Manassas National Battlefield Park

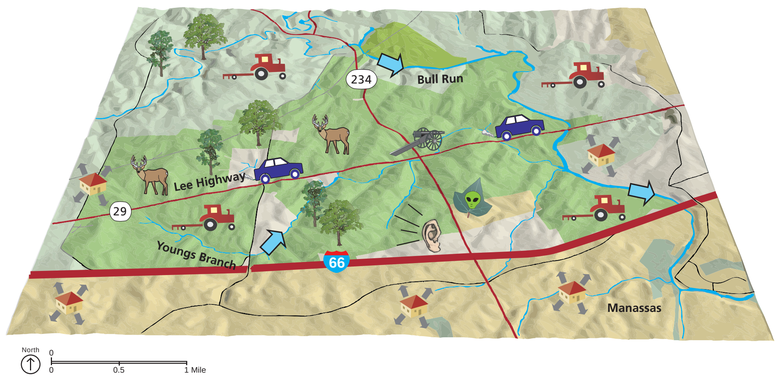
Virginia

National Park Service
U.S. Department of the Interior

National Capital Region Network

Historical Settings Provide for Wildlife Protection

Manassas National Battlefield Park was established to preserve the scene of two major Civil War battles. Much of the landscape retains its wartime character with a patchwork of open fields and woodlots scattered across gently rolling hills. The 5,073 acre park is located within the northern VA Piedmont, approximately 45 miles southwest of Washington, DC. Many surrounding lands are becoming residential and industrial developments. Major transportation corridors, including a busy road passing through and another running adjacent, impact the park resources. In addition, the overpopulation of white-tailed deer, the spread of exotic invasive species, and increased runoff are important natural issues for Manassas National Battlefield Park.

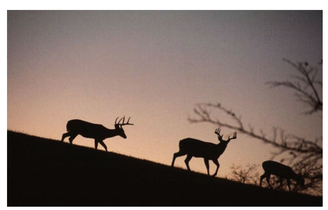


Resource Values

- Freshwater flow: Youngs Branch and Bull Run
- Historical sites: Civil War battlefields
- Forests: hickory and chestnut oak
- Agriculture: crops

Resource Stressors

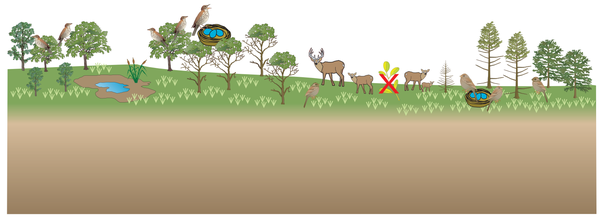
- Development: residential and light industrial
- Major highways and roads
- Noise: road traffic
- White-tailed deer: overpopulation
- Invasive/exotic plants



Scenes of Manassas National Battlefield Park during sunset and on a foggy morning.

Biodiversity

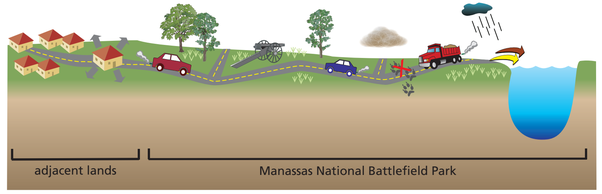
Landscape habitat diversity supports an important bird refuge



The landscape of grasslands and meadows , swamps and woodlands contribute significantly to preservation of local and regional biodiversity. The park is a particularly important refuge for grassland birds , which are of high conservation concern in the region. The overpopulation of deer in the park has greatly reduced woodland understory vegetation with potentially negative consequences on the park's woodland species .

Ecosystem Pattern and Processes

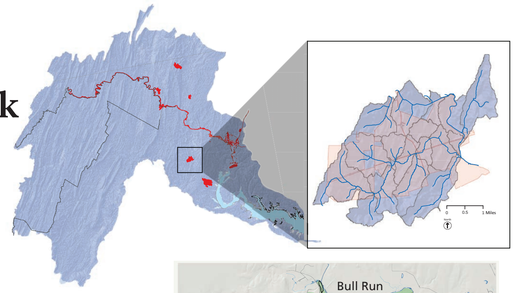
Roads divide park and fragment habitat



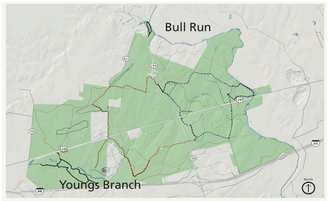
Manassas National Battlefield Park provides the opportunity for visitors to explore the historic terrain in a natural setting while immersed in the increasingly urbanized landscape of northern Virginia. However, two busy commuter corridors, Routes 29 and 234 , transect the park and restrict animal movement and visitor relaxation opportunities. Degraded air quality associated with the traffic also affects aquatic habitats and sensitive species, and continued road development increases stormwater run-off of sediments and pollutants into the streams.

Manassas grasslands provide habitat for many kinds of wildlife such as this cottontail rabbit.

Manassas National Battlefield Park Watershed



(Close right) Potomac River watershed and National Capital Region Network parks (red). (Far right) Manassas National Battlefield Park watershed and boundary.



(Right) Park map showing major roads and waterways.

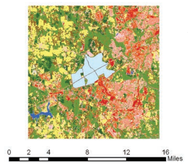
Vital Signs Monitoring

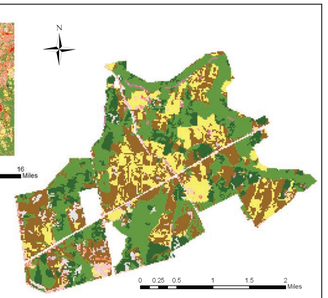
Assembling the puzzle

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.

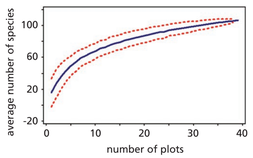
In Manassas National Battlefield Park, data are being collected on **Biodiversity** and **Ecosystem Pattern and Processes**, with reference to park specific concerns as well as understanding regional issues.

Remote sensing imagery (close right) is used to track the importance of the park to provide regional grassland habitat. The area around the park (far right) is rapidly developing and currently contains a roughly even mixture of developed (reds and pinks), forest (greens), and grassland/cropland (yellows and browns). The park contains a significantly higher proportion of forest and grassland.





A species-area curve (right) provides the total number of grassland plant species recorded in Manassas as a function of inventory effort. The red dashed bands demonstrate the level of confidence in the estimate. A total of 117 species of grasses, sedges, and rushes were observed on 39 plots. Using the curve, the projected total number of species in the park is 136. ~25% of the species recorded in the inventory data were non-native.



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