

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, 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 Capital Parks East, managed by the National Park Service (NPS). USGS has taken the lead on monitoring each of these wetlands, providing valuable data to be used to better manage the wetlands after they were constructed, and to improve the knowledge available for the design phase of the later restoration projects. Two of the biggest challenges to the success of these restored wetlands has been grazing 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 plots (fenced to keep the geese out) and unfenced control plots, is being used to provide data and analyses to support the National Park Service's wetland management EIS currently underway.
- **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 private and academic partners. 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 good management of the Anacostia's existing wetland restorations, as well as the addition of new projects that will be needed if further progress in the restoration of the Anacostia's tidal freshwater wetlands is to be made. Depending on the outcome of the NPS EIS, additional work will be needed to show the recovery of native wetland vegetation as a result of the Canada goose control measures. Additional research needs would include monitoring for invasive species, changes in rates of sedimentation and subsidence (important to predict effect of climate change), and the assessment of the impacts of the removal of the sheet piling from the Anacostia River Fringe Marsh.

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