Creek State Park Water litigation Joanna Furnace Saugus Iron Works Charcoal Anthracite coal American Revolution Cold blast process Transporting product Economic opportunities De-industrialization Technological change

Theme 1: Iron and Industry — Continued	
Concepts	Topics and Stories
<ul style="list-style-type: none"> • Describe how Hopewell Furnace and the community around it began as an industrial site and then 100+years later transformed temporarily into an agrarian site. • Describe the economic effects of the Pennsylvania legislature's late 1830s authorization to use hotter burning coke and anthracite coal to fuel iron furnaces. Describe the economic, social, and political effects of this decision. Illustrate the ways in which it created a new era for the iron industry in America. (For example, within 15 years, there were as many anthracite-fueled furnaces as charcoal fueled furnaces in Pennsylvania.) Describe the modern economic relevance of Hopewell partners' experimentation with anthracite coal-fueled production at Hopewell; and how ultimately, the costs of production and transportation made them to revert to production of charcoal-fueled production pig iron. Trace how these business decisions, despite investment in buildings and production technology, put the furnace in decline in the early 1870s and closed for good in 1883. • Connect the rise of a vertically integrated iron industry, with large, centralized manufacturing plants using hot blast furnaces with Appalachian coal were affected by an increasingly sophisticated US transportation system of canals and railroads. Trace how these advancements contributed to the demise of the small, rural, dispersed, charcoal-fueled iron furnaces like Hopewell. Illustrate how Hopewell's early business practices foreshadowed late 19th and early 20th century vertically integrated, American iron industry conglomerates. Connect the economic cycles of industry at Hopewell to the contemporary economic cycles of industry in the United States and world. • Describe the natural resources (raw materials) and transportation networks found at Hopewell and in southeastern Pennsylvania that made the iron industry prominent in 18th and 19th century America. • Describe the social and economic cycles that shaped the growth, success, and decline of Hopewell Furnace. Connect the demise of American iron production with growth of the steel industry. Compare the shift in American steel production with early steel production in Great Britain. <p>Hopewell Plate Stove</p> <ul style="list-style-type: none"> • Describe the rise and fall in popularity of the Hopewell plate stove and why it became desirable. Explain the technology of the stove. Put the stove and the innovation it represented into context of its time, the iron industry, and other means of heating and cooking. The stove is composed of multiple plates, cast individually. Using plates of various sizes provided the ability to manufacture a variety of large and small stoves, creating a diversity of product at various price points. The Hopewell stove and other similar products brought technological innovation to the Western world. A limited method of central heating resulted as well as labor saving methodology for cooking. • Describe what the Hopewell stove meant to the fortunes of Hopewell Furnace. 	
<p><i>In the era of small farms, wooden implements, and workbench manufacturing, the iron (industry) forged the guidelines for the factory system of the future: massive capital investment; detailed cost accounting; development of far-off markets; division of labor by precise job definition; invention and crafting of machinery; standardization of product; (and) personnel management of a complex order.</i></p> <p style="text-align: right;">Klein and Higgenboom, 1980</p>	

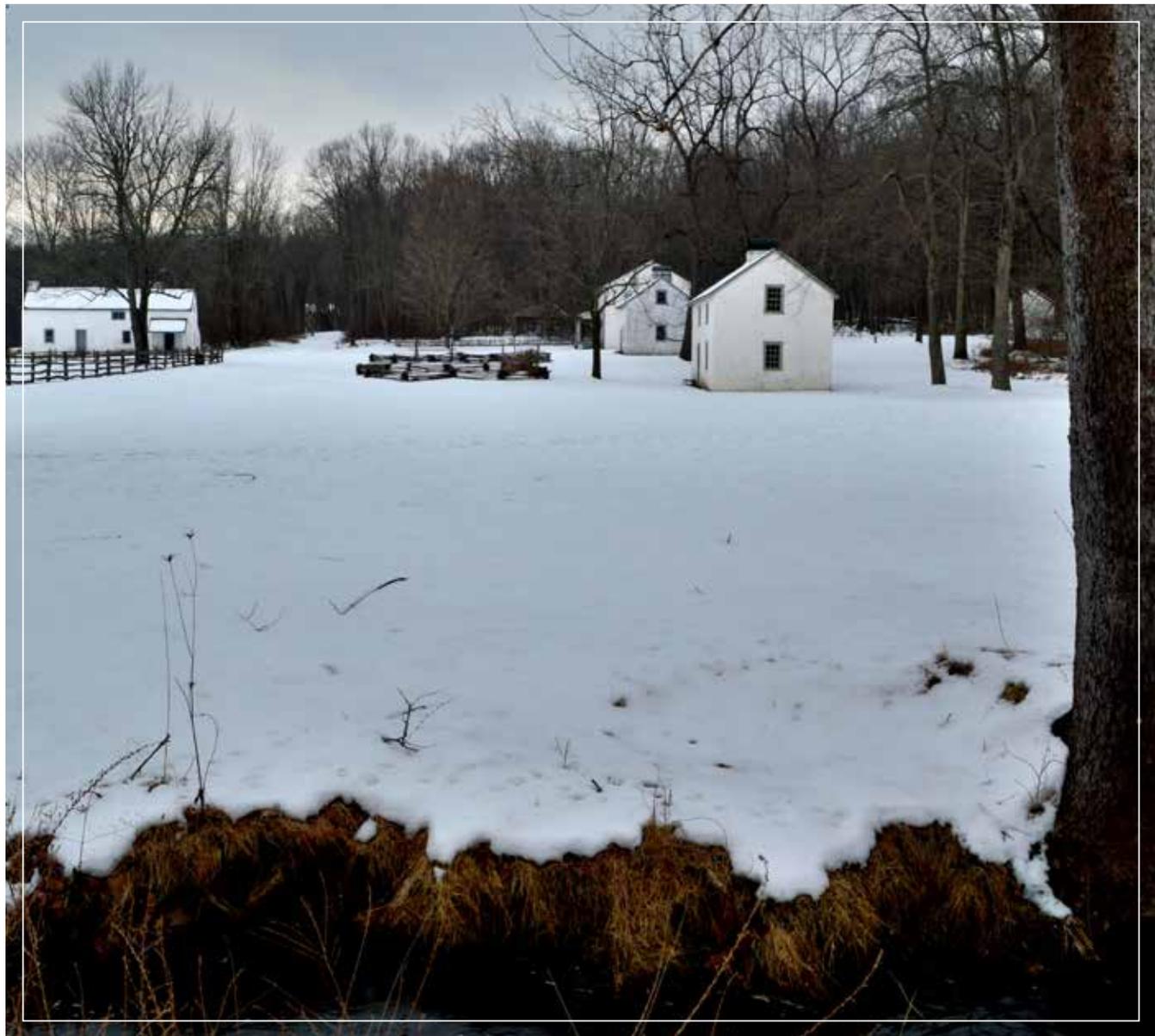
Theme 2: Natural Resources

The use of land around Hopewell Furnace, as well as the Furnace's fortunes and demise, reflect society's changing views over time of economic forces and values from resource extraction and agriculture to conservation and recreation.

This theme is about: How natural resources and their conditions helped to define the economic fortunes of Hopewell Furnace over time—from its founding as an iron furnace to a historic site and a recreation destination in a tourism economy; how the use of human activities including technology affect the environment; how ecosystems change over time due to natural and/or human influences; the ways in which humans depend on natural resources for survival; how people use resources in sustainable and non-sustainable ways; and how geography and climate have influenced continuity and change over time.

Concepts	Topics and Stories
<p>Natural Resources</p> <ul style="list-style-type: none"> Analyze, debate, and explore the issues of trade-offs between conservation and use of resources for industry and employment—historically and today. Explore the pros and cons of both sides of this issue. Describe the ways in which the activities at Hopewell Furnace affected the environment, exploring how both natural and human influences led to change in the local ecosystem over time, and compare that to an example in today's world. Explore the ways in which natural resources at Hopewell Furnace were used in both sustainable and non-sustainable ways. Describe how in the early Colonial period, land in southeastern Pennsylvania and its natural resources offered economic opportunities to settlers. Describe how William Penn marketed his colony not only to those seeking religious freedom, but also to people in search of economic advantage. Describe the range of people who were attracted or took advantage of those opportunities based in the colony's natural resources. Describe how and why in the 18th century, William and Mark Bird recognized the opportunities and sought to increase their financial position by using the natural resources along what was then the Pennsylvania frontier. Describe how Hopewell's owners harvested wood for the furnace. Illustrate how the juxtaposition and diversity of natural resources in southeastern Pennsylvania—especially iron ore, wood, limestone, and running water—made Hopewell an ideal location for an iron furnace. Describe how these shaped the development of iron manufacturing at Hopewell. Describe Hopewell in the context of other regional furnaces and the iron industry in Pennsylvania and other colonies. Link to other examples from life today that demonstrate how geography and climate have influenced continuity and change over time, just as they have at Hopewell. Describe and evaluate the choices made by Hopewell's owners at the end of iron production, and in the years after that affected regeneration of natural resources in the area. Examine how these choices reflect trends seen in other de-industrialized iron operations in the region and similar sized businesses/complexes across the United States. Trace how after the demise of the iron furnace, the land at Hopewell became a farm and country home for the next 50 years (however, soil condition made farming only marginally profitable). Identify locations and methodologies in which raw materials were extracted and processed for iron production at Hopewell. Describe the ways in which humans today continue to depend upon natural resources for their survival, just as did the people at Hopewell Furnace. <p>Conservation, Recreation, and the Leisure Industry</p> <ul style="list-style-type: none"> Describe the efforts to establish a national park unit at Hopewell. (Remains of an industrial village were documented in the mid-1930s and the NPS unit was established to preserve remains of the furnace, blacksmith shop, and ironmaster's house.) This is the second time the designation "National Historic Site" was used (Salem Maritime in Salem, Massachusetts, was the first). 	<ul style="list-style-type: none"> William Penn Economic opportunity William Bird Mark Bird Location Iron ore Wood Limestone Water Transportation corridors French Creek Recreation Demonstration Area. Creation of Hopewell Furnace. Louisa Brooks Asset for public recreation Scenic natural and cultural resource Quality of experience Biodiversity

Theme 2: Natural Resources — Continued	
Concepts	Topics and Stories
<ul style="list-style-type: none"> • Explore the effect that NPS initiatives and funding such as Mission 66 (1966—the 50th anniversary of the NPS) and the Bicentennial (1976) had on Hopewell. Compare and contrast the cycles and shifts in the economic basis for Hopewell—that in the 19th century, iron was Pennsylvania’s leading industry; today, tourism is among the state’s most profitable industries. • Place the development and evolution of the Hopewell Big Woods conservation efforts into context of conservation in Pennsylvania and the nation in the late 20th and early 21st century. Illustrate how this initiative reflects changes in stewardship regionally and nationwide. • Evaluate the impact of cooperative conservation efforts such as the Schuylkill Valley National Heritage Area on the local and national economy. • Describe the biodiversity at Hopewell Furnace. Demonstrate, explore, and evaluate the value of the habitat protection and protection of water, plant, and wildlife. 	



Theme 3: Hopewell's Communities

The archive of Hopewell Furnace's extensive business records provides an unusual look in the lives of everyday people, the shape of early American industrialization, and its impact on its people.

This theme is about: How the lives of those that lived and worked in this preserved company town reflect the cycles of all the facets of industrialization (economics, capital, innovation, the growth of consumerism) and post-industrialization (large scale coalescence of resources, industrial factors, culture shift in land use, preservation, and memorialization) in the United States, and the influences on humans of continuity and change. In its unique state as an almost completely preserved community, the stories from the community reflect cycles seen locally, nationally, and internationally.

Concepts	Topics and Stories
<ul style="list-style-type: none"> • Trace the peaks and valleys of economic cycles relating to Hopewell. Describe the ways in which the welfare of the larger community in and around Hopewell was connected to the success of Hopewell's owners, their business decisions, and the economic and political climate of the country. (Includes workers and families of: ironmasters, molders, miners, teamsters, farmers, woodsmen and others.) Describe the ways that people in the Hopewell community and region were affected by changing local and national economic conditions and Hopewell's business practices. • Describe the work, lives, and society of Europeans and free Africans. Describe the dynamics between workers and managers. Describe how they all interacted and helped to develop Hopewell Furnace. Describe the opportunities and limitations that Hopewell Furnace had for the people who lived and worked in furnace buildings, on local farms, and in the surrounding communities like Warwick Village and Six Penny Creek. Compare and contrast the work and lives of managers, skilled, and unskilled trades over time at Hopewell. • Compare and contrast how housing for Hopewell's workers varied as the type of workers and the fortunes of the furnace changed. (For example, during the Mark Bird, era, employees were housed in buildings already on the property – houses, cast shed and farm buildings and gradually moved out into other domestic buildings on the property or rented rooms on neighboring farms and in local towns. At the height of the furnace's operation, 14 company-owned houses, temporary shelters and log houses were constructed near the furnace, collier's huts existed throughout the woods, and there was a primarily African American settlement along Six Penny Creek.) • Describe how the types and conditions of the buildings and how patterns of settlement reveal status and reflect patterns of community life. Identify the different buildings at Hopewell Furnace, their functions, and how they supported the facets of Hopewell's community. • Describe the various roles of women at Hopewell Furnace. Understand that women at Hopewell played a variety of roles from the traditional gender roles of the 19th century to roles directly involved with the iron making process. • Illustrate and describe the social and economic forces that affected 19th century migration and immigration in Pennsylvania and in the United States and how that shaped the community and workforce at Hopewell. <p>Slavery, Underground Railroad, Free Africans, and African Americans</p> <ul style="list-style-type: none"> • Understand role slavery and the Underground Railroad played on the development of Hopewell and its operations in the 18th and 19th century. • Describe why geography made Hopewell Furnace an ideal destination for individuals freeing themselves from slavery. Some Africans came north from Maryland, some might have come west from Philadelphia. Free Africans, like Isaac Cole, also moved north after the passage of the fugitive slave act. 	<ul style="list-style-type: none"> • Skilled and unskilled trades. Indentured servants • Free workers • Enslaved people • Farmers • Mark Bird • Furnace workers • Miners • Teamsters • Woodcutters • Colliers • Housing and the community • Underground Railroad, abolition, and emancipation

Theme 4: The Civilian Conservation Corps

The men of the Civilian Conservation Corps helped create the park while participating in the Franklin D. Roosevelt administrations’ recreation development program to create jobs at a time of high unemployment.

This theme is about: a culture shift in land use, preservation, and memorialization in the United States; the duty of government to its citizens, and the strategies that government can use to alleviate unsatisfactory economic conditions; the workers recruited for the program, how they were chosen, and the impact that the CCC had on their lives and those of their families.

Concepts	Topics and Stories
<ul style="list-style-type: none"> Trace how In response to the Great Depression of the 1930s, the Franklin D. Roosevelt administration developed the recreation demonstration area (RDA) program to create jobs for unskilled men, in a time of high unemployment that would also develop recreation opportunities for nearby urban dwellers. Describe the two-fold purposes for Hopewell: one, as a vehicle for employment through the Civilian Conservation Corps (camps were established in and around Hopewell); second, inclusion as a unit of the national parks system to provide respite for urban dwellers struggling with the nation’s economic circumstances. Illustrate how national and state parks were established and the picnic shelters, campgrounds, trail and road system, and historic village were built, rehabilitated, or reconstructed. Describe criteria for the recreation demonstration area program: large tracts of submarginal land, usually despoiled by industrial use, with a single owner, and close to urban areas. (Hopewell Furnace lands was owned by a member of the Brooke family and positioned near Philadelphia, Reading, and Harrisburg.) Describe how French Creek RDA was established in 1935, with two Civilian Conservation Corps (CCC) camps to construct infrastructure and recreation facilities. Describe the establishment of the Civilian Conservation Corps, the economic circumstance of the Great Depression, and the role of the federal government, through the CCC, in preserving and promoting the natural and cultural resources for recreation and elsewhere. Describe the segment of the population recruited for these efforts and the effect the CCC had on the lives of the participants. Evaluate the successes and failures of the CCC at the time and the agency’s impact on preservation and recreation in the United States over time. Show the ways that the Civilian Conservation Corps at Hopewell affected and preserved resources at Hopewell Furnace. Describe how the CCC reflected gender and cultural roles of the era. 	<ul style="list-style-type: none"> CCC workers Great Depression Recreation users



Appendix C: History of Historic Structures at Hopewell Furnace National Historic Site

Anthracite Furnace (Building 11) – Historic Structures Report, 1962–1965

Anthracite Furnace (Building 11) – Preliminary Research Report, 1964

Anthracite Furnace (Building 11) – Stabilization, 2003

Anthracite Furnace (Building 11) – Stabilization (Treatment Record), 2000–2001

Anthracite Furnace (Building 11), 1997–2002

Anthracite Furnace (Building 11) – Historic Structures Report, 1962–1965

Anthracite Furnace (Building 11) – Reference, 1963–1964

Anthracite Furnace (Building 11) – Survey Report, undated

Anthracite & Charcoal Furnaces (Building 11) – Historic Structures Report and Engineering Study, Vol. I, 1987 [1 of 2]

Anthracite & Charcoal Furnaces (Building 11) – Historic Structures Report and Engineering Study, Vol. I, 1987 [2 of 2]

Anthracite & Charcoal Furnaces (Building 11) – Historic Structures Report and Engineering Study, Vol. II, 1987 [1 of 2]

Anthracite & Charcoal Furnaces (Building 11) – Historic Structures Report and Engineering Study, Vol. II, 1987 [2 of 2]

Anthracite & Charcoal Furnaces (Building 11) – Historical Report, 1986

Anthracite & Charcoal Furnaces (Building 11) – Masonry Restoration, 1987

Bake Ovens (Building 16), 1940

Bake Ovens (Building 16), 2003

Bath House (Building 99) – Historic Structures Report, 1972

Bethesda Baptist Church (Building 79) – Historic Structures Report, 1972

Bethesda Baptist Church (Building 79) – Historical Data, 1941–1982

Bethesda Church Cemetery (Building 79), undated

Bethesda Baptist Church (Building 79) – Cemetery Wall, 1980–1982

Bethesda Baptist Church (Building 79) – Window Design, 1974–1975

Bethesda Baptist Church (Building 79) – Interior Finishes Report, 2013

Blacksmith Shop (Building 6) – Fire (Artifacts Salvaged), 1980

Blacksmith Shop (Building 6) – Furnishings Reports, 1952

Blacksmith Shop (Building 6) – Historic Structure Preservation Guide, 1977

Blacksmith Shop (Building 6) – Historic Structure Report and Historic Furnishing Study, 1974 [1 of 2]

Blacksmith Shop (Building 6) – Historic Structure Report and Historic Furnishing Study, 1974 [2 of 2]

Blacksmith Shop (Building 6) – Historic Structures Report, 1965

Blacksmith Shop (Building 6) – Notes and Photos, c.1976

Blacksmith Shop (Building 6) – Restoration, 1940–1952

Blacksmith Shop (Building 6) – Restoration, 1974

Blacksmith Shop (Building 6) – Restoration (Completion Report), 1950

Blacksmith Shop (Building 6) – Restoration (Completion Report), 1975
Blacksmith Shop (Building 6) – Restoration (Photos), 1974
Blast Machinery, 1935–1965
Boarding House (Building 24) – Archeological Notes and Historical Structure Reports, 1962–1963
Boarding House (Building 24) – Roof Preservation, 2000–2001
Boarding House (Building 24), 1976–2000
Boarding House (Building 24) – Feature Inventory Forms, 1996
Boone House (Tenant House 4), 1981
Bridge and Wheel Houses (Buildings 8 & 10) – Architectural Survey Reports, 1956
Bridge and Wheel Houses (Buildings 8 & 10) – Historical Documentary Report, 1956
Bridge and Wheel Houses (Buildings 8 & 10) – Survey Report, 1956
Brison House, undated
Care House (Building 25), 1947–1962
Cast House (Building 33) – Completion Report, 1965–1997
Cast House (Building 33) – Furnishings Plan, 1967–1969
Cast House (Building 33) – Furnishings Plan, 1986–1987
Cast House (Building 33) – Historic Structures Report, 1959
Cast House (Building 33) – Historic Structures Report, 1964
Cast House (Building 33) – Survey Report, 1960
Cast House (Building 33) – Roof and Tower Preservation, 1996–1997
Cast House and Moulding Sheds (Buildings 33 & 37) – Completion Report, 1964–1966
Cast House and Moulding Sheds (Buildings 33 & 37) – Historic Structures Report, 1973
Charcoal Furnace – Skylight, 1988
Charcoal Furnace – Stabilization, 1937–1962
Charcoal Furnace – Stabilization, 1987–1989
Charcoal House (Building 9) – Historic Structures Report, 1962–1966 [1 of 2]
Charcoal House (Building 9) – Historic Structures Report, 1962–1966 [2 of 2]
Charcoal House (Building 9) – Roof, 1947–1948
Charcoal House (Building 9) – Roof, 1986
Charcoal House and Shed (Buildings 9 & 91) – Historic Building Report, 1957
Charcoal House and Shed (Buildings 9 & 91) – Survey Reports, 1956–1957
Charcoal Kiln (Building 39) – Historic Preservation Training Center Project Agreement, 1999
Charcoal Kiln (Building 39) – Historic Structures Report, 1961
Charcoal Kiln (Building 39) – Orientation Report, 1960
Charcoal Kiln (Building 39), 1960–1989
Church Barn (Building 28) – Architectural Survey Report, 1958
Church House (Building 27), 1940–1943
Church House (Building 27) – Superintendent’s House Inspection, 1987

Connecting Shed (Building 10) – Roofing, 1976–1999

East Headrace, 1963

Exterior Walls – Restoration and Maintenance, 1939–1956

Furnace (Machinery and Stack) – Restoration, 1939–1948

Furnace Group – Archeological Explorations, 1940–1952

Furnace Group – Historic Structures Report (Final), 2008

Ironmaster’s House (Building 1) – Archeological Monitoring, 1980

Ironmaster’s House (Building 1) – Furnishings Donations, 1975

Ironmaster’s House (Building 1) – Furnishings Plan, 1954–1964 [1 of 2]

Ironmaster’s House (Building 1) – Furnishings Plan, 1954–1964 [2 of 2]

Ironmaster’s House (Building 1) – Garden: Greenhouse, 1941–1958

Ironmaster’s House (Building 1) – Historic Structures Report, 1963

Ironmaster’s House (Building 1) – Historic Structures Report, 1965

Ironmaster’s House (Building 1) – Historic Structures Report, 1972

Ironmaster’s House (Building 1) – Historic Structures Report, 1978

Ironmaster’s House (Building 1) – Historic Structures Report, circa 1986

Ironmaster’s House (Building 1) – Historic Structures Report, 2014

Ironmaster’s House (Building 1) – Historic Structures Report, Part I (Archeological Studies), 1964 [1 of 2]

Ironmaster’s House (Building 1) – Historic Structures Report, Part I (Archeological Studies), 1964 [2 of 2]

Ironmaster’s House (Building 1) – Historic Structures Report: Privy, 1964 [1 of 2]

Ironmaster’s House (Building 1) – Historic Structures Report: Privy, 1964 [2 of 2]

Ironmaster’s House (Building 1) – Historic Structures Survey Report, 1960

Ironmaster’s House (Building 1) – Moulder’s Kitchen, 1979

Ironmaster’s House (Building 1) – Original Measurements (Drawings), circa 1957

Ironmaster’s House (Building 1) – Painting and Paint Analysis, 1953–1980

Ironmaster’s House (Building 1) – Preservation and Rehabilitation: Project Documentation, 1979–1980

Ironmaster’s House (Building 1) – Preservation and Rehabilitation: Project Manual, 1979

Ironmaster’s House (Building 1) – Roof, 1979

Lloyd House (Building 71), 1948–1964

Lloyd House (Building 71) – Historic Structures Report, 1959

Lloyd House (Building 71) – Survey Reports, 1959–1971

Lloyd House (Building 71) – Historic Structures Report, 1959

Lloyd House (Building 71) – Survey Report, 1959–1961

Miscellaneous Features, 1939–1967

Office/Store (Building 3) – Furnishings Plan, 1960

Office/Store (Building 3) – Historic Building Survey Report, 1959–1960

Office/Store (Building 3) – Historic Structures Report, 1960–1964 [1 of 2]

Office/Store (Building 3) – Historic Structures Report, 1960–1964 [2 of 2]
Office/Store (Building 3) – Historic Structures Report (Preliminary), 1960
Office/Store (Building 3) – Reference, 1956
Office/Store (Building 3) – Basement Dehumidification, 1994
Office/Store (Building 3) – Furnishings Plan, 1960
Office/Store (Building 3) – Furnishings Plan (Sections d, e, & f), 1963
Office/Store (Building 3) – Historic Structures Report (Appendix), c.1960
Office/Store (Building 3) – Historic Structures Report: Architectural Data Section, 1959–1963
Office/Store (Building 3) – Reference, 1956
Office/Store (Building 3) – Survey Report, 1959–1960
Office/Store (Building 3) – Survey Report: Administrative Data, 1960
Office/Store (Building 3) – Survey Report: Furnishings and Exhibit Data, 1960
Office/Store (Building 3) – Survey Report: Historical Data, 1959–1960
Ore Roaster, 1940–1956
Roads (Historic), 1938–1956 [1 of 2]
Roads (Historic), 1938–1956 [2 of 2]
Schoolhouse (Building 18) – Historic Structures Report, 1973
Schoolhouse (Building 18) – Reference, undated
Slag Pile – Restoration, 1940–1958
Smokehouse (Building 41) – Historic Structures Report, 1972
Spring House (Building 17) – Archeological Investigations and Repairs, 1940
Spring House (Building 17) – Furnishings Plan, 1966
Spring House (Building 17) – Historic Structures Report, 1964 [1 of 2]
Spring House (Building 17) – Historic Structures Report, 1964 [2 of 2]
Spring House (Building 17) – Reroof, 1998–1999
Spring House (Building 17) – Roof, 1998–1999
Spring House and Smokehouse (Buildings 17 & 41) – Archeological Excavations, 1969
Spring House and Wash House (Building 17) – Furnishings Plan, undated
Tail Race, 1940
Tenant House 1 (Building 19) – Archeological Tests, 1970
Tenant House 1 (Building 19) – Architectural Survey Report, 1958
Tenant House 1 (Building 19) – Furnishings Plan, 1963
Tenant House 1 (Building 19) – Historic Structures Report, 1964–1966 [1 of 2]
Tenant House 1 (Building 19) – Historic Structures Report, 1964–1966 [2 of 2]
Tenant House 2 (Building 20) – Architectural Survey Report, 1958
Tenant House 2 (Building 20) – Historic Structures Report, 1963–1964
Tenant Houses 1 and 2 (Buildings 19 & 20) – Survey Reports, 1958
Tenant House 3 (Building 21) – Survey Reports, 1958
Tenant Houses – Restoration, 1941–1950

Northeast Region Foundation Document Recommendation Hopewell Furnace National Historic Site

July 2017

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

Steve Sims

July 19, 2017

RECOMMENDED

Steve Sims, Superintendent, Hopewell Furnace National Historic Site

Date

Cynthia MacLeod

August 15, 2017

APPROVED

Cynthia MacLeod, Acting Regional Director, Northeast Region

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.

HOFU 376/137855

July 2017

Foundation Document • Hopewell Furnace National Historic Site

