

Patuxent Wildlife Research Center

Rebuilding Freshwater Tidal Wetlands on the Anacostia River in Washington, D.C.

The Challenge: Prior to the early 1900's, tidal freshwater wetlands associated with the Anacostia River in Washington, D.C., were extensive and provided habitat for a wide variety of plant and animal species. Much of these wetlands were deliberately removed through dredging. The USGS has played an active role in the rebuilding of these wetlands since the 1980's, participating in their design, and monitoring and evaluating their success.



The Science: A series of four tidal freshwater wetland restoration projects has been undertaken on lands along the Anacostia River, part of National Capitol Parks East, managed by the National Park Service (NPS). USGS has taken the lead on monitoring each of these wetlands, providing valuable data that could be used to better manage the wetlands after they were constructed, and improving the knowledge base available for the design phase of the later restoration projects in the series. Two of the biggest challenges to the success of these restored wetlands have been herbivory of the native wetland vegetation by resident Canada geese and competition from invasive wetland species, primarily *Phragmites australis* (common reed). The current herbivory study, which uses paired enclosed and unfenced control plots, was used to provide data and statistical analyses to support the National Park Service's wetland management EIS.



The Future: USGS involvement in tidal freshwater wetlands on the Anacostia River represents a long-term collaboration with the NPS, the District Department of the Environment, and the US Army Corps of Engineers, as well as academic partners, and private partners such as the Anacostia Watershed Society. There is still much work to be done in rebuilding the Anacostia's once-extensive tidal freshwater wetlands. Given its long history of involvement with the existing wetland restoration projects, USGS is well-positioned to continue its collaboration and provide the science needed to support both good management of the Anacostia's existing wetland restorations, as well as the addition of new projects that will be needed to further progress in the restoration of the Anacostia's tidal freshwater wetlands. If Canada goose control measures are implemented as a result of the NPS's wetland management EIS, continued monitoring of the herbivory study modules will provide the data that will allow us to gauge the recovery of the native wetland vegetation as a result of those control measures. Additional research needs would include monitoring for invasive species, changes in rates of sedimentation and subsidence (important to predict effects of climate change), and impacts of the removal of the sheet piling from the Anacostia River Fringe Marsh.

