



White-tailed Deer Monitoring at Arkansas Post National Memorial

Importance: *An important component of the memorial's ecosystem*

White-tailed deer (*Odocoileus virginianus*) populations in Arkansas have recovered from near extirpation to current levels of more than one million deer. Visitors view deer as an important component of the memorial's ecosystems, but large numbers of deer can impact the memorial and visitor safety. Deer can damage resources, pose a hazard to motorists, and contribute to the spread of human diseases. High densities of deer can also cause the spread of disease and starvation within localized deer populations.

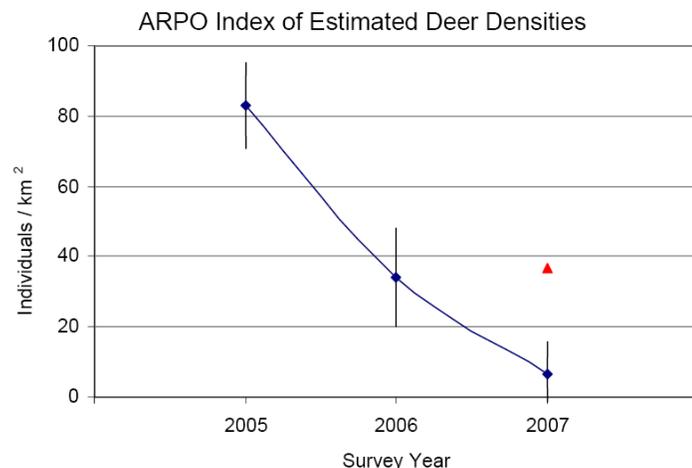


Long Term Monitoring: *Assessing trends in population size*¹

The Heartland Network, Inventory and Monitoring Program, initiated a pilot study of deer population densities in winter 2005. The primary objectives for monitoring white-tailed deer populations include (1) determining annual changes in white-tailed deer numbers and (2) determining long-term trends in white-tailed deer numbers. Understanding trends in deer population density will help resource managers determine what measures must be taken to maintain herd health and to minimize vegetation damage within the memorial or surrounding private properties.

Status and Trends: *Sudden decline in population size*

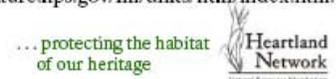
Overall, the deer density has declined 92% over the past three years with an 81% decline in the past year alone. Hunting pressures or practices outside of the memorial may have contributed to the decline. Additionally, scientists made several other observations:



Index of white-tailed deer density estimated at Arkansas Post NM during all survey years.

1. The first three years of monitoring demonstrated the importance of annual population monitoring in identifying changes in deer population that will impact adaptive management.
2. Future surveys must improve the accuracy of deer counts and account for activities outside the memorial that influence deer numbers.

Heartland Network Inventory and Monitoring Program of the National Park Service. Visit www1.nature.nps.gov/im/units/htln/index.htm.



¹ Cribbs, J.T. and D.G. Peitz. 2007. *White-tailed Deer Monitoring at Arkansas Post National Memorial, Arkansas: 2007 Status Report*. Natural Resource Technical Report NPS/HTLN/NRTR—2007/025. National Park Service, Fort Collins, Colorado.