

# Chesapeake & Ohio Canal National Historical Park

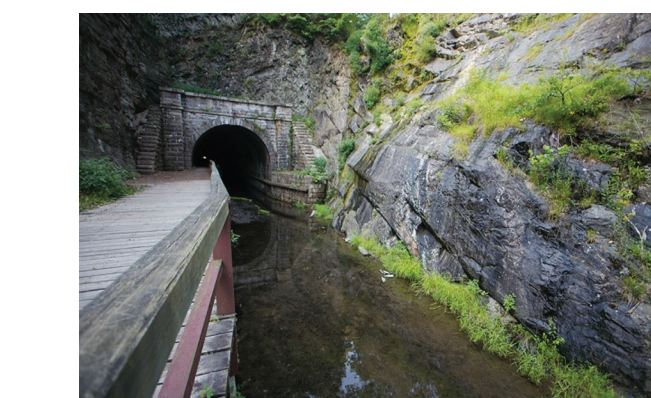
Maryland, West Virginia, District of Columbia

National Park Service  
U.S. Department of the Interior  
National Capital Region Network

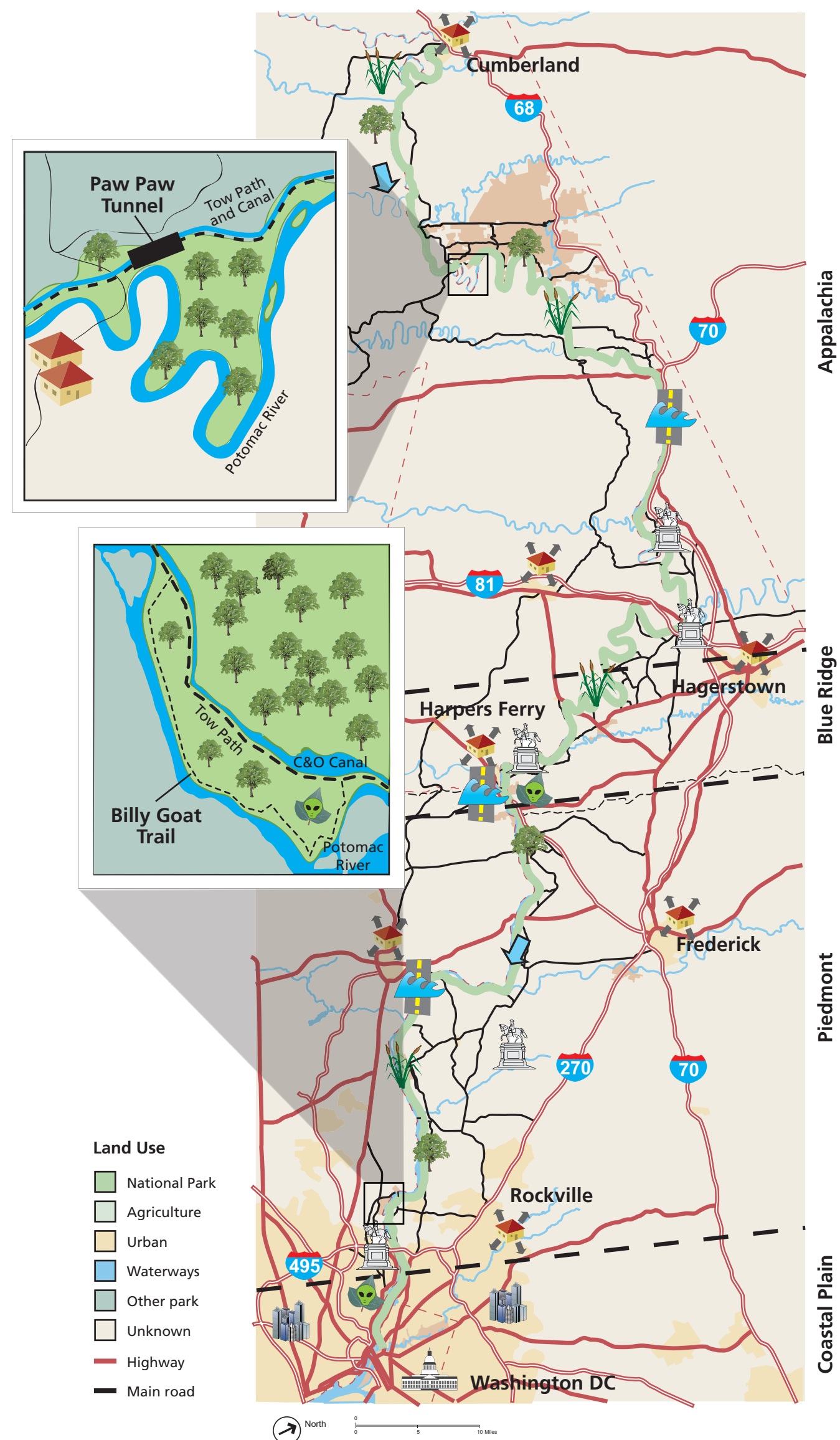


## The Great National Project: A Ribbon of History and Habitats

The Chesapeake & Ohio Canal National Historical Park is the largest and longest park in the National Capital Region, stretching along the Potomac River for 184.5 miles from Washington, DC to Cumberland, MD. The park's 19,236 acres cut through four major physiographic provinces and include diverse wetlands, floodplain, and upland forests. Hundreds of historic structures are preserved as reminders of the Canal's role as a major transportation system during the Canal Era. Today, the Canal and tow path support a large variety of recreational opportunities, but also permit the rapid spread of exotic and weedy species.



The Paw Paw Tunnel.



**Resource Values**

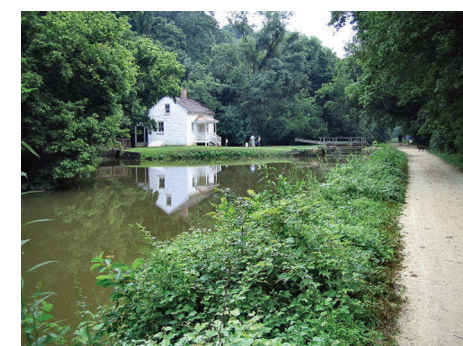
- Freshwater flow: Potomac River
- Physiogeographic regions
- Historic sites: monuments, Canal and tow path
- Forests: Chesnut oak
- Wetlands

**Resource Stressors**

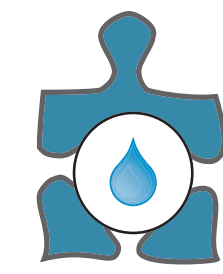
- Development: suburban and urban
- Flooding: seasonal
- Invasive/exotic plants

**Land Use**

- National Park
- Agriculture
- Urban
- Waterways
- Other park
- Unknown
- Highway
- Main road

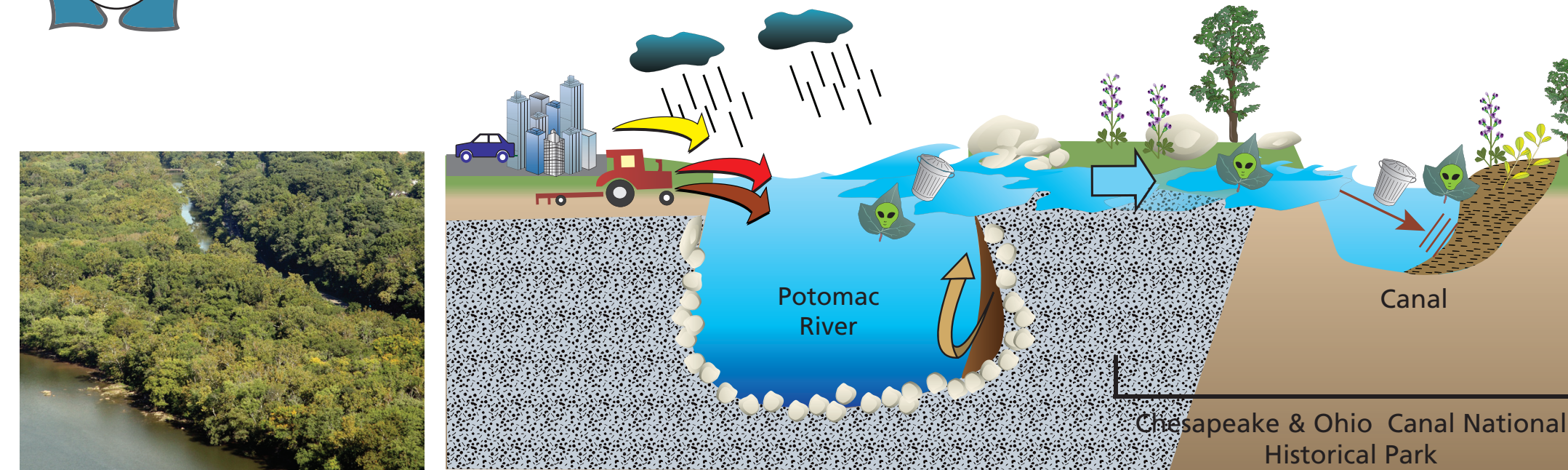


Tow path and Canal.

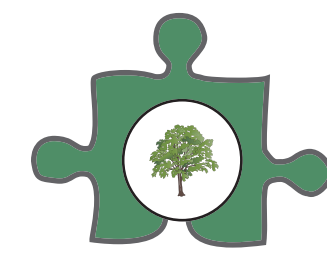


## Water Quality and Hydrology

*Dynamic river conditions influence Canal environments*

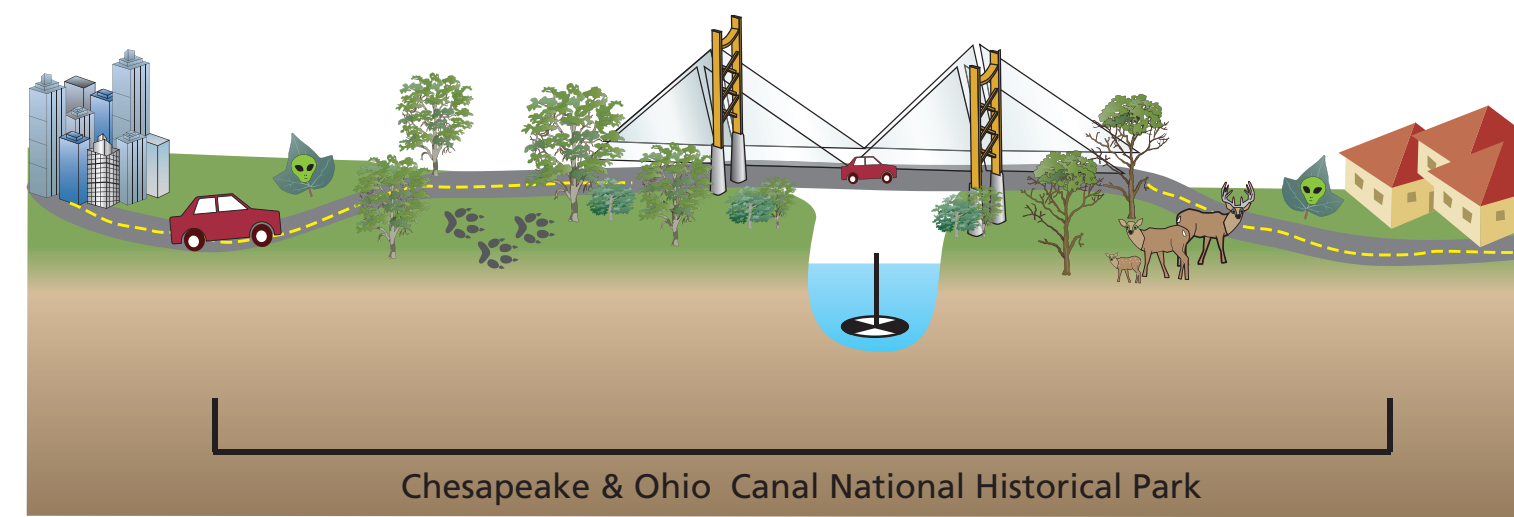


The Chesapeake & Ohio Canal is greatly influenced by the adjacent Potomac River. The Potomac River floodplains, scoured bars, and exposed rocky surfaces along the park house many rare, threatened or endangered species. Both the Potomac and the Canal are highly impacted by increased amounts of dumping, nutrient, and sediment inputs (from houses, agricultural fields, industry, roads), and the rapid spread of invasive species. The Canal experiences accelerated filling by sediments carried by surface run-off.



## Ecosystem Pattern and Processes

*Forest edges are both highly valuable and vulnerable*



The diversity of park neighbors, multiple rights-of-ways, and narrow shape add to the complexity of managing Chesapeake & Ohio Canal National Historical Park. The health of the riparian buffer forests is critical to preserving high quality water resources. Stretching from western Maryland to the Washington DC, the park provides important movement corridors for a variety of forest-dwelling species. The long stretch of forest edge habitat also promotes the proliferation of human-tolerant and shade-intolerant species such as white-tailed deer and invasive plants.

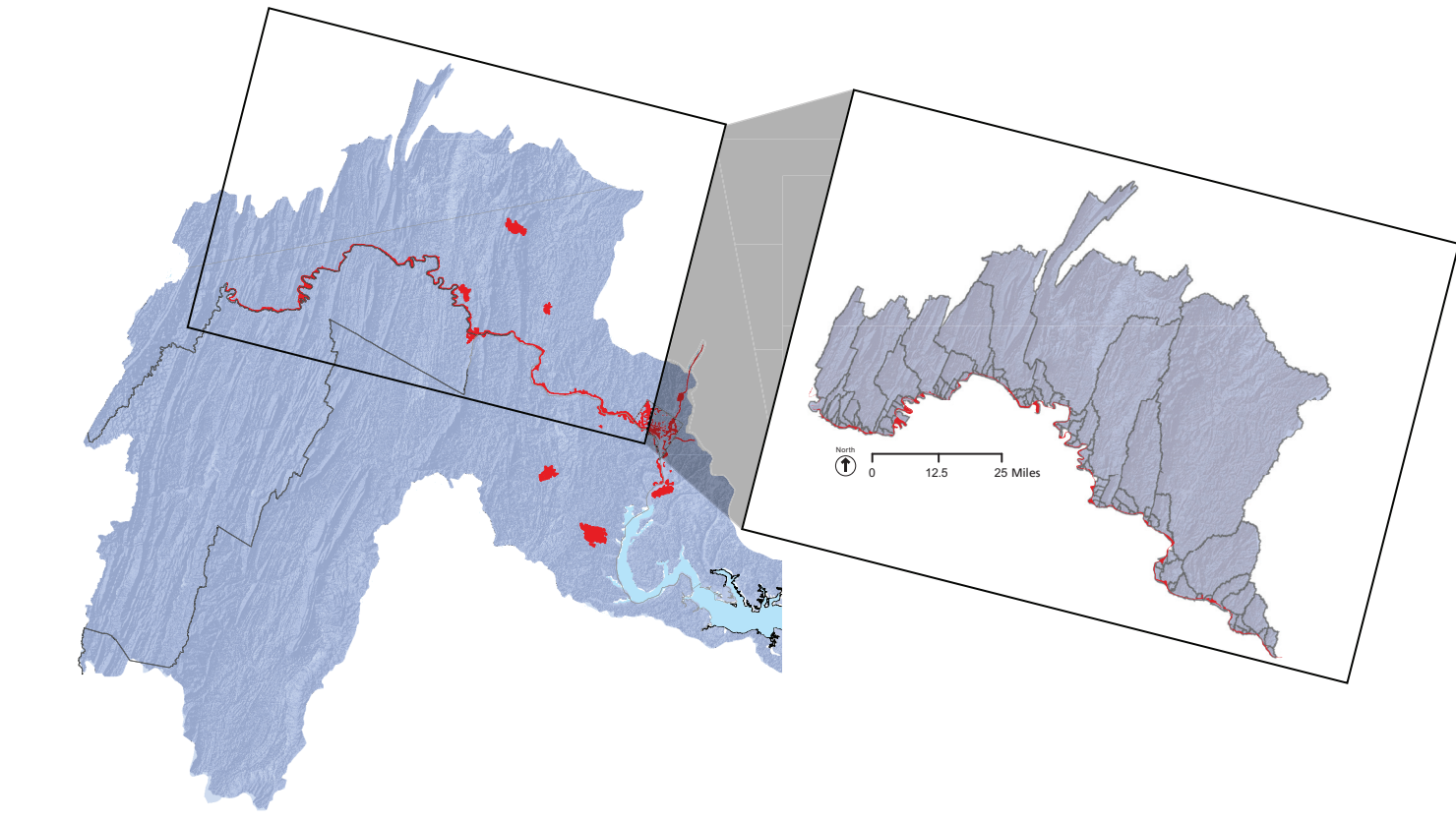


Park staff monitoring the vegetation.



Potomac stormwaters heavy with sediment.

## Chesapeake & Ohio Canal National Historical Park Watershed



(Above left) Potomac River watershed and National Capital Region Network parks (red). (Above right) Chesapeake & Ohio Canal National Historical Park watershed and boundary.

(Far right) Park map showing major roads and waterways.

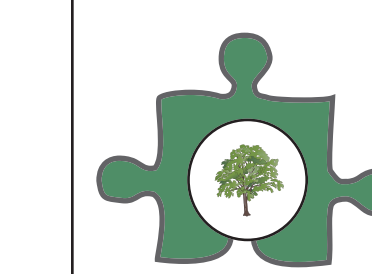


## Vital Signs Monitoring

*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.

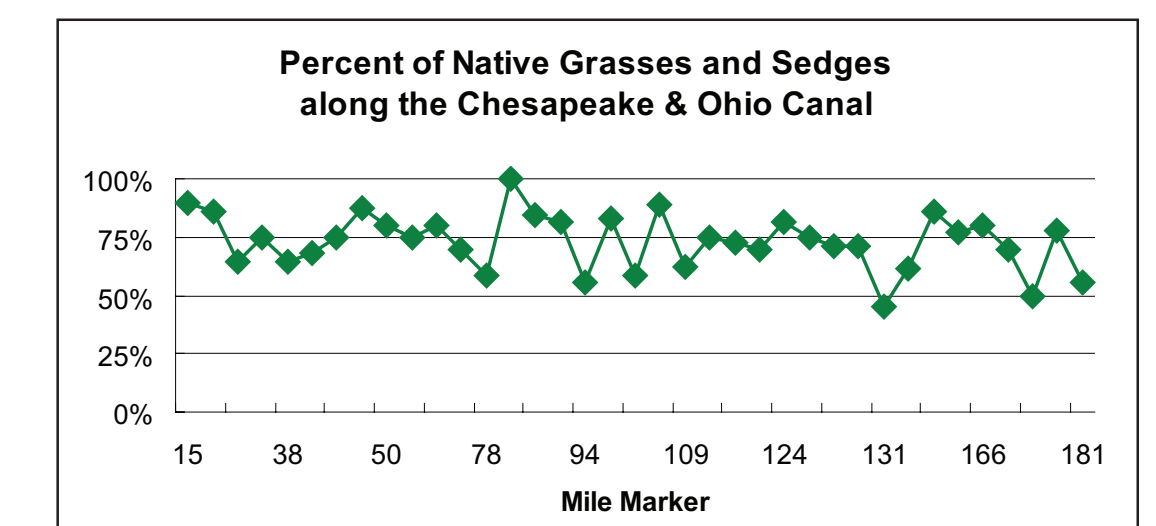
In the Chesapeake & Ohio Canal National Historical Park, data are being collected on **Water Quality and Hydrology** and **Ecosystem Pattern and Processes**, with reference to park specific concerns as well as understanding regional issues.



The graph below shows the percent of native grass and sedge species located at 39 sites along the Chesapeake & Ohio Canal. The remaining species are exotic species that do not belong at the park, and have been introduced to this environment by human activities. In many cases, these exotic plants are out-competing the native species. At the Chesapeake & Ohio Canal, the Inventory & Monitoring Program is working to prevent the loss of native vegetation, especially the rare, threatened, or endangered species located along scour bars and exposed rocky surfaces in the park.



Straw-colored flatsedge, an invasive plant.



**NATIONAL CAPITAL REGION INVENTORY & MONITORING PROGRAM**  
National Park Service  
[www.nps.gov/cue](http://www.nps.gov/cue)

**INTEGRATION & APPLICATION NETWORK (IAN)**  
University of Maryland Center for Environmental Science  
[www.ian.umces.edu](http://www.ian.umces.edu)