Harpers Ferry National Historical Park

West Virginia, Maryland, Virginia

National Park Service
U.S. Department of the Interior

National Capital Region Network

At the Confluence of Rivers, History and Nature Merge

Harpers Ferry National Historical Park protects the historic town area and surrounding natural resources lands at the confluence of the Shenandoah and Potomac rivers in West Virginia, Virginia, and Maryland. Preserved structures and landscapes in the park tell of the historic role of the town and lands in the Civil War, African American history, manufacturing, and transportation and other historic events. The natural heritage of the park is equally rich, and over 70% of the park's 3,645 acres is covered with eastern deciduous forest. Changes in adjacent land use that may affect park resources (e.g., water quality, invasive species, deer population) are of primary concern to park management. Because of its unique location, flooding is also a major concern.

Resource Values

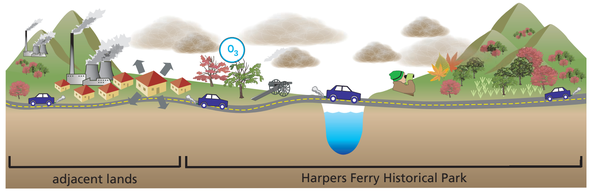
- Freshwater flow: Potomac and Shenandoah Rivers
- Geologic regions: limestone and shale
- Forests: chestnut oak and red maple
- Historic sites: Civil War structures and battlefields
- Agriculture: crops
- Railway corridors

Resource Stressors

- Development: suburban
- White-tailed deer: overpopulation
- Invasive/exotic plants
- Insect pests: gypsy moths
- Flooding: seasonal
- Toxic runoff

Air Quality and Climate

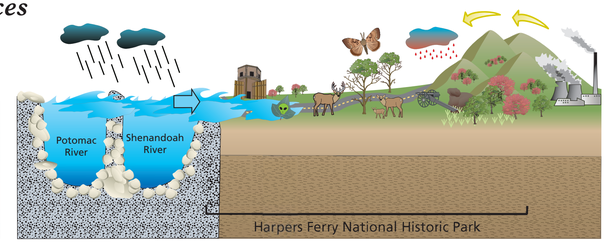
Air quality inpacts scenic vistas



The natural landscape of Harpers Ferry National Historical Park includes major rivers, forested mountains, riparian habitats, old fields, grasslands, and agricultural lands. Panoramic views and spectacular landscape serve as context for the interpretation of historic Civil War and Civil Rights events that the park commemorates. Degraded air quality and haze from regional pollution sources cause increased ozone levels that threatens vegetation . Expanding residential development adversely affects the historic and scenic vistas in the park.

Biodiversity

Natural and anthropogenic disturbances threaten historic resources



Flooding is a natural occurrence at Harpers Ferry National Historical Park. Located at the lowest point of the confluence of the Potomac and Shenandoah rivers, flooding can have a devastating impact on historic buildings and archeological features. Gypsy moth infestations and unchecked populations of white-tailed deer have severely defoliated sections of the park's historic Maryland Heights forest. Invasive exotic plants and acid rain threaten Civil War sites and historic geological structures such as the Stone Steps and Jefferson Rock.

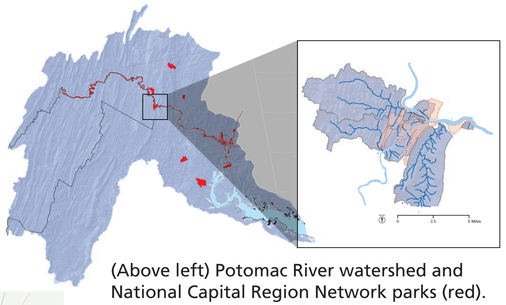
Photo: IAN

At Harpers Ferry, the Shenandoah and Potomac Rivers converge.

Photo: IAN

Mountain forest with stream.

Harpers Ferry National Historical Park Watershed



(Above left) Potomac River watershed and National Capital Region Network parks (red). (Above right) Harpers Ferry National Historical Park watershed and boundary.

(Left) Park map showing major roads and waterways.

Vital Signs Monitoring

Assembling the puzzle

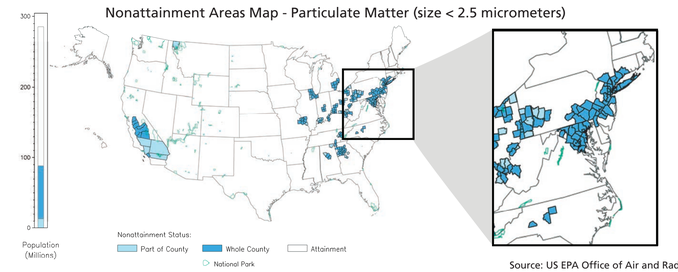
Park vital signs monitoring is designed to inform managers of the condition of water, air, plants and animals, and the various ecological, biological, and physical processes that act on those resources. This site-specific data will provide parks the information needed for ecologically sound management of the natural resources.

In Harpers Ferry National Historical Park, data are being collected on **Air Quality and Climate** and **Biodiversity**, with reference to park specific concerns as well as understanding regional issues.

Air quality-related values, such as visibility, are highly significant for the Park. The view of the confluence of the Shenandoah and Potomac Rivers inspired Thomas Jefferson to say it is "worth a voyage across the Atlantic" and continues to inspire visitors today.

The data for this vital sign category are collected regionally rather than just in Harpers Ferry Historical Park. Based upon the data that has been analyzed to date, the area often exceeds regulatory threshold values for air quality and climate vital signs, indicating that the Washington DC region has poor air quality.

Nonattainment Areas Map - Particulate Matter (size < 2.5 micrometers)



Source: US EPA Office of Air and Radiation

National Capital Region Inventory & Monitoring Program
National Park Service
www.nps.gov/cue

Integration & Application Network (IAN)
University of Maryland Center for Environmental Science
www.ian.umces.edu

Photos by NPS