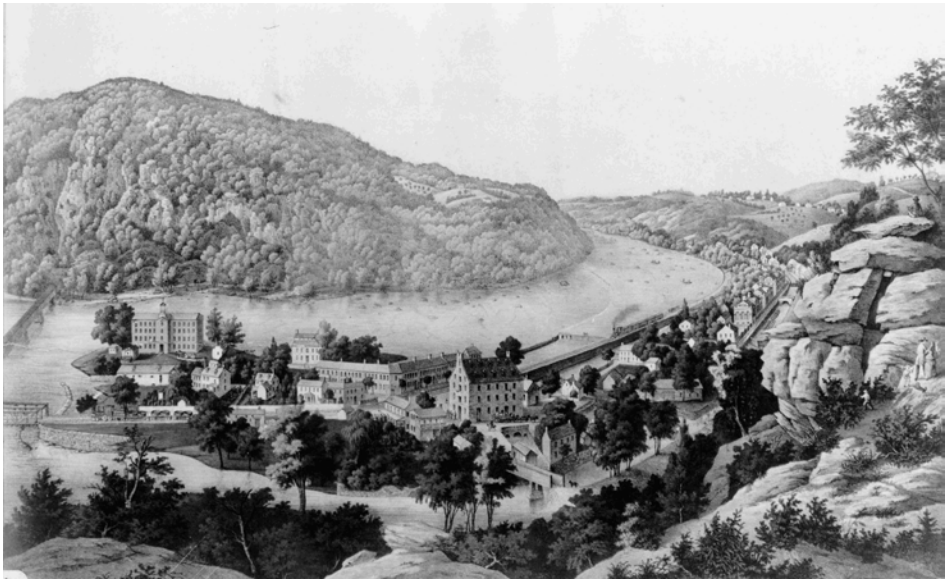
National Park Service
Cultural Landscapes Inventory

2003



Virginius Island
Harpers Ferry National Historical Park

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Inventory Summary

The Cultural Landscapes Inventory Overview:

CLI General Information:

Purpose and Goals of the CLI

The Cultural Landscapes Inventory (CLI), a comprehensive inventory of all cultural landscapes in the national park system, is one of the most ambitious initiatives of the National Park Service (NPS) Park Cultural Landscapes Program. The CLI is an evaluated inventory of all landscapes having historical significance that are listed on or eligible for listing on the National Register of Historic Places, or are otherwise managed as cultural resources through a public planning process and in which the NPS has or plans to acquire any legal interest. The CLI identifies and documents each landscape's location, size, physical development, condition, landscape characteristics, character-defining features, as well as other valuable information useful to park management. Cultural landscapes become approved CLIs when concurrence with the findings is obtained from the park superintendent and all required data fields are entered into a national database. In addition, for landscapes that are not currently listed on the National Register and/or do not have adequate documentation, concurrence is required from the State Historic Preservation Officer or the Keeper of the National Register.

The CLI, like the List of Classified Structures, assists the NPS in its efforts to fulfill the identification and management requirements associated with Section 110(a) of the National Historic Preservation Act, National Park Service Management Policies (2006), and Director's Order #28: Cultural Resource Management. Since launching the CLI nationwide, the NPS, in response to the Government Performance and Results Act (GPRA), is required to report information that respond to NPS strategic plan accomplishments. Two GPRA goals are associated with the CLI: bringing certified cultural landscapes into good condition (Goal 1a7) and increasing the number of CLI records that have complete, accurate, and reliable information (Goal 1b2B).

Scope of the CLI

The information contained within the CLI is gathered from existing secondary sources found in park libraries and archives and at NPS regional offices and centers, as well as through on-site reconnaissance of the existing landscape. The baseline information collected provides a comprehensive look at the historical development and significance of the landscape, placing it in context of the site's overall significance. Documentation and analysis of the existing landscape identifies character-defining characteristics and features, and allows for an evaluation of the landscape's overall integrity and an assessment of the landscape's overall condition. The CLI also provides an illustrative site plan that indicates major features within the inventory unit. Unlike cultural landscape reports, the CLI does not provide management recommendations or

treatment guidelines for the cultural landscape.

Inventory Unit Description:

Physical Description and Location
Virginius Island is located in Harpers Ferry Historical Park, at the confluence of the Shenandoah and Potomac rivers. Harpers Ferry National Historical Park is comprised of 2,336 acres of land in three states-- West Virginia, Maryland and Virginia. Virginius Island comprises about 13 of those acres and is located entirely in the State of West Virginia. The island is currently treated as an archeological preserve containing various archeological sites and building ruins associated with the nineteenth-century industrial and residential development on the island.

Beginning in the eighteenth-century, the Shenandoah and Potomac rivers were harnessed for power and transportation. Due to its location, Harpers Ferry and later Virginius Island became important manufacturing areas. During the nineteenth-century residential communities developed on the eastern end of the Island of Virginius, adjacent to Lower Town, Harpers Ferry. Remnants of historic structures associated with these development periods are still visible in the landscape (Joseph et al. 1993, 2-2, 2-8).

Description of Significance Period
The cultural landscape of Virginius Island has three periods of historical significance. Between 1750 and 1820, the Shenandoah Canal was established and the first mill on the island was constructed. Between 1820 and 1855 the island was organized and subdivided into smaller parcels of land. In addition, during this time the majority of structures were constructed and the milling industry was established. Between 1855 and 1890 the island community was consolidated under one owner and experienced destruction caused by the Civil War and floods. These three identified developmental eras, occurring between the years of 1750 and 1890, are considered historically significant under National Register Criteria A, B, C, and D (Joseph et al.1993, 4-38, 4-39).

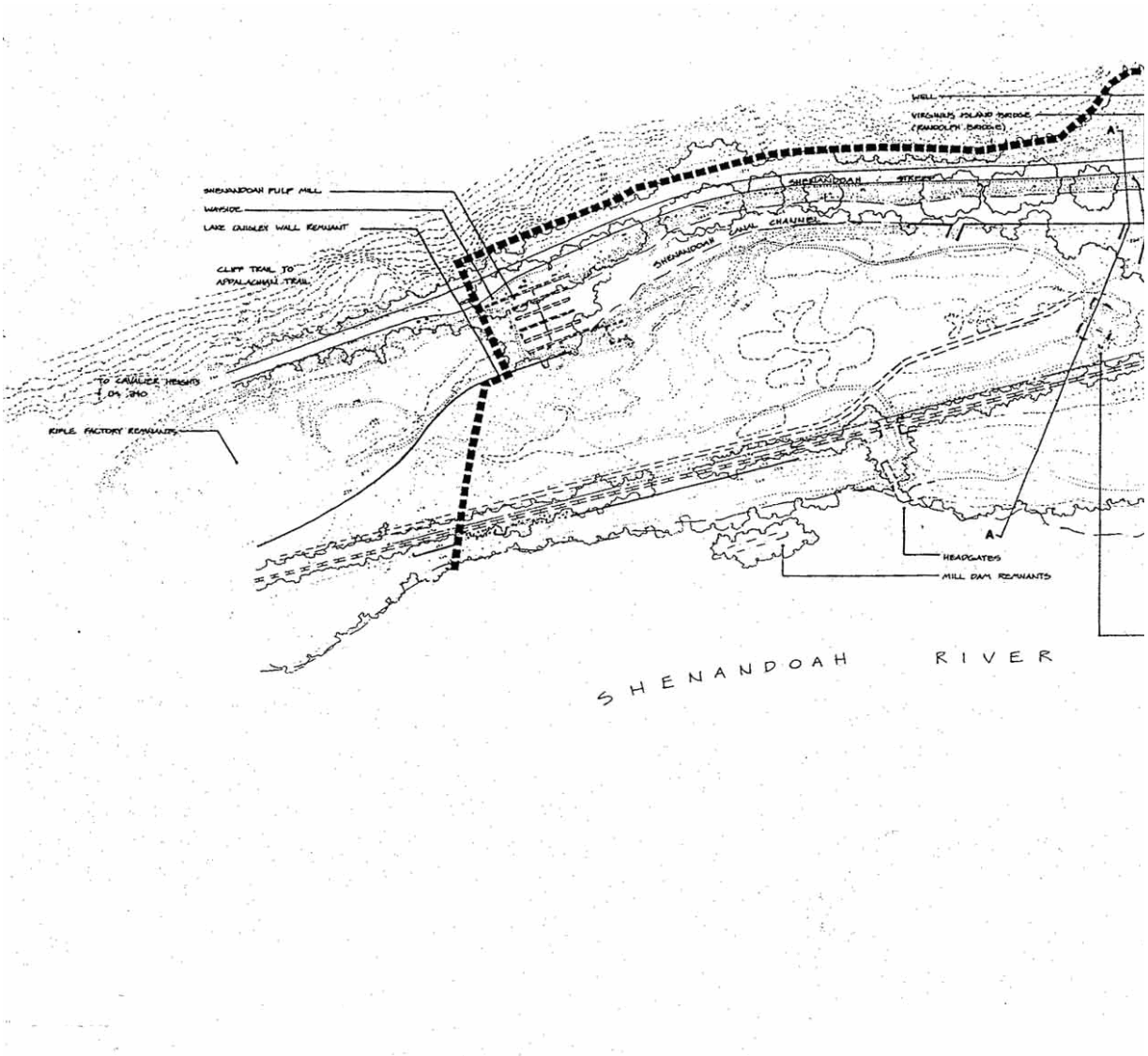
Current Conditions and Analysis
Despite frequent flooding, remnants of features illustrating historic development remain visible on the cultural landscape of the island. These include industrial ruins of cotton and flour mills and the remains of historic waterways and residential structures. Ten remnant historic resources are on the National Park Service List of Classified Structures (LCS). Once the location of a rail line, road systems, residential and manufacturing structures, orchards and gardens, Virginius Island is currently treated as an archeological treasure. Visitors access the island by shuttle bus from Cavalier Heights and can approach the island from a bridge on Shenandoah Street or Hamilton Street. Pedestrian access provides the primary route onto the island. A network of trails leds the visitor along the historic road system and nature trails that follow the shoreline. The integrity of the historic railroad circulation is preserved as a branch of the CSX traverses the island along the original 1836 rail alignment. To provide for maintenance, limited vehicular access is available for park and railroad employees at north end of the island.

Vegetation and the destructive floodwaters, have contributed to the deterioration of the ruins. Water intake tunnels, canals, raceways and headgates constitute the remnants of the original water system designed for transporting goods and for powering the mills. Foundations from two cotton mills, a flour mill and a pulp mill are the only remaining structures of the once prosperous industries. Foundations of

five individual dwellings and rubble of the row house complex comprise the ruins of former residences on the island (Joseph et al. 1993, 2-8).

In 1993 a Cultural Landscape Report was completed for Virginius Island, serving as the basis for this Cultural Landscape Inventory (see Inventory Summary narrative). Based on the recommendations in the Cultural Landscape Report, the first phase of the treatment plan was implemented in 1994, coinciding with the 50th anniversary of the park. In 1996, two major floods inundated the island causing major damage to the shoreline ruins, eroding away portions of the trail system and toppling many trees. Flood debris accumulated on the island and caused the park to close the island to visitors until the summer of 2000. By 2003, the park completed stabilization of the shoreline mill ruins and water systems, to protect these structures from the destructive effects of future floods and rapid vegetative growth. In 2004 and 2005 the management efforts will be focused on resurfacing the trails and cleaning up the debris left from the flood and stabilization projects. The cultural landscape report still serves as the management approach to preserving and interpreting the historic significance of the island landscape. Through the stabilization of structural ruins, management of vegetation, and reestablishment of historic circulation, the remnants of the industrial and residential community will be well preserve.

Site Plan



This map was created as part of the Cultural Landscape Report for Virginius Island, completed in 1993.

Property Level and CLI Numbers

Inventory Unit Name:	Virginius Island
Property Level:	Landscape
CLI Identification Number:	600005
Parent Landscape:	600005

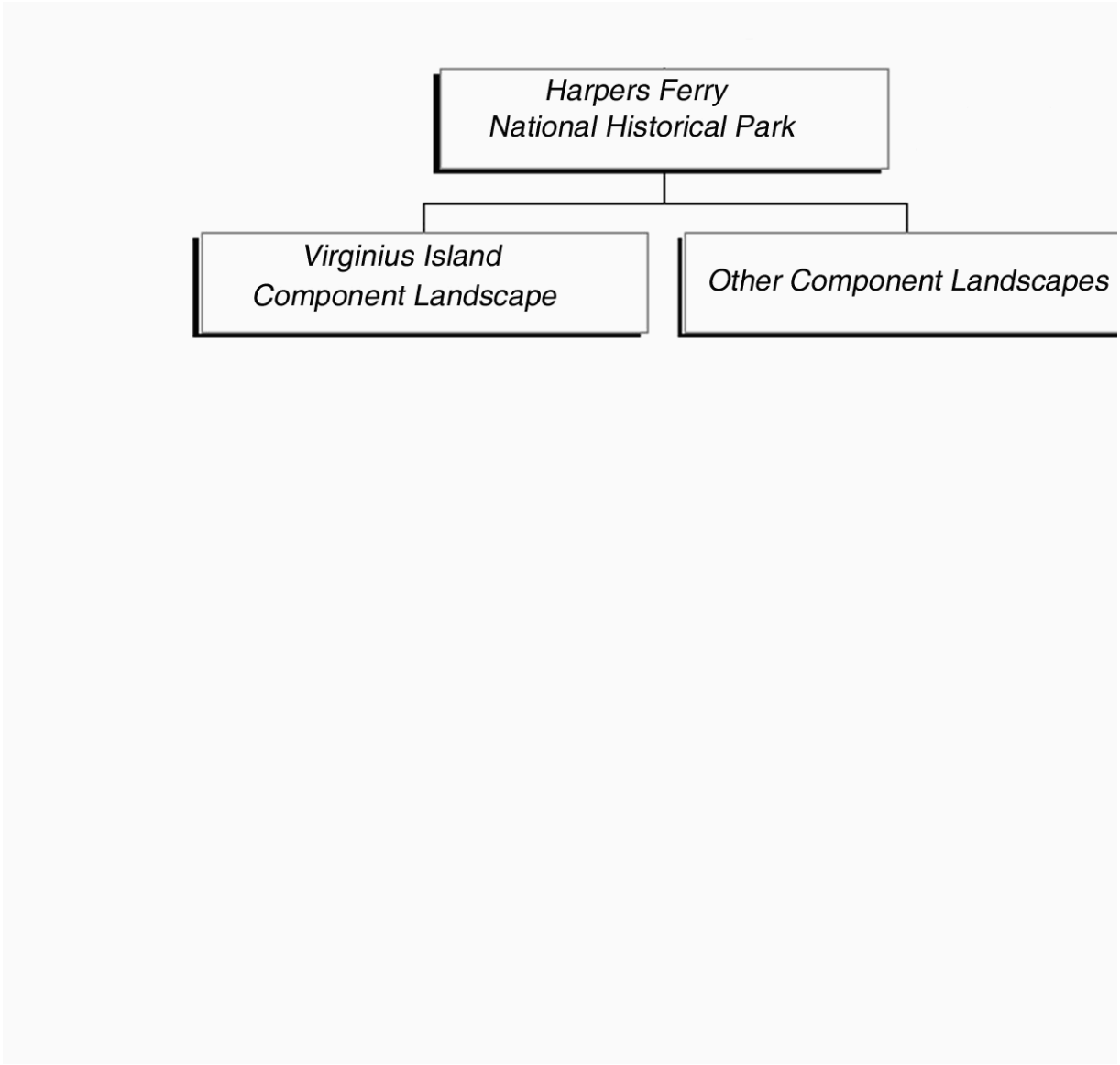
Park Information

Park Name and Alpha Code:	Harpers Ferry National Historical Park -HAFE
Park Organization Code:	3850
Park Administrative Unit:	Harpers Ferry National Historical Park

CLI Hierarchy Description

Due to the extreme flooding experienced by Virginius Island, the changing use patterns, and the many years of maintenance neglect, little above ground historic fabric is extant. As such the cultural landscape can not be divided into component landscapes; for no portion of the landscape retains enough historic integrity to be defined individually. There are, however, landscape features, such as structural foundations and road and canal traces, which retain integrity and reveal the historic nature of the site.

The cultural landscape of Virginius Island is defined by the physical features of landscape evolution associated with the island community during the nineteenth-century. Transportation routes, crucial to residential and industrial development, form the primary boundaries for this cultural landscape inventory unit (Joseph et al. 1993, 2-7).


Harpers Ferry
National Historical Park
Virginius Island
Component Landscape
Other Component Landscapes

Concurrence Status

Inventory Status: Complete

Completion Status Explanatory Narrative:

This Cultural Landscape Inventory is based on the findings of the Cultural Landscape Report for Virginius Island written in 1993 by Maureen Joseph and Perry Wheelock, members of the Cultural Landscape Team of the Denver Service Center of the National Park Service, National Capital Region. In addition, on site inventory and analysis was conducted in the spring of 1998 to update the description of the current conditions of the cultural landscape.

In conducting the Cultural Landscape Report for Virginius Island, upon which this cultural landscape inventory is based, primary and secondary source material was utilized. Historic photographs, old newspapers accounts, maps, manuscripts and artistic renderings from the Harper's Ferry National Historical Park archives, the National Archives, the Baltimore & Ohio Railroad Archives, and the Hagley Museum were used to determine the historic setting for the island. Additional on site analysis was initiated to identify the physical and functional character of the landscape from the eighteenth century until today. Based on this research, a narrative landscape history and an analysis of existing site conditions were prepared and historic base maps were compiled to depict the evolution of the physical landscape through five periods of development (Joseph et al. 1993, 1-4).

The Cultural Landscape Report, written and published in 1993, included a preferred alternative landscape plan which formulated a management guide based upon the existing historic integrity and signifigance of the island's resources. This alternative, adopted by Harpers Ferry National Historical Park, is currently being used to guide the stablization and interpretation of the cultural landscape of Virginius Island.

The major concentration of future cultural landscape research should be in the archeological investigation of the island landscape. For example, findings of recently completed archaeological studies must be incorporated into future historic landscape development and maintenance plans, in order to preserve the location of historic landscape features and structures such as, Wernwag Street [study completed 1993], the inner basin [1993], the machine shop and the sawmill [1994]. This information should be utilized to further improve the interpretation as well of the cultural resources on the island (Joseph et al. 1993, 1-4).

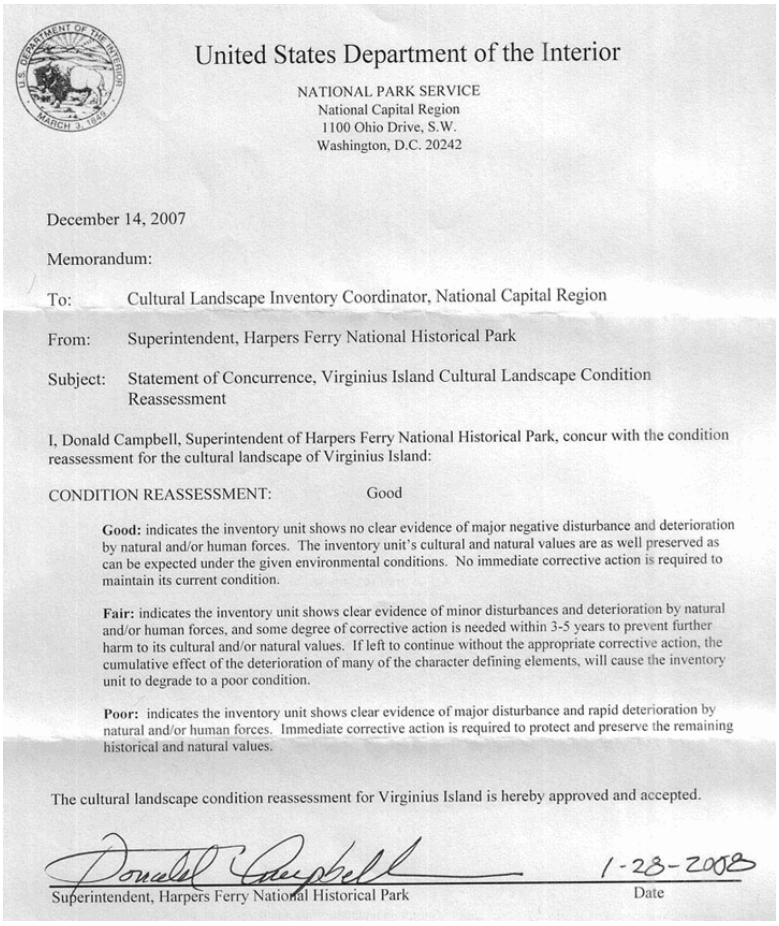
Concurrence Status:

Park Superintendent Concurrence:	Yes
Park Superintendent Date of Concurrence:	01/28/2008
National Register Concurrence:	Eligible -- SHPO Consensus Determination
Date of Concurrence Determination:	04/16/2004

National Register Concurrence Narrative:

The State Historic Preservation Officer for the State of West Virginia concurred with the findings of the Virginius Island CLI on 4/16/04, in accordance with Section 110 of the National Historic Preservation Act. It should be noted that the Date of Eligibility Determination refers to this Section 110 Concurrence and not the date of National Register Eligibility, since that is not the purview of the Cultural Landscapes Inventory.

Concurrence Graphic Information:



United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

December 14, 2007

Memorandum:

To: Cultural Landscape Inventory Coordinator, National Capital Region

From: Superintendent, Harpers Ferry National Historical Park

Subject: Statement of Concurrence, Virginius Island Cultural Landscape Condition Reassessment

I, Donald Campbell, Superintendent of Harpers Ferry National Historical Park, concur with the condition reassessment for the cultural landscape of Virginius Island:

CONDITION REASSESSMENT: Good

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements, will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The cultural landscape condition reassessment for Virginius Island is hereby approved and accepted.

Donald Campbell 1-28-2008

Superintendent, Harpers Ferry National Historical Park Date

Harpers Ferry National Historical Park Superintendent Condition Reassessment Statement of Concurrence.

United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
Office of Lands, Resources and Planning
1100 Ohio Drive, S.W.
Washington, DC 20242

February 26, 2004

Memorandum

To: Cultural Landscape Inventory Coordinator, National Capital Region

From: West Virginia State Historic Preservation Officer

Subject: Statement of Concurrence, Virginius Island Cultural Landscape Inventory

I, Nancy Herholdt, West Virginia State Historic Preservation Officer, concur with the findings of the Virginius Island Cultural Landscape Inventory as submitted on February 26, 2004.

Nancy Herholdt
State Historic Preservation Officer
State of West Virginia

4-16-04
Date

Concurrence memo signed by the WV SHPO on 4/16/2004.

Revisions Impacting Change in Concurrence:

Revision Date: 10/05/2003

Revision Narrative:

Revisions made in accordance with park staff.

Revision Date: 02/26/2004

Revision Narrative:

Updated current conditions to reflect most recent ruins stabilization projects completed in 2003.

Revision Date: 01/28/2008

Revision Narrative:

At the request of the park, our office reassessed the condition of the Virginius Island cultural landscape. The park has completed many stabilization projects since the last assesment in 2003, and the condition has improved from "Fair" to "Good".

Geographic Information & Location Map

Inventory Unit Boundary Description:

Study boundaries for this Cultural Landscape Inventory are based on the historic boundaries of Virginius Island. They include the Shenandoah River on the south and the Shenandoah Canal Channel on the east, which separate the island from Lower Town, Harpers Ferry. The northern boundary follows Shenandoah Street along the base of the cliffs toward the west as far as the pulp mill ruins. Continuing from the pulp mill ruins, the western boundary follows a course toward the Shenandoah River in the approximate location of the silted channel that once divided Hall's Island, the site of the U.S. Rifle Factory, from Virginius Island. The western boundary continues in a more southerly direction toward the abandoned railroad bridge and then to the Shenandoah shoreline. The incorporation of Shenandoah Street to the north of the island is crucial to the comprehension of the residential and industrial development on the island during the nineteenth-century. Shenandoah Street was a primary access route into Harpers Ferry during the nineteenth-century and remains so today. This route also provides visitor's first view of the island by shuttle bus from Cavalier Heights. (Joseph et. al. 1993, 2-7)

State and County:

State: WV

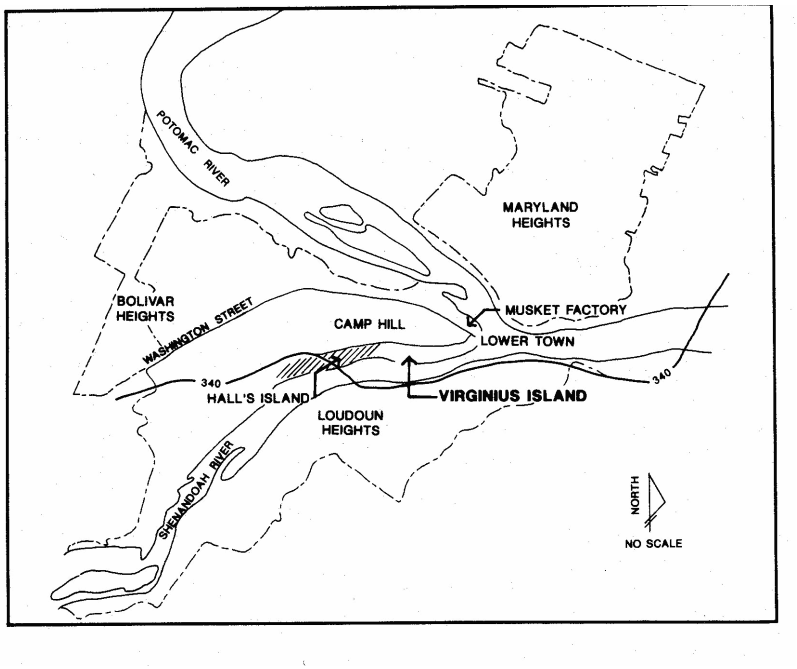
County: Jefferson County

Size (Acres): 13.00

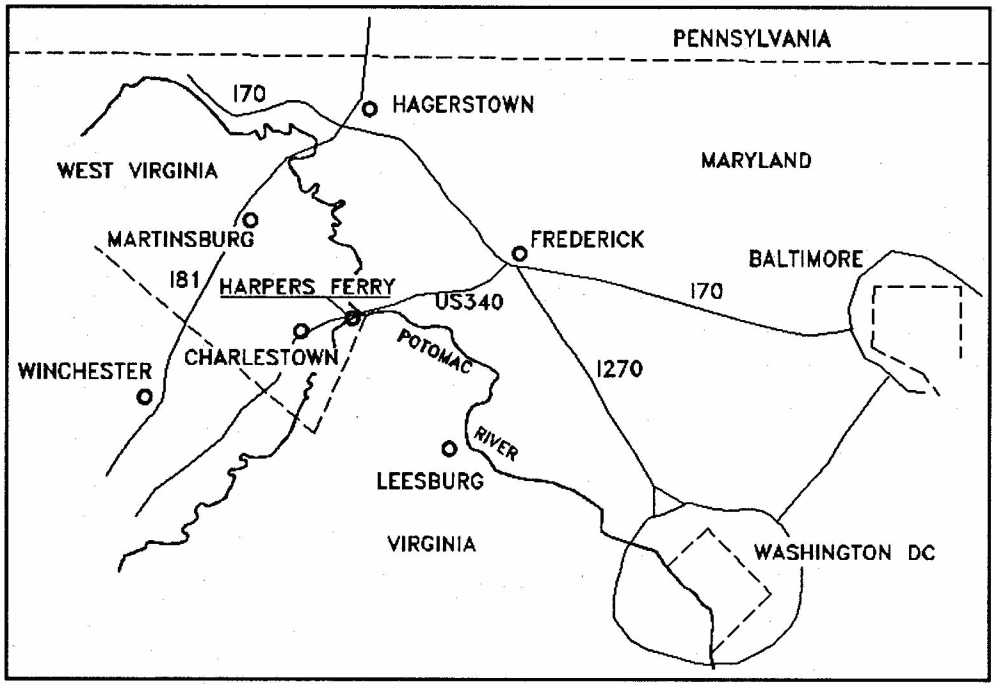
Boundary UTMS:

Source:	GPS-Differentially Corrected
Type of Point:	Point
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UTM Easting:	264,414
UTM Northing:	4,355,949
Source:	GPS-Differentially Corrected
Type of Point:	Point
UTM Zone:	18
UTM Easting:	264,238
UTM Northing:	4,356,070
Source:	GPS-Differentially Corrected
Type of Point:	Point
UTM Zone:	18
UTM Easting:	263,595
UTM Northing:	4,355,938
Source:	GPS-Differentially Corrected
Type of Point:	Point
UTM Zone:	18
UTM Easting:	263,639
UTM Northing:	4,356,096

Location Map:



Virginius Island in relation to associated Harpers Ferry, West Virginia developments. The map was first published in the Cultural Landscape Report for Virginius Island, 1993.



Location of Harpers Ferry, West Virginia in relation to neighboring towns and states.

Regional Context:

Type of Context: Cultural

Description:

The cultural context for Virginius Island is closely related to the development of Harpers Ferry as an industrial and governmental center during the nineteenth-century. The first industrial and residential development occurred in Harpers Ferry during the mid eighteenth-century, with Robert Harper's establishment of a ferry operation on the shores of the Potomac River. In addition, Harper set up a gristmill and sawmill, beginning Harpers Ferry's evolution as an important industrial town. Virginius Island during the nineteenth-century also emerged as a profitable industrial location with the construction of the flour and cotton mills.

Harpers Ferry also played an important role in the Civil War, due to the town's location near the border of Union and Confederate land holdings. For instance, in 1859 the town was the site of John Brown's raid on the U.S. Armory. In the decades following the Civil War, Harpers Ferry' s prominence as an industrial town began to decline due to changing technology and the damage caused by recurrent flooding. In the last decades of the nineteenth-century, Harpers Ferry emerged as a tourist town, supported by its role in the Civil War and its picturesque location. Harpers Ferry, including Virginius Island, was transferred to the National Park Service in 1944, becoming Harpers Ferry National Historic Monument. The historic vegetation and architectural remnants remaining on Virginius Island slowly became overgrown with successional growth, while efforts at restoration, preservation and rehabilitation of the commercial and residential areas of Lower Town quickly followed the National Park Service acquisition. At first little attention was given to Virginius Island because most of its cultural resources were of an archaeological nature which didn't conform to the mid twentieth-century notion of historical tourism. Later, the Park Service began to utilize a preservation program that incorporated archaeology, stabilization and limited restoration, within what was termed the "natural landscape" of Virginius. Currently, Harpers Ferry and Virginius Island are part of Harpers Ferry National Historical Park. A continuing campaign of stabilization and rehabilitation of historic structures and landscapes is attempting to preserve the historic integrity of Harpers Ferry and Virginius Island (Joseph et al.1993, 3-85).

Type of Context: Physiographic

Description:

The most significant physiographic feature influencing the cultural landscape of Virginius Island is the Shenandoah River. The course of the Shenandoah River, its falls and natural channels, played a key role in determining the spatial arrangement of structures on the island, the constructed hydrological systems and the topographic form of the island itself. In addition, the characteristics and use of specific materials for construction on Virginius Island reveal close ties between the landscape of the island and the evolution of the island's industrial and residential development. Virginius Island, located within the one hundred year flood plain of both the Shenandoah and the Potomac rivers, is surrounded on three sides by distinct "heights." Maryland Heights, located on the northern shoreline at the confluence of the Potomac and

Shenandoah rivers, is a part of the Blue Ridge mountain system. Loudoun Heights is located on the southern shoreline of the Shenandoah River. Bolivar Heights is a large ridge located west of Harpers Ferry and the Town of Bolivar. Hall's Island is located to the west of Virginius Island. Once a separate landform, Hall's Island was connected to the mainland and Virginus Island with the dredging of Lake Quigley and the construction of the Shenandoah Pulp Mill on the site of the Shenandoah Canal locks. In addition to these landforms, four major site aspects influenced the physiographic landform of Virginius Island—historic geologic processes, hydrology, soils, and vegetation (Joseph et al. 1993, 2-13).

Geologic Evolution

"The topography of the Harpers Ferry region is directly related to the formation of Appalachian geosyncline, a great depression formed in the earth's crust during the Paleozoic Era, 600 million years ago. Within this depression, sediment from ancient land masses gathered, becoming compacted and cemented into sedimentary rocks. Toward the close of the Paleozoic Era, about 230 million years ago, tremendous pressure exerted from the southeast drove the earth's crust westward, compressing the strata of the Appalachian geosyncline into parallel faults and folds. Along the eastern edge of the geosyncline, in an area extending north-south from Pennsylvania to Virginia, this 'Appalachian Revolution' forced up an immense fold in the earth' s crust called the South Mountain anticlinorium. South Mountain, Short Hill Mountain, Maryland Heights, Loudoun Heights and Bolivar Heights are all second-order folds within this massive formation. The tremendous forces that created the South Mountain anticlinorium also subjected the rock strata to intense heat and pressure. In the Harpers Ferry area sandstone became quartzite and shale became a schist, slate or phyllite, known today as Harpers Shale. These two formations which have been tilted up on end and uniformly dip to the east, meet at the confluence of the Potomac and Shenandoah rivers—just a few feet west of the railroad tunnel. The belt of Harpers Shale extends westward up the Potomac and Shenandoah rivers to form the numerous rapids just above Harpers Ferry. It also comprises the cliffs and hillsides in Lower Town Harpers Ferry" (paraphrased from Gilbert 1983, 121). The primary underlying formation of Virginius Island, like Harpers Ferry, is Harpers Shale. As outcrops in exposed areas, these shale beds, slabs or blocks vary in color from bluish green to bluish gray. Shale from nearby cliffs on the peninsula was used extensively in the construction of buildings, walls and waterworks on Virginius Island (Joseph et al. 1993, 2-13).

Hydrology

Virginius Island is located adjacent to the town of Harpers Ferry, West Virginia. The development and spatial arrangement of Harpers Ferry, which was first settled during the early eighteenth century to take advantage of the water power of the Potomac and Shenandoah rivers, is closely related to the hydrology of the region. Located at the convergence of the Shenandoah and Potomac rivers, Harpers Ferry has historically and continues to experience today, periodic episodes of flooding which alter its landform. The drainage area of the Potomac River is 6,380 square miles. That of the Shenandoah is about 2,800 square miles (Gilbert 1983, 10). The ample topographic change in the streambed near the town combined with the enormous volume of stream flow, provided energy for industry to develop. The

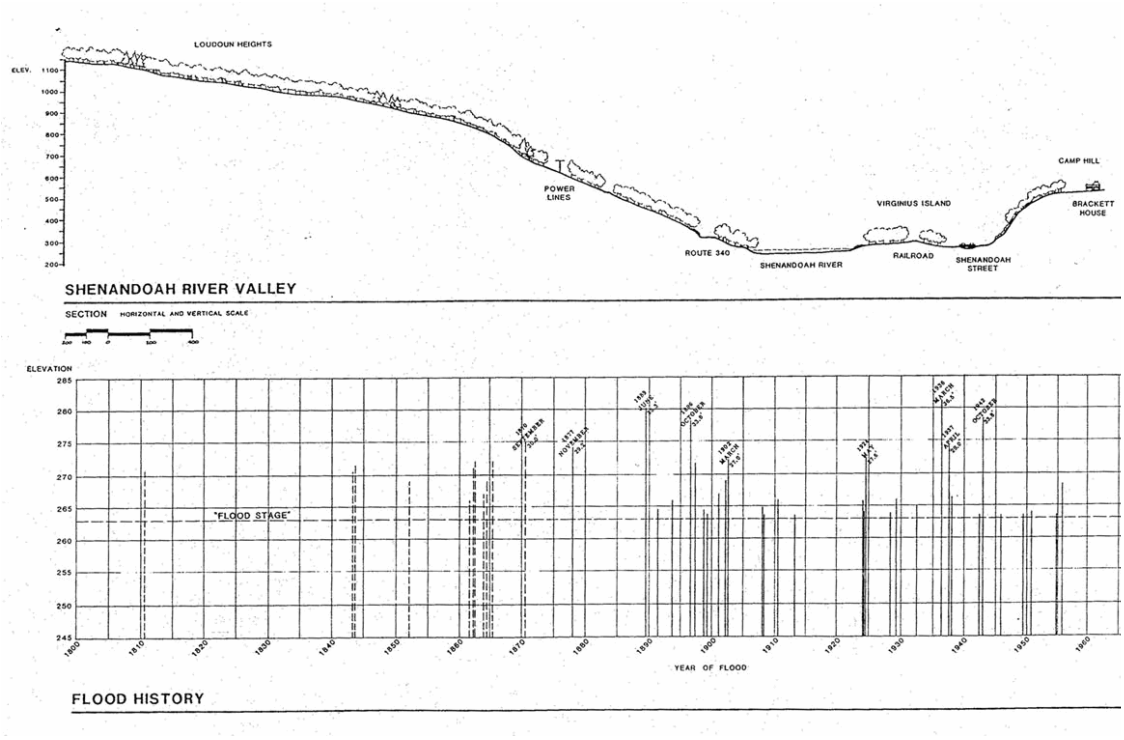
precarious location of the mills at the confluence of the rivers, however, contributed greatly to their eventual abandonment at the end of the nineteenth-century. The periodic flooding also provides challenges to preservation efforts. Earth is periodically deposited in large mounds on site, burying the remains of historic resources. In other areas on the island the periodic freshets and floods cause soil to be eroded, revealing additional historic remains. As such, the edges of the island are in constant fluctuation.

Soils

Five types of soils have been classified in and adjacent to Virginius Island. These soils, as identified by the Soil Conservation Service, are as follows; Berks-Weikert shaley silt loams--6-12% slope, Berks-Weikert shaley silt loams—12-25% slopes, Landes fine sandy loam—lowlands, Steep Rock Land-outcrops, Weikert shaley silt loam—25-45% slopes. These soils generally reflect the typical landform with its variation of slope between the rocky ledges of the hillside and flood plain along the Shenandoah River's banks (Joseph et al. 1993, 2-14).

Vegetation

The forests surrounding Harpers Ferry are dominated by white, red, black and chestnut oak (Quercus prinus) and hickory (Carya sp.). The understory of the ridge top forests is made up of young oaks, hickories and various smaller growth trees including sassafras (Sassafras albidum), dogwood (Cornus florida), and redbud (Cersis canadensis). Various plants, including Virginia Creeper (Parthenocissus quinquefolia), greenbrier (Smilax rotundifolia), and poison ivy (Toxicodendron radicans). (Gilbert 1983, 120) The riparian vegetation of the low lying areas includes members of the maple (Acer genus), birch (Betula nigra), catalpa (Catalpa speciosa) and sycamore (Platanus occidentalis) genera, among other types of trees. The native shrubs include spicebush (Lindera benzoin), blackberry (Rubus sp.) and bladdernut (Staphylea radicans) (Joseph et al. 1993, 3-2). Such thick vegetation, in some instances, helps to mitigate erosion on the islands banks. For further discussion, see vegetative section of CLI for Virginius Island landscape and the Cultural Landscape Report for Virginius Island, 1993.



This diagram, from the cultural landscape report for Virginius Island, completed in 1993, illustrates the horizontal and vertical scale of the Shenandoah River Valley and the flood history of the area around Virginius Island.

Type of Context: Political

Description:

Virginius Island is located in Harpers Ferry National Historical Park in Jefferson County, West Virginia. Harpers Ferry National Monument was established 1944 by Public Law 386. The name of the park was changed to Harpers Ferry National Historical Park under Public Law 88-33. Virginius Island has been administered by the National Park Service since 1944.

Management Unit: VI

Tract Numbers: none

Management Information

General Management Information

Management Category: Must be Preserved and Maintained

Management Category Date: 10/06/2003

Management Category Explanatory Narrative:

This date, prior to the 1993 copyright of the Cultural Landscape Report for Virginius Island, is taken from the List of Classified Structures associated with Virginius Island.

The Management Category Date is the date that the park superintendent first concurred with the findings of this CLI.

Maintenance Location Code: VI

Agreements, Legal Interest, and Access

Management Agreement:

Expiration Date: NA

Management Agreement Explanatory Narrative:

The National Park Service owns Virginius Island, fee simple. No management agreement has been procured.

NPS Legal Interest:

Type of Interest: Fee Simple

Explanatory Narrative:

The National Park Service aquired fee simple ownership of Virginius Island in 1955.

Public Access:

Type of Access: Other Restrictions

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Description:

Associated Sites

Musket Factory and the U. S. Armory

Though the musket factory site is not owned by the United States government or managed by Harpers Ferry National Park, the lands still contribute to the historic integrity and significance of Virginius Island. The musket factory, located along the southwestern bank of the Potomac River, as a major portion of the U.S. Armory established in 1796, is extremely significant in the development of the area around Virginius Island. The physical development of Harpers Ferrry was greatly influenced by the infrastructure created to support the Armory, including roads, buildings, water works, dams, culverts and canals. In 1859, the U. S. Armory was the setting for John Brown's raid. Following the Civil War, the Armory Fire Enginehouse, which had served as John Brown's fort, was identified as a historic site until its removal for display in the Chicago Columbian Exposition of 1893. A monument to mark the location of the enginehouse was placed on a berm created in 1894, near the railraod station and tracks of the B&O Railroad. The monument remains, however vegetation obscures the location of the musket factory structural remnants not buried by the railroad berm. Only a portion of the site is currently within park boundaries and general access is limited (Joseph et al. 1993, 2-3).

Camp Hill

Camp Hill is located to the north of Virginius Island and has remained a residential community, from the late eighteenth century until present day. During the period of development for the U.S. Armory (1810-1860), the community was comprised of the homes and residential gardens of armory workers and other officals. The area was also an important encampment site for troops during the Civil War. Following the war, Storer College was established, utilizing four former armory residences. Storer operated from 1867 to 1955, when the institution was closed and its campus was deeded to the National Park Service. Buildings from the college and additional structures presently are used for interpretive programs and National Park Service offices and training facilities. Park housing is also located on the western portion of Camp Hill. Pedestrian access is from Jefferson Rock trail, cliff trail/Appalachian Trail and a side trail from Virginius Island. Vehicular access is from Washington/High Street from the town of Bolivar adn Lower Town, Harpers Ferry (Joseph et al.1993, 2-4).

Lower Town

The historic core of Harpers Ferry is Lower Town, located at the confluence of the Potomac and Shenandoah rivers and below the steep shale hillside along High and Shenandoah streets. Robert Harper established a settlement and ferry operation in this area in 1751. At the time of Harper's death in 1782, a stone tavern had been established in the community. In 1796, Harper's heirs sold a majority of their holdings to the United States government to be the site of a U.S. Armory. The heirs retained a six acre reservation of land and lot at the ferry crossing in the Lower Town area for private commercial and residential development. This portion eventually became the commercial core of the community. The proximity to the U.S. Armory factories increased the value of the private property which in turn intensified the development within the six acre reservation. On the government's land in Lower Town, the arsenal as well as armory worker dwellings and storage facilities were located along the Shenandoah River shoreline. Influences from the platting of lots and roads by the U.S. government, and the Winchester & Potomac (W&P) Railroad, organized the Lower Town landscape for community development. During the war, the prosperous commercial core along the Potomac

River, the Ferry Lot, the armory's musket factory and arsenal buildings were destroyed. The commercial core shifted to Shenandoah Street and development occurred on the vacant arsenal yard. Floods in the twentieth century brought destruction to the dwellings of former armory workers along Shenandoah Street as well as to the commercial district. In 1944 congressional legislation established Harpers Ferry National Monument, which included the Lower Town area. In 1963, the park was redesignated a National Historical Park. Thirty-four historic buildings are presently listed on the National Register. They embody the full range of preservation treatments from total reconstruction to rehabilitation and stablization. Pedestrian access to Lower Town is along High Street and the Jefferson Rock trail from Camp Hill, and from the Chesapeake & Ohio (C&O) Canal across the Potomac River bridge. Vehicular access is by a shuttle service from the Cavalier Heights visitor center and by Shenandoah or High streets. There is also train service from Washington D.C. by the MARC commuter train and Amtrak to the Lower Town station located on the site of the former musket factory grounds (Joseph et al. 1993, 2-4).

The Heights
There are three distinct landforms of "heights" surrounding Virginius Island: Maryland Heights, Loudoun Heights, and Bolivar Heights.

Maryland Heights
Maryland Heights consists of 763 acres within park boundaries. The landform is on the eastern shoreline at the confluence of the Potomac and Shenandoah rivers and is a part of the Blue Ridge mountain system. Maryland Heights was occupied by both Federal and Confederate troops during the Civil War. Remnants from the Federal occupation between 1862 and 1865 dominate the present landscape. Among these earthen redoubts and batteries are, a stone fort and associated buildings, and stone breastworks. Rock outcrops on the cliffs above the Potomac offer a spectacular view of the Harpers Ferry area. Access to the heights is by pedestrian bridge across the Potomac and then along the C&O towpath to the trailhead and vehicular access is by Harpers Ferry Road to the limited parking areas.

Loudoun Heights
Loudoun Heights consists of 275 acres that stretches from the shoreline to the high ridge surrounding the town on the west and south shoreline of the Shenandoah River in the state of West Virginia. In 1813, the U.S. government purchased timber rights to clear the timber from Loudoun Heights to be used in armory production. In 1861, Confederate troops constructed three large stone redoubts which were later improved in 1862 by Union soldiers. Remnants of these fortifications and Union campgrounds are presently evident. The Appalachian Trail follows the primary ridge and adjoining side trails lead to panoramic vistas at the edge of the cliffs above the Shenandoah River. The Appalachian Trail connects to Harpers Ferry via the Shenandoah River bridge.

Bolivar Heights
Bolivar Heights is a large ridge that runs from the Potomac River two miles across the peninsula to the Shenandoah River in West Virginia. It was the site of the largest surrender of troops during the Civil War. Vehicular access is from Washington Street and Whitman Avenue to the parking area. An

interpretive trail loops along the ridge to key areas where waysides are located.

Hall's Island

Hall's Island, located to the west of Virginius Island and adjacent to the canal constructed by the Potowmack Company, was the site of the workshops of John Hall, inventor of the interchangeable breech-loading rifle. It was later the site of the U.S. Rifle Factory, which was burned down by Confederate soldiers in 1861. After the war, materials from the factory were salvaged for the construction of other structures throughout the Harpers Ferry area. Hall's Island eventually became the site of the Shenandoah Pulp Mill and Lake Quigley. With the construction of the pulp mill on top of the site of the Shenandoah Canal locks and the dredging of the lake, Hall's Island became connected with the mainland and Virginius Island and was no longer an independent entity. Few remnants remain of the rifle factory except for some exposed archeological resources. Walls from Lake Quigley and the ruins of the pulp mill are the most prominent features evident to the visitor today. A loop trail meanders to significant archeological features uncovered in the 1960s. This trail connects to the Virginius Island trail at the pulp mill ruins (Joseph et al., 2-5 to 2-7).

National Register Information

Existing NRIS Information:

Name in National Register:	Harpers Ferry National Historical Park
NRIS Number:	66000041
Primary Certification:	Listed In The National Register
Primary Certification Date:	10/15/1966

Significance Criteria:	A - Associated with events significant to broad patterns of our history
Significance Criteria:	B - Associated with lives of persons significant in our past
Significance Criteria:	C - Embodies distinctive construction, work of master, or high artistic values
Significance Criteria:	D - Has yielded, or is likely to yield, information important to prehistory or history

Period of Significance:

Time Period:	AD 1750 - 1820
Historic Context Theme:	Expressing Cultural Values
Subtheme:	Landscape Architecture
Facet:	Development Of Transportation And Land Tenure Systems
Other Facet:	None
Time Period:	AD 1820 - 1855
Historic Context Theme:	Creating Social Institutions and Movements
Subtheme:	Ways of Life
Facet:	Industrial Towns
Other Facet:	None
Time Period:	AD 1820 - 1855
Historic Context Theme:	Transforming the Environment
Subtheme:	The Industrial Revolution
Facet:	The Industrial Revolution
Other Facet:	None
Time Period:	AD 1855 - 1890
Historic Context Theme:	Expanding Science and Technology
Subtheme:	Technology (Engineering and Invention)
Facet:	Industrial Production Processes (Including Agriculture)
Other Facet:	None
Time Period:	AD 1855 - 1890
Historic Context Theme:	Expressing Cultural Values
Subtheme:	Landscape Architecture
Facet:	Development Of Transportation And Land Tenure Systems
Other Facet:	None
Time Period:	AD 1855 - 1890
Historic Context Theme:	Shaping the Political Landscape
Subtheme:	The Civil War
Facet:	Battles In The North And South
Other Facet:	None

Time Period:	AD 1855 - 1890
Historic Context Theme:	Transforming the Environment
Subtheme:	The Industrial Revolution
Facet:	The Industrial Revolution
Other Facet:	None

Area of Significance:

Area of Significance Category:	Archeology
Area of Significance Subcategory:	Historic-Non-Aboriginal
Area of Significance Category:	Engineering
Area of Significance Subcategory:	None
Area of Significance Category:	Industry
Area of Significance Subcategory:	None
Area of Significance Category:	Military
Area of Significance Subcategory:	None

Statement of Significance:

The following statement of significance is adapted from the Cultural Landscape Report for Virginius Island written in 1993. The statement is based on the documentation of the historic landscape features and patterns through three historically significant periods beginning in 1750 and continuing to 1890.

Periods of Significance

1750-1820---Settlement
1820-1855---Industrial Development
1855-1890---Corporate Consolidations and Natural Catastrophes

Of the five primary historic periods influencing the landscape of Virginius Island, as discussed within the history section of this cultural landscape inventory, three eras had the most impact on the overall

development of the community: The period of settlement between 1750 and 1820, when the Shenandoah Canal was established and the first mill on the island was constructed; the period between 1820 and 1855, when the island was organized and subdivided, the majority of structures were constructed and the milling industry was established; and the period between 1855 and 1890, when the island community was consolidated under one owner and endured the destruction brought by the Civil War and floods. The cultural landscape of Virginius Island is eligible for listing in the National Register under Criteria A, B, C, and D.

Criterion A

The Virginius Island landscape is significant under Criterion A because it is associated with the events that strengthen our understanding of broad patterns of history. Virginius Island was surrounded by the U.S. Armory and was the only privately owned land with developed waterpower industries and mills in the Harpers Ferry district. Several of these mills produced construction materials and machinery for the armory. Most of the property owners on the island were associated with the armory as contractors or as employees. The mills also utilized the rich resources of the Shenandoah Valley. Because of its proximity to Harpers Ferry, a transportation and shipping center on both the Baltimore and Ohio Railroad and the Chesapeake and Ohio Canal, Virginius Island developed into a one of the premier industrial communities of the Shenandoah Valley. The site was also associated with the Civil War. Between 1862 and 1865, the entire island was occupied by Union troops. The military utilized many of the island structures for storage, as residences for officers and doctors, and for a hospital. Personal accounts of soldiers in the hospital have been documented.

Criterion B

Virginius Island is significant because of the involvement of individuals of both national and regional significance. The island is identified first with George Washington, who as president of the Patowmack Canal Company, initiated plans to improve tributaries of the Potomac River. Even at this early stage, George Washington recognized the potential of the Shenandoah River for both transportation and industry. At the beginning of the nineteenth century, a canal was built and the channel along the north side of Virginius Island was improved. At the regional level, Lewis Wernwag, a resident of the island, made important contributions as an engineer and inventor. Between 1824 and 1828, he constructed the first bridge across the Potomac River to Harpers Ferry and also was commissioned by the B&O Railroad to build other bridges. On his island property Wernwag built a sawmill, machine shop, and residence where he designed and executed many of his projects for the U.S. government and for private industry. Abraham Herr, an entrepreneur, influenced both industrial and community development of the island. His successful flour operation made his mill a focal point for the island's economic growth. Herr increased the production of processing grain into flour. After he purchased the entire island in 1855, Herr reorganized and rebuilt many of the existing industries. He was active in the formation of regional organizations such as the Hillsborough Turnpike and the Alexandria and Harpers Ferry Railroad. In addition to his activities in the larger community, Herr served on the local schoolboard and also provided new tenement housing for his employees. During the Civil War his flour mill was destroyed by Confederates because he was a Union sympathizer.

Criterion C

The landscape of Virginius Island is significant for the distinctive style of its construction. The landscape of Virginius Island strongly reflects the manipulation of natural resources. Natural river channels were adapted and utilized in the earliest island mills. Raceways and water tunnels were constructed and further refined to facilitate the use of waterpower for the entire island. Advances in mill technology influenced additional changes in the water systems. On Virginius, this progression extended from the evolution of the earliest waterwheels to more modern waterpower turbines and is evident in the landforms found on the island where locations of the mills and industrial development can be related to the history of the site. Foundations of native stone quarried from the hillside across the canal channel provide evidence of the extensive use of stone on the island for the construction of the mills, raceways, walls and residences. James Stubblefield's subdivision of the island into four parcels originally shaped and organized individual properties according to their proximity to waterpower. These parcels developed into separate industrial clusters, with primary structures arranged according to the water system.

Criterion D

Virginius Island is designated as an archeological and natural resource preserve. Several individual sites on the island have been excavated. However, until recently archeological investigation had focused exclusively on the industrial development of the island. Excavations in 1992 examined sites where residential neighborhoods existed to learn more about the lives of the people who worked in the mills and resided on the island. Analysis of the relationships found in the physical arrangement of the residential areas followed, including; the backyards, street fronts, outbuildings, garden plots (vegetation), paths and walkways. Subsequent investigations should focus on seeking additional information concerned with historical events, social and economic history, and prehistory of the site (Joseph et al. 1993, 4-38 to 4-40).

Chronology & Physical History

Cultural Landscape Type and Use

Cultural Landscape Type: Vernacular

Current and Historic Use/Function:

Primary Historic Function: Industrial/Processing/Extraction-Other

Primary Current Use: Interpretive Landscape

Other Use/Function	Other Type of Use or Function
Leisure-Passive (Park)	Both Current And Historic
Multifamily (4+ Units)	Historic
RR Trackage	Both Current And Historic
Village Site	Historic

Current and Historic Names:

Name	Type of Name
Herr's Island: Herr, Abraham	Historic
McPherson Island: McPherson, Daniel	Historic
Peacher Island: Peacher, John	Historic
Stubblefield's Island: Stubblefield, James	Historic
Virginius Island	Both Current And Historic

Ethnographic Study Conducted: Yes-Restricted Information

Associated Group:

Name of Group: Euro-American

Type of Association: Historic

Ethnographic Significance Description:

Viriginius Island was first settled and developed by European-Americans at the beginning of the nineteenth-century. Residential and industrial development continued throughout the century. Evidence of such settlement was excavated on Virginius Island by employees of the National Park Service during 1992 and 1993. A general report on the findings of this excavation has yet to be published. Two individual reports on specific sites on Virginius Island have been published recently; an "Archeological Report on the Investigations of Wernwag's Machine Shop" was written by Mia T. Parsons and "Archeological Investigations of Lewis Wernwag's Sawmill" by Anna C. Borden. Both were published in August of 1995. Full citations are included in the bibiography.

Chronology:

Year	Event	Annotation
AD 1750 - 1820	Settled	Settlement began in 1803, with the award of a land grant to Daniel McPherson. Between 1817 and 1823, a bridge, mill, mill house and machinery were erected among the sycamore, ash, elm willow and oak trees of Virginius Island. (Joseph et al 1993, 3-8)

Daniel McPherson

AD 1820 - 1855	Developed	During these years large-scale development occurred on the island. The physical layout of the government's installation on the Potomac was established. Many more commerical and residential structures were constructed (Joseph et al.1993, 3-15).
		Lewis Wernwag
		James Stubblefield
		Hugh Gilleece
		Lewis Wernwag
		Edward Wager
		Townsend Beckham
		Fontaine Beckham
AD 1855 - 1890	Altered	During this period the island was consolidated under one owner and endured the destruction brought by the Civil War and floods (Joseph et al. 1993, 4-38).
		Abraham Herr
		John McCreight
		Johnathan Child
		Solomon Yantis
AD 1890 - 1944	Purchased/Sold	Following the purchase of Virginius Island by the Shenandoah Pulp Company, the island was used mainly for residential purposes. The remaining mills were abandoned (Joseph et al 1993, 4-8).
		Shenandoah Pulp Company
AD 1944 - 1993	Naturalized	After the acquisition of Virginius Island by the National Park Service in 1944, the island was managed as an archeological preserve with limited stablization of landscape features and structural ruins.
		National Park Service
AD 1993 - 2003	Stabilized	The 1993 Cultural Landscape Report for the Island provided management direction to stabilize the ruins and follow a vegetation management plan. Another series of floods in 1996 severely damaged the shoreline ruins prompting further stabilization.
		National Park Service

Physical History:

1750-1820 SETTLEMENT

The following historical narrative, adapted from the Cultural Landscape Report for Virginius Island, was written by employees of the National Park Service and published in 1993.

When Robert Harper established his ferry operation on the shores of the Potomac River at Harpers Ferry in 1751, he enhanced the land grant awarded to him by Lord Fairfax by constructing both a water-powered gristmill and a sawmill on the shores of the Shenandoah River. These mills were probably operated seasonally, as they were among several enterprises undertaken by Harper at his settlement near the confluence of the Potomac and the Shenandoah. A ferry operation, mills, a tavern and farming constituted Harper's enterprises. This entrepreneurial spirit was typical of colonial farmers who employed a variety of talents and skills throughout the course of the year. When, as the legend claims, seasonal flooding of the rivers forced him to relocate from the cabin he was occupying at the Potomac ferry landing to more secure ground, Harper selected a site a mile farther up the Shenandoah near his mills. Located at the foot of a natural declivity in the hillside (present-day Union Street), the mills, mill race, boat landing, Harper's residence and associated outbuildings became a naturally sited crossroads complex (Gilbert 1984, 12). Here the road or pathway to Harper's upper fields and the Winchester road connected with Harper's Shenandoah enterprises. Interpretation of historic documentation suggests that the gristmill established by Harper was a forerunner of a later type of mill known as a merchant mill. In post-revolutionary America, merchant mills were large enough to process grain and other materials for regional as well as local customers (Frye 1987, 24-26). During the early 1750s, the enterprising Harper encouraged farmers from the vicinity to bring their wheat to his mill for grist, offering his customers free passage across the Shenandoah River to the farmers in Maryland, and over the Blue Ridge in Loudoun County (Gilbert 1984, 12).

It was also typical of colonial mill sites to have a grain or flour mill and a sawmill (Frye 1987, 23). Harper's sawmill occupied a site along the mill race, downstream from the gristmill. With a boat landing and Harper's buildings clustered along the shore and mill race, a commercial and residential complex similar to the one associated with the ferry crossing on the Potomac developed.

Harper bypassed the Virginius Island area when selecting a site for his mill and residence for several reasons. For one, rather than attempting the more treacherous rapids downstream, boats and skiffs could maneuver more easily through the river above Virginius to land along the shoreline near the mills. Furthermore, had Harper indeed seen the potential on the island now known as Virginius and located his enterprise there, the upper portion of his tract (presently known as Camp Hill) would have been inaccessible to the mills below. Steep cliffs of shale that formed the mainland shore towered above the small island and the narrow channel of water passing between. Near Virginius, direct access to the higher fields was not possible. On the other hand, pathways following the natural contours and ridges to the high fields had been relatively easy to establish at Harper's first settlement on the Potomac and would be as easy to create at the site he selected on the Shenandoah.

The small mill complex on the Shenandoah hugged both sides of a mill race, which may have been part of a single natural channel created by the passage of the Shenandoah between the shoreline and a river island, now known as Hall's (Johnson and Barker 1992, 6). It is also possible that this channel, once adapted as a race, carried soil and debris to the Virginius Island area. These deposits, would have, in turn accelerated the otherwise gradual process of accumulation eventually transforming the collection of small islands located below Harper's mills into nineteenth century Virginius Island.

Like Robert Harper, the peninsula's early residents apparently either ignored or considered these small islands inconsequential. Historic records do not account for Virginius until 1803; until that time it remained undocumented. Moreover, tradition suggests that Virginius was probably a relatively insignificant landform throughout most of the eighteenth-century, easily overlooked when more appropriate choices for mill sites were discovered (Johnson and Barker 1992, 6). Virginius indeed may have been nothing more than a collection of large rocks and a small island whose overall size was frequently determined by the seasonal level of water in the Shenandoah River (Anderson, 17).

In the summer months, the island appeared larger as the river gradually receded, only to be completely submerged when the Shenandoah reached flood stage. Seasonal freshets, brought on by heavy rains in the spring and fall, also altered the size of the island. Not only was the total circumference temporarily reduced, but "alluvial deposites" brought by the high waters created permanent additions (Talcott 1843, personal letter).

When Harper died in 1782, he left his mills and fields to his nephew Robert Griffith. An island in the Shenandoah River [Hall's] was mentioned and included in his bequest to Griffith (Nofsinger 1959, 61-64). A description of the island, however, was not given. Griffith's heirs sold these holdings to the United States in 1797, conveying all property to be used for the establishment of a federal armory at Harpers Ferry. The island was not included in the sale. The Griffith parcel, which contained "Houses, buildings, orchards, meadows, waterways, watercourses, mills, mill dams and other appurtenances," was combined with property sold to the government by John Wager Sr., and the descendants of Sarah Harper Wager, who had been Wager's first wife and Robert Harper's other original heir (Nofsinger 1959, 76). With the exception of two reservations of land retained by the Wagers and their descendants, all the land at Harpers Ferry along the northern shore of the Shenandoah and the southern shore of the Potomac was, by 1798, owned by the U.S. government.

The federal government's purchase of property at Harpers Ferry marked the culmination of efforts by many different individuals to develop the water power at the confluence of the two rivers. In the last half of the eighteenth century, early industrial development at Harpers Ferry was a key element in the longstanding vision for the growth of the entire Potomac River region. Notable among these individuals was George Washington, who wholeheartedly supported and promoted the Potomac as not only a potential source of water power but also a major transportation link from eastern cities to the hinterlands of the new west, beyond the Ohio. As a surveyor of Lord Fairfax's western lands, with his military experiences during the French and

Indian War, as a landowner of large tracts along the Potomac and its tributaries, and in his position as the first president of the Patowmack Canal Company, Washington had long been an advocate for the commercial and industrial development of the Potomac River valley. Indeed this all-encompassing vision held by Washington and others, of industry, trade and a viable transportation system along the Potomac, persisted well into the nineteenth-century.

The effect of this vision on Harpers Ferry was considerable. Two separate, but related, events occurred at the turn of the eighteenth-century that indicate the impact of the vision. The Patowmack Canal Company, which had worked under Washington's leadership since 1785 to improve navigation on the Potomac River, also realized the necessity to improve the Shenandoah and other Potomac tributaries. More significant was Congress's designation, made with the urging and influence of Washington, of the "Gap" at Harpers Ferry for one of the new federal armories. The selection of Harpers Ferry in 1796 for a national armory brought additional stature to the region and specific commercial advantage to the two small riverfront communities established by Robert Harper at the confluence of the Shenandoah and the Potomac. For the next three decades, hopes for economic development were manifested in the physical changes undertaken at the Harpers Ferry crossing on the Potomac and at the mill cluster along the Shenandoah shore.

Inadvertently, Thomas Jefferson's description from 1783 of the physical beauty of the area in his "Notes on the State of Virginia", also imparts information on the economic potential of the early Harper settlement. Jefferson's illustrative description of the breath-taking view of the gap between the hills, the grandeur of the geologic formations and the majestic force of the Shenandoah and Potomac rivers reveals more about the available waterpower and potential for commerce than Jefferson ever intended.

"You stand on a very high point of land. On your right comes up the Shenandoah. On your left approaches the Patowmac, in quest of a passage also. In the moment of the junction they rush together against the mountain, rend it asunder, and pass off to the sea" (Jefferson 1954 reprint, 19).

In 1803, the governor of the Commonwealth of Virginia awarded Daniel McPherson a land grant for the "lowermost Island in the Shenandoah river" containing over eleven acres. The grant is the first explicit reference to the land mass later to be named Virginius Island. Documents from 1803 also indicate that this island was at times a single island and at other times a collection of smaller ones, depending on the level of water in the river (Jefferson County Land Grant Book 1809: 1, 479). No doubt of interest to McPherson was the work of the surveyors and engineers of the Patowmack Canal Company, who were mapping the Shenandoah River shoreline at the time of his land grant.

The plans of the Patowmack Canal Company to develop tributary streams and rivers important to Potomac River navigation included work on the Shenandoah River at Harpers Ferry, near Virginius and the old Harper riverfront settlement. The original concept called for not only a skirting canal on the Shenandoah, but also an extension of the same canal through a natural stream or channel along the north shore of Virginius to Lower Town. Here the company

planned to excavate a second canal at the foot of the high cliffs (on the north side of what was to become Shenandoah Street). On the eastern side of Lower Town, the Shenandoah Canal would connect with the government's armory canal on the Potomac shore. Lack of necessary capital, however, thwarted plans to join the two canals in Harpers Ferry. While the canal junction never materialized, the transformation on the Shenandoah shoreline was significant. The project, undertaken between 1806 and 1807, included the excavation of the 580-yard skirting canal around the Shenandoah River "Staircase" falls and through the landform and natural depressions along the northern Shenandoah shore; the construction of two locks; the deepening of existing channels; and the building of additional structures, such as the engineer's residence and a new sawmill (Garrett 1987, 720-722). By excavating the lowlands to create a canal large enough to accommodate skiffs and small barges laden with goods and produce, islands were, in fact, carved from the mainland by the waterway and shaped by the fill left from the excavations. By also improving the stream north of Virginius and east of the canal site, the completed skirting canal and channel extended from above the falls to the western edge of Lower Town.

In addition to the major structural changes that occurred with the construction of walls, locks, and buildings, the natural environment also was altered. Beginning with the original Harper sawmill race and continuing with the skirting canal, the increase in water flowing from the northwest toward the island area affected the long-term ecology of Virginius Island. In addition to this flow, a strong current was always coming down from the main part of the river toward the same northwestern location (Sponcellor 1887, 47). Both brought silt and sand from up-stream settlements which were naturally deposited at the island's edge. The affect was augmented during flood stage, when the combined force of the higher water from the river and the canal carried drift and debris not only to Virginius' Shenandoah shore but also to the northwestern end of the island. In this way the Virginius Island area was also transformed.

With the Patowmack Company's construction of the Shenandoah River skirting canal above Virginius and the completion of other up-stream canals and locks, navigation of the Shenandoah was possible. Cargo carried down the Shenandoah to Harpers Ferry came in special riverboats called "gundalows." Frequently, these craft unloaded iron, flour and lumber on the Shenandoah shore, near the site of the old Harper mill settlement. Once unloaded, the boats often were dismantled and sold for their lumber (Gilbert 1984, 37, 38). The early transportation improvements brought an increase in river trade and commerce that further influenced the physical development of the lower Shenandoah River islands. The first significant changes occurred on the islands [Upper and Lower Hall's Islands] owned by the United States. Even though lowlands on the Shenandoah were "subject to inundations," the government adapted the existing structures left behind by the canal construction on the shoreline of the Griffith Tract for use as armory workshops (Garrett 1987, 720-722). In 1810, two additional shops were built. Yet these changes were minor in comparison to the government's efforts to establish the larger armory complex on the Potomac. A simple bird's-eye sketch from this period shows the layout of the government works at Harpers Ferry and depicts a single large, barren island, representing all the lower Shenandoah islands lying in the river, with "mountains" towering above it (Marcellus to Mr. Oldschool 1809, 413).

By the end of the second decade of the nineteenth-century, the area below the government islands consisted of three islands and one main island, known then, not as Virginius, but as Peachers Island. Peachers Island was divided from the other two by a natural stream (Fossett 1887, 44, 45).

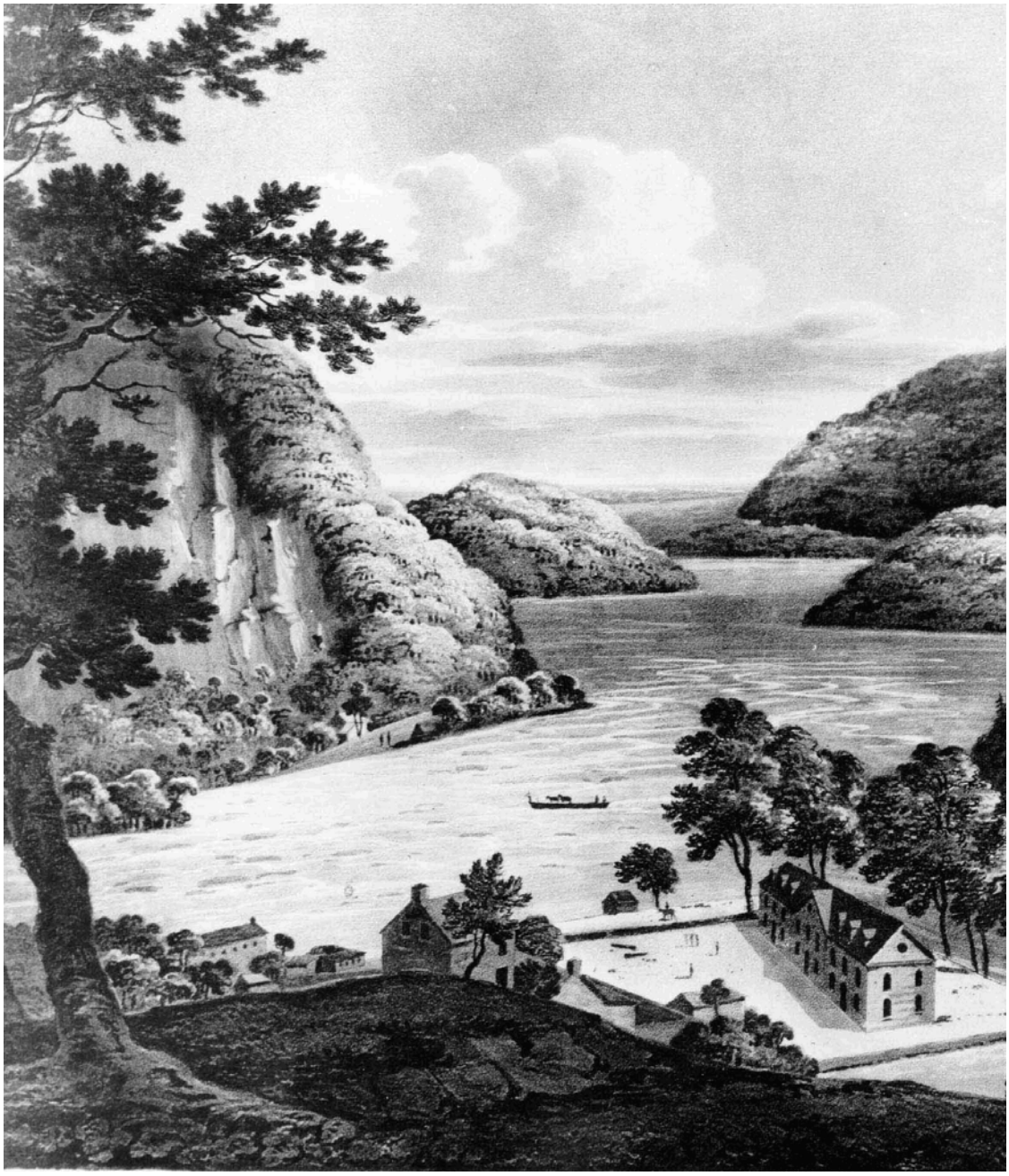
Of the two small islands, the one nearest the government works was probably nothing more than a sandbank; for the government later used the sand "in erecting foundations, walls and buildings on both armory sites" (Heskett 1887, 38). Between 1817 and 1823, a bridge, mill, mill house and machinery were erected among the sycamore, ash, elm, willow and oak trees on Virginius Island. There was also at least one orchard. Most of these structural improvements were probably made by the island's owner, John Peacher (Daniel McPherson to John Peacher, May 1817). Although Peacher was the first documented individual to develop the resources of Virginius Island, area entrepenuers had probably taken advantage of its timber, its rich lowland and its location next to the river. Peacher, however, most likely purchased the island from Daniel McPherson as unimproved land. After constructing the grist mill, Peacher most probably set up a small ferry or boating operation and constructed a few residences. For instance, a man named Chambers resided at the upper end of Peacher Island from about 1822 to 1824 and worked for Peacher in the ferry operation (Chambers 1887, 44, 45). In contrast to Robert Harper's early river enterprises and mills, Peacher's boating and milling concerns were small. Called a chopping mill, according to historic accounts, Peacher's mill did not grind wheat to flour (King 1887, 35).

Peacher's was probably a custom mill. It utilized the waterpower channeled by the river between the three small islands and the main island to grind or chop wheat, corn and rye. Unlike the more market-oriented merchant mills of the early Republic, a custom mill served the need of the local farming community. A typical custom mill was a simple apparatus using a vertical undershot wheel that functioned on the power generated by the force of the natural current. A small grinding or burr stone, one that easily could be carried, was attached to the vertical shaft of the wheel, and a small hopper collected the ground meal. Easily dismantled, this machinery was often housed under an open-sided, crudely built structure. Total output was three to four bushels an hour (Frye 1987, 21,22). Peacher probably relocated the mill off of the island at about the same time he sold his island property to James Stubblefield, a prominent Harpers Ferry resident in 1823.

Stubblefield's prominence was due in large part to his position as superintendent of the federal armory. In addition to his official capacity, Stubblefield was connected by marriage to other leaders in the community. Among these were the small group of Harpers Ferry entrepreneurs of the 1820s, who viewed Virginius as prime property for development with merchant mills and other industries. Merchant mills were a fairly common feature in the settled areas of the early nineteenth-century Blue Ridge. These structures were more substantial than custom mills and were designed to process wheat on a larger, commercial scale. Merchant flour mills of this era often were sited in rural settings advantageously located near sufficient water power, wheat-producing fields, other market-oriented industries, such as iron manufactories, and water transport. Because the federal government's armory workshops utilized the water power both at the more advantageous site of the former Harper gristmill and at the expanse of the Potomac

shore-line on the other side of the peninsula, Virginius Island was the only remaining logical site for the development of privately owned, water-powered industries. The completed Patowmack Canal locks along the Shenandoah created additional incentive for the establishment of an important grain-processing and transportation center on the island. From Virginius and Harpers Ferry large quantities of flour could be exported via the Potomac River to cities the of mid-Atlantic, and from there to lucrative trade with the West Indies (Cochran 1981, 38-49).

In 1815, the recently formed Shenandoah Company began negotiations to purchase the skirting canal, as well as the locks and equipment on the Shenandoah from the financially-troubled Patowmack Company (Bacon-Foster v15: 211). However, local control of this waterway was not determined until 1824, when the stock of the Patowmack was absorbed into the newly chartered Chesapeake and Ohio Canal Company and the separate Shenandoah Company took over operation of the canal and locks on the Shenandoah River. Improvements made by the Shenandoah Company had been intended to increase the water level in the waterway. These included the construction of a rubble dam across the river at the upstream end of the canal, and the replacement of the original two locks with a single lock of five feet and a double lock of fifteen (Gilbert 1984, 38). With these changes occurring adjacent to Virginius Island, new opportunities for economic development and expanded use of this lowermost island in the Shenandoah were realized. When these opportunities were initially realized, one of the first structures erected on the island was a large merchant mill.



The new armory buildings at the confluence of the Potomac and Shenandoah Rivers, circa 1803-1806. HF21 HFNHP photofile.

1820-1855 INDUSTRIAL DEVELOPMENT

"A road leads up the Shenandoah as well as the Potomac, and, also has a ferry; both roads are much travelled, and both rivers are navigated by light boats. There is a small island in the Shenandoah some hundred yards above the chasm, which contains several houses" (Royall

1828, 5).

The beginning of the third decade of the nineteenth-century marks an era of change for Virginius Island and for Harpers Ferry. The initiation of large-scale development on the island coincided with, and was influenced by, the significant changes that occurred in the Lower Town community. During these years, the physical layout of the government's installation on the Potomac was firmly established. Major circulation patterns were improved by the construction of a bridge across the Potomac, which eliminated the need for the ferry crossing on that shore. More residential and commercial structures were built in the "Reservation" owned by the Wager family, heirs to Robert Harper's original holdings. Along the Shenandoah shore and above on Camp Hill, armory workers were permitted to build individual dwellings on government land. On the government's island in the Shenandoah, John H. Hall, the inventor of the interchangeable breech-loading rifle, worked under contract to refine his invention and produce arms for the United States. The process of manufacturing these rifles became known as the "American System of Manufactures."

As armory superintendent (1815-1830), James Stubblefield, witnessed firsthand the significance of Hall's work (Royall 1828, 7). Though he may not have been predisposed to adopt Hall's techniques at the musket factory, the expedient use of men, materials and machinery in Hall's workshops was an important new industrial prototype for investment at Harpers Ferry (Smith 1977, 65, 67). While marriage and other familial connections also strengthened Stubblefield's ties to the leadership of the community, it was probably through his friendship with Roswell Lee, his counterpart at the Springfield Armory, that he entertained entrepreneurial aspirations beyond his position as Harpers Ferry superintendent. To realize his objectives, Stubblefield devised a plan to develop the relatively flat, vacant land on Peacher's island, the only available land in Harpers Ferry that was privately owned and not yet utilized for large-scale commerce, industry or manufacturing. Thus motivated, Stubblefield purchased the island from John Peacher, subdivided the property, acquired the dam privileges and water rights to the Shenandoah around the island, and sold off parcels to four different investors. These transactions all occurred in 1823 and 1824.

Stubblefield bought the property, which included approximately 12 acres of land, a bridge, mills, mill house, machinery, water and watercourses, in 1823 (Deed: Peacher to Stubblefield 1823, DB 13: 28). The mills were probably the Peacher gristmill and an oil mill, both powered by the flow of the river through two separate island channels. The oil mill, which ground flax seed into oil, and raceway had been established earlier on the westernmost portion of Stubblefield's holdings, probably adjacent to the gristmill site (Deed: Peacher to Stubblefield 1823, DB 13: 23, 28, 30). A year after his purchase of the island, the Shenandoah Company, which owned the canal and locks, granted Stubblefield the right to construct a dam southeast of the lower locks and to divert water flowing from spillways on Hall's Islands toward the mills and industries on Virginius Island (Bell et al., to Stubblefield 1824, DB 13: 259). To accomplish this, the natural channel between one of the three small islands and the main island, near Stubblefield's gristmill and other "edifices," was excavated and a formal millrace was constructed with headgates and walls of stone.

Other changes occurred that also altered the physical appearance of Virginius. Stubblefield subdivided the island into four separate parcels, each with access to waterfront. The oil mill and gristmill were located on the two westernmost sections. A rough street or lane was laid out to connect the gristmill section with the two eastern parcels. Of these two, there were existing "houses and buildings" on the parcel closest to the Lower Town area and a single house on the other (Deed: Stubblefield to Wernwag 1824, DB 14: 41). Stubblefield's sales of the four separate parcels all were recorded on December 28, 1824 (Deed: Stubblefield to Wager 1824, DB 13: 328, 330, 344 and DB14 41). Each of the new owners were related by marriage or by a significant business relationship to one another and to Stubblefield. The timing of the transactions and the personal relationship strongly suggest the existence of a development scheme or plan for the island. While the structural improvements initiated under Stubblefield's brief ownership were important, his apportionment of his holdings into individual parcels had the most immediate impact on the landscape of Virginius.

The early entrepreneurs involved with the development of Virginius included the Beckham brothers, Townsend and Fontaine, brothers-in-law of James Stubblefield. Townsend purchased the mill site, and Fontaine Beckham purchased the existing gristmill property. The third owner was Lewis Wernwag, a German millwright and builder with long-standing experience in engineering and bridge building, who had come to Harpers Ferry in 1824 from the Philadelphia area (Nelson 1990). As the designer for the Wager's Potomac River bridge, Wernwag apparently worked out of the new shops and sawmill he established on the Virginius Island property he had purchased from James Stubblefield. He also may have upgraded the wooden bridge leading to the island. This structure crossed the canal channel and connected Virginius to the mainland road (Shenandoah Street) at one of the cliffside quarry sites (Smith Jr. 1959, 4). Edward Wager, a relative of the family who held all the privately reserved land in Lower Town, was the fourth property owner on Virginius Island.

The expansion of the two original mills and the development of Wernwag's sawmill were part of a community wide response to a range of events and circumstances. Among the influences in the expansion was the preeminent role of the U.S. Armory in Harpers Ferry, the relocation of the community gristmill from Harper's original mill site to Virginius, the improvement of the existing river channel by the Patowmack Company, and later Shenandoah Company, along the north shore of the island, and Lewis Wernwag's 1824 contract to build the Wager Bridge across the Potomac. These factors combined to inspire investment in land speculation and early industrial enterprise. Several other conditions also played an important and continuous role in the development of Virginius. The available waterpower, the shortage of level buildable land on the Lower Town peninsula and the agricultural productivity of the nearby Shenandoah Valley, all made the low-lying island so appealing to entrepreneurs (Royall 1828, 3).

Indeed, the prospects for a healthy economy based on abundant supply of agricultural products in the Shenandoah Valley would prove to be an influential factor in the development of both large and small industries on Virginius Island. The valley supplied many varieties of consumable goods to outlying markets, including beef, pork, mutton, butter, oats, clover, corn, fodder and orchard grass-hay (Kercheval 1925, 363).

In 1827, the Virginia General Assembly granted town status to the community on the island. Thus named Virginius, the island joined Bolivar as the second official neighbor to the quasi-government-owned community of Harpers Ferry. In their petition requesting the change, the signers underscored the Virginius Island's "works of great public utility," an extensive sawmill, merchant mill, oil mill, tannery and "about twelve dwelling houses"(Petition for Incorporation of Town of Virginius 1826, B 276). Bolivar, located on the open ridges beyond the Camp Hill area of Harpers Ferry, had become a town in 1825. Like Virginius, land in Bolivar was privately held. Yet Bolivar's growth followed a different course. Over time it became a community of small farms and residences, many of which were owned by armory workers. In 1830, the United States Census listed 89 people [16 heads of household] living on Virginius, while Bolivar claimed a population of 269 and Harpers Ferry 1,385 (Johnson and Barker, 14).

The citizens of Harpers Ferry, Bolivar and Virginius anxiously awaited the prosperity long anticipated for the area around the Potomac and Shenandoah river gap. Talk of the benefits for the community to be derived from a regional program of internal improvements began as early as 1816, when a possible turnpike construction through Harpers Ferry was contemplated (Farmers Advocate, 8/11/1906). A turnpike, the Harpers Ferry, Charles Town & Smithfield, was finally organized in 1830 and inaugurated a year later. Its route into Harpers Ferry followed a narrow course between the high cliffs of shale and the Shenandoah Canal channel [formerly the Patowmack Canal channel] as it passed Virginius, improving transportation, ease of travel and speed (Virginia Free Press, 8/18/1831).

Additional transportation projects near Harpers Ferry included not only the Wager bridge, which Lewis Wernwag completed in 1828, but more significantly, on the Maryland shore of the Potomac River, the Chesapeake and Ohio Canal and the Baltimore and Ohio Railroad. Both were initiated in 1828, one in the District of Columbia and the other in Baltimore. However, construction for both projects lasted many years, with the C&O reaching the Potomac shore opposite Harpers Ferry in 1833, and the B&O crossing the Potomac into Lower Town in 1836. In 1832, reconnaissance to establish a rail route from Winchester, Virginia, to Harpers Ferry was undertaken. The route approved shortly thereafter brought the Winchester and Potomac [W&P] Railroad down the Shenandoah shore across the length of Hall's Islands and Virginius Island, then through Lower Town to a junction with the Baltimore and Ohio at the Potomac River. This was completed by 1836.

These internal improvements had additional significance for the development of Virginius Island. Because of its location near the junction of the canal, turnpike and railroad systems, and because of its flat topography and its proximity to waterpower, the island had significant potential as a major distribution point for the agricultural products and natural resources coming out of the Shenandoah Valley and the immediate regions to the west. Wheat, flour, corn, and coal were among the items shipped from the nearby hinterlands to eastern markets (Gilbert 1984, 38). Added to the island's potential as a distribution point was its advantageous location for receiving federal armory contracts. The proximity of island mills and workshops made it possible for private concerns to provide services to the government operations on the Potomac and the adjacent island in the Shenandoah (Virginia Free Press, 9/29/1842).

In the ten-year period between the subdivision and sale of Stubblefield's property and the construction of the rail line across the island, the separate parcels were developed in distinctly different ways by their respective owners. In the early years, the owners of the individual properties resided in homes built on Virginius. They participated in the life of the island community serving as town trustees, as well as entrepreneurs, employers, and landlords (Johnson and Barker 1992, 22). The oil-mill site belonged to Townsend Beckham. He improved the property by adding a tannery, which consisted of "water-works to grind bark, a large number of vats, Shops, [and] Bark Houses." There were also two "commodious" houses, with yards, gardens and outbuildings (Virginia Free Press, 11/7/1833). The headrace that powered the oil mill and tannery passed under the older oil mill structure. The majority of these structures were located on Beckham's Island, the name given at this time to the large island located just west of the main island. The collection of workshops and yards, residences and gardens was connected by a path or lane that followed the perimeter of the property. (Kearney et al. 1835, Map of Harper’s ferry Shewing [sic] the Location of the Winchester and Potomac Rail Road 1835). The course of this pathway passed across a bridge, over a larger tailrace, to join with the adjacent flour mill property owned by Fontaine Beckham, Townsend's brother. Known as Island Mill or Beckham's Mill, this large stone structure occupied the site, next to the large raceway, of the earlier gristmill. By 1831, Beckham, in partnership with Daniel Snyder, had most likely rehabilitated and enlarged the mill, putting it "in good order" (Virginia Free Press, 8/18/1831). The building measured sixty feet by forty feet and had two pair of burrs and a pair of "country stones"(Virginia Free Press, 8/16/1832).

Also on the property were four houses and a cooper shop (Virginia Free Press, 8/16/1832). These five structures were arranged along the "street," graded so as to accommodate delivery wagons, carriages and horses. This road, which spanned the widest portion of the main island, came from the Virginius Island bridge and led directly to the sawmill property, passing in front of the relatively undeveloped land in the section owned by Edward Wager.

Of the four island parcels, Edward Wager's lacked the direct access to waterpower from a natural river channel or millrace. On the north, his property fronted on the Shenandoah Canal channel and on the south, the "street" was Wager's boundary. As a result, the development of this parcel was more residential in character. When Wager purchased the parcel, an existing dwelling was included in the property transfer. In 1833 when the property was advertised for sale by Wager's heirs [Edward Wager died in 1826], two "comfortable stone stuccoed Dwellings - one of them large enough to accommodate two families" were situated on this parcel. Productive gardens also had been established behind the residences. Even with this residential arrangement, sufficient space remained for two additional buildings to be constructed in the future along the street front (Virginia Free Press, 8/22/1833).

The facilities at the Wernwag sawmill site had expanded considerably since Lewis Wernwag's arrival in Harpers Ferry. The sawmill and race, a machine shop, two smith shops and offices were all part of Wernwag's enterprise. Here, Wernwag prepared plans and materials for some of his commissions. Among these were the Wager's wagon and pedestrian bridge across the Potomac (1824-1828), the Harpers Ferry Free Church (1826), the armory dams on both the

Potomac (circa 1830) and the Shenandoah, and the Baltimore and Ohio Railroad bridge across the Monocacy River, near Frederick, Maryland (1831). Also available from the Wernwag shops were supplies of timber, lumber, plank and scantling, and routine services, such as; the turning of lathes in wood, brass, iron and steel (Virginia Free Press, 7/18/1833).

The shops owned by this talented individual, inventor and engineer, manufactured and produced everything from innovative tools to furniture (Snell 1958, 30-33, 63-64, 90). Although the workshops and mills on the Island were frequently leased to other individuals and operators, documentation suggests that several Wernwag sons were engaged in or were business partners with their father (Virginia Free Press, 2/17/1830: Johnson and Barker, 234-241). During the period of Wernwag's ownership, additional brick and frame structures were constructed on the site (Johnson and Barker, 12, 13). Some of these were residences, constructed mostly along both sides of the main street, which later was referred to as Wernwag Street. The mill and shops, however, were located next to their power sources--a raceway which utilized the water from both the Shenandoah and an adjacent river channel. This channel was the third on Virginius to be adapted as a raceway. The raceway carried water first to the machine shop and then to the sawmill. Most of the workshops were connected to the Island's main street by secondary roads that veered off of or intersected with the public right-of-way. In 1830, Wernwag enlarged his holdings, and increased the size of his river frontage by purchasing a two-acre section of the "Island Mill" site from Fontaine Beckham (Deed: Beckham and Stubblefield to Wernwag 1832, Jefferson County Deeds, DB 16: 518, 519). With this acquisition, Wernwag extended the mill race and created a water impoundment basin, thereby considerably improving the waterpower and increasing the capacity of the machine shop and the sawmill. Wernwag's purchase also expanded the potential for future owners of the site to develop other water-powered facilities along the riverfront (Deed: Beckham and Stubblefield to Wernwag 1832, Jefferson County Deeds, DB 16: 518, 519). Between 1830 and 1832, a wooden foot-bridge was constructed across the Shenandoah Canal channel to connect the Wernwag residential complex, workshops and mills with the Shenandoah shoreline in Lower Town (Deed: Wernwag to Smith and Hook 1832, Jefferson County Deeds, DB 17: 424).

Early industrial expansion on Virginius thus was limited to three distinct clusters of development. Buildings and structures associated with three separate enterprises--the oil mill/tannery, the merchant mill, and the sawmill enterprise--were grouped along raceways and riverfront so that their machinery could be powered by the force of the Shenandoah River. Although residential structures were constructed adjacent to the mills, only the small grouping of two stuccoed houses on the Wager lot was distinctly nonindustrial. By the 1830s, residents and workers came and went from the island via two bridges, one crossing the Shenandoah Canal channel on the north and the other, for pedestrians only, crossing the channel on the east. Throughout the next two decades, the physical development of the island continued to exhibit this cluster pattern. Efforts to transform Virginius into a model of industrial enterprise notwithstanding, the original spatial organization of mills, residences, waterways and roads remained until well past the middle of the century (Virginia Free Press, 10/9/1834).

The subsequent physical changes that occurred on Virginius were shaped by the Winchester and Potomac Railroad crossing the island. Just as the Shenandoah Canal and the turnpike had

before, the structural influences inherent in the railroad's development created subtle alterations in the arrangement of the properties. By the mid-1830s, not only access to waterpower was important, but also access to the newest transportation technology, a railroad system designed primarily to expedite and ship goods to eastern markets. On Virginius, location near the railroad was highly desirable (Virginia Free Press, 7/3/1835). Thus several structures were removed from the path of the W&P, while others were constructed in alignment with the track. Roadways also were reoriented to accommodate the line. The effect on the landscape of the island was an expanded hierarchy of circulation based on waterways, the railroad, the two bridges connecting the island to the mainland, the turnpike, and the secondary roads that connected the individual industrial structures.

Documentation of the survey and proposal for the route of the Winchester and Potomac Railroad underscores the significance of the location of the eastern terminus and the restrictions imposed by the topography and existing conditions at Harpers Ferry. A Lower Town connection with the Baltimore and Ohio Railroad at the Potomac crossing and rail access to the U.S. Armory for the defense of the Shenandoah Valley during wartime were important considerations in undertaking the construction of thirty-two miles of track between Winchester and Harpers Ferry. To accommodate the projected thirty to forty thousand tons of agricultural products, mostly grain, that were to be shipped annually along the W&P, the railroad initially planned to construct a single track route, with four passing places per mile with a double track to be installed in three years. Depots, storehouses and water stations were to be located strategically between the two termini (Graham, U.S. Topographical Engineer 1832, 15-19). Near Harpers Ferry, however, the terrain was prohibitively difficult for such an ambitious undertaking.

“Half a mile below the last mentioned point, the Charlestown turnpike-road descends from the table lands, and occupies most of the space between the steep rocky bluff and the margin of the stream. So narrow is this space at several points, and so high, steep and rocky the bluff bounding it on the north, that it if not altogether impractible, it would at least be extremely difficult and expensive to conduct the railroad in this direction without encroaching upon the chartered privileges of the turnpike upon the one side, or of the canal upon the other.” (Graham, U.S. Topographical Engineer 1832, 8).

The preferred route therefore was one that traversed the islands in the Shenandoah. Because Thropp's, Hall's and Virginius Islands were composed of slate rock, below the surface of the prescribed railroad bed, a continuous embankment eight to thirteen feet high and three short bridges were required to complete the island route to Lower Town (Graham, U.S. Topographical Engineer 1832, 8). Between 1833 and 1835, track was laid along the Shenandoah River from Winchester. Construction of the island and the Lower Town sections were not completed until 1836. As the W&P traversed Virginius from west to east, it intersected three of the four individual properties near the center of the island. Two small wood bridges supported by stone piers enabled the rail line to cross over the river inlet leading to Beckham's flour-mill channel and the other inlet at the sawmill head. The flour-mill site, the residential area and the sawmill complex all directly benefitted from their proximity to the rail route. In 1835, the W&P purchased the residential property, which the Edward Wager estate had sold in 1833

to John Gildea, the priest of Saint Peter's Roman Catholic Church in Harpers Ferry. On this lot, the railroad operated a depot until 1847 and during this period, a grocery was located at the depot (Johnson and Barker 1992, 178, 179). With these simple transactions, this relatively undeveloped area lost some of its original residential character.

The various owners of the other three sites also transformed their properties. Like the former Wager residential area, the tannery, the flour mill and the sawmill experienced changes in both ownership and the development of their respective industries. In 1835, Hugh Gilleece leased part of the tannery site and adapted the old oil mill into an iron foundry. Here, Gilleece cast many forms of ironwork, such as machine castings, mill gearing, branding irons, moldboards, threshing machines and items for domestic use. Several items he offered were designed as labor-saving devices for nearby farmers and farm households. While Gilleece worked to establish the iron foundry, the tannery was operated by the Townsend Beckham estate under a leased arrangement. In 1838, Gilleece bought the entire tannery site. For a short time, he attempted to lease the tanyard to another operator, while he continued to manufacture iron castings and was engaged in grinding lime into plaster as well. When this arrangement proved unsatisfactory, Gilleece expanded his own operation to the tannery. Here, in 1840, he dismantled structures apparently associated with tanning and converted the works to a chopping mill for corn and rye. He also continued to produce plaster (Deed: Hunter and Beckham to Gilleece and Aspey 1838, Jefferson County Deeds, DB 23, 376, 377). Over the years, Gilleece's production of cast iron became increasingly sophisticated. He manufactured updated agricultural items including "thrashing machines of every kind," corn shellers, straw cutters, and windmill irons. His selection of household products featured grates, coal stoves and cook stoves. By 1843, Gilleece had refined his operation to include the production of cast-iron railing suitable for churches, porticos and grave-yards (Virginia Free Press, 7/27/1843).

The flour-mill site evolved in a slightly different way. The construction of the Winchester and Potomac rail line across the property necessitated the relocation or demolition of at least three structures, most likely residences. The flour mill and cooper shop probably remained undisturbed (Snell 1958, 58). Although still owned by Fontaine Beckham at the time of the rail construction, the "Island Mill" was leased to a succession of business concerns. In 1836, the firm of Rowland, Hefflebower and Company occupied Beckham's mill. This company worked to improve and repair the mill machinery. Then the company claimed a potential production capacity of 200 barrels of flour per day and advertised that they could afford to offer more compensation for wheat milled at their establishments than any other west of teh Blue Ridge (Virginia Free Press, 6/23/1836).

Their success was such that in 1838, Rowland and Hefflebower purchased the mill from trustees of the property (Deed dated May 1, 1838, DB 24: 513-515). Unfortunately, a disastrous fire burned the mill in February 1839, destroying the entire structure. Sometime between 1838 and 1840, the site was leveled with fill and the mill was rebuilt with stone and enlarged, spanning the canal near the site of the old one. After the fire, the ownership of the mill property, which had operated mostly under lease or by court order, became entangled in a series of complicated business relationships (Snell 1958, 57). In 1844, Abraham and John Herr purchased the "well known and extensive Merchant Mill on the Island of Virginius "known as

the Island Mill" (McCormick and Hunter to Herr and Herr 1846, Jefferson County Deeds, DB 28: 292, 293).

While the configuration and functional use of the structures on the depot and sawmill lots remained constant, the ownership of the sawmill site became more entangled than that of the flour mill. The smith shops, the machine shop and the sawmill were either operated by Lewis Wernwag, his son John and other partners, or the properties were leased by their respective owners. A small portion of the original site on the south side of the main street, referred to then as Wernwag or Wernwag's Street, included a two-story brick house, that was sold in 1835 to Jesse Schofield, Lewis Wernwag's son-in-law (Johnson and Barker 1992, 208-214).

The complexity of the legal arrangements, which characterized the ownership of the sawmill site and the operation of the different workshops during these years, contrasts with the pastoral quality of the 1843 Fourth of July celebration, which also characterized community life along the Shenandoah.

“[A] very large and imposing Procession moved through the principal streets of the town, and halted in a pleasant grove on the island of Virginius, the use of which had been politely and kindly tendered to us for the occasion by our venerable and esteemed friend, Lewis Wernwag, Esq” (Virginia Free Press, 7/13/1843).

By 1844, John Wernwag, Lewis Wernwag's son, and Jesse Schofield controlled all the property attached to the original sawmill site. Hoping to profit from their holdings, Wernwag and Schofield enlisted a sales agent, James Giddings, to promote the sale of their property. Unfortunately, entrepreneurs willing to make such a large investment did not respond to Giddings's efforts. To stimulate investment in this Virginius real estate, Giddings, Wernwag, Schofield and others incorporated the Harpers Ferry and Shenandoah Manufacturing Company, which purchased all of the sawmill site.

The Harpers Ferry and Shenandoah Manufacturing Company promptly issued stock to undertake a program of industrial expansion on the site. Construction of a new cotton factory located on the riverside was initiated in the fall of 1846. In 1847, the company also purchased the old depot lot, which, in the interim, Jesse Schofield had acquired from the Winchester and Potomac Railroad. At the time of Schofield's purchase, the manufacturing company already had removed the depot building, leaving only the railcar turnarounds for the railroad (Snell 1958, 28). By 1847, all necessary parcels of land had been acquired and the cotton-factory building was nearly complete. The structure was a large, four-story brick building resting on foundations of stone quarried from the cliffs of shale found opposite the island, above Shenandoah Street. Under the factory's tin roof, the owners had installed the most technologically advanced spinning and weaving machinery. Additional waterpower came from the construction of a long dam that arched across the Shenandoah, from a second millrace, which ran underground and parallel to the sawmill race, and from the increasing of the size of the water impoundment with a new river wall and an inner and outer basin. Attached to the factory was an office, a storeroom and a waste house. With the construction of the factory complete, the entire sawmill site was reorganized around cotton production. While the

weather-boarded sawmill, with its iron waterwheel, the three-story stone machine shop, and the smith shop continued to be leased to operators, a new two-story, irregular-shaped brick building served as the company store. Among the different structures used for residences were four large rough cast "stone dwelling houses," five two-story brick tenements, and five one-and-one-half story wooden cottages (Virginia Free Press, 12/9/1852). A second factory was constructed in 1849, probably using money borrowed from Abraham Herr, who was the secretary of Harpers Ferry and Shenandoah Manufacturing Company at that time. This structure, although originally conceived as a paper mill, operated as the Valley Cotton Factory. Located on the river side of Virginius, west of the first cotton factory, the structure was also four stories high, built of brick and roofed with tin; however, it was smaller than the first factory. Documentation indicates that the second structure was destroyed by fire in November of 1852 (Snell 1958, 97, 98).

The Gilleece iron foundry and the Herr flourmill sites were not transformed in the same way the Harpers Ferry and Shenandoah Manufacturing Company changed the sawmill area. While the iron foundry operated at a fairly steady level, productivity at the flour mill increased under the ownership of Abraham Herr. In 1850, Herr constructed four new tenements for workers on his property. Indeed, overall industrial expansion brought by the new cotton manufacturing and increased flour production was responsible for the dramatic rise in population on Virginius. The census indicates that by 1850 nearly 186 people resided in thirty-one dwellings there. Many of these residents worked for the two cotton factories and had come from textile areas in the North or had immigrated from England (Snell 1958, 99, 111).

Throughout the first half of the nineteenth-century, one issue created continued concern among the owners and operators of the industries along both the Shenandoah and the Potomac. High water, freshets and floods posed a constant threat to mill operations, armory property and the residences along the shoreline. Fortunately for Harpers Ferry and Virginius Island, destructive floods did not occur between 1810 and 1840, years which mark periods of substantial growth and development for both communities. However, periodic flooding always has been endemic to the lowlands at the confluence of the Potomac and Shenandoah, causing the rivers to flow over Virginius Island or fill the main streets of Lower Town. In 1843, three floods hit Virginius. The first flood in April carried off lumber supplies from Wernwag's mill and probably destroyed the footbridge leading from the sawmill property to Lower Town. The two other floods in September damaged the Winchester and Potomac railroad line, filled gardens and cellars and once again carried off the Wernwag lumber (Virginia Free Press, 4/20/1843). Minor floods occurred in the fall of 1846 and 1847; armory shops, residences and mill sites were affected most (Virginia Free Press 11/5/1846). A major flood seriously damaged property on Virginius and in Lower Town in March of 1852, as the quote below describes.

“[B]ut still there was no dread that the ‘high water marks,’ known for a century--would become submerged--that the ever memorable freshet of 1847, would be a purling stream, compared with the angry, terrible and devastating torrent that was quickly to rush upon the, drive them from their firesides and leave their inhabitations look afar, like islands dotted over the sea” (Virginia Free Press, 4/22/1852).

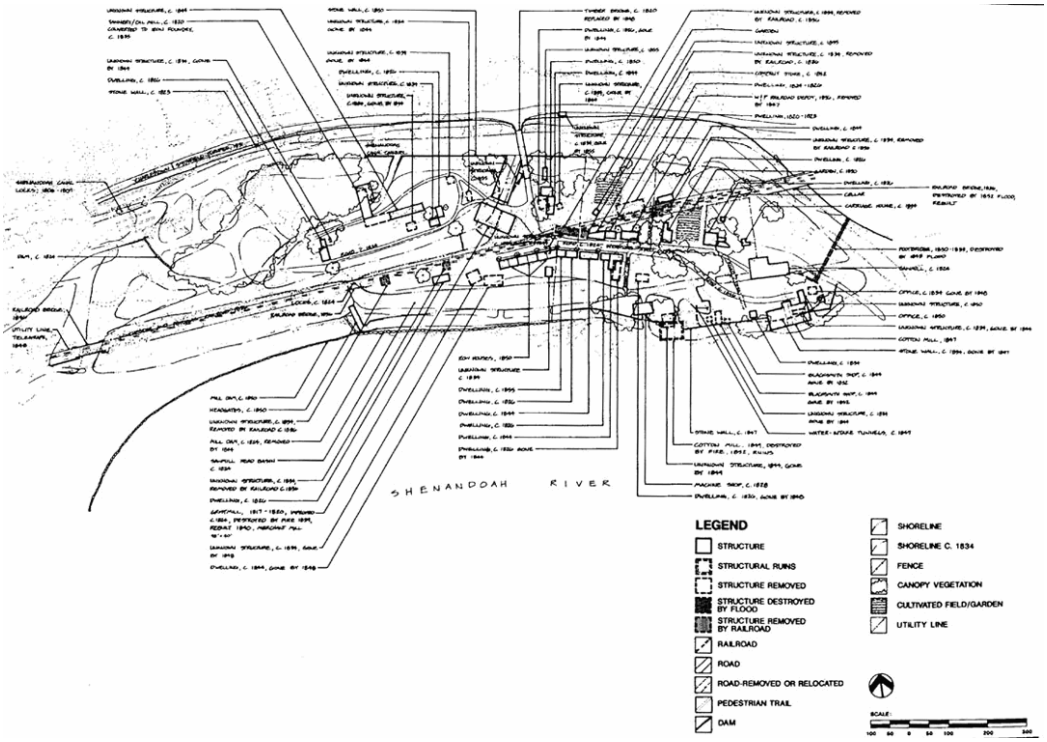
Specific damage by these floods to Virginius included the loss of the primary wagon bridge to the mainland and the loss of the W&P Railroad bridges. Floods had wrecked havoc on Virginius Island in the past, and floods would cause great destruction in the future, but at the middle of the century, cleanup and rebuilding were the order of the day (Virginia Free Press 4/20/1843).

By mid century, Virginius Island entrepreneurs had brought industrial expansion to a level commensurate with other industrial communities in the United States. This expansion occurred rapidly and contrasted directly with the more gradual changes that had occurred throughout the 1830s and 1840s, when the Virginius population had increased from 89 residents to 113 (Johnson and Barker 1992, 14). During these early years, the labor force necessary to support the kind of industrial activity suggested in the following editorial had been lacking.

"Hands could be employed at the place very advantageously, without incurring the expense of erecting buildings for their residences. The families of the workmen in the Armory might find useful and constant employment in such Factories, which might yield them a support independent of their parents" (Virginia Free Press, 10/9/1834).

With three decades of gradual development and refinement of the industrial capacity of the waterpower on Virginius, large-scale transformation of the island occurred. Waterways had been channeled, mills constructed and reconstructed. Four individual industrial enclaves had evolved out of the original landowner patterns. Along with the residential structures and service buildings, these clustered enclaves were connected to each other by an informal circulation system of cart paths, and the more rigid and linear arrangement of the main street, the Winchester and Potomac Railroad, and the bridges to the mainland.

Although new structural changes and improvements were undertaken, the success of all Virginius's industries in the first half of the nineteenth-century was limited to what local and regional markets could support. For this reason, and for the general shortage of large amounts of investment capital, Virginius Island did not emerge as a full-fledged industrial landscape like the large-scale Lowell factory complex on the Merrimack River in northeast Massachusetts, the smaller, but well-integrated, Crown and Eagle Mill village on the Blackstone River in southern Massachusetts, or the Brandywine mills in Delaware. These two issues of market and capital hindered the economic development of the entire Potomac and Shenandoah river region. The less industrialized character of the economy in the Potomac region was also of great concern to government officials overseeing operations at the U.S. Armory in Harpers Ferry. Here, where production levels consistently fell below those at the armory in Springfield, Massachusetts, superintendents worked during the 1840s and 1850s to reorganize the government installations on the Potomac and Shenandoah into more efficient manufacturing centers (Smith no date, 275-277). These initiatives were undertaken not only for the improvement of arms production but also for the improvement of community life in Harpers Ferry.



The development on Virginius Island between 1820 and 1855.

1855-1890 CORPORATE CONSOLIDATIONS AND NATURAL CATASTROPHES

By mid century, Harpers Ferry and Virginius Island had developed into a moderate-size industrial community. While its overall physical appearance was not comparable with that of Lowell or other New England towns, recent rehabilitation of the armory facilities and the establishment of factories on Virginius gave these industrial areas on the Potomac and the Shenandoah an aura of purpose and prosperity (Virginia Free Press, 6/26/1845).

At this time, the confluence of the Potomac and the Shenandoah was not only a place for water-powered factories and mills, but also a hub for a modern transportation network. Throughout the first half of the nineteenth-century, the interdependent relationship between industry and transportation had been the greatest influence on the transformation of the landscape at Harpers Ferry and on Virginius Island. After 1850, as the waterways, lowlands, and hillsides were adapted and developed further, this relationship became a more subtle and refining influence.

The center of commercial activity for Harpers Ferry was at the junction of the Winchester and Potomac and Baltimore and Ohio rail lines in Lower Town, near the covered Y-shaped bridge crossing. Nearby, spread out in two rows of brick buildings along the Potomac shore, the main facility of the U.S. Armory produced approximately 7,700 muskets per year (Nofsinger 1959, 43). These were stored across Shenandoah Street in the arsenal. On the hillside above the government-owned factory, stone, brick and frame stores and residences were crowded along

the two main streets and on the terraced cliffs. On the southern edge of the town, the Shenandoah River curved toward Virginius Island. Along the Lower Town shore was a neighborhood of modest residences and stores. To the rear of many of theses structures were fenced yards, garden plots and a few outbuildings. All of Lower Town-- factory, stores, residences, yards and hillside was seemingly enclosed by the two railroads, as their tracks encircled the community along the shoreline of the two rivers. The B&O ran north, up the Potomac, on a trestle secured by a long wall adjacent to the U.S. Musket Factory and along the river's edge. The route of the W&P followed the Shenandoah shore, except in Lower Town, where the track had been constructed on a massive, elevated wooden trestle a short distance from the river's edge. When the W&P train departed from its junction with the B&O in Lower Town, it passed by the armory workers' houses, crossed the Shenandoah Canal channel rail bridge and then entered the Virginius Island community. As the W&P traversed Virginius Island, it passed the enclave of mills, factories and residences clustered along a network of raceways.

The industries and the races had been developed over three decades by a succession of entrepreneurs and enterprising engineers. During the second half of the century, the properties gradually became consolidated under the single ownership of Abraham Herr. With his direction, the function of several of the individual sites was changed and the spatial organization of the island as a whole was refined further. By 1858 Virginius had reached the height of its physical development.

Certain transportation changes had a general, if not specific, affect on the development of Virginius Island during this era. Among these were the merger of the two railroads, improvements along the Shenandoah River, and the construction of a new turnpike in nearby Loudoun County. Although the Baltimore and Ohio Railroad assumed financial control of the Winchester and Potomac in 1848, it allowed the W&P to operate fairly independently until the Civil War (Zabriskie 1960, 109). This corporate arrangement probably sustained the apparent harmonious relationship between the railroad and owners and residents of the island (Stilgoe 1983). At the same time that the W&P merged with the B&O, the new Shenandoah Company planned to improve navigation on the Shenandoah River through expanding and maintaining the old skirting canals. The Company devised these alterations to accommodate newer, larger and more powerful steam-powered river craft. The Hillsborough Turnpike, located across the Shenandoah River, was also incorporated in 1851 to facilitate the transportation of grain and other products through Loudoun County, to Lower Town and Virginius via the Shenandoah Bridge. Abraham Herr, aware of the potential benefit to his flour-milling enterprise, was one of the organizers of the turnpike.

As opportunities for further investment in Virginius Island arose, Abraham Herr took advantage of them, as well. One of the first was Herr's purchase of the former holdings of the Harpers Ferry and Shenandoah Manufacturing Company. To settle existing debts, the manufacturing company offered for sale in 1852 and 1853 its six acres of land and its "large brick factory building, filled with approved machinery; Saw Mill, dwellings, shops, store houses, &c." (Virginia Free Press, 1/27/1853). The property was purchased for $50,000 by one of the Company's partners; shortly thereafter in 1854 the court ordered a second sale where Abraham

Herr bought the "Valuable Water Power and Factory Property" for $25,000 (Snell 1959, 114, 115). To this, in 1855, Herr added the small lot owned by Jesse Schofield, where Schofield and his family had been living since 1835. Also in 1855, Hugh Gilleece and his partner sold the iron foundry site to Herr. Ironically, at the time of the sale, the foundry was leased to Fontaine Beckham (and son), the original owner of the "Island Mill" and brother of the former owner of the Gilleece site. With the completion of these transactions, Abraham Herr became the sole proprietor of Virginius Island (Snell 1959, 115-117). Immediately before and in the years following the Herr purchases, many of the industries on Virginius operated under different lease or partnership arrangements. Herr himself apparently oversaw the production of cotton goods at the factory, while the flour mill operated as a partnership, with Herr as one of the principals, and a new manufactory, Rohr Brother's Wagon Making and Blacksmithing, leased the "new brick shop, near Herr's Mill." Residential quarters for operators and workers could be found in some thirty-one structures. These included boardinghouses, cottages, large homes and tenements near the industrial areas (Virginia Free Press, 12/11/1856 and 6/8/1854).

Although there were adjustments and some fluctuations in the population of the island, between 1850 and 1860, the Virginius population remained near its highest level at 184 (Johnson and Barker 1992, 40-41).

Abraham Herr constructed four small two-story brick tenement houses in 1850 on the flour-mill site either as dwellings for his mill workers or as rental properties for residents of the island who were employed in the other Virginius industries. Stone quarried from the government cliffs was used for the foundations of the tenements, which were constructed on lots adjacent to existing residences. Three of these were located south of Herr's mill, aligned with the railroad, and opposite the intersection of the W&P with Wernwag Street. The fourth tenement probably was constructed adjacent to Herr's own residence. With the completion of the tenements, the residential core of the island was changed dramatically into a single streetscape of urban row houses, an architectural characteristic not possible on the stepped terrain of the other privately developed Harpers Ferry neighborhoods. Collectively, the facades of the small island residences in two east-west rows added another strong linear element to the rigid landscape pattern earlier formed by Wernwag Street and the rail line (Herr to Talcott, personal letter 3/19/1850). While the original street and the rail line served to connect industries and transportation systems, the construction of the row houses visually united the circulation systems with the new residential arrangement. An industrialized residential neighborhood thus was created at the center of the island. Rather than clusters of mills, shops and factories, with homes located nearby, the new residential patterns and singular ownership of the island consolidated and unified the physical layout of Virginius. The overall appearance was that of a typical 1830s and 1840s factory village, similar to those devoted to textile production and sited along the rivers of southern New England and the Brandywine River Valley.

Ironically, at the time the arrangement of industrial and residential structures located on the island was most cohesive, Virginius no longer was a separate jurisdiction. By the 1850s, the island had been absorbed into Harpers Ferry proper (Deed: Conrad and Hunter to Abraham Herr, Jefferson County Deeds 1859, DB 38: 315). Eventually, the citizens of Harpers Ferry would refer to the island as Herr's and no longer call it Virginius. Community reorganization

also had occurred in the Lower Town and Camp Hill areas of Harpers Ferry during the tenure (1844-1851) of Major John Symington, who served as the second military superintendent of the U.S. Armory installation. Through Symington's efforts a town plan had been adopted that realigned and laid out a grid of streets, rendered the arms factories on the Potomac shore and on Hall's Islands more efficient, set aside lots for churches and schools, and sold armory property to individuals for residential development.

Abraham Herr also may have developed a plan for the overall industrial output and spatial organization of his island. Documentation suggests subtle physical changes were instituted during the initial period of his ownership, mostly adjustments and refinements in the function and arrangement of the primary structures (Llewellyn 1856). Construction of the row houses, their alignment determined by the course of the railroad across Virginius, is one indication of Herr's planning on behalf of his employees. Herr's business acumen is demonstrated in his successful flour milling and simultaneous expansion of his interests into the cotton factory enterprise; the formation of a partnership, Snapp and Herr in a new iron foundry; and the construction of additional structures for a granary and a wheelwright and carriage shop (Snell 1959, 36). His reconstruction of the old Harpers Ferry and Shenandoah Manufacturing Company dam to create a larger inner basin brought additional waterpower to the cotton factory site and also demonstrated his efforts at comprehensive planning. Herr's involvement in the civic life of Virginius, Harpers Ferry and in the welfare of the greater community further indicates his role as a leading citizen. Not only did he live near his mills, factories and worker's residences, in a house adjacent to the "Island Mills" and across the rail tracks from the tenements, but he also erected a schoolhouse on the island, was elected to the Harpers Ferry Town Council, served on the board of the Overseers of the Poor and was superintendent of school commission elections. In addition to these local positions, Herr focused on regional concerns in his position as chairman of the stockholders of the Hillsborough and Harpers Ferry Turnpike, as president of the stockholders of the Shenandoah Bridge Company, and in raising stock for the Alexandria and Harpers Ferry Railroad Company, enterprises that directly affected his businesses (Virginia Free Press, 3/7/1851, 5/9/1851, 9/18/1851, 4/12/1853, 9/13/1850).

With this knowledge of Abraham Herr's career, the artistic rendering of Virginius Island produced in 1857 by Sachse and Company of Baltimore, Maryland, gains added significance. Of the limited number of drawn, and later photographed, images made of Virginius Island, this one is the most comprehensive. Mid-nineteenth century lithographs of towns and cities were a very popular and often egalitarian, cultural expression of American attitudes toward the growth of communities such as Virginius Island. Frequently, the lithographs conveyed many accurate details that reveal information about the placement, use and appearance of structures and circulation systems in these communities. Modern aspects of contemporary life often were portrayed in harmony with the town's pastoral surroundings, underscoring the pleasant transition between the old agricultural way and the new industrial order (Reps 1984, 3-4).

Typically, an artist employed by the publishing firm would come to a community and advertise that he would be preparing sketches of views of the town, village or hamlet. By encouraging citizen interest in this artistic activity, the lithographic company hoped to subscribe purchasers of the finished work. This arrangement was probably similar to that which brought the artist

from Sachse and Company to Harpers Ferry to draw Lower Town from Maryland Heights and Virginius Island from Jefferson Rock, both appropriate vantage points for creating interesting, but typical, renderings of communities in the era before the Civil War (Lithograph by Sachse 1857).

The Sachse Company lithograph of Virginius portrays a fairly accurate representation of "Herr's Island" in 1857 and demonstrates how important physical layout and spatial organization were to the prosperity of Herr's various operations. Essential to Herr's establishment was that all significant structures were adjacent to sources of waterpower and located within access to the railroad, the island roads and bridges, and the turnpike and river bridges. An indirect connection to the agricultural resources of Shenandoah Valley also is suggested by the farms and fields in the background and the meander of the river in the distance. Of additional importance, as the lithograph demonstrates, was the proximity of residences to factory, mill and workshop. With such a short distance between work and home, the owner, manager and worker became a closely integrated island community. While many of these elements were evident in the physical organization of the island before Herr's purchases and consolidation, the properties were then, less tightly knit, clustered according to the water system, individual ownership patterns and boundary lines.

Floods in 1859, 1860 and 1861, brought the usual disruption to life along the riverbank. High water and mud entered the basements of houses along the Shenandoah in Lower Town as well as on Virginius, where some residences had basements and cellars. The mills, naturally, took in the most water by the raceways and canals. Periodic flooding continued to be one of the drawbacks of manufacturing with waterpower (Virginia Free Press, 9/22/1859, 11/8/1860 and 4/18/1861).

When John Brown and his band of raiders entered Harpers Ferry on October 16, 1859, to seize the weapons stored in the U.S. Arsenal, the drama of his attack, siege and capture by U.S. Marines brought the community national prominence and enormous historical significance, but the raid had little direct impact on the island properties or the residents of Virginius. However, the Shenandoah riverfront did provide a complete view of a small band of Brown's men fleeing from the U.S. Rifle Factory into the river. As they attempted their escape, shots were fired from the rifle factory and from a company of militia stationed on the Shenandoah River bridge. All but one of Brown's men were killed.

In the months following John Brown's capture and execution, little physical change occurred on Virginius. As evident from the 1860 Census, the population had remained relatively stable during the 1850s; consequently, additional residential development was not necessary (Johnson and Barker 1992, 41). Moreover, the debt Herr incurred purchasing portions of the island may have hindered further plans for expansion beyond construction of the iron foundry, carriage and granary, or he may have considered adapting existing structures for new uses rather than undertaking the construction of more facilities. At the beginning of the decade, Herr had the machinery in both the iron foundry and the cotton factory dismantled. He then used the cotton factory building as a storehouse for grain (Hindle and Lubar 1986, 155-156). Regardless of Abraham Herr's circumstances, the calm that had settled on this picturesque factory

community of the "Island Virginius," as beautifully depicted in the Sachse's lithograph, was shattered shortly thereafter by the outbreak of the Civil War.

Between 1861 and 1865, Virginius Island served as a backdrop to many of the dramatic wartime events that occurred in and around Harpers Ferry. Abraham Herr apparently evacuated the island early in the spring of 1861. Union troops dismantled the mill machinery in the flour factory to render the plant inoperable in the event of Confederate occupation. When Herr, who was a Union supporter, returned to Harpers Ferry shortly thereafter, he offered stored grain, which he was no longer able to process, to the Union forces. In retaliation to Herr's favoritism, Confederate troops burned the mill, "destroying it completely and the shattered and toppling walls are still to be seen, a monument of vandalism and a reproach to civilised warriors" (Barry 1979, 116). Herr temporarily retreated to Baltimore, where he became involved in the lucrative wheat and flour trade with the West Indies. Before the war's end, Herr relocated to Georgetown [Washington, D.C.] where he began a partnership with his former Virginius miller, James Welch. Their flour mill, located adjacent to the Chesapeake and Ohio Canal, became a prosperous Georgetown establishment in the 1870s. During the Reconstruction era, Herr petitioned the U.S. Congress for restitution for damages done by Union forces throughout the war to his property on Virginius Island. This claim was not satisfied until the 1890's, after Herr's death in 1886 (Mitchell 1968, 156-161). After burning Herr's flour mill, Confederate forces also destroyed the U.S. Rifle Factory on Hall's Island in June 1861. Together, Herr's departure and the destruction of both his flour mill and the U.S. Rifle Factory, empty shells of stone and brick by the summer of 1861, marked the end of large-scale industrial enterprise on the Shenandoah at Harpers Ferry.

Union occupation of Virginius Island began in February 1862. Island property, like other structures in Lower Town, was used as "barracks and stables, workshops, corrals; for hospitals, storage and other purposes." The former cotton factory was converted into a hospital for sick soldiers (Paul R. Lee II in Virginius Island Trail, 1988).

“There were no wounded men there for it was for the treatment of diseases only. There were about two hundred cots in a ward . . . separating the most helpless from those in less serious condition. Nearly every morning from five to ten who had died that night were carried out. We were almost surrounded by dying men” (Ibid).

Between October 1863 and September 1865, the Union reoccupied Harpers Ferry and buildings on Virginius once again served the military. The cotton factory and two dwelling houses were utilized for caring for wounded soldiers. In fact, all the properties southeast of the destroyed flour mill, with the exception of three houses and the machine shops, were devoted at one point to the treatment of the wounded (Secretary of War to A.H. Herr, personal letter April 8, 1897).

Documentation suggests the capacity for 350 beds on the island; preliminary analysis indicates an average of, approximately 200 patients were treated daily. Not only were buildings on the islands adapted for wartime use, but the Winchester and Potomac played an essential part, serving as the primary rail conduit for transporting troops and supplies to Union forces fighting in the Shenandoah Valley. Such numbers of soldiers convalescing [and dying] in the island's

hospital and such great numbers passing through on the rails increased the population to a level never before realized. After the Confederate surrender, several chivalry-minded citizens adapted the cotton factory building for a more pleasant purpose, when they staged a "ball and supper" in its "spacious Halls" as part of the festivities associated with the Harpers Ferry jousting tournament (Virginia Free Press, 11/09/1865, 11/22/1865 and 11/30/1865).

Although Herr's properties, with the exception of the already destroyed flour mill, were much abused and damaged by the Union occupation, by the late 1860s several buildings were rehabilitated and former island industries again were in operation. William Wernwag (related to the original family) and his partner, Walter Taylor, operated Excelsior Planing Mill and Lumber Yard sawmill, producing sashes, doors, frames, balusters and other building materials. John Wernwag, "a man of great mechanical genius" and a son of Lewis Wernwag, leased a building "as a dwelling and a machine shop." Here he lived "surrounded by strange tools and devices of his own planning and construction . . ."(Virginia Free Press, 6/17/1869). The iron foundry and coopers shop were also operated under leased arrangements. At the same time, residents of Harpers Ferry began the long process of rebuilding livelihoods as well as stores and residences. Following the decision of the government to divest or sell all its holdings - water rights and dams, the former arsenal site, musket and rifle factory properties, armory officials' residences and undeveloped land--private individuals attempted to revive the local and regional economy through selected commercial and industrial activity. In 1867, Abraham Herr, by this time a well-established Georgetown flour merchant, sold his island to Jonathan Child and John McCreight of Springfield, Ohio.

As the new proprietors of Virginius Island, Child and McCreight quickly adapted the empty cotton factory into a state of the art flour mill, utilizing the newest milling technology. A large force of men was kept in employment for fifteen months, preparing the building and putting up the machinery, under the direction of Mr. Cochran. They repaired twenty-eight dwellings on the island in addition to the new flour mill (Barry 1979, 169-171).

During this period of revival, the stone walls of the old Herr flour mill stood as a monument and reminder of prewar productivity. The Child family occupied the former Herr residence adjacent to the old flour-mill site; the McCreights lived in a substantial residence near the sawmill (Child et al., 10/7/1870). Mill workers employed by the firm mostly resided in the twelve brick row houses that lined the main street. The wooden wagon bridge on the north and the rail bridge on the east continued to serve as the main connections to Shenandoah Street and Lower Town. In 1869, Child and McCreight negotiated with the Baltimore and Ohio Railroad [by 1867, the B&O had completed its takeover of the W&P] to establish a right-of-way for the railroad on Virginius and for a special rail spur and siding to be constructed adjacent to the newly refitted mill. Once constructed this rail spur curved off of the existing triple track that lay "in the middle and lower part of the island" and ran to the mill over the tunnel of the sawmill race. The right-of-way was set at eighteen feet on either side of the rails, except where the irregular shaped brick structure, used as an office, was located in the angle created by the street and the rail line. Here the clearance was to be sixteen feet (Child et al., December 29, 1870). The three rows of track and the wide zone of some thirty-four to thirty-six feet made the long line of the railroad the predominant feature on the overall landscape of Virginius. With

their modern flour mill and with the establishment of their own rail spur, the Child and McCreight operation had the capacity to produce 400 barrels or eighteen railroad carloads of flour per day (Spirit of Jefferson, 12/7/1869).

The relative economic stability achieved by Child and McCreight from the conversion of the old cotton mill to a flour mill and the construction of the new rail access was broken by the first of three devastating floods. The first flood, at the time the most destructive on record, was in September of 1870 after the high-water level in the Shenandoah at Harpers Ferry had reached thirty feet. On Virginius "twelve structures," including the iron foundry, the sawmill, the machine shop, granary, blacksmith and wheelwright shop, as well as residences were leveled. The schoolhouse, kitchen additions, service structures and outbuildings, bridges (rail and wagon) and most vegetation also were carried off by the force of the floodwaters. Many of the residents of the island evacuated, yet several drowned in their homes. Others were swept away by the swollen river although a few of these individuals miraculously survived. Among them was John Wernwag, the operator of the island machine shop (Child, 10/7/1870 and Virginia Free Press, 10/8/1870).

The Child and McCreight firm repaired the flour mill and continued to own and operate their firm throughout the rest of the decade and into the next. Although new partners were brought into the firm and management shifts occurred, the flour company was only a marginally successful enterprise throughout these years. Whether it manufactured cotton goods as it had before the Civil War or processed flour as it did afterwards, this facility apparently never realized its full potential.

“The present flour mill of Harper's Ferry Mill Co. was formerly the old cotton Factory but failed several years before the war. The machinery was taken out of it and when I was working for Mr. Herr he used it as a store-house for grain. The first use which was ever made of it for a flour mill was by Child, McCreight & Co. in 1868 or 1869. They ran till 1870, then shut down for repairs, and then resumed again in about six months and ran up to 1875, but since that time have only run at intervals. I worked for Child, McCreight & Co. up to 1875”(Charles H. Trail testimony, 7/13/1887).

The surviving residential structures also were repaired after the flood. The B&O increased the level of the southwestern portion of the railroad embankment 2 1/2 feet to protect the rail route across the island from future floods. The inner basin was dredged and the damaged bridges were reconstructed. The new iron rail bridge erected by the B&O at the southwestern crossing was a Bollman-type design, while the wagon bridge from Shenandoah Street, which was not completed until 1872, was constructed of timber with stone piers. However, the older industries on Virginius were not rebuilt or replaced after the events of 1870. Flood destruction essentially had eliminated several residences from the island as well as all the older industrial buildings such as the iron foundry, the sawmill and the machine and blacksmith shops. As a result of the flood, the island soon became a single-industry community centered around the Child and McCreight flour mill. Only the prominent stone walls of Herr's former flour mill, a deteriorating shell after 1870, remained from the prewar era to recall the earlier industrial diversity on Virginius.

Efforts to revitalize navigation on the Shenandoah were undertaken in 1872 when the Shenandoah River Navigation Company was chartered to remove obstructions or to build locks and dams in the river. Unfortunately, the company never fulfilled all the obligations of its charter, its failure to do so perpetuating the slow decline of the water system on the north side of the island (Sponcellor 7/12/1887). The 1877 flood and the 1889 flood also hastened the deterioration of the structures on Virginius, and finally convinced residents such as the Child family to move off the island (Greenland interview, 2/20/1957). This third flood also washed away the storeroom adjacent to the flour mill and a residence near the western end of the row houses. Although the bridge from Shenandoah Street to the island withstood the river torrent in 1877, the force of the 1889 flood apparently was great enough to lift the bridge crossing from its stone piers (Virginia Free Press 12/01/1877).

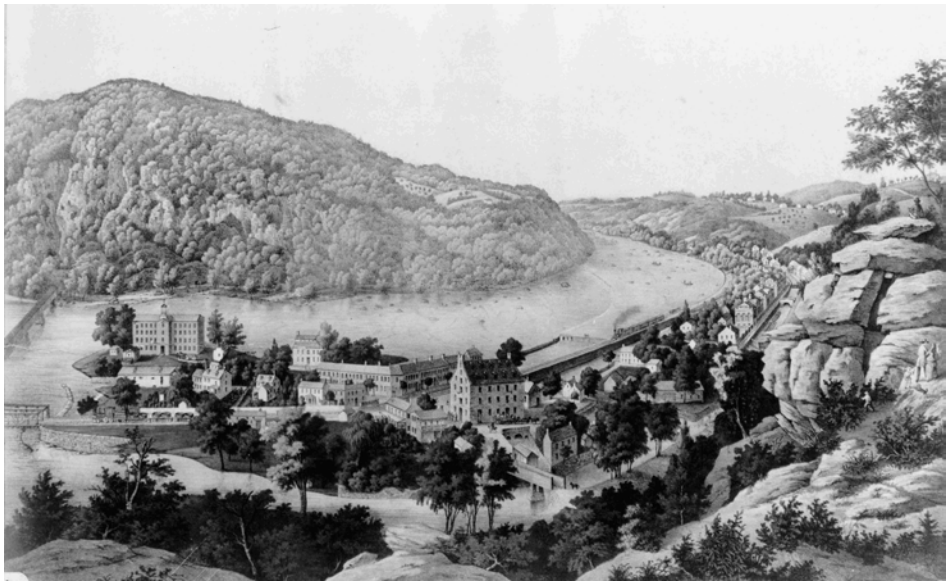
In 1880, Jonathan Child sold his share of the island to McCreight and another partner, Solomon Yantis, and for several years thereafter Child was affiliated with a store in Lower Town operated by his son. McCreight and Solomon Yantis, became the exclusive owners of Virginius Island. In 1884, McCreight and Yantis sold their holdings to the Harpers Ferry Mill Company. This new firm upgraded the flour milling machinery by replacing the "old burr arrangement" with a "new roller process" and equipment designed by the John T. Noye Manufacturing Company of Buffalo, New York. Along with the introduction of new machinery at the flour mill, the Harpers Ferry Mill Company made improvements to seventeen dwellings.

“Since 1875 they have been shut down as long as two years at a time, and since the Mill went into hands of present Mill Co. they have done but little running. They have been shut down for past fifteen months and are now shut down and not operating” (Charles H. Trail testimony, 7/13/1887). Both a series of debilitating lawsuits in the 1880s involving the Harpers Ferry Mill Company and the damages to the mill caused by the 1889 flood signaled the end of flour manufacturing on Virginius Island. Two failed attempts to run the flour mill occurred in 1890, when successive concerns purchased the site. In 1893, the Shenandoah Pulp Company, which recently had located on Hall's Island, purchased the property (Virginia Free Press 1889).

“The road around Bolivar is the segment of a circle, the first part of which lies along the Shenandoah and the unused Slackwater Canal, bordered by majestic cottonwoods, their wide gaunt, flecked branches spreading weirdly over the dismantled Government Rifle Works, the empty, crumbling canal, and the havoc that war and flood have made on every side” (Bryant 1872, 99).

Although this description was published in 1872, it accurately describes the state of the old Shenandoah Canal and the site of Hall's rifleworks, later known as the U.S. Rifle Factory, when Thomas Savery of Wilmington, Delaware, purchased Hall's Island from the federal government only a decade later, in 1884. Here he erected the Shenandoah Pulp Company on the location of the old canal locks. The pulp mill was only one aspect of Savery's business concerns; he was president of a larger corporation involved in the manufacture of paper in the Wilmington area as well as in Harpers Ferry. In constructing the pulp mill, Savery transformed the old government factory site in ways that were to have enormous impact on the land form

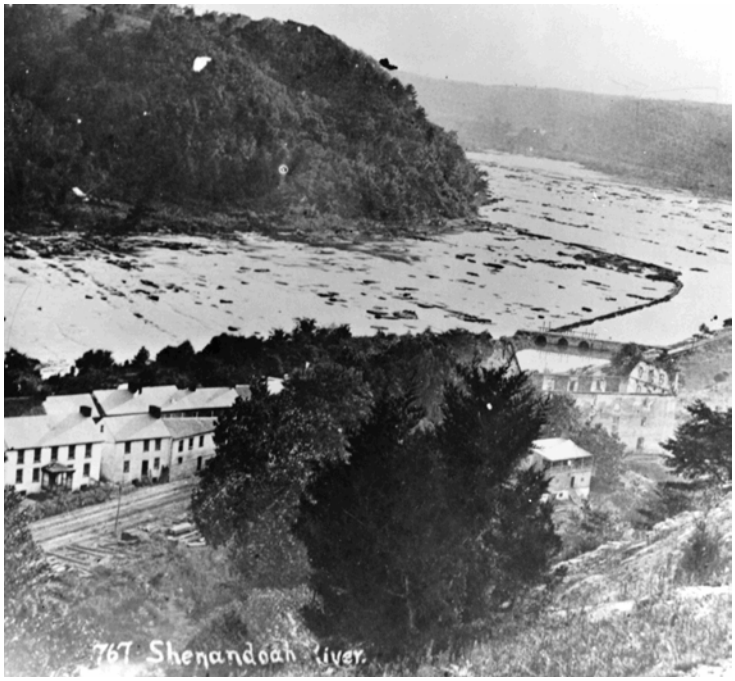
and ecology of Virginius Island.



Color lithograph of Virginius Island produced by Thomas Sachse, Baltimore, circa 1857.



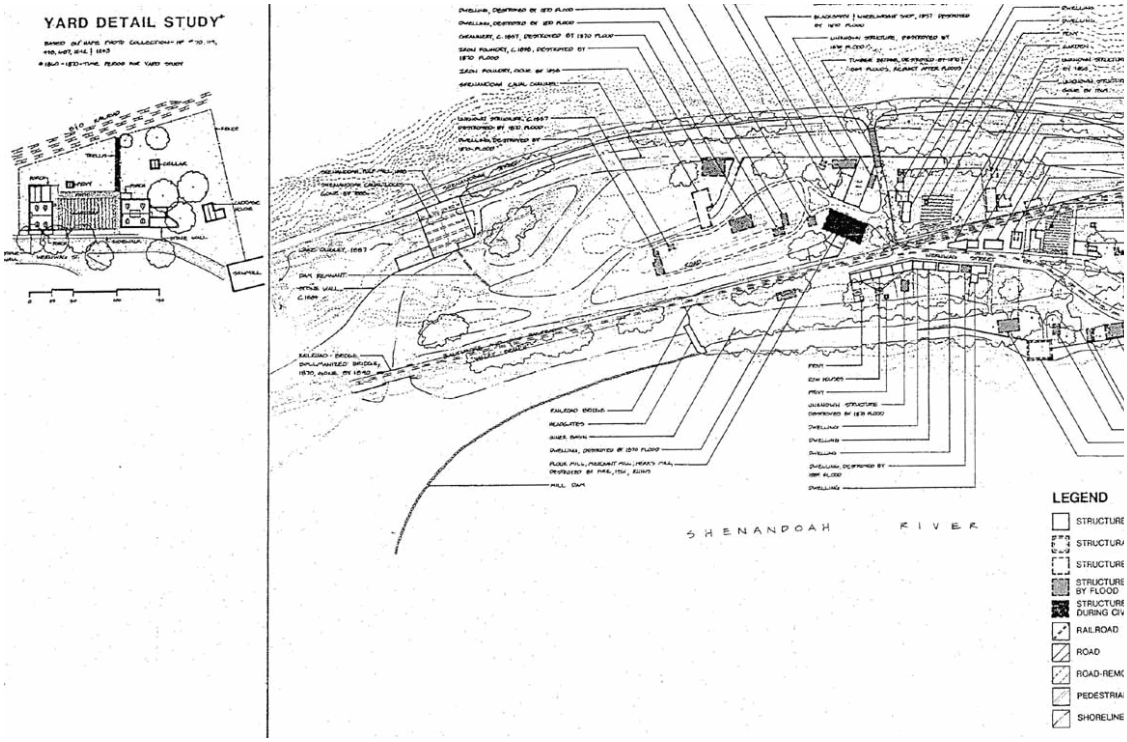
Civil War-era photograph of Virginius Island taken from Jefferson Rock and showing W & P rail cars transporting Union troops in December 1864.



Newly whitewashed residential structures on Virginius, demonstrating post-war rehabilitation of island properties, circa 1869.



The area near the residential row houses, dated May 29, 1886.



Conditions in the years between 1855 and 1890.

1890-1944 THE SHENANDOAH PULP COMPANY

"After viewing this place we returned to the Charlestown road and were now beyond the village on the country road, the bluffs still on the right, the river at the left. We continued until we came to a bend in the river which gave us a view for miles toward its source. At this point is situated a wood-pulp mill; a large boom of logs was close against its side. Near this place we chose a shaded nook under the brow of the hill; - a pump, - with which articles the Ferry is plentifully supplied, was conveniently near. Here we rested and lightened our lunch-box. We felt quite refreshed on leaving here and on our return stopped at the pulp-mill. Here spruce logs are ground to pulp, then strained through gauze, and collected on steel rollers, forming sheets of crude paper stock" (Taft 1898).

In the post-war era, many people came to visit Harpers Ferry as tourists, summer residents or day-trippers on the Baltimore and Ohio Railroad. Frequently, the purpose of their visit was to see the site of the infamous 1859 John Brown Raid, to see the ruins of the former U.S. Armory installation, and to admire the majesty of the natural scenery found at the confluence of the Potomac and Shenandoah. The visit recounted above occurred in 1898, a few years after the Shenandoah Pulp Company, one of two paper mills owned by Thomas Savery in Harpers Ferry, had been in operation. As part of their tour of Harpers Ferry, these visitors walked along Shenandoah Street from Lower Town to see the "Rifle Factory ruins," a little distance beyond "a little bridge to the left." Remarkably, in this account, the tourists mistook the ruins of Herr's old flour mill on Virginius for those of the former rifle factory on Hall's Island (Taft 1898). A

quantity of the bricks from the remains of the rifle works had been hauled off the site several years earlier to be used in the 1890 construction of Savery's Harpers Ferry Paper Company on the Potomac River (Spirit of Jefferson, 3/12/1867, 10/25/1887). In place of the old government installation was Lake Quigley, a large impoundment for holding back water for the newly constructed pulp mill.

Thomas H. Savery purchased the rifle factory, the old musket factory on the Potomac and the riparian lands and water rights from the federal government in 1884. He began construction on the pulp mill in 1887, on the site of the lower locks of the old Shenandoah Canal and the former U.S. Rifle Factory, above Virginius Island. A new dam, a mile upriver from this site, and the large impoundment lake also were constructed by Savery to provide increased water power for the new mill. Shortly thereafter, a railroad siding was built adjacent to the mill "to unload Pulpwood" from railcars (Spirit of Jefferson, 4/28/1887, 6/28/1887, 7/5/1887, 9/13/1887). Concerns over the diversion of river water away from the "Harpers Ferry Mill Company" (McCreight and Yantis flour mill) on Virginius to the Shenandoah Pulp Company, which eventually would end in a legal battle, temporarily delayed completion of the new mill. When the water rights issue was resolved by the federal courts in favor of Savery, the pulp mill was completed, with ten turbines installed in five flumes (Spirit of Jefferson, 6/14/1887, 6/19/1888).

As mentioned in the previous section, Thomas Savery's Shenandoah Pulp Company purchased Virginius Island in 1893. Although Savery was an absentee owner and his supervising managers resided in Harpers Ferry, his ownership of the island had long-term impact. Rather than convert or modernize former industrial structures, Savery utilized only the existing residences on Virginius to provide convenient housing for his employees working at the pulp mill on Hall's Island. Savery's purchase and subsequent adaptation of Virginius altered the social fabric of the community. Generally, residents of Savery's island could be characterized by their tenant status, their transient nature and their economic dependence on the pulp mill (Johnson and Barker 1992, 65). The island's population thus became less socially and economically diversified, more centrally located, and less numerous.

Initially, the overall appearance of the residential core remained very much the same, with two rows of tenant dwellings along the street [referred to during Savery's ownership as Island Avenue] and rail corridor. On the street side, a wide brick walkway lay between the row of houses and the rail lines. At the rear of each dwelling was space for each tenant to have a yard, a garden, and outbuildings. In front of the former Herr/Child house the occupants had cultivated an exceptionally large garden in rows that followed the alignment of the rail track (E. Farmer interview, 2/9/1992). As a result of the 1889 flood, just before Savery's purchase, the number of housing units had been reduced. There were fifteen dwellings on the island; ten row houses residences and five others in separate locations, including the old Herr/Child house and the former McCreight house near the sawmill site (Johnson and Barker 1992, 61-63). Access to and from Shenandoah Street and Lower Town continued to be via the timber bridge [newly constructed after the 1889 flood] on the north that traditionally had carried wagons and pedestrians across the stone walls of the old Shenandoah Canal channel [used by the pulp mill as a tailrace] to Virginius and the rail bridge on the east.

Under Savery's ownership, the residential situation on the island began to change. Rather than increase the number of available residences to a preflood number, the Shenandoah Pulp Company apparently chose to adapt existing residential structures to accommodate workers rather than to rebuild or undertake new residential construction (Savery to J.D. Sisler, personal letter 9/28/1900). Two additional residences were taken down or destroyed after the 1889 flood. Later, a few of the single-family row houses were subdivided into apartments. Residential units were not exclusively for the use of pulp-mill workers; they were available to anyone who wanted to rent one (Johnson and Barker 1992, 61-63).

In maintaining the island as an adjacent residential neighborhood, the Savery company apparently invested little money and materials in upgrading any other structures on the island not directly related to the operation of the pulp mill. Waterways bringing the power of the Shenandoah River to defunct mills were abandoned and allowed to fill not only with excavations from the construction of Lake Quigley, but also with the debris, silt and sand brought by each freshet and flood (General Manager's Report to Board of Directors, June 6, 1924). The old rail bridges no longer passed over water-ways, but over island depressions and seasonally dry gullies. The spur line to the former Child and McCreight factory, its importance diminished to that of an infrequently used siding, was now a weed-choked curving line of metal through the lower landscape of the island. Subsequently, a portion of the main rail line right-of-way was adapted by pedestrians to serve as a route between the residential area and the pulp mill. For sometime, the long main rail line across the island had been the longstanding landscape feature, symbolizing the viability of private industry and commerce on Virginius. However, by 1890, the empty mills preempted the railroad's symbolic role. The stone walls of the old Herr mill continued to stand as a crumbling testament to the antebellum prosperity, while the vacant four-story brick cotton/flour mill dominated the Shenandoah shoreline as a physical remnant of the postwar bust. With time, the remnants of both these structures were carried off. "People got the stones and things [from Herr's mill] to rebuild foundations . . . around 1902" (Kellison interview, 4/8/1968). The fine machinery, interior architecture and even the brick walls of the Child and McCreight mill were dismantled, or scavenged and taken away for salvage (Farmers Advocate, 7/5/1902).

One improvement, however, was the replacement of the wooden bridge across the old Shenandoah Canal channel with a highway bridge, constructed of steel and paid for in part by the town of Harpers Ferry and by the Shenandoah Pulp Company. With the Savery ownership and transformation of the lower Shenandoah islands in the last decade of the nineteenth century, Virginius Island ceased to be a collection of industrial workshops, factories and waterways and became instead, with Hall's Island, one large landform, owned and operated by the Shenandoah Pulp Company as a small residential community.

By the turn of the century, the pulp mill had become the center-piece of all significant commercial and industrial activity on the lower Shenandoah shore. Peripheral uses were found for some of the industrial property and structures on Virginius. Sandbanks along the shore provided a valuable resource to builders and contractors. A "warehouse" was converted into an ice storage plant by the owner of the brewery in Lower Town. Summer visitors also may have used the island for camping (Kellison interview, 4/8/1968). The general lack of improvements

however to those structures which had survived the floods perpetuated the slow decline of the island, which, affected Virginius's permanent population. In 1900, there were sixty-seven people in fourteen households on Virginius; by 1910, there were forty-six individuals in nine house-holds (Johnson and Barker 1992, 76). This decrease was not only because of overall changes, but also specifically because of the loss of two adjoining brick structures that burned down in July 1913 (Virginia Free Press, 7/17/1913). Another element was the unprofitable market for pulp paper, which directly affected the operation of the pulp mill. Unfortunately for Virginius, the Shenandoah Pulp Company never achieved the level of financial success requiring a large stable resident workforce. In an early effort to reverse long-term losses, the pulp company leased one of its turbines in 1894 to the Harpers Ferry Electric Light and Power Company, also owned by Thomas Savery. In the years that followed, Savery and his associates continued to explore [and advertise for] other possible uses for the potential hydroelectric power source found alongside their Shenandoah River islands.

Social and economic changes occurring in Lower Town and Harpers Ferry also affected the economic viability of the area. Commercial activity no longer was sustained by the national armory, as it had been before the Civil War, or by commerce on the B&O Railroad, as in the postwar era. Railroad excursions and visits from seasonal tourists gradually decreased as automobile travel became increasingly popular. By 1921, automobile traffic travelling through Harpers Ferry followed Route 340, a paved "Class A Road" with signs the directed travelers to take High Street/Washington Street through Lower Town, Camp Hill and Bolivar, instead of using Shenandoah Street past Virginius Island on the route of the old turnpike. The overwhelming acceptance of the automobile as means to vacation and travel tended to draw numbers of tourists away from the Harpers Ferry area as well. Although an automobile campsite was set up on Virginius in 1923, this was hardly the type of enterprise that was to bring long-term economic benefits to the community (Farmers Advocate, 6/23/1923).

By the beginning of the twentieth century, nature began to reclaim the island. With fewer residents, unoccupied lots were allowed to become overgrown. Upon the abandonment of the old nineteenth century, water-powered industrial facilities along the river, a full canopy of trees developed along the shoreline and adjacent to the old raceways. A large grove of "graceful weeping willows," established decades earlier, edged the old inner basin. After the damming of the headgates, the basin no longer was supplied by the Shenandoah and gradually was allowed to fill with debris, earth and low vegetation. In time what had remained of the former water channel was no longer evident. By the 1920s the yards behind the row houses sloped without interruption all the way to the river, across the undulating area that had been the inner basin. This parklike landscape, with "the most gorgeous flower gardens," made the island "something of a showplace, very pretty" (Flanagan interview, 8/20/1992).

"We kept the property all clean and nice, painted up and everything, walkways in front of the houses were all brick, the walls were up as high as the railroad track and they had the houses all cleaned up and in good shape and the parkway, the little parkway from the island up to the paper mill, we had it all cleaned off, tables and all in there to enjoy yourself. People would come there and eat dinners and one thing or another" (Flanagan interview, 8/20/1992).

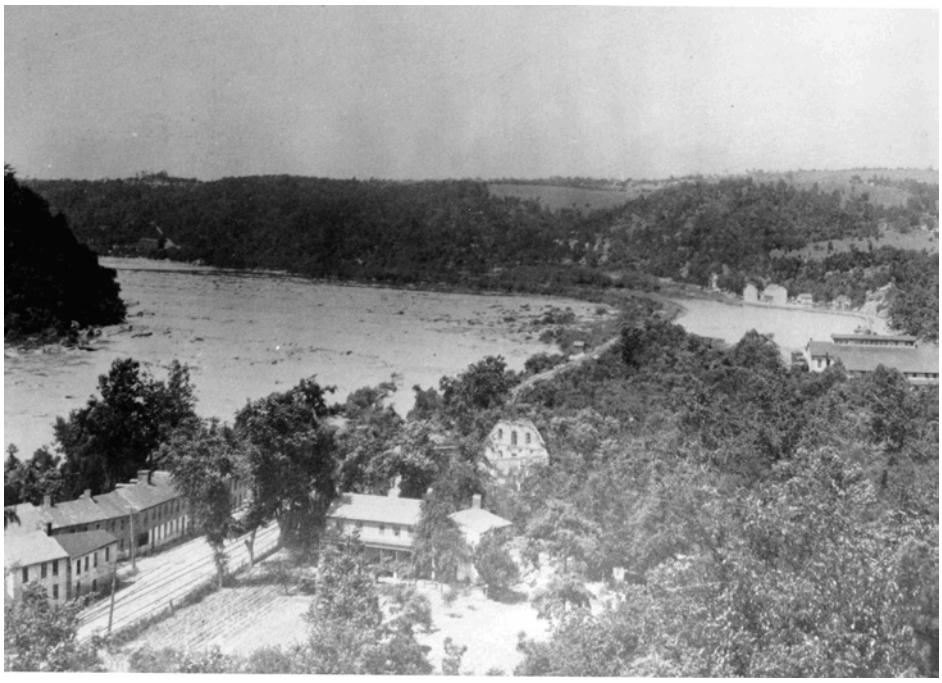
Eventually, Virginius became an increasingly favorable location for other outdoor, recreational activities. Along the "Shenandoah River Road", visitors could contemplate the "interesting features" to be found in the high cliffs towering above the island (The Mountain Echo August 1919, 1: 4). The island provided "a delightfully shady spot" just to the right of the bridge [over the pulp mill tailrace] for automobile outings and picnicking, and appropriate places for fishing and swimming, an amusement park, as well as boating, ice skating and games on Lake Quigley (Harpers Ferry Times, 11/9/1906 and Farmers Advocate 10/29/1904).

In 1923, two unoccupied residences, located on the north side of the main street, burned. Sometime in the mid-1920s, what was left of the brick walls of the Child and McCreight flour mill just "naturally fell down," from high winds, also from the company taking them down "to keep them from falling on fisherman" (E.W. Kellison interview, 4/8/1968, 3). The bricks "lay scattered over the ground," free to the public for patchwork or filling in, until the pulp company determined that they might be used in the construction of a new mill (Famers Advocate, 5/27/1922). In 1924, another flood ravaged the lower Shenandoah, shutting down the mill, carrying off logs and damaging the dam, raceway, and floodgates. Nearby, Shenandoah Street from Lower Town was rendered impassable. The flood wreckage probably forced some of the few remaining residents to leave the island permanently (Farmers Advocate, 5/17/1924). By the end of the 1920s, apparently only two families were left living on the island (General Manager's Report June 6, 1924). Yet, uses were found for the island during this period of decline. The town of Harpers Ferry leased the whole island in 1923. Separate leases were also drawn. One was written for the Sunday School from the Episcopal Church of Charles Town. In 1922, Zion Church Mission Sunday School conducted Christmas Eve entertainment, and in 1923, Saint Andrew's Parish held Christmas services on the island. In 1930, camp cars providing temporary shelter for road crews working nearby on state highway projects were placed on the island's unused rail tracks (Spirit of Jefferson, 9/25/1930).

Corporate changes in the management and focus of the Shenandoah Pulp Company and its parent, the Harpers Ferry Paper Company, marked the official end to manufacturing on Virginius. With an ever-increasing national emphasis on the production of hydroelectric power, the National Electric Power Company purchased the stock and property of both the pulp and paper companies in August 1929. Sometime between 1924 and 1930, the light and power company ordered the demolition of the remaining row houses (Hannah unpublished, 125). Thus, years of irrevocable economic decline culminated both in the demolition of the last of the workers houses and in the complete closing of the Shenandoah pulp mill in 1935. The record flood of 1936, which destroyed the two automobile bridges to Harpers Ferry and permanently damaged many buildings in Lower Town, then brought an end to residential life on Virginius Island. The last remaining resident left her home at the old Herr/Child house following this final devastation. Another flood in 1942, carried water and deposited debris over the island that no longer was inhabited by families, or workers, or entrepreneurs. As in 1936, no one remained to clear away what the receding floodwaters had left behind. With these unfortunate events, nature rapidly began to reclaim Virginius Island, to bury and to conceal remnants of more than a century of history.

"Situated at the gateway of the valley, the cross roads of the east and west, the north and

south; with legend and lore awaiting the imaginative touch of the literary artist; the magnificent scenery at Harpers Ferry and everywhere along her noble rivers, awaiting the brushes and palette of gifted fingers; with roads and fields and crossings made more memorable by Civil War contests . . . Jefferson County bids welcome with no uncertain sound those who have been here to return, and those who seek amidst the magnificent apple blossoms of spring time of the pervading fragrance of sun kissed fruit in the autumn, bedecking a thousand thousand [sic] trees, health, wealth, and serene living" (McDonald 1924, 30).



Post card view, circa 1890, of the Shenandoah Valley taken from Jefferson Rock showing a large cultivated garden in the foreground on Virginius.



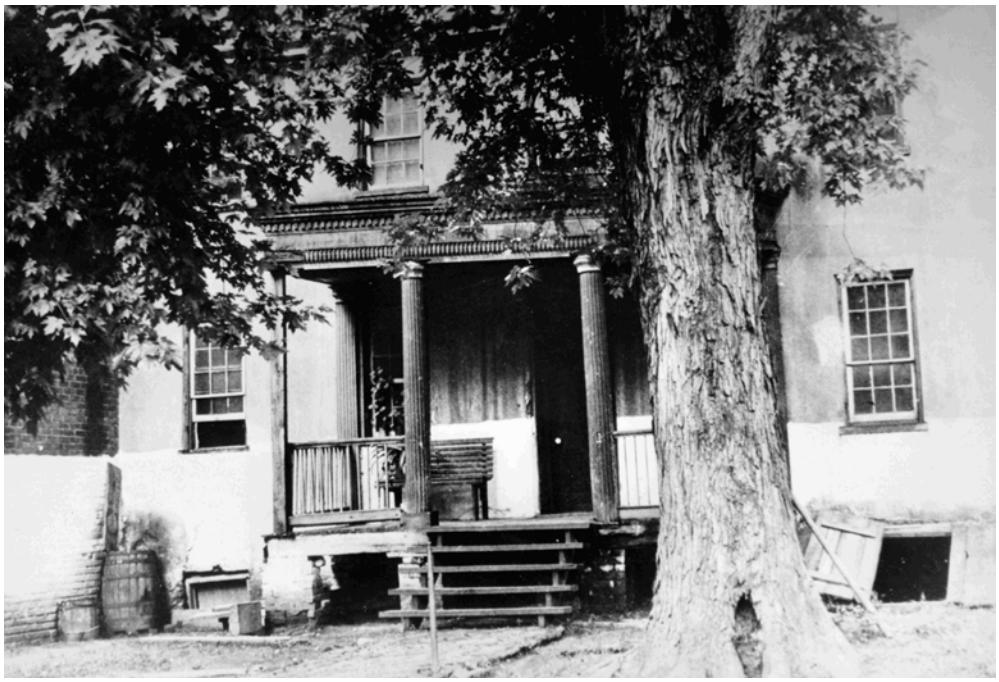
Winter scene, circa 1900, showing the spatial relationship between the original industrial center of the island (upper left) and the new pulp mill (lower right).



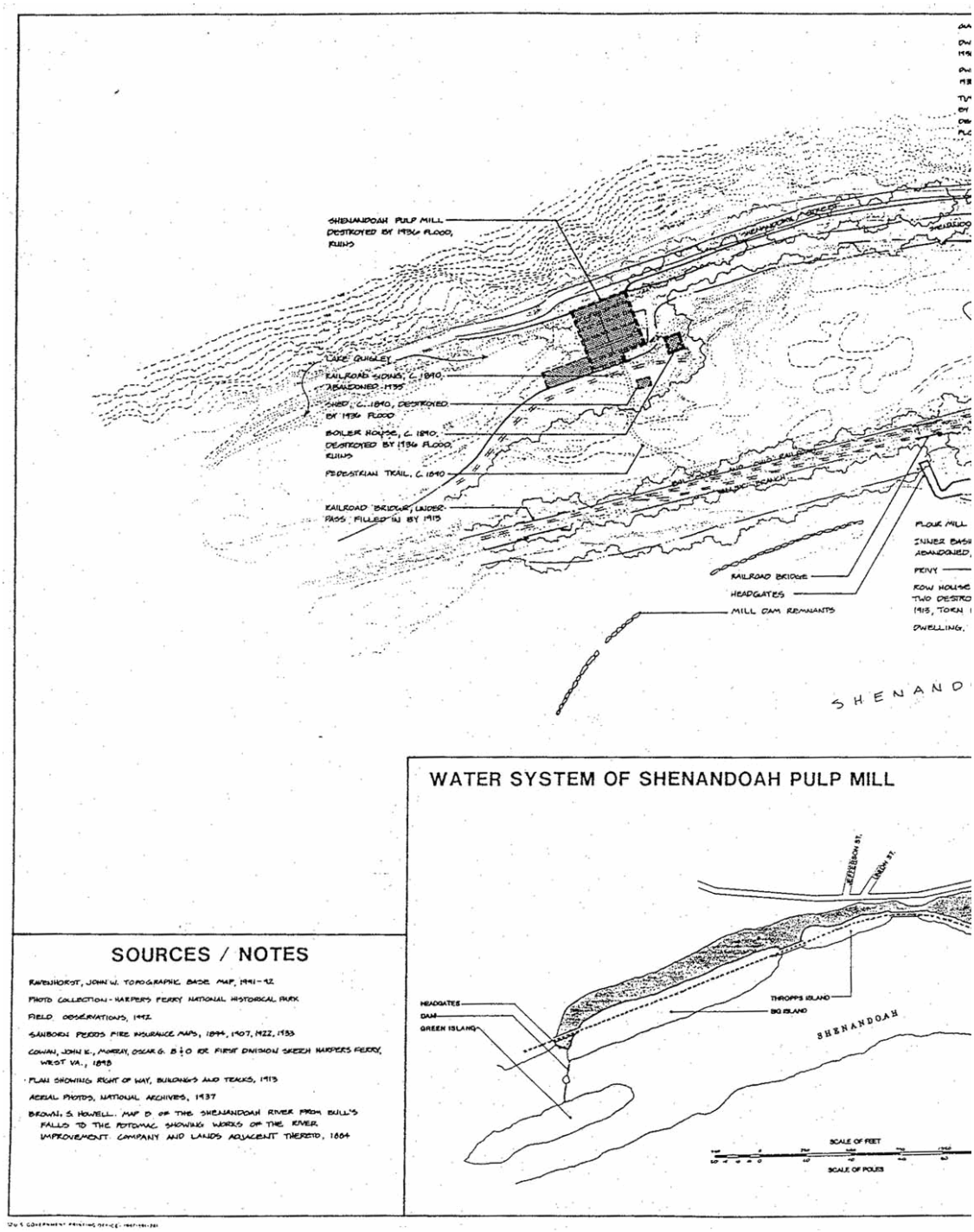
Vacant flour mill and unused railroad spur, circa 1904.



Virginius Island in the early twentieth-century.



A front porch of one of the residential buildings located on Virginius Island, circa 1928.



Virginius Island between 1890 and 1944.

1944-1993 NATIONAL PARK SERVICE ADMINISTRATION

"Herrs Island, once the site of an industrial village called Virginius, is a desolate, deserted

13-acre island in the Shenandoah River containing flood and war-battered ruins of an earlier era. Virginius, which then included a sawmill, tannery, oil mill, and 12 dwellings, was established by the Virginia assembly in 1827, but remained essentially a part of Harpers Ferry. Hall's Rifleworks, a part of the Government armory, also stood here, and the place thrived through the War between the States until the flood of 1870, which washed away or wrecked most of the buildings. The flour mill of Abraham Herr, for whom the island was named, escaped damage in this flood and operated until 1887, but subsequent floods destroyed it and the few remaining buildings" (West Virginia Writers' Project 1941: 234).

The incorrect information and historical confusion conveyed in this example of the "West Virginia, A Guide to the Mountain State" typifies the difficulty in relaying the physical history of Virginius Island. In many ways, this example is similar to the 1898 example of the tourist, described in the previous chapter, perceiving the ruins of Herr's flour mill to be those of the old U.S. Rifle Factory. Such vintage publications, guides and diaries, perpetuate the exaggerated myths and legends that surround the island's story. Indeed, they give life to the silent ruins that have lain partially concealed by river fill and vegetation since the 1936 flood. One source of confusion is in the name of the island itself. Throughout the nineteenth and into the twentieth century, the island has had several different names. Beginning simply with "the lowermost island in the Shenandoah," then Peacher's Island in the early years, Stubblefield's Island, the island of Virginius, the town of Virginius (the incorporated name from 1827), Virginius Island, Wernwag's Island, and Herr's Island were all at one time appropriate, or at least historically understandable, names. Interestingly, an appellation relating to the Savery ownership is not documented. In fact, as the description from the Writer's Guide infers, references to Herr's Island were common well into the twentieth century (Spirit of Jefferson, 6/6/1922). The venerable nineteenth century historian Joseph Barry, however, notes only island of Virginius or Virginius Island in his account of Harpers Ferry (Barry 1979: 104, 114, 158, 163).

In 1944, legislation to establish the Harpers Ferry National Monument was enacted by the U.S. Congress (DB 160, 1 May 1944: 352). Among the 619 acres purchased by West Virginia in 1952 for donation to the monument was Virginius Island. In the years between the enactment of legislation and the transfer of property for the park, two modern steel highway bridges were constructed across the Potomac (1947) and Shenandoah River (1949) to replace those destroyed by the 1936 flood. The bridges were sited at strategic points below and above Harpers Ferry. The historic crossing to Lower Town at the confluence was circumvented by the improved route of the highway that traversed the bridges. The new Shenandoah bridge spanned the river above Hall's Island, meeting the northern shore near the site of Robert Harper's second residence and mills. Here, the large earthen embankment and the footings for the bridge piers buried the long forgotten Harper settlement. The effect of the new bridge on Virginius was less tangible than that on Hall's. For one, the highway bypassed Virginius, as well as Lower Town. A paved connection with the Shenandoah bridge did not exist as Union Street and Shenandoah Street were "all but impassable." Eventually, these two secondary routes were paved (Ross 1949, 5). The most significant effect came from the low roar of automobiles and trucks traveling along the highway on the opposite shore and crossing over the river on the bridge. These vehicles created a continual noise that, forty years later, has become an integral part of the landscape. Their sound reverberates off the surface of the water, the cliffs and

surrounding hills in a way not at all reminiscent of the factory noise from the Beckham, Wernwag, Gilleece, Herr, Child and McCreight or Savery eras. Indeed for many years, when Virginius was uninhabited and overgrown, the solitary rumble of a freight train passing along the old W&P rail line was the only industrial sound to be heard.

In 1955, the National Park Service began managing Harpers Ferry National Monument. In the years that followed, the National Park Service focused the majority of its efforts on the preservation, restoration and rehabilitation of the Lower Town area of Harpers Ferry. Because these efforts concentrated on the events of the 1859 John Brown Raid and the Civil War activity that had occurred at Harpers Ferry, little attention was directed toward Virginius Island, where historic cultural resources mostly lay under the ground (Development Concept Plan 1980). The National Park Service, however, did not ignore the island. It dealt with this wild habitat by utilizing a preservation program that incorporated archeology, stabilization and limited restoration. Over time, the methods used by the Park Service to interpret the island's history also have influenced the way the contemporary visitor to Harpers Ferry experiences Virginius Island.

Archeological work on Virginius Island began with David H. Hannah's assessment of aboveground features in the mid-1960s (Halchin, Shackel and Frye 1992). In 1969, Hannah directed a Job Corps team in uncovering the foundation walls of the large brick cotton/flour mill and in excavating part of the mill's raceway. Uncovered in this project were four Leffel turbines and other flour milling machinery belonging to the old mill. Additional work also was performed on the site of the former Wernwag sawmill, where two stone foundation walls were uncovered. In 1977, a somewhat detailed assessment of existing aboveground cultural resources was conducted. In 1978, additional excavations located remnants of the old Wernwag machine shop and investigated the site of a former residence north of the sawmill site.

In subsequent years, archeological testing often coincided with National Park Service restoration projects. A pedestrian bridge was constructed and dedicated in 1974 to the Honorable Jennings Randolph, the West Virginia congressman responsible for the legislation establishing the Harpers Ferry Monument. The wooden bridge design was based on historic photographic documentation of the original bridge over the Shenandoah Canal. The stone walls of the Shenandoah Canal channel that support and extend from the reconstructed bridge were restored in stages during the 1980s. Archeological testing in this area continued from 1983 to 1987. Monitoring the construction activity, the National Park Service archeology teams located the wall of the tailrace for Fontaine Beckham's flour mill (circa 1824), the mouth of the original iron foundry/tannery tailrace, and the foundation walls of one of the newer iron foundries (circa 1859-1860).

Since the National Park Service began its stewardship of the Park area, historic research has been an important part of the preservation process. For Virginius Island, documentary evidence first was analyzed by Park Historian Charles Snell in 1958. Subsequent research projects and historical analyses have focused on industrial and social history, as well as archeology (Snell 1958). Implementation of the research and analysis has been limited to a simple marked trail,

where history is conveyed through information contained in a walking-tour guide, made available at the Park bookstore, and by a single wayside kiosk. While early trail guides stressed the natural history, evolution and ecology of Virginius, the present book highlights the political, social, and industrial history with less emphasis placed on the natural (Lee 1988).

Further archeological investigations occurred in the 1990s, coinciding with the development of a Cultural Landscape Report for Virginius Island completed in 1993. At this time the archeologist uncovered more information about the island's residential community with their investigations of the West Row House, Schofield House, and Wernwag House. They also located two industrial buildings (sawmill and machine shop) that were destroyed in the 1870s flood.

In 1994, the National Park Service completed the first phase of the treatment plan from the Cultural Landscape Report (1993), which included redefining the historic circulation patterns and controlling vegetation. Since the completion of the first phase of work, however, two major floods, which occurred in the winter and fall of 1996, caused significant damage on the island.

For a time, Virginius Island was closed to the public because of concerns about safety and accessibility, but in the island was reopened in the summer of 2000, keeping a limited portion of the shoreline trail closed due to the damage suffered during the floods. Four of the interpretive markers along the Shenandoah shoreline that related the history of the island's features were torn loose from their footings and lost in the floods. Ten others remain on the higher ground where the floodwaters were not as destructive. Piles of flood debris have also been deposited in selected locations.

The 13 acres that make up Virginius Island are marked by a dense overhead canopy of deciduous trees, patterns of current and former use created by paths, roads, and the still active rail line, wayside exhibits, and distinctive stone and brick ruins. Visitors access the island from three entrances: the footbridge at the end of Hamilton Street in Lower Town; the Shenandoah Street bridge that crosses over the old Shenandoah Canal channel; and at the pulp mill ruins a short distance upstream from the canal crossing. Once on the island, visitors are encouraged to follow the path system, based primarily on historic circulation, that links the various structural ruins. The piles of brick and stone rubble that partially outline the former sites of workers' houses and the homes of wealthy residents are the only collections of structural artifacts that mark what remains of the streetscape that lined historic Wernwag Street.

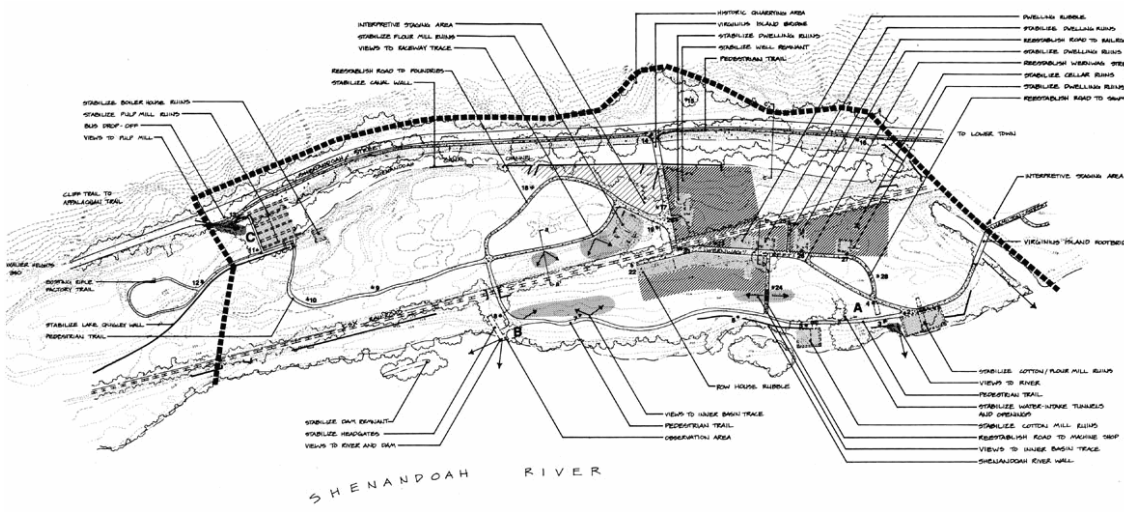
As of 2003, some structural features are now more prominent due to what has become a significant redefinition of the shoreline ruins. In most cases, these structures are now safer for the public to venture onto or into. Another change from pre-flood conditions occurred with the removal of silt from the stone-lined water tunnels that brought water from the river to power several island mills. Though not promoted or encouraged by park stewards today, park visitors can literally walk through the now-excavated tunnels.

In the interior of the island, structural foundations continue to deteriorate, but not at the accelerated rate of the shoreline features. These industrial and residential ruins are still showcased in their post-flood condition, as only minor stabilization has occurred in these areas.

The most conspicuous structure outside of the cotton/flour mill ruin and the old water intake system, is the pulp mill. Its location along Shenandoah Street makes it highly visible to visitors riding the shuttle bus from the visitor center to the historic commercial core of Harpers Ferry.



Hamilton Street footbridge to Virginius Island, circa 1998.



Treatment Plan from the Virginius Island Cultural Landscape Report, 1993.



Completed stabilization of the cotton/flour mill ruins, 2002.

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

The following is a summary of the analysis and evaluation for the cultural landscape of Virginius Island, based on the documentation of the historic landscape features and patterns through five historic periods beginning in 1750 and continuing to 1998.

Periods of Significance

1750-1820---Settlement
1820-1855---Industrial Development
1855-1890---Corporate Consolidations and Natural Catastrophes

Other Periods Documented

1890-1944---The Shenandoah Pulp Company
1944-1998---National Park Service Administration

Of the five primary historic periods influencing the landscape of Virginius Island, three eras had the most impact on the overall development of the community: the period of settlement between 1750 and 1820, when the Shenandoah Canal was established and the first mill on the island was constructed; the period between 1820 and 1855, when the island was organized and subdivided, the majority of structures were constructed, and the milling industry was established; and the period between 1855 and 1890, when the island community was consolidated under one owner and endured the destruction brought by the Civil War and floods. The cultural landscape of Virginius Island is eligible for listing in the National Register of Historic Places under Criteria A, B, C, and D (Joseph et al.1993, 4-38).

Landscape Characteristics Inventory Summary Analysis--Integrity
The limitations and opportunities inherent in the natural landscape of Virginius Island greatly influenced its physical development. The close proximity of a primary waterpower source, the Shenandoah River, was the main determinant of the clustered arrangement of mills and associated residential and industrial support structures. In addition, of the four parcels of land subdividing the island, three of the parcels developed secondary waterpower systems to serve individual mills. The fourth parcel remained primarily residential with single family homes and row housing. With the consolidation of the ownership of the four parcels during the period from 1855 to 1890, the cohesiveness of the industrial community became more apparent. Although over time, many diverse commercial enterprises were established to help support the production at the mills. With the Civil War, subsequent floods between 1860 and 1890, and the construction of the Shenandoah Pulp Mill adjacent to the island, the industrial community became exclusively a residential neighborhood (Joseph et al 1993, 4-10).

Currently the historic integrity of the site is preserved through interpretation and stabilization of the relationship between the nineteenth century milling sites and the island's hydrological systems. Integrity of setting and location is preserved through the retainment of the historic surroundings of

Harpers Ferry National Historical Park. Although invasive vegetation and periodic flooding threaten the historic resources on Virginius Island, the integrity of the mid-nineteenth century village organization is retained through the existence of structural ruins and vegetative clearings. Views and vistas remain suggestive of the historic scenery of the area, though altered due to periodic island flooding and the introduction of park developmental structures and circulation systems.

Circulation systems within and around Virginius Island formed principal elements of the landscape. Features associated with circulation included roads, canals, railroads, bridges, and footpaths. The road along the Shenandoah and the canal channel was established between 1750 and 1820. This road retains its historic alignment contributing to the retainment of site integrity. The canal, although filled in and partially hidden by overgrown vegetation, is still visible in the landscape through topographic change. For a time little evidence existed of the former interior island road systems that developed between 1820 and 1855 (Joseph et al. 1993, 4-14). The development of the Cultural Landscape Report treatment plan, redefined the historic circulation patterns and its relationship with the remnant structures.

The vegetation on Virginius Island has evolved from native to primarily exotic species. The removal of woody vegetation in the development areas was initiated between 1750 and 1820, when wood was harvested for fuel and building materials. Cultivated fields and gardens were established in residential yards. Trees planted in the Wernwag Street area frequently were exotic species. Periodic freshets increased the dispersal of seeds from upriver and added to the amount of exotic vegetation established on the island. Eventually, the structural development of the island ceased and the vegetation increased dramatically. Along the canal and Shenandoah River, the vegetation has remained riparian in character through all historic periods. This type of vegetation retains its historic integrity, however, vegetation dating to the period of significance is no longer extent. The control of the vegetation on the island in the historical areas is still an important maintenance issue (Joseph et al. 1993, 4-18).

The structural remains of the industrial community on Virginius Island vary from discrete residential foundations to the enormous flumes of the Shenandoah Pulp Mill. Remnants of mill walls and foundations of dwellings serve to recall not only the prosperity of the past but also the power of nature. Landscape features for the waterpower system are evident on portions of the island, but the appreciation of this history of Virginius is lost within the vegetation and flood debris. Other landscape features that remain include walls associated with the canal, retaining walls for the railroad, and the Lake Quigley wall. Although no longer extent, the historic use of fences and stone walls in residential areas to define the yard spaces between dwellings, is evident through archeological investigation. In addition some archeological evidence of the distinct use areas on the island can be seen in the remnant traces of the watercourses and in the postholes and stone walls. Structural features such as the Virginius Island bridge and a portion of a mill tail race have been reconstructed based on historical documentation and archeological investigations (Joseph et al.1993, 4-25). While the historic integrity of such reconstructions is questionable, the integrity of the remaining structural foundations is high. Though the condition of much of the built environment is poor, the completion of the shoreline stabilization efforts are attempting to mitigate further disintegration.

From the earliest development of industries on Virginius Island, maintaining the channels and raceways or water systems for the mills was essential. Archeological evidence indicates that the water systems regularly were dredged after freshets and floods had occurred. With the destruction and abandonment of the mills, dredging activities ceased. Improvements made to the island's water system in the late 1840s are still evident today. Remnant features of the headgates, inner basin wall, water tunnels, and mill dam attest to these 1840s additions to the system. Traces of the merchant mill raceway and inner basin presently are hidden by vegetation, while structures associated with the pulp mill water system remain intact, represented by remnant walls for Lake Quigley and the pulp mill flumes. The most impressive system that has endured is the Shenandoah Canal channel (Joseph et al.1993, 4-30). The existence of these hydrological systems contributes greatly to the integrity of the island for they serve to portray the not only early engineering workmanship, but also the Island's association with the natural surroundings and the town of Harpers Ferry.

The landscape integrity of this inventory unit is highest near the Shenandoah Canal Channel. The areas of the row houses, the milling area along the Shenandoah, and the Merchant Mill area also retain integrity of site, workmanship, and association. While the Shenandoah Street Corridor is significant to all historic periods, it retains little integrity due to the loss of original materials. The pulp mill has historical significance and landscape integrity relating to some periods, but not all. The sites associated with the foundry and workshops do not have extant landscape features and no cultural landscape integrity. Therefore these sites are primarily archeological sites with potential cultural landscape value (Joseph et al. 1993, 5-6).

Landscape Characteristic:

Archeological Sites

A major archeological investigation was conducted in association with the Cultural Landscape Report written in 1993. A draft report from these findings is being written by Matt Palus in association with the University of Maryland. It is due out for review by late 1999. Two individual excavations were conducted recently on Virginius Island; the "Archeological Investigations of Lewis Wernwag's Sawmill" by Anna C. Borden and the "Archeological Investigations at Wernwag's Machine Shop" by Mia T. Parsons. Both studies were conducted by employees of the National Park Service in 1995.

Character-defining Features:

Feature: Lewis Wernwag's Sawmill archeolgical site

Feature Identification Number: 101380

Type of Feature Contribution: Contributing

Feature: Wernwag's Machine Shop Archaeological Site

Feature Identification Number: 101381

Type of Feature Contribution: Contributing

Buildings And Structures

1750-1820
Few significant structures were built on the island during the settlement period. The sawmill and gristmill built by Robert Harper in the 1750s, were nearby. Between 1806 and 1807, the Patowmack Canal Company constructed stone walls for the Shenandoah skirting canal, using stone quarried from the adjacent cliffs. This stone, known as Harpers shale, was used extensively on Virginius Island and in the surrounding Harpers Ferry area. The first recorded structure built on the island was a gristmill, owned by John Peacher. Other structures associated with the mill were probably wooden, such as warehouses, sheds and various outbuildings. Historical evidence suggests that a log cabin was located somewhere on the island, as well. Most likely the wooden structures were simply built with little ornamentation or detail. The gristmill had a waterwheel to power the grinding stones. In the later part of this period, a timber bridge was constructed to the island.

1820-1855
During this period, the Town of Virginius became established as an industrial community. Five major industrial areas were created that included an oil mill, a sawmill, a flour mill, cotton mills, and a machine shop. These buildings were designed according to the arrangement of the island's water system as well as the mechanics of production. Their architectural style was both vernacular and industrial. The oil mill/tannery/iron foundry was housed in a frame building extending across a raceway. It is not known if this facility had one or two waterwheels to power the machinery. A number of service buildings relating to the operation of the mills were clustered around the main structure. These small buildings were generally built of wood. The original Peacher gristmill was improved, enlarged, and operated until it was destroyed by fire in 1839. A substantial four-story flour mill of native stone replaced the older structure. Its rectangular shape was marked by two rows of dormer windows at the roof line, a pair of end chimneys, and a line of windows on the lower floors. On the eastern portion of the island, was a frame weather-boarded sawmill structure with two iron waterwheels. Near the sawmill was a stone machine shop. This stone building had clerestory lights to bring in the natural light. Between 1847 and 1849, two cotton mills were constructed near the sawmill and machine shop along the shoreline of the Shenandoah. The architecture of the buildings was based on traditional textile factory designs. The large mill was a four-story brick building with lighting provided by rows of windows on each floor. A central exterior stair tower topped by a bell cupola was on the north side of the structure. The small cotton mill also was a four-story brick building very similar in design to the larger cotton mill.

The construction of waterpower systems had significant impact on the arrangement of structures on Virginius Island. Raceway walls, dams and water tunnels, all built of stone, were part of the system. The stone was also used to face the walls of the Shenandoah Canal channel and a wall constructed by the U.S. government beside Shenandoah Street, next to the canal channel. Stone walls were constructed by the Winchester and Potomac railroad for bridge abutments over water raceways and for retaining walls along the Shenandoah River.

Another prominent structural type were residential structures. These structures on Virginius Island generally were constructed in the Federal style. Characteristic elements of the style included rectangular or square layouts, three stories, brick facades, and low-hipped or gable roofs. The best example of this style on Virginius Island were the row house structures along Wernwag Street. Many had prominent dormers on the rear portion of the buildings, with common chimneys and walls constructed between the individual apartments. Their exterior facades created the appearance of an urban streetscape.

A more vernacular style is represented in the earliest dwellings on the island. These structures were constructed of stone and brick with dormer windows and end chimneys. Later additions to these structures, either kitchen wings, porches or additional stories, transformed the dwellings into individual expressions of the buildings' occupant's. Service and work-related structures throughout the town continued to be built with wood, reflecting the functional and temporary character of these buildings.

1855-1890
During the period of transition and reconstruction following the Civil War, Virginius Island retained its character as a milling community. A new wheelwright shop, brick foundry, and a frame granary located near the flour mill were antebellum improvements that survived the war. Herr's flour mill, however, was destroyed in 1861 and left as a decaying ruin. A disastrous flood in 1870 destroyed many more structures. Those that remained included the large cotton mill, which had been converted to a flour mill in 1868, and residential structures on Wernwag Street. These would endure into the next historic period. Only a few new structures were built after 1870. Structural improvements, related to production were made at the new flour mill. New turbines were installed to power the mill more efficiently. A simple frame storeroom and cooper shop were also built adjacent to the flour mill. At this time, the developments that had the most significant impact on Virginius were the construction of the Shenandoah Pulp Mill and the creation of Lake Quigley, a water impoundment on nearby Hall's Island. The pulp mill was a frame and stone building. The stone used was salvaged from the former U.S. Rifle Factory and Musket Factory buildings left in ruin after the Civil War. Throughout this period, the Virginius Island timber bridge was either damaged or destroyed by floods, but always repaired. It spanned the Shenandoah Canal, supported by two stone abutments and a stone pier.

1890-1944
After the construction of the pulp mill, buildings adjacent to the mill and associated with the production of pulp were built on the island. Only one other significant building was constructed during this period, on the foundations of one of the original dwellings. The Child and McCreight flour mill was abandoned and began to deteriorate. Salvage of building materials from the island became common. The stone from Herr's flour mill and the brick from the Child and McCreight mill were used in other parts of the Harpers Ferry community. Metal from the interior machinery was sold to scrap dealers. Neglect, lack of maintenance, and subsequent destruction by floods left the majority of residential structures in ruins. The pulp mill ceased to operate in 1935 and was badly damaged by the 1936 flood. On a positive note, early in the era,

the Virginius Island bridge was converted to a steel bridge.

1944-2003
The structural ruins on the island comprise its present character. Stone and brick foundation ruins from the cotton and flour mills and dwellings are significant reminders of the past. A major ruins stabilization project was initiated in 1995 for the cotton/flour mill. Two destructive floods in 1996 severely damaged the shoreline features. Restoration of the Shenandoah Canal walls, reconstruction of the Virginius Island bridge, and the most recent stabilization of the shoreline ruins have been the most prominent of the preservation treatments. Remnant landscape features of retaining walls and dams also remain.

SUMMARY
The remains of the industrial community on Virginius Island are either spectacular or unimpressive. Remnants of mill walls and foundations of dwellings serve to recall not only the prosperity of the past but also the power of nature. The most imposing ruins on the island are those of the pulp mill and cotton/flour mill. Landscape features for the waterpower system are evident on portions of the island, but the appreciation of this history of Virginius is lost within the vegetation. Other landscape features that remain include walls associated with the canal, retaining walls for the railroad, and the Lake Quigley wall. Structural features such as the Virginius Island bridge and mill tailraces have been reconstructed based on historical documentation and archeological investigations (Joseph et al. 1993 4-18 to 4-26).

Character-defining Features:

Feature: Cotton Mill/ Hospital Foundation Ruins

Feature Identification Number:	101382
Type of Feature Contribution:	Contributing
IDLCS Number:	45473
LCS Structure Name:	Cotton Mill Hospital--Virginius Island
LCS Structure Number:	VI11

Feature: Dwelling House Ruins

Feature Identification Number:	101383
Type of Feature Contribution:	Contributing
IDLCS Number:	45474
LCS Structure Name:	House Ruins--Virginius Island
LCS Structure Number:	VI12

Feature: Herr's Flour Mill Ruins

Feature Identification Number: 101384

Type of Feature Contribution: Contributing

Feature: Inner Basin Headgates Ruins

Feature Identification Number: 101385

Type of Feature Contribution: Contributing

Feature: Island Bridge Piers

Feature Identification Number: 101386

Type of Feature Contribution: Contributing

IDLCS Number: 45467

LCS Structure Name: Island Bridge Piers--Virginius Island

LCS Structure Number: VI02

Feature: Shenandoah Pulp Company Ruins

Feature Identification Number: 101387

Type of Feature Contribution: Contributing

IDLCS Number: 12892

LCS Structure Name: Shendandoah Pulp Company--Virginius Island

LCS Structure Number: VI04

Feature: Underground Tunnels/Canals Ruins

Feature Identification Number: 101388

Type of Feature Contribution: Contributing

IDLCS Number: 45472

LCS Structure Name: Underground Tunnels/Canals--Virginius Island

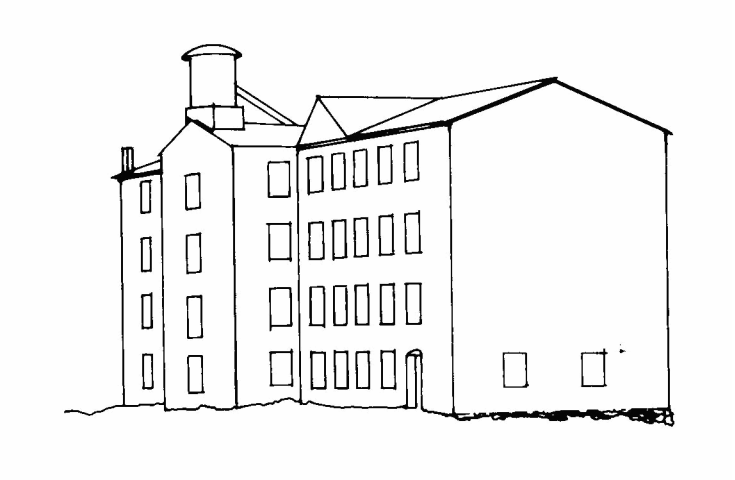
LCS Structure Number: VI10

Feature: Virginius Island Bridge

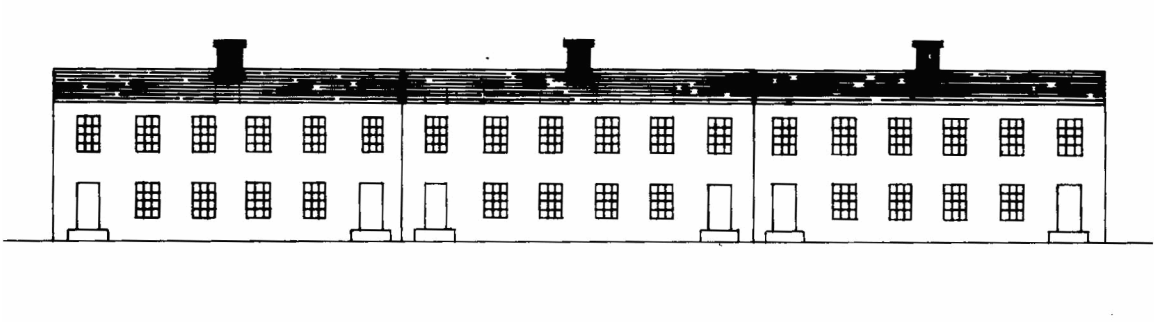
Feature Identification Number: 101389

Type of Feature Contribution: Non-Contributing

Landscape Characteristic Graphics:



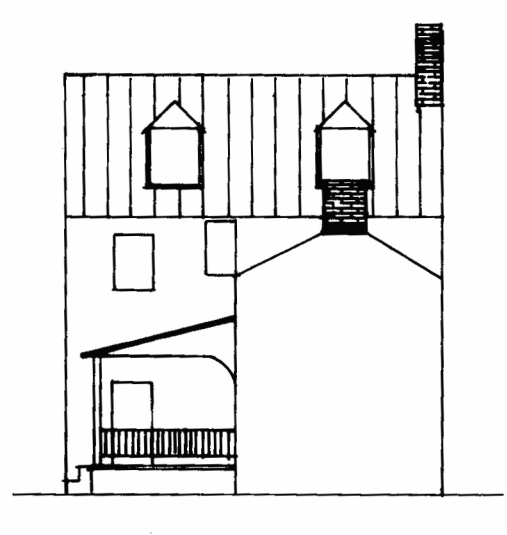
Cotton mill, circa 1860.



A front view of the row houses, circa 1860.



Front view of a dwelling along Wernwag Street, circa 1865.



Rear view of a dwelling on Wernwag Street, circa 1865.



Shenandoah Pulp Mill, circa 1898.

Circulation

1750-1820
During this period, a simple road from the small settlement at the confluence of the Potomac and Shenandoah rivers to Robert Harper's sawmill and gristmill was established along the banks of the Shenandoah. With the excavation of a canal upstream from Virginius by the Patowmack Canal Company in 1806, the road along the Shenandoah gradually was improved. With the opening of the canal, gondolas transported goods from the rich Shenandoah River Valley to Harpers Ferry and other cities and communities downriver. An improved channel around Virginius was used as a continuation of the canal. When John Hall established workshops on adjacent islands in the late 1810s, vehicular and pedestrian traffic along the Shenandoah shore increased. At the conclusion of this historic period, a bridge was constructed to Virginius Island for easier access to Peacher's gristmill.

1820-1855
When the early industries started production on Virginius in the 1820s, an internal circulation system of paths and roads to the individual properties also was established and the bridge across the canal channel was improved. A diagonal route from the flour mill to the sawmill cut across the center of the island and was the primary island roadway. This later was named Wernwag Street and was the only road named on Virginius. Secondary roads from the flour mill looped around the oil mill and tannery and later the iron foundry. In 1830, Shenandoah Street adjacent to the canal was designated part of the Harpers Ferry, Charles Town and Smithfield Turnpike. The mills on Virginius Island benefitted from the increased traffic on the turnpike. Soon after, a footbridge connecting the eastern end of the island with Harpers Ferry was erected over the canal channel. In 1836, tracks for the Winchester and Potomac Railroad were laid across the island. The Winchester and Potomac Railroad connected Winchester, Virginia, in the Shenandoah River Valley, with the Harpers Ferry junction of the Baltimore and Ohio Railroad. By this time, additional secondary roads to the machine shop and railroad depot intersected with Wernwag Street. With the introduction of the railroad and the use of the canal traffic from the Shenandoah Canal channel, the Island of Virginius became a crossroads for transportation, manufacturing and mill production. Industrial expansion continued when two

cotton factories where constructed on the shoreline of the Shenandoah River. Roads to these factories crossed over the waterways to the mills.

1855-1890
Growth and gradual decline characterize the physical evolution of the island during this historic period. The destruction of Herr's flour mill during the Civil War left an industrial void which brought about the conversion of the large cotton mill to a flour mill after the war. With the conversion to flouring, a rail line spur to serve the mill was laid along side Wernwag Street. Wernwag Street remained the primary route for the island. After the flood of 1870 caused the destruction of the iron foundry, machine shop and sawmill, secondary roads to these industries no longer were needed. Shenandoah Street, via the Virginius Island bridge, continued to serve as the only road to the Lower Town commercial district. Although the Virginius Island bridge was damaged by floods, it remained the main point of access to the island. In 1888, an additional spur line was laid from the main tracks to the newly completed pulp mill.

1890-1944
Construction of the pulp mill influenced the overall decline of industry on Virginius. By 1890, the flour mill ceased production, and the rail spur line to the mill was abandoned. With the pulp mill as a new center of employment, a new pedestrian route was established by residents on the island who worked for the company. To walk from their houses to their jobs at the mill, they followed the railroad tracks. Shenandoah Street also became an auto route bringing visitors from Lower Town or Charles Town to the island to car camp or picnic. By the 1920s, vehicular traffic on Wernwag Street was virtually nonexistent. The resident population gradually declined to only two families. When the pulp mill closed in 1935, the second spur line was also abandoned. The last resident left the island when the remaining structures were destroyed by the 1936 flood.

1944-2003
When the National Park Service assumed management of the island in 1955, Virginius already had become a heavily overgrown and wooded area. Trails following the Shenandoah River shoreline had been established by local fishermen. The outline of Wernwag Street was still evident in the 1950s but no longer served its original purpose. Pleasure seekers and hikers had also created meandering trails among the various structural ruins that crisscrossed the island. A vehicular service road developed by the railroad and also used by the Park Service staff follows the tracks. Additional trails, shortcuts to the river, have been created across the island by outdoor recreation groups. In 1969 and 1970, the Virginius Island bridge (Randolph Bridge) was constructed based on historic documentation. Since 1990, Shenandoah Street has served as the shuttle bus route to Harpers Ferry National Historical Park from the Visitor Center on Cavalier Heights. Visitors walking from Lower Town to the island can use two bridges, one from Shenandoah Street to the reconstructed Virginius Island bridge and another from Hamilton Street. Based on the 1993 Cultural Landscape Report treatment plan, the historic alignment of Wernwag Street and other unnamed roads were redefined. Some existing trails were retained to create provide a visitor with many options to view the island landscape. In 1996, two floods

caused damage to the shoreline trail and a bridge over the cotton/flour mill ruin. The island was closed to visitors until the summer of 2000 because of the unsafe conditions. Although the shoreline trail is eroded in portions, most of the island trail system is intact.

SUMMARY
Circulation systems within and around Virginius Island were functional elements of the landscape. Features associated with circulation included roads, canals, railroad, bridges, and footpaths. The road along the Shenandoah and the canal channel were established between 1750 and 1820, and are two of the significant remaining elements of the original circulation system. With the reconstruction of the Virginius Island bridge, the connection to these components was reestablished. For a time little evidence existed of the former interior island road systems that developed between 1820 and 1855, with the exception of the railroad bisecting the island. With the development of the cultural landscape report's treatment plan, the circulation system now relates to the historic patterns and remnant structures.

Character-defining Features:

Feature: National Park Service Virginius Island Interpretive Walk

Feature Identification Number: 101390

Type of Feature Contribution: Non-Contributing

Feature: Shenandoah Street

Feature Identification Number: 101391

Type of Feature Contribution: Contributing

Feature: Vehicular Service Road

Feature Identification Number: 101392

Type of Feature Contribution: Non-Contributing

Feature: Wernwag Street

Feature Identification Number: 101393

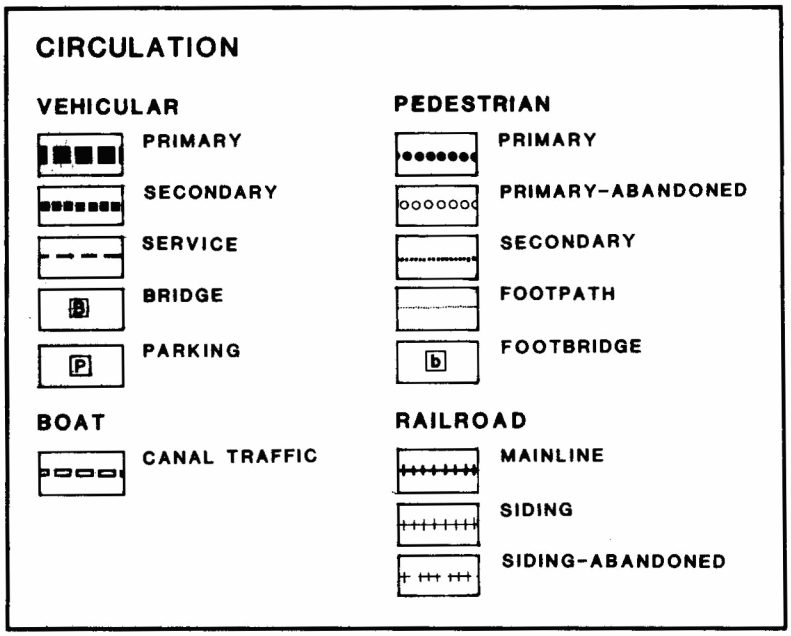
Type of Feature Contribution: Contributing

Feature: Winchester and Potomac Railroad

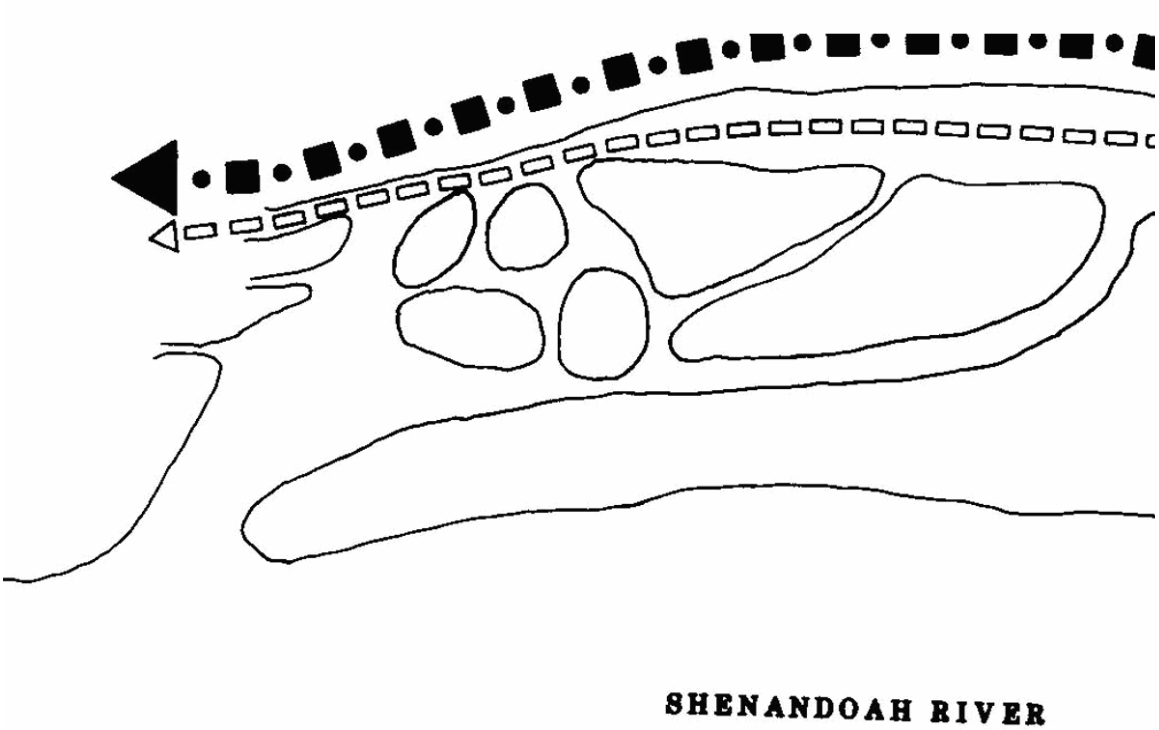
Feature Identification Number: 101394

Type of Feature Contribution: Contributing

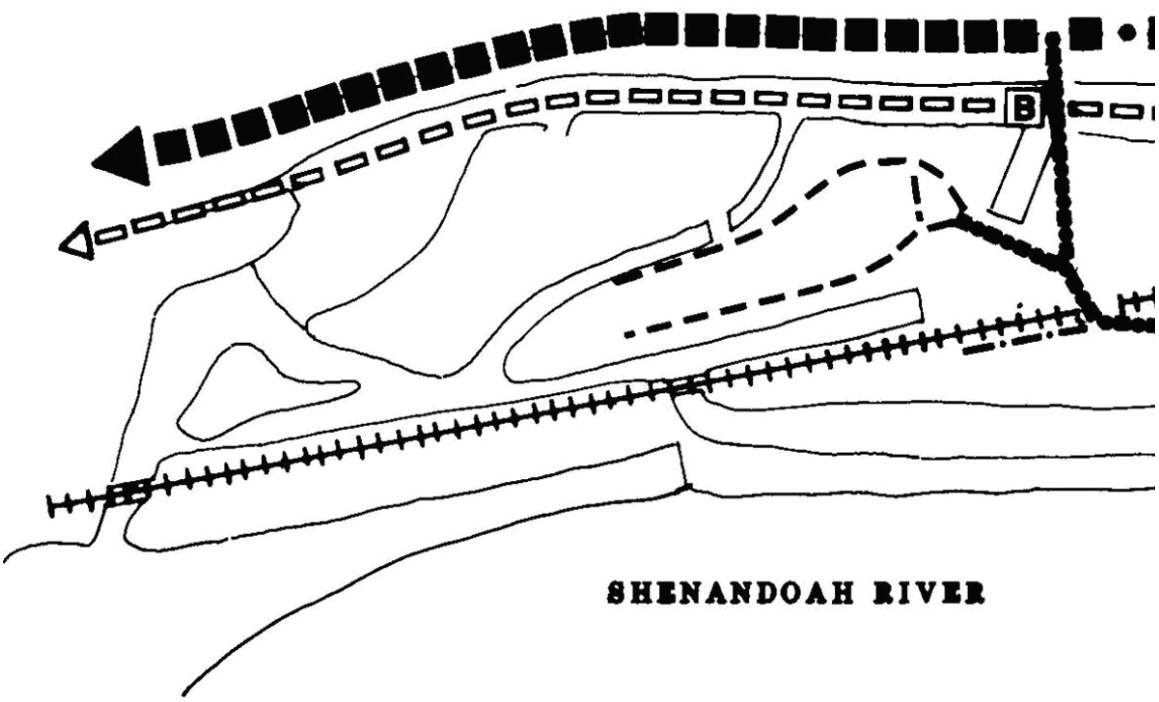
Landscape Characteristic Graphics:



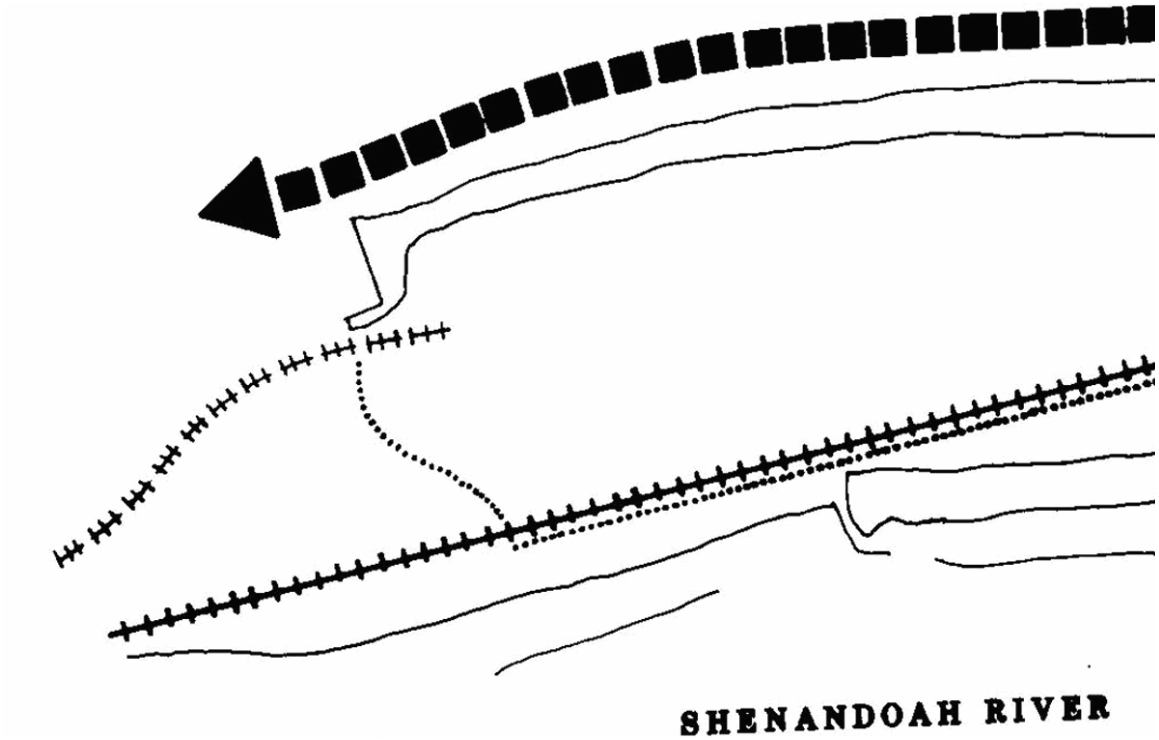
This legend corresponds to all diagrams in the Circulation section of this report.



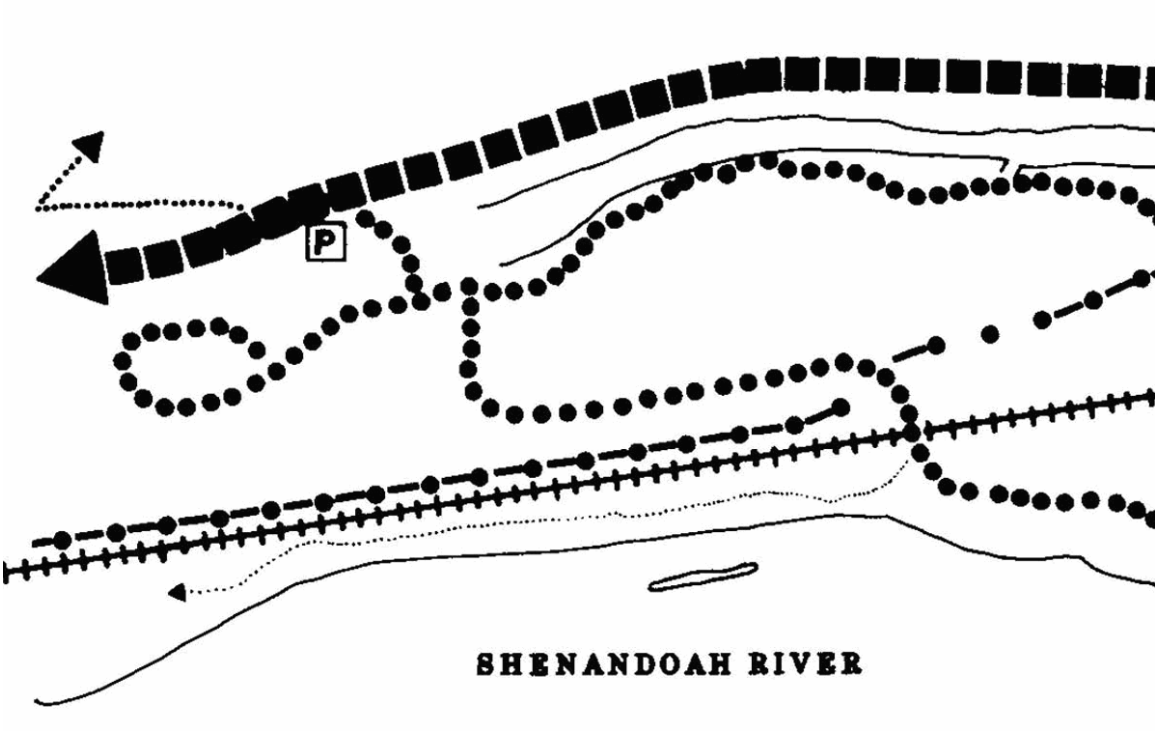
Circulation patterns on the island between 1750 and 1820.



Circulation patterns on the island between 1820 and 1855.



Circulation patterns on the island between 1855 and 1890.



Circulation patterns on the island between 1944 and 1992.

Cluster Arrangement

Cluster arrangement on Virginius Island was influenced primarily by the preeminence of waterpower systems and by the 1824 original land ownership patterns. Once these were established, the cluster arrangement was characterized by the massing and grouping of individual buildings as they defined industrial and residential spaces, circulation systems, land-use boundaries, and landscape organization. The mill clusters for the industries are one example of the functional arrangement of structures. In the residential community, a series of dwellings formed a facade of row houses, defining the street. Alleys between some of the buildings provided access to the backyards. The yards were defined by fencing, outbuildings, and walls (Joseph et al. 1993, 4-31).

Character-defining Features:

Feature: Mill Ruins

Feature Identification Number: 101395

Type of Feature Contribution: Contributing

Feature: Row Housing

Feature Identification Number: 101396

Type of Feature Contribution: Contributing

IDLCS Number: 45474

LCS Structure Name: House Ruins--Virginius Island

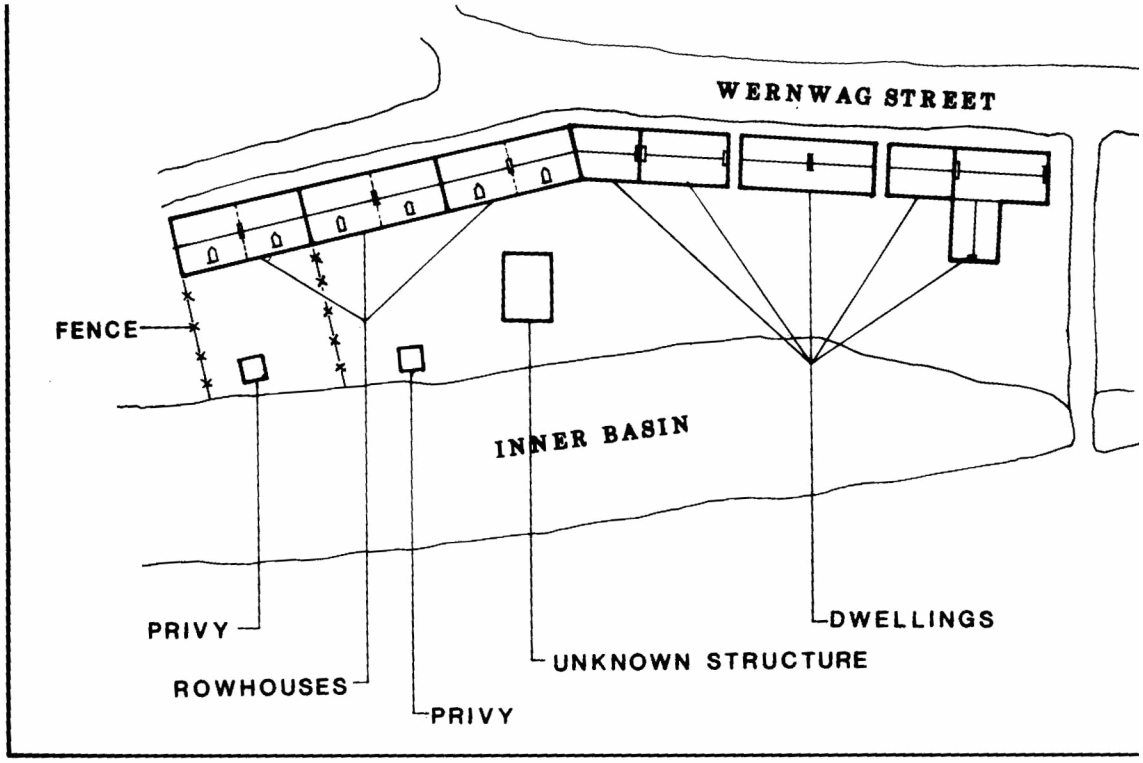
LCS Structure Number: VI12

Feature: Shenandoah Pulp Mill Ruins

Feature Identification Number: 101397

Type of Feature Contribution: Contributing

Landscape Characteristic Graphics:



Cluster arrangement depicting the row house area (conjectural location of outbuildings.)

Constructed Water Features

1750-1820

The development of a sawmill race in the 1750s and excavation of the Shenandoah Canal channel in 1806 and 1807 were the initial attempts to adapt and manipulate the natural flow of the Shenandoah River near Harpers Ferry. The Virginius Island landform, however, was not adapted for waterpower until sometime before 1817. When the first mill was established on

Virginius, a natural river channel between the main island and a smaller one was utilized.

1820-1855
During this period, a major portion of the island's water system was constructed to power the mills and industries. Between 1820 and 1845, the primary inlet for the water to the mills was a river channel dividing Virginius Island and Hall's Island. The water was directed to three mill clusters from this inlet, and dam was constructed on the downstream side of Hall's Island to divert wastewater from the U.S. Rifle Factory toward the primary inlet or main raceway. Improvements to the water system occurred in the late 1840s when two cotton mills were constructed on the banks of the river or southern side of the island. Water that previously had been diverted under a railroad crossing to the sawmill and machine shop was redirected by an improved intake system. A newly constructed set of headgates and a rip-rap dam built into the river funneled water straight toward the eastern end of the island. This system ran independently of the previous water channel and was utilized by the sawmill, machine shop, and the newly constructed cotton mills. A system of tunnels and an inner basin constituted the other improvements.

1855-1890
The aftermath of the Civil War and subsequent floods drastically transformed the landscape of Virginius Island during this period. The destruction of Herr's flour mill during the war terminated the use of its raceway. A flood in 1870 destroyed all of the mills on the island except for the newly converted flour mill. Since the older mills were destroyed, the need to maintain the channels and raceways with dredging was eliminated. The cotton/flour mill continued to operate until 1889 when another flood occurred that eventually resulted in the mill being closed permanently. Another influence that coincided with the closing of the cotton/flour mill was the construction of a pulp mill and its large water impoundment upstream.

1890-1944
For most of this period, the pulp mill was the only industry affecting Virginius Island. Built in the same location as the Shenandoah Canal locks, the pulp mill's water impoundment, Lake Quigley, was created by dredging a large area of Hall's Island. The dredged material then was deposited in the area between Virginius Island and Hall's Island, thus filling the channel between the islands. The pulp mill eventually was closed in 1935.

1944-2003
During this period, the former raceways and channels associated with the once-prosperous mills gradually filled in with sediment. With the exception of its efforts to preserve the Shenandoah Canal channel, the park service made no attempt to clean out the historic water systems, until 2002. It is now possible to walk through the intake tunnels and stand on the headgates due to the efforts to stabilize these features after the 1996 floods.

SUMMARY
From the earliest development of industries on Virginius Island, maintaining the channels and

raceways or water system for the mills was essential. Archeological evidence indicates that the water systems regularly were dredged after freshets and floods had occurred. With the destruction and abandonment of the mills, dredging activities ceased. Improvements made to the island's water system in the late 1840s are still evident today. Remnant features of the headgates, inner basin wall, water tunnels, and mill dam attest to these 1840s additions to the system. Traces of the merchant mill raceway and inner basin presently are hidden by vegetation, while structures associated with the pulp mill water system remain intact, represented by remnant walls for Lake Quigley and the pulp mill flumes. The most impressive system that has endured is the Shenandoah Canal channel (Joseph et al., 1993 4-27 to 4-30).

Character-defining Features:

Feature: Inner Basin Walls

Feature Identification Number: 101398

Type of Feature Contribution: Contributing

IDLCS Number: 12895

LCS Structure Name: Inner Basin Walls--Virginius Island

LCS Structure Number: VI08

Feature: Lake Quigley & Retaining Wall

Feature Identification Number: 101399

Type of Feature Contribution: Contributing

IDLCS Number: 45469

LCS Structure Name: Lake Quigley & Retaining Wall--Virginius Island

LCS Structure Number: VI05

Feature: Mill Dam Remnants

Feature Identification Number: 101400

Type of Feature Contribution: Contributing

Feature: Shenandoah Canal Ruins

Feature Identification Number: 101401

Type of Feature Contribution: Contributing

IDLCS Number: 12894

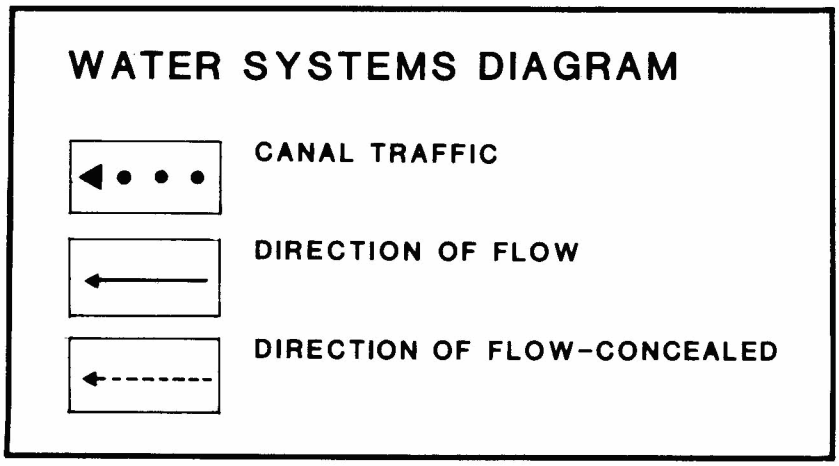
LCS Structure Name: Shenandoah Canal--Virginius Island

LCS Structure Number: VI01

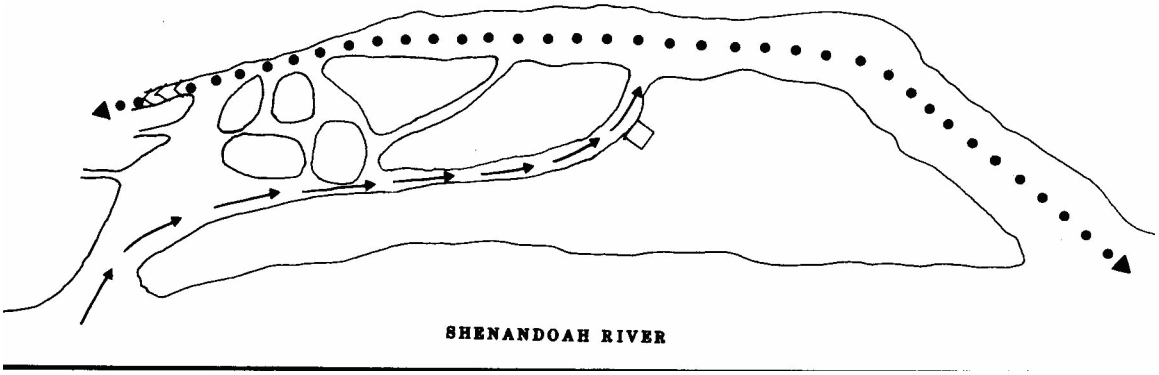
Feature: Water Intake Tunnels

Feature Identification Number:	101402
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IDLCS Number:	045472
LCS Structure Name:	Virginius Island; Underground Tunnels
LCS Structure Number:	VI10

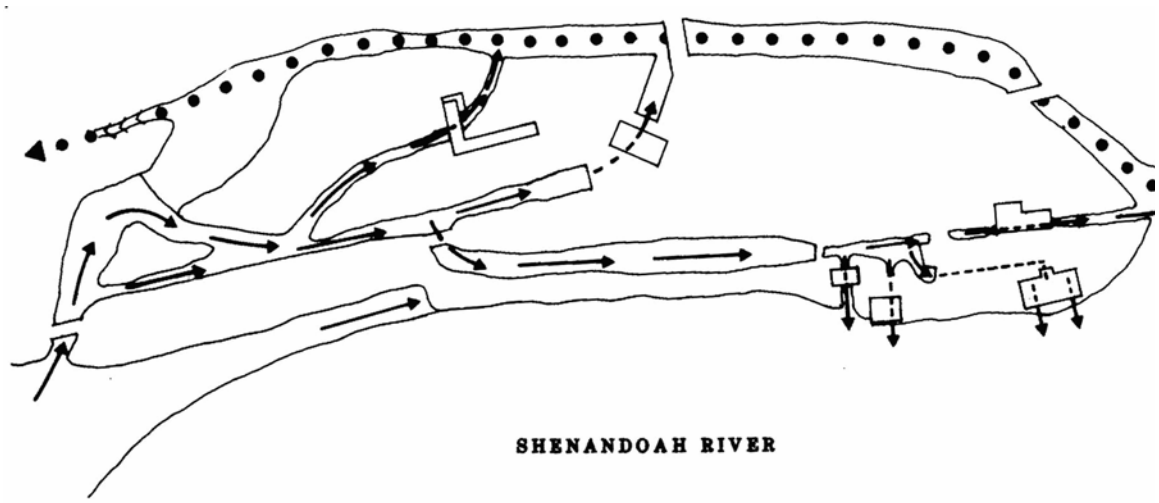
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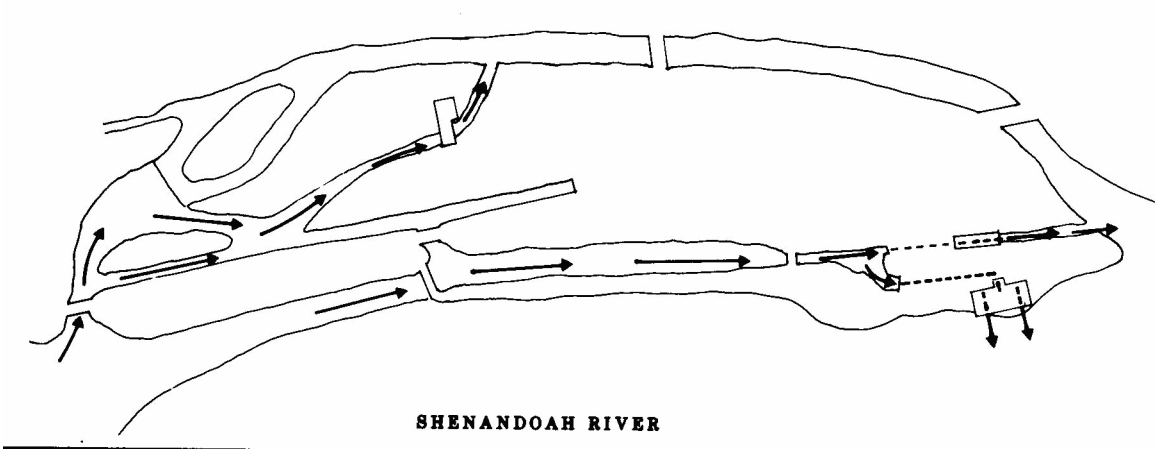
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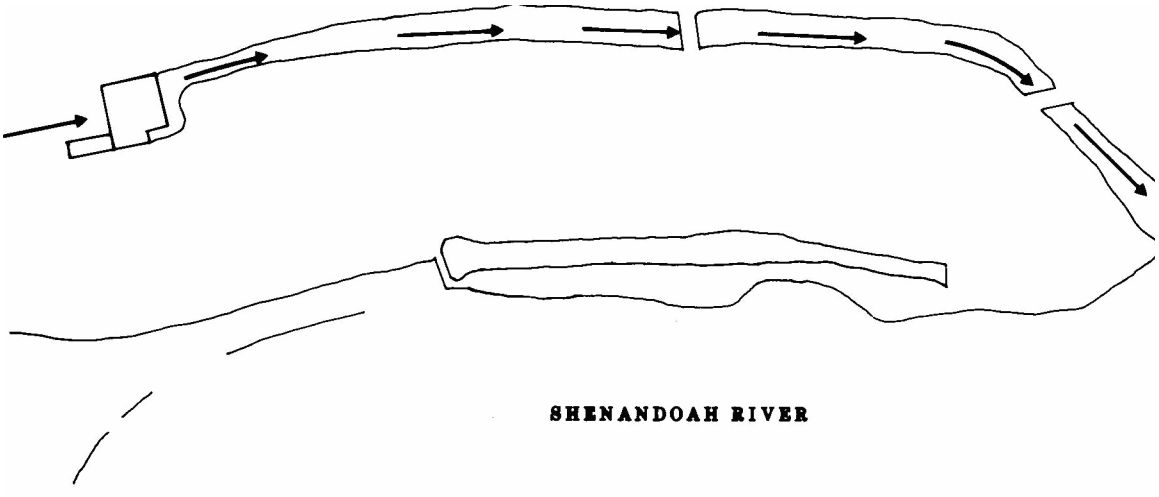
The water features on the island between 1750 and 1820.



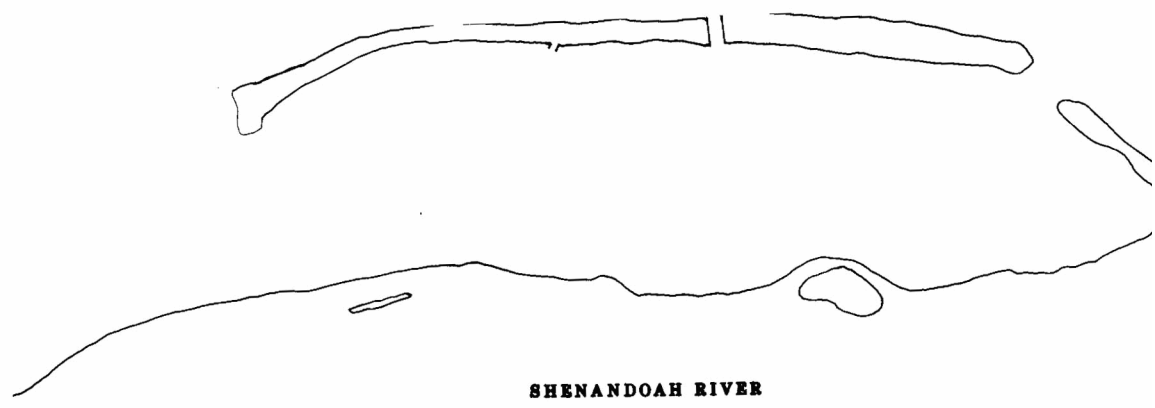
The water features on the island between 1820 and 1855.



The water features on the island between 1855 and 1890.



The water features on the island between 1890 and 1944.



The water features, or lack thereof, on the island between 1944 and 1993, when this drawing was made.

Land Use

1750-1820
During the years of early settlement in Harpers Ferry, the Island of Virginius was a relatively unused parcel of land until late in this historic period. When Robert Harper obtained a land grant from Lord Fairfax in 1751, he established the first industries in the Harpers Ferry area. Along the banks of the Shenandoah River, Harper constructed a sawmill and gristmill, and a raceway to power the mills. The Island of Virginius was presumably an insignificant island not sufficient for mills. Also the frequent flooding of the Shenandoah River prohibited long-term use of the island. Most likely, timber from the island was used to supply the sawmill.

In 1796, the United States government purchased land from Robert Harper's heirs for the establishment of a U.S. Armory. An island in the Shenandoah River was mentioned, but it is not known if this was Virginius Island. Shortly thereafter in 1806 and 1807, the Patowmack Canal Company constructed a canal and locks to improve the navigation of the Shenandoah. The channel, separating the lowermost island from the mainland, was used as part of the canal system. This same island, which previously had been considered unclaimed land, was awarded to Daniel McPherson. Documentation reveals little about settlement on the island until McPherson sold the property to John Peacher in 1817. After 1817, a mill, mill house, and orchard were located on the island.

1820-1855
With the establishment of the first mill, several individuals began to develop portions of the island. In 1823 John Peacher sold the island to James Stubblefield, who subdivided the island into four parcels which were respectively sold to four parties in 1824. In time, an oil mill, a new gristmill, tannery, and sawmill, as well as dwellings for the owners and the mill workers, were constructed. Development occurred in clusters, centered around the individual industries in each parcel, with the exception of one which remained primarily residential in character.

Within each cluster there were residential structures and yards with gardens. The incorporation of the Town of Virginius in 1827 marked the beginning of an organized island community. By 1836, the Winchester and Potomac Railroad had constructed a depot and a rail line, which bisected the island. Changes in production of goods and advances in industrial technology influenced many structural improvements made on the island in the 1840s. An iron foundry replaced the oil mill and tannery, and two new cotton mills where constructed along the Shenandoah River shoreline. By 1855, new tenement row houses and other residential structures formed a residential corridor along the main road, Wernwag Street.

1855-1890
The consolidation of the island under single ownership in 1855 signifies the beginning of this period. The island's owner, Abraham Herr, developed his mills from local into regional industries. Improvements to the waterpower systems and a new iron foundry adjacent to the Shenandoah Canal channel were some of the refinements Herr made. Enterprises such as stables and a wheelwright shop added commercial diversity to the island. Events of the Civil War affected the island in several ways. Herr's flour mill was destroyed by Confederate troops in 1861. Union troops occupied Virginius and adapted island buildings to suit their needs. Among these was the large cotton mill which was utilized as a hospital between 1862 and 1865.

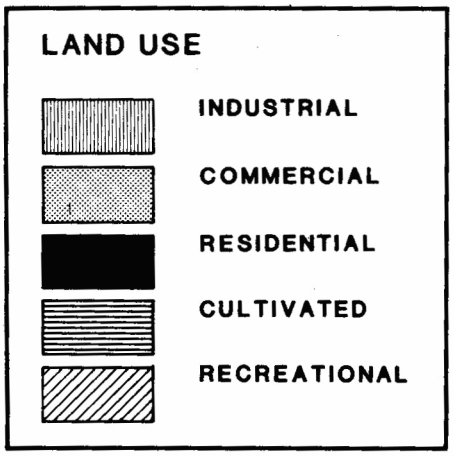
After the war, with his mill in ruins, Herr sold the island to the firm of Child and McCreight. The new owners converted the large cotton mill to a flour mill. A disastrous flood in 1870 scoured the landscape of residences and industries on the western part of the island and along the shoreline of the Shenandoah. Floods in 1877 and 1889 continued the damage and helped bring about the decline of industries on Virginius. Eventually the production at the flour mill ceased. The construction of the Shenandoah Pulp Company and its water impoundment lake, Lake Quigley, above Virginius Island near the old Shenandoah Canal locks in 1888, introduced a new pattern of land ownership.

1890-1944
After their purchase of Virginius Island in 1893, the Shenandoah Pulp Company exerted significant influence on the landscape of the island. The primary focus of the owners was the production of wood pulp from their mill along Shenandoah Street above Virginius. Development and maintenance of Virginius was of secondary importance and few improvements were undertaken. Because the company leased residential structures to their employees and other interested parties, the island became essentially a neighborhood of older houses with yards and garden plots. The company also leased areas to civic groups for church services. In addition, sections of the island were used for automobile camping and picnicking. This activity was popular between 1900 and 1930, especially on the upper part of island along the Shenandoah Canal channel. Because of long-term neglect to the residential structures caused by floods and fires, the row house structures were removed by the company in the mid-1920s. By 1930, only two dwellings were occupied. The ruins of Herr's old mill and the abandoned Child and McCreight mill remained. In 1935, after years of economic decline, the Shenandoah Pulp Company ceased operation. In 1936 the highest recorded flood left the residential structures

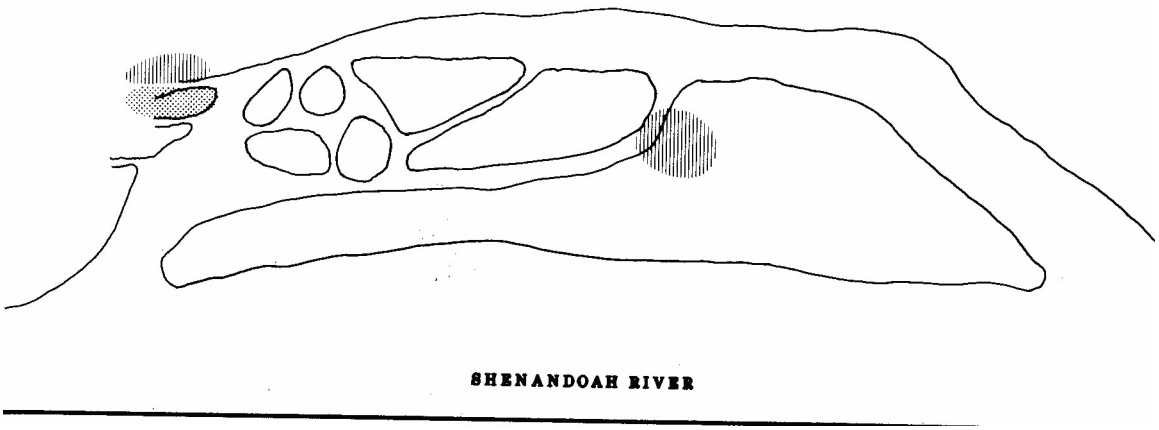
and the pulp mill in ruins. With these final events, the railroad remained the only lasting element of the landscape.

1944-1998
When Virginius Island was designated by the National Park Service for inclusion into Harpers Ferry National Historical Park, only ruinous features from the formerly prosperous industrial community remained. The force of floods and subsequent vegetative growth on the ruins intensified the deterioration of the features. Under the Park Service, the site has been maintained as an archeological preserve with limited stabilization of landscape features. Visitor understanding of the cultural resources on the island is conducted with a self-guided walking tour guide or from an interpretive ranger program. Recreational use by rafters and picnickers and other noncompatible uses are prohibited. In 1994, after the publication of the Cultural Landscape Report in 1993, an interpretative program using waysides was developed to interpret the hisotry of the island. Flooding in 1996 destroyed the rehabilitated and interpretive cultural landscape. Currently the existing structural foundations of the mills are undergoing stablization (Joseph et al. 1993, 4-7 to 4-10).

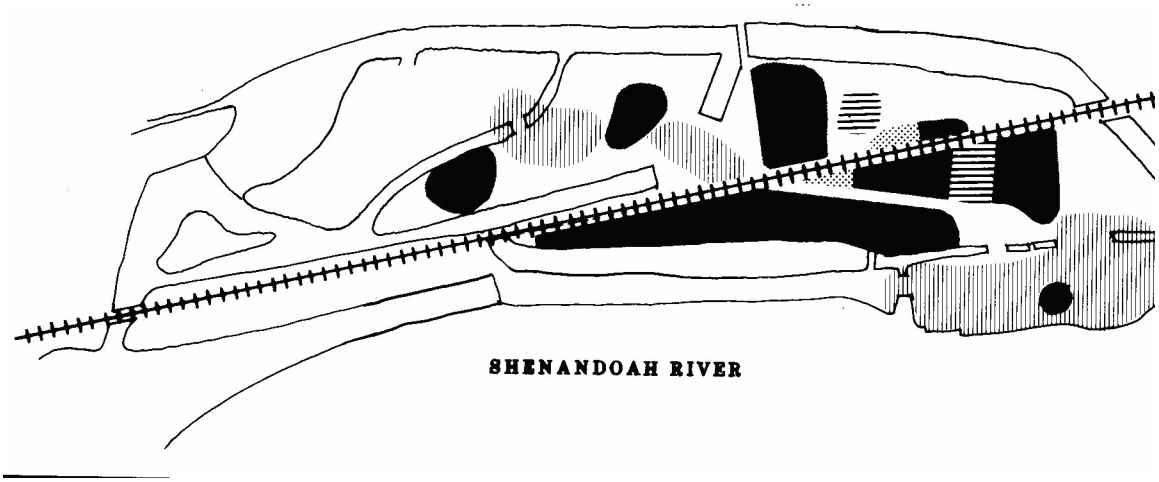
Landscape Characteristic Graphics:



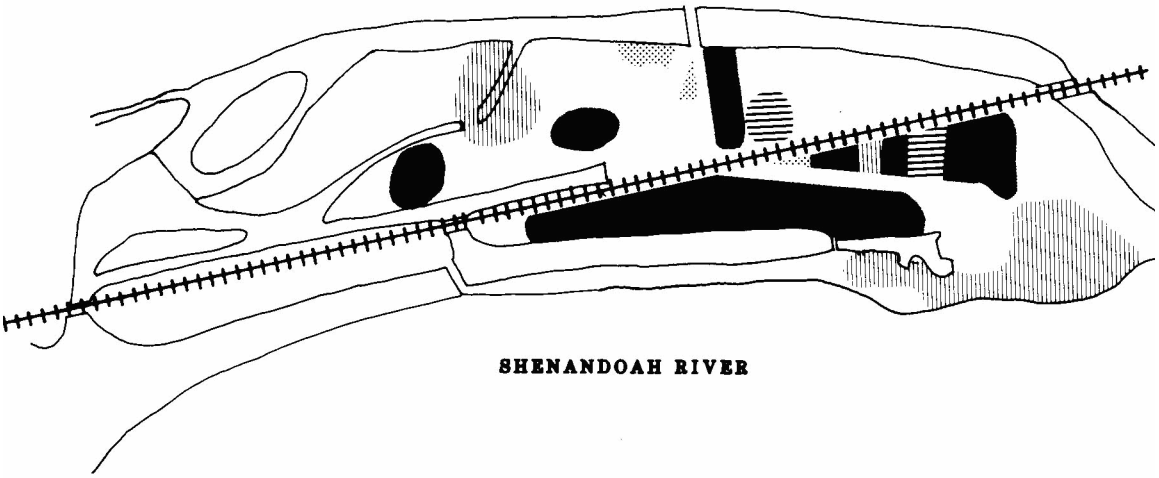
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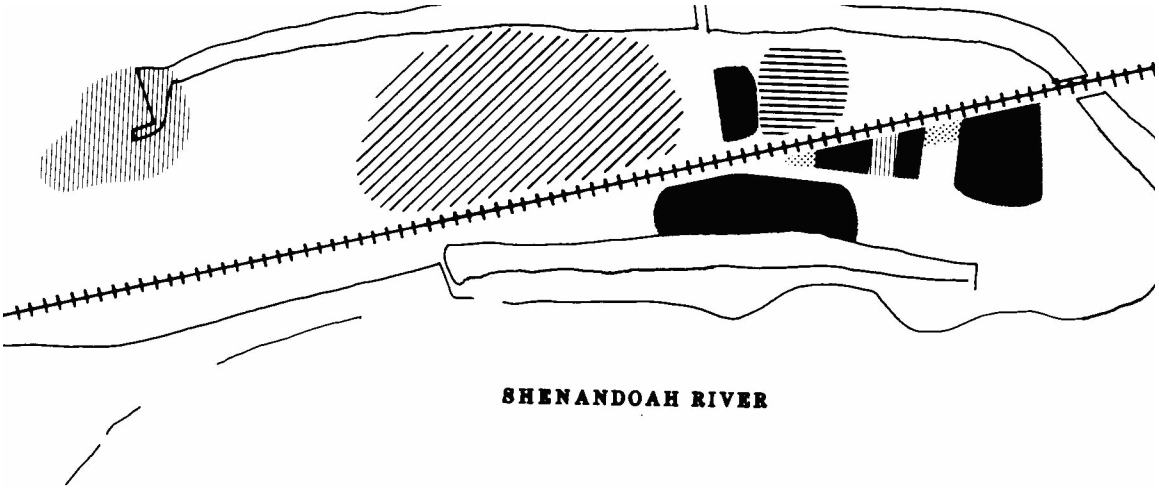
Patterns of land use on the Island between 1750 and 1820.



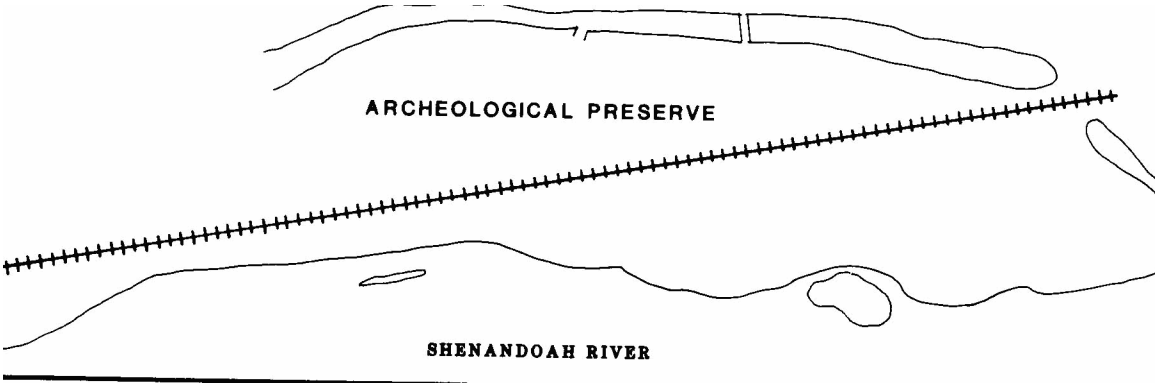
Patterns of land use on the island between 1820 and 1855.



Patterns of land use on the island between 1855 and 1890.



Patterns of land use on the island between 1890 and 1944.



Patterns of land use on the island between1944 and 1992.

Natural Systems And Features

The predominant landform in the Shenandoah River Valley, the location of Virginius Island, is the large east-west ridge of the Blue Ridge Geological Province. The primary underlying geographic formation throughout the area is Harpers shale. Exposed outcrops of this shale along Shenandoah Street were quarried and used extensively on Virginius Island for the construction of buildings, walls, bridges, waterworks, and circulation systems.

The most significant physiographic feature impacting the cultural landscape on Virginius Island is the Shenandoah River. The river system had a strong influence on the settlement and historical development of the island. Mills developed in the low-lying areas of the island derived great benefit from the available waterpower, which through floods and high water would eventually contribute to the mills' demise. On the island, the siting, type, scale, and density of individual structures; the nature and use of specific materials for construction; and the general

spatial adaptation to, and modification of, natural features and resources reflect a strong relationship between the built and natural landscapes (Joseph et al. 1993, 4-2).

Small Scale Features

Small scale features serve functional and aesthetic purposes and give the landscape texture and dimension. These landscape features of Virginius Island are grouped in the following categories: boundary demarcation, paving materials, and site furniture. (Please note: the photo documentation of Virginius Island was limited, providing little information on the island's small scale features during the nineteenth century).

Boundary Demarcation
On Virginius Island, the separation of residential and industrial areas was not as significant as in Lower Town, Harpers Ferry. On Virginius, distinct areas were created by watercourses and raceways, with the water features functioning as boundaries between individual properties and parcels. In several instances, stone walls, which were constructed to stabilize the water courses, partition the island into plots of land. Use of fences and stone walls were also evident in residential areas to define the yard spaces between dwellings. However, no record exists of official lotting of the residential areas along Wernwag Street, except where the four original parcels were delineated. Some evidence of the distinct areas on the island can be seen in the remnant traces of the watercourses and in the postholes and stone walls that have been located through archeological investigations.

Paving Material
The roads on Virginius Island were always worn dirt surfaces from the early years of industrial development until the mid-twentieth century, when they fell into a deteriorated state. No evidence exists to suggest that Wernwag Street or any of the minor roads were paved. There is however photographic and archeological documentation that demonstrates the use of brick and Harpers shale for sidewalks. These paved surfaces are no longer visible on the island. Archeological investigations also indicate the use of Harpers shale for interior floor surfaces.

Site Furniture
Site furniture is a broad division that includes trash cans, planting walls, pergolas, and other features not easily categorized. These historic features are temporal in nature and no longer exist on the island. The only site features on the island, are signs, fences and trash cans installed by the National Park Service. To help visitors interpret the history of the island, trail markers have been installed along the path, to be used in conjunction with a trail guide. Only one interpretive wayside exists on the island near the Shenandoah Pulp Mill. Informational signs are also used by the National Park Service to advise visitors of the prohibitive uses of the island (Joseph et al., 1993 4-32 to 4-37).

Character-defining Features:

Feature: Historic Preservation Zone sign, 1992

Feature Identification Number: 101403

Type of Feature Contribution: Non-Contributing

Feature: Informational Kiosk

Feature Identification Number: 101404

Type of Feature Contribution: Non-Contributing

Feature: Shenandoah Pulp Company wayside, 1992

Feature Identification Number: 101405

Type of Feature Contribution: Non-Contributing

Feature: Shenandoah Street Barrier Fencing, 1992

Feature Identification Number: 101406

Type of Feature Contribution: Non-Contributing

Feature: Trash cans, 1992

Feature Identification Number: 101407

Type of Feature Contribution: Non-Contributing

Landscape Characteristic Graphics:

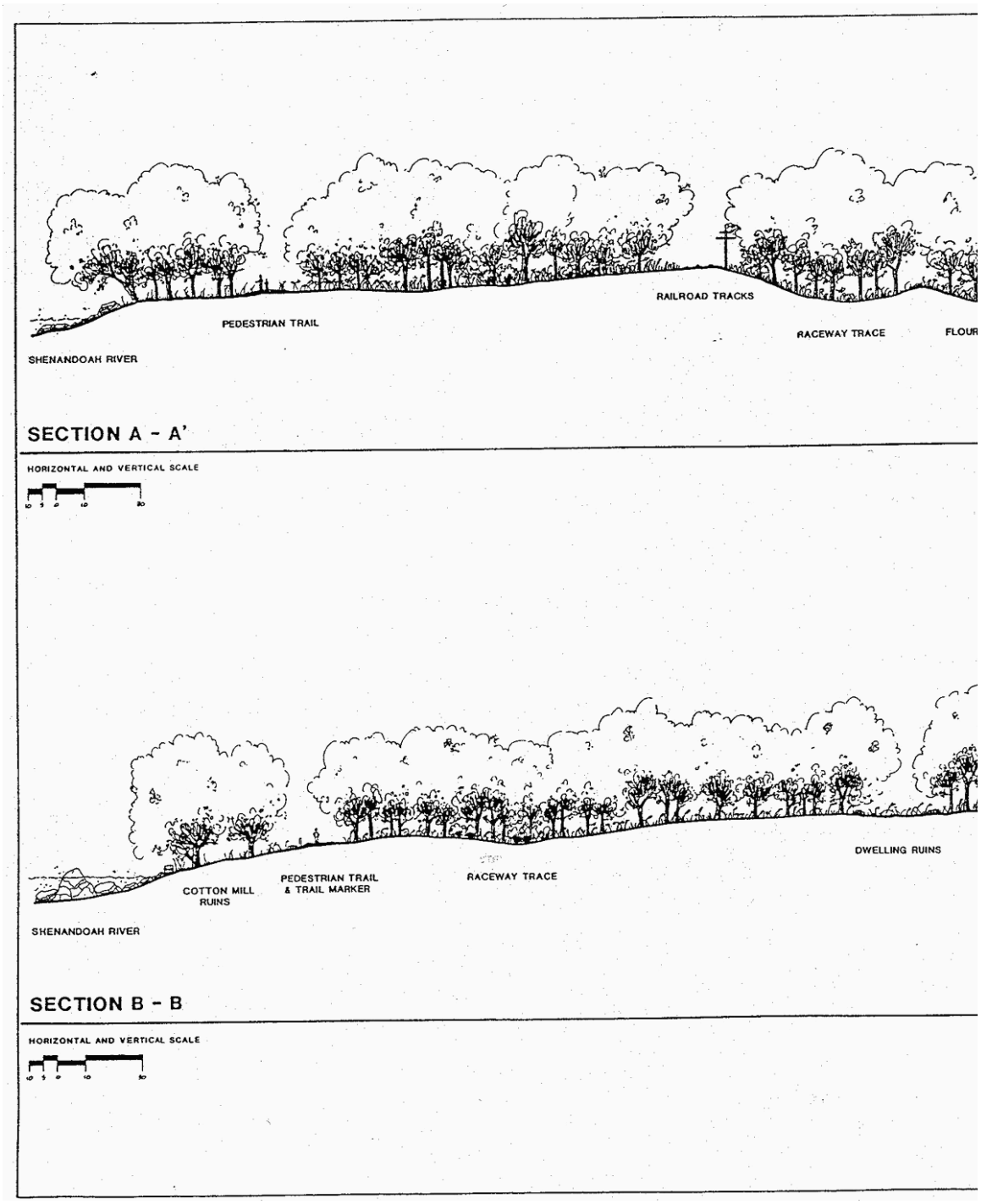


Interpretive wayside, located near a Virginius Island footbridge.

Topography

The topography of Virginius Island is shaped by both human land alterations and by natural flooding. When floods and freshets occur, the banks of the island are eroded in some areas, while sand and silt are deposited in other locations. Due to the fluxuation in the ground level, sometimes by as much as twelve feet, historic resources are continually buried and unearthed, depending upon the location of the resource. Such topographic change also contributes to prominence of riparian vegetation and the occasional death of trees and undergrowth. The general topography of the island is relatively flat, with grades of between one percent and twelve. Much topographic change is the result of human alteration, exemplified by the Shenandoah Canal channel and the races associated with the milling enterprises.

Landscape Characteristic Graphics:



The section drawings above, included in the 1993 Cultural Landscape Report for Virginius Island, illustrate the flat topography of the island and the relative prominence of the Shenandoah Canal channel.

Vegetation

1750-1820
Before settlement on Virginius Island, the woody vegetation probably was composed of lowland species such as sycamores, willows, and ash. It is assumed that Robert Harper harvested some of the timber from the area for cutting at his sawmill on the nearby Shenandoah shore. An orchard was documented to have existed on the island in 1817 at an unknown location. Because of the frequent flooding in the area, the trees and shrubs had to adapt to the sandy soils of the island and fluctuation of the water table.

1820-1855
As the island developed, the riparian character along the shorelines of the Shenandoah River and skirting canal remained. For the interior of the island, the character of the vegetation changed considerably. With the construction of mills, workshops, residences and outbuildings, the island was cleared of vegetation, although pockets of native vegetation did persist within the community. Street trees were planted along the road leading to the flour mill and yard trees were planted by residents for shade. Gardens beside or at the rear of each dwelling were a common feature. After the row houses were built in 1850, trees were planted in front of both the new buildings and the existing residences, eventually creating a canopy of trees over Wernwag Street.

Few yard and street trees survived the military occupation of the island during the Civil War. Trees that did survive lined Wernwag Street all the way to the newly converted cotton mill. These trees were predominantly black locust and silver maple. Floods during this period removed much of the vegetation from the western portion of the island. Herbaceous grasses and low shrubs subsequently filled in this area. Residential gardens of the period were mostly utilitarian garden plots. In some of the backyards, vine-covered arbors sheltered paths and walkways. At the entrance to the bridge on Shenandoah Street, two sycamores grew on either side of the passage. In front of the residence known as the Child house, a row of silver maples were planted. The riparian edge along the canal and the Shenandoah shoreline became increasingly overgrown. A grove of willow trees encircled the inner basin behind the row houses, creating a graceful picturesque frame view for the backyards.

1890-1944
During this era, vegetation continued to fill in the unoccupied land. By the turn of the century, moderate-sized trees established themselves on the western portion of the island. Residential utilitarian and flower gardens were still prominent on the island. Silver maple trees remained in the front of the Child house. In the backyard, a small orchard had been planted beside a large cultivated garden.

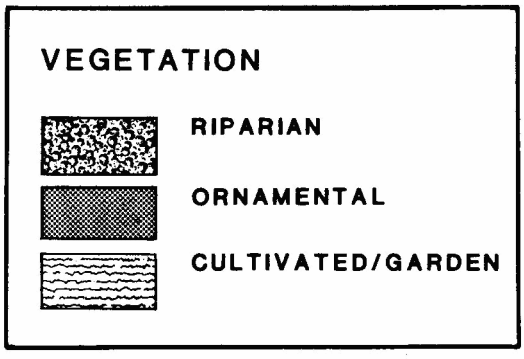
1944-1998
A natural succession of vegetation continued to fill in the few remaining open sections of the island. Gradually, the island became forested with a combination of exotic and native species. In 1996 a major flood damaged or destroyed much of the tree and shrub cover on the island, especially at the east end. Currently the National Park Service program to control vegetation

concentrates on the routine mowing of areas around the Virginius Island bridge and canal walls to deter the growth of trees and shrubs. The Park Service staff has also selectively cleared shrubs and used herbicides to keep the cultural resources free of invasive vegetation. Along the rail line, the railroad and utility company have worked to keep the corridor clear of vegetation.

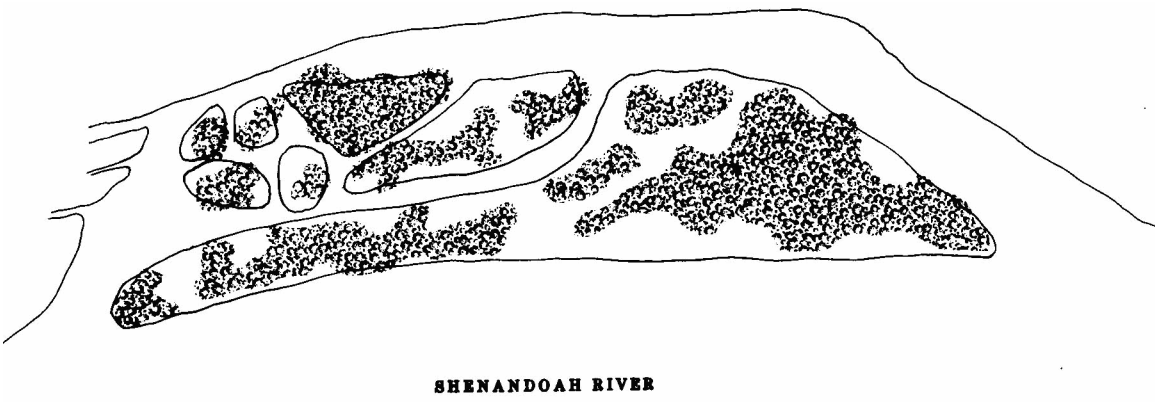
SUMMARY

The vegetation on Virginius Island has evolved from native to primarily exotic species. The removal of woody vegetation in the developing areas was initiated between 1750 and 1820, when wood was harvested for fuel and building materials. Cultivated fields and gardens were established in residential yards. Trees planted in the Wernwag Street area frequently were exotic species. Periodic freshets increased the dispersal of seeds from upriver and added to the amount of exotic vegetation established on the island. Eventually, the structural development of the island ceased and the vegetation increased dramatically. Along the canal and Shenandoah River, the vegetation has remained riparian in character through all historic periods. The control of the vegetation on the island in the historical areas is still an important maintenance issue (Joseph et al. 1993, 4-14 to 4-18).

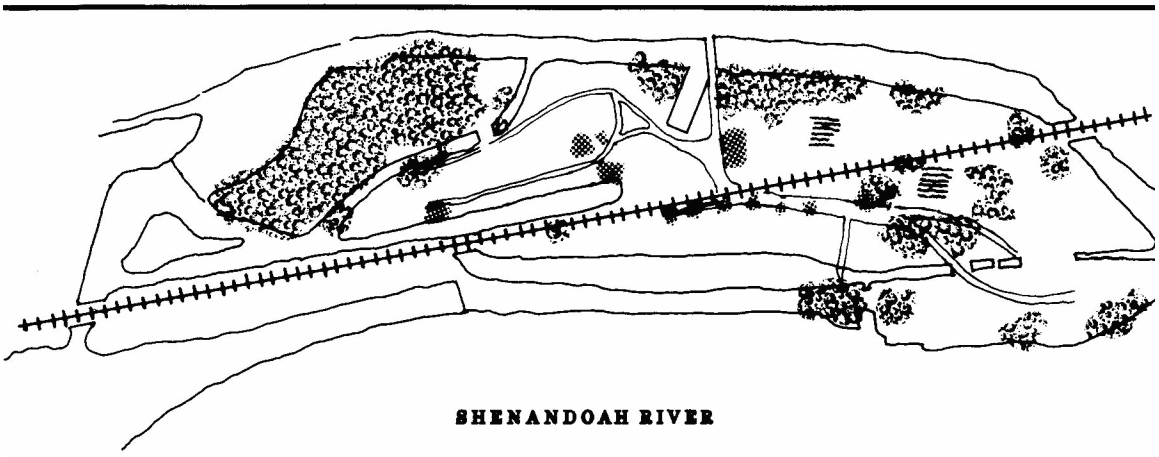
Landscape Characteristic Graphics:



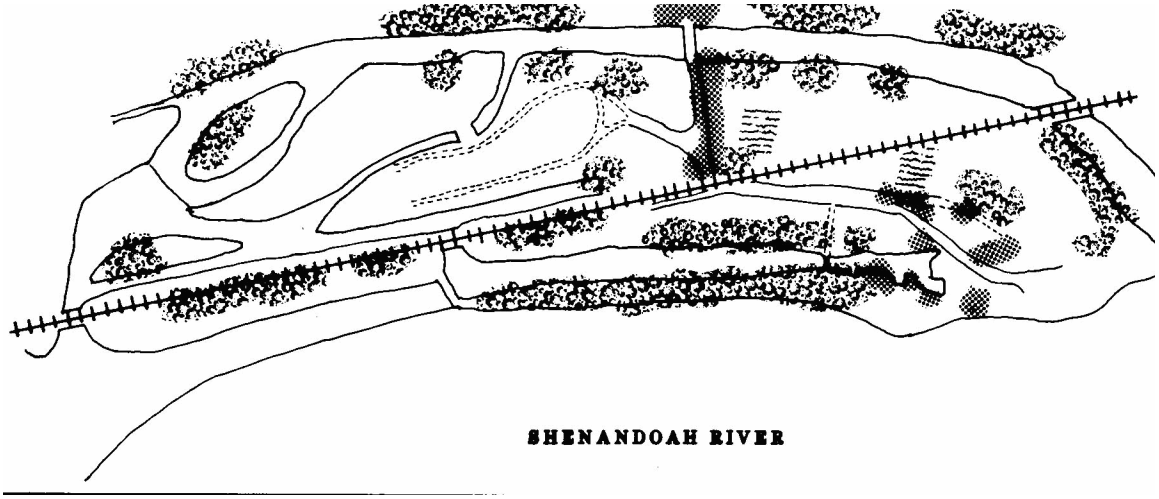
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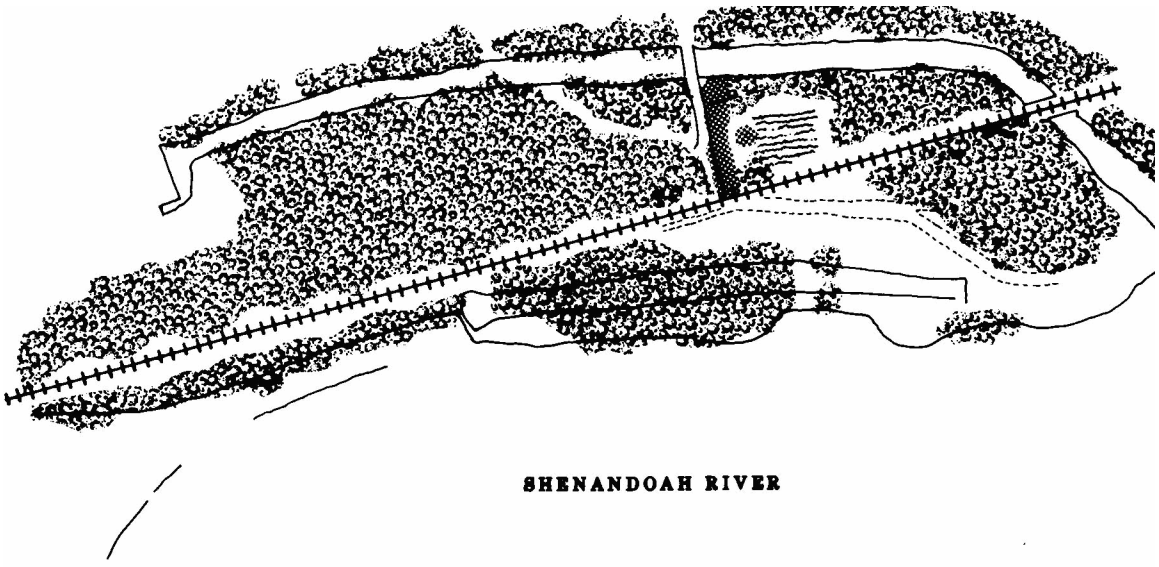
Patterns of vegetation on the island between 1750 and 1820.



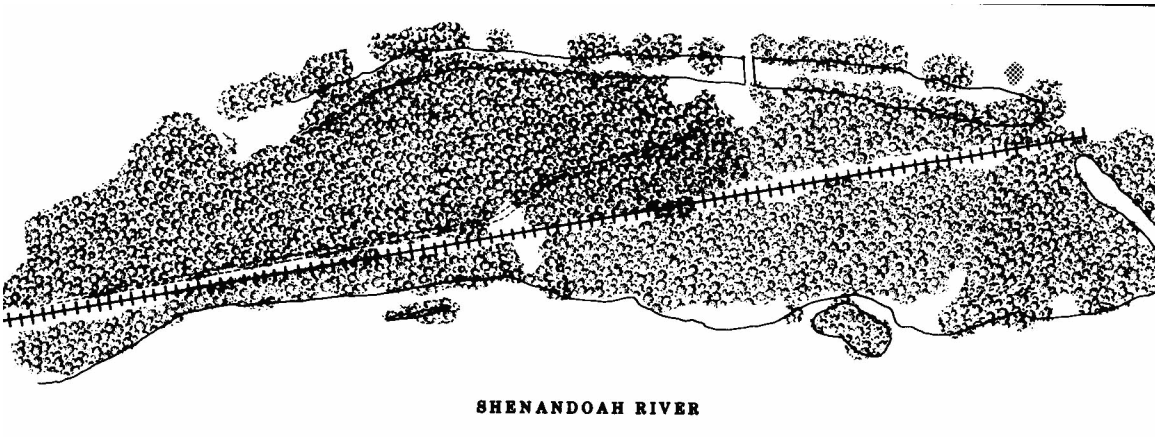
Patterns of vegetation on the island between 1820 and 1855.



Patterns of vegetation on the island between 1855 and 1890.



Patterns of vegetation on the island between 1890 and 1944.

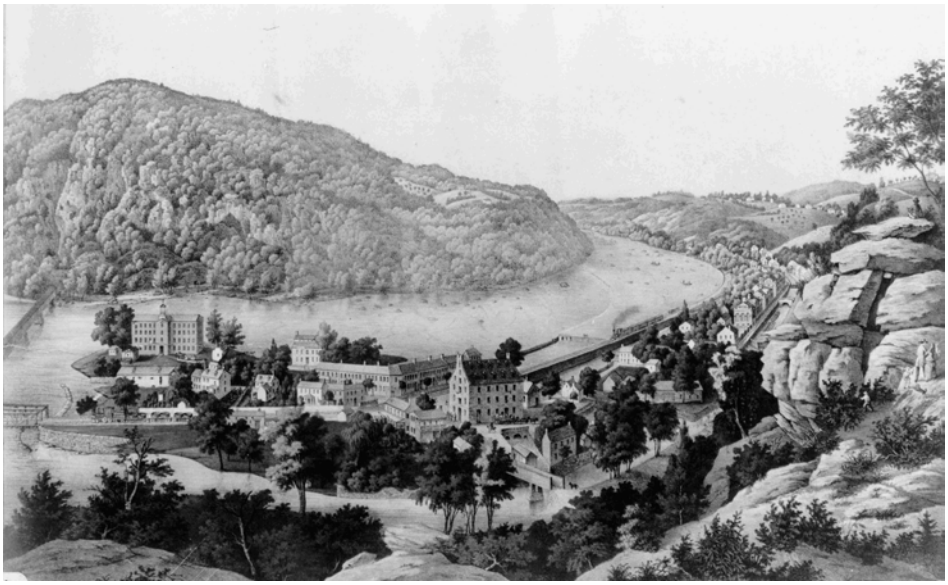


Patterns of vegetation on the island between 1944 and 1992.

Views And Vistas

Views and vistas remain suggestive of the historic scenery of the area, though altered due to periodic island flooding and the introduction of structures and circulation systems associated with Harpers Ferry National Historic Park development. The views present both currently and historically on Viriginius Island were the result of natural clearing due to flooding and the pragmatic needs of the island population. They were not and are not consciously designed aesthetic views or vistas. A historic view, however, exists from Jefferson's Rock within Lower Town, to Virginius Island.

Landscape Characteristic Graphics:



The lithograph above illustrates Viriginius Island from Jefferson Rock, circa 1857.

Condition

Condition Assessment and Impacts

Condition Assessment: Good

Assessment Date: 01/28/2008

Condition Assessment Explanatory Narrative:

The cultural landscape of Virginius Island shows no evidence of major negative disturbance or deterioration by natural and/or human forces. Its cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition. The Assessment Date refers to the date that the park superintendent concurred with the Condition Assessment.

Condition Assessment: Fair

Assessment Date: 10/06/2003

Condition Assessment Explanatory Narrative:

The Assessment Date refers to the date that the park superintendent concurred with the Condition Assessment. The Date Recorded information refers to the date when condition was first assessed by the author of the report.

Impacts

Type of Impact: Flooding

External or Internal: External

Impact Description: Frequent floods and freshets cause erosion of the river banks, damage to historic structures and vegetation (the most recent floods were in 1996). The historic structures along the shoreline were stabilized between 1998 2006. All contracted stone work from 2001 to 2006 was completed; however, much of the feature known as ‘River Wall’ stretching from the head gates east to the Flour Mill still needs excavation and treatment to be fully stabilized. This is the last major stone feature needing attention. Additional stabilization will likely be required following future floods.

Type of Impact: Structural Deterioration

External or Internal: Internal

Impact Description: After the 1996 floods, the National Park Service initiated a ruins stabilization plan for the shoreline ruins, the ones most affected by the floods. By 2006 all stone work stabilization had been

completed on the island. The ruins are still prone to damage from flooding, tree fall, and visitation, and should be monitored and stabilized as necessary. Bricks litter the shore of the Shenandoah River along the Cotton/Flour Mill. Some of these bricks are broken remnants of the factory's walls, while others are part of a deteriorating pavement. With time, these resources will degrade and be lost in the river.

Type of Impact: Vegetation/Invasive Plants

External or Internal: Internal

Impact Description: Invasive vegetation continues to threaten the historic structures and character of Virginius Island. Successional vegetation is overgrown within the Valley Mills Cotton Mill. In some areas the invasive vegetation threatens the establishment of native and historically appropriate plant species. Portions of the trail on the north side of the island between the railroad and the canal are difficult to locate and follow, hidden by vegetation. The trail should be marked more clearly here.

Stabilization Costs

Landscape Stabilization Cost: 200,000.00

Cost Date: 06/01/1998

Level of Estimate: C - Similar Facilities

Cost Estimator: Park/FMSS

Landscape Stabilization Cost Explanatory Description:

The approved treatment for the site is stabilization, therefore the cost estimates are the same as those above.

Treatment

Treatment

Approved Treatment: Rehabilitation

Approved Treatment Document: Cultural Landscape Report

Document Date: 01/01/1993

Approved Treatment Document Explanatory Narrative:

The Cultural Landscape Report for Virginius Island is divided into three main parts: research, analysis and evaluation, and design development. The research portion of the report involved investigations into the historical record and documentation of existing conditions. Primary and secondary source material was used for the historical research. From the park files, selected reports documented the industrial history of Virginius. This documentation was useful but did not address the overall landscape history, the physical evolution, and structural development of the island. Additional research was initiated to identify the physical and functional character of the landscape from the eighteenth into the twentieth century. Historic photographs, old newspapers accounts, maps, manuscripts, and artistic renderings were used to determine the historic setting for the island. Primary source material from the National Archives, Baltimore & Ohio (B&O) Railroad Archives, and the Hagley Museum was useful in determining physical changes on the island in the nineteenth and twentieth centuries. Based on this research, a narrative landscape history was prepared, and historic base maps were compiled to depict the physical landscape through five periods of development.

As a part of the project research, all park planning and archeological documents were reviewed. Archeological reports and recent topographic maps produced by the archeological staff were used to identify landscape features while documenting the existing conditions. In addition, vegetation, signs, trails and other landscape features were added to the topographic map. The one to one hundred foot scale site map developed during this phase was used as the primary scale base map throughout the project.

The analysis phase of the cultural landscape study involved documenting key landscape components and analyzing the development of these components over time. Based on the evaluation of historic landscape features and patterns, landscape significance was determined. The historic base maps were then consolidated to define the type and concentration of resources remaining on Virginius Island. From this information, eight cultural landscape character areas and management zones for subsequent preservation of significant cultural landscape resources were identified.

These management zones were utilized for the formation of the design development. Three design alternatives were prepared and presented in a review to the park and regional staff. A preferred alternative was selected and prepared. Design details and a material list were developed to depict the plan and expand the level of information. However, implementation of the overall development plan was not within the scope of this project. Nevertheless, a phasing plan for construction was prepared to guide the development program. A intrepretive program was introduced on site in 1994 using selective vegetation control, structural stablization and waysides. This interpretive landscape was destroyed by floods in 1996. The cultural landscape report is currently being used as a maintenance and management guide for park staff (Joseph et al. 1993, 1-4).

Approved Treatment Completed: No

Approved Treatment Costs

Landscape Treatment Cost: 200,000.00

Cost Date: 01/01/1993

Level of Estimate: C - Similar Facilities

Cost Estimator: Park/FMSS

Landscape Approved Treatment Cost Explanatory Description:

This cost estimate for the LSC Approved Treatment Cost was given by Peter Dessauer the Historical Architect at Harpers Ferry National Historical Park. The estimate is generated from a sumation of the cost estimates given for the five major structural ruins on site. They are as follows, Cotton Flour Mill--$500,000.00; Cotton Mill--$300,000.00; Tunnel Vaults/Intake arches--$400,000.00; Shoreline retaining walls--$200,000.00; and Headgates with wingwall--$400,000.00. The estimate for the stablization and repair of the landscape is $200,000.00. These cost estimates, based in 1997/1998 dollars, are approximate only and based upon the work done by the NPS Historic Preservation Training Center from 1992-1994 with modification due to more recent historic resource damage. According to Dessauer the treatment as of 9/1999 is 60% finished.

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Year of Publication:	1958
Source Name:	CRBIB
Citation Number:	001188

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Citation Title:	An Archeological Survey and Assessment of Virginius Island, Harper's Ferry National Historical Park
Year of Publication:	1977
Source Name:	CRBIB
Citation Number:	001113
Citation Type:	Both Graphic And Narrative
Citation Location:	National Heritage Corporation

Citation Author:	Hannah, David Hardgrave
Citation Title:	Archeological Excavations on Virginius Island, Harpers Ferry National Historic Park, 1966-1968
Year of Publication:	1969
Source Name:	CRBIB
Citation Number:	001177
Citation Type:	Both Graphic And Narrative
Citation Location:	Harpers Ferry Job Corps Civilian Conservation Center

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Citation Title:	Archeological Investigations on Virginius Island, 1977 to 1981, Harpers Ferry National Historical Park, Harpers Ferry, West Virginia
Year of Publication:	1986
Source Name:	CRBIB
Citation Number:	015019
Citation Type:	Both Graphic And Narrative
Citation Location:	U.S. Department of the Interior, National Park Service

Citation Author:	Frye, Susan W.//Young-Ravenhorst, Cari
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Source Name:	CRBIB
Citation Number:	450453

Citation Author:	Joseph, Maureen DeLay/Wheelock, Perry Carpenter/Warshaw, Deborah/Kriemelmeyer David
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Year of Publication:	1993
Source Name:	CRBIB
Citation Number:	016315
Citation Type:	Both Graphic And Narrative
Citation Location:	National Capital Region Support Office

Citation Author:	Sarles, Frank B., Jr.
Citation Title:	Social & Economic History of Virginius Island, Harpers Ferry National Historical Park
Year of Publication:	1969
Source Name:	CRBIB
Citation Number:	001179
Citation Type:	Both Graphic And Narrative
Citation Location:	U.S. Department of the Interior, National Park Service

Citation Author:	Niedinger, Paul John
Citation Title:	Virginius Island Ruins Assessment and Stabilization Plan, Harpers Ferry National Historical Park
Year of Publication:	1993
Source Name:	CRBIB
Citation Number:	450452
Citation Type:	Both Graphic And Narrative
Citation Location:	U.S. Department of the Interior, National Park Service

Citation Author:	Lee, Paul R., II
Citation Title:	Virginius Island Trail
Year of Publication:	1988
Source Name:	CRBIB
Citation Number:	450324
Citation Type:	Both Graphic And Narrative
Citation Location:	Harpers Ferry National Historical Park

Citation Author:	Gilbert, Dave
Citation Title:	Where Industry Failed, Water-Powered Mills at Harpers Ferry, West Virginia
Year of Publication:	1984
Source Name:	CRBIB
Citation Number:	450383
Citation Type:	Both Graphic And Narrative
Citation Location:	Pictorial Histories Publishing Company

Citation Author:	Denver Service Center
Citation Title:	Archaeological Survey of Virginius Island
Source Name:	DSC/TIC
Citation Location:	Denver Service Center--Eastern Region library and vertical files

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Citation Title:	A History of the Valley of Virginia
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Citation Title:	A Tour Through Part of Virginia, in the Summer of 1808
Year of Publication:	1951
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Source Name:	Library Of Congress/Dewey Decimal

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Citation Title:	Views and Viewmakers of Urban America
Year of Publication:	1984
Source Name:	Library Of Congress/Dewey Decimal
Citation Title:	Virginius Island Trail
Year of Publication:	0
Source Name:	Library Of Congress/Dewey Decimal
Citation Type:	Both Graphic And Narrative
Citation Location:	Harpers Ferry National Historical Park, National Park Service
Citation Author:	Parsons, Mia T
Citation Title:	Archeological Investigations at Wernwag's Machine Shop: Site 46JF230 on Virginius Island
Year of Publication:	1995
Source Name:	CRBIB
Citation Number:	016748

Citation Author:	Borden, Anna C.
Citation Title:	Archeological Investigations of Lewis Wernwag's Sawmill, 46JF229, Virginius Island, Harpers Ferry, West Virginia
Year of Publication:	1995
Source Name:	Other
Citation Type:	Both Graphic And Narrative
Citation Location:	Harpers Ferry National Historic Park

Citation Author:	Marmion, Anne P.
Citation Title:	Under Fire
Source Name:	Other
Citation Location:	Harpers Ferry National Historical Park, (HFB 206)

Citation Author:	Taft, Grace Jennings
Citation Title:	A Trip to Harpers Ferry, unpublished
Year of Publication:	1898
Source Name:	Other
Citation Location:	Harpers Ferry National Historical Park Manuscripts Collection

Citation Author:	Paul E. Lee II
Citation Title:	Virginius Island Trail
Year of Publication:	1988
Source Name:	Other
Citation Type:	Both Graphic And Narrative
Citation Location:	Harpers Ferry National Historical Park

Citation Author:	Soil Systems. Inc and Edaw, Inc.
Citation Title:	Vegetative Threats to Historic Sites and Structures
Year of Publication:	1983
Source Name:	Other
Citation Type:	Both Graphic And Narrative
Citation Location:	National Park Service, National Capital Region Support Office

Citation Author:	Palus, Matthew M., ed.
Citation Title:	"They Worked Regular": Archeology of the Virginius Island Mill Community, Package 123 in Harpers Ferry/National Historical Park, 2001 draft.
Year of Publication:	2001
Source Name:	CRBIB

Supplemental Information

Title: A Map of the Island of Viginius at Harper's Ferry, Virginia

Description: James M. Brown, April 1844. RG 153, JAGO Military Reservation File, 1809-1942, Box 44, Folder 7 (Harpers Ferry), National Archives, copy on file, HFNHP Brackett House

Title: Archeological and Topographical Base Map Lower Hall Island, Harpers Ferry National Monument 5/12/1962

Description: Located in Edward M. Larrabee, "Report of the Third Season of Exploratory Archeological Excavations Conducted at the U.S. Rifleworks, Lower Hall Island, Harpers Ferry National Monument, Harpers Ferry, West Virginia,", 1962, HFNHP manuscript collection

Title: B & O RR First Division Sketch

Description: Harpers Ferry West Virginia, Dec 21, 1898, Savery Papers, HFNHP

Title: Building Flood Levels and Statistical Information on Harpers Ferry Floods

Description: located in HFNHP resource management specialist's file

Title: Compilation notes from Edna Brasher Farmer interview

Description: Date of Interview: 9/2/1992. On file HFNHP, Brackett House

Title: Developmental Concept Plan

Description: Harpers Ferry National Historical Park, United States Department of Interior/National Park Service, NPS 1599, 1980

Title: Draft of a deposition to David Hannah, 4/8/1968

Description: By Wardell Eugene Kellison. HFD 321, HFNHP document file

Title: Floods & High Waters At Harpers Ferry

Description: Drawing No. 6, Flood Graph, 4/26/1962. Located in Edward M. Larrabee, "Report of the Third Season of Exploratory Archeological Excavations conducted at the U.S. rifleworks, Lower Hall Island, Harpers Ferry National Monument, hapers Ferry, West Virginia," 1962, HFNHP manuscript collection

Title: General Plan Harpers Ferry to Sandy Hook, ca. 1887-1892

Description: Known as Von Lindenberg's Map, traced 1892. HFNHP map collection designation: U.S. Department of the Interior, National Park Service, EODC, map number HFNM 9002

Title: George Stubblefield Grant, No. 6

Description: Surveyed by James M. Brown, entry plat 11, 1833, HAFE 8299, HFNHP, Lockwood House

Title: Harpers Ferry Historical Base Map, 1859

Description: NHP HF 3021, 1959, HFNHP map collection

Title: Harper's Ferry Prepared by Bvt. Brig. Gen. N. Michler, Major of Engineers from Surveys under his direction by Order of Brig. Gen. & Bvt. Maj. Gen. A.A. Humphreys, Chief of Engineers . . .1867

Title: Jefferson Country, West Virginia Court Records

Description: On file West Virginia and Regional History Collection, West Virginia University, Morgantown, WV

Title: Jefferson County, Virginius Island Deeds

Description: Copies on file HFNHP, Brackett House

Title: Report to the Office of Topographical Engineers, March 31, 1832

Description: 25th Congress, 2nd Session [Doc. No. 465] House of Representatives, June 27, 1833. Special Collections, Gelman Library, George Washington University, Washington, D.C.

Title: Savery Papers

Description: Collection on File, HFNHP Library

Title: Thomas Savery Family Papers

Description: Hagley Museum and Library, Wilminton, DE. Selection on file HFNHP, Brackett House

Title: Transcription of interview with Isabel Kern Flanagan

Description: Date: 8/20/1992 On file, HFNHP, Brackett House

Title: Two plan views, watercolor rendering and sketch of "Hair's Island", ca. 1988

Description: Copies on file HFNHP, Brackett House