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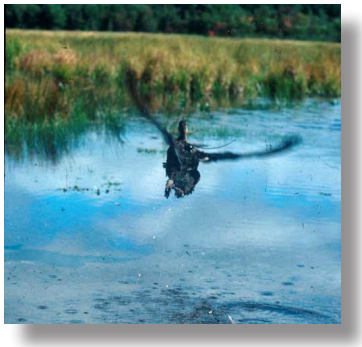
Patuxent Wildlife Research Center

Delineate Black Duck Populations and Habitat Utilization on Blackwater National Wildlife Refuge to Determine Critical Areas and Assess Potential Impacts of Sea Level Rise on Chesapeake Bay Black Duck Populations.

- ***The Challenge:*** Executive order 13508 Chesapeake Bay Strategy requires a three-year average wintering black duck populations in the Chesapeake Bay watershed of 100,000 birds by 2025. Recent mid-winter aerial surveys estimate the 2007-2009 rolling three-year average at 37,158 black ducks in the Chesapeake Bay. By 2017, National Wildlife Refuges will increase by 10 percent the availability of food resources to support energetic carrying capacity for wintering black ducks on refuge lands located within the Chesapeake watershed. The increase of food resources on refuges will be accomplished through active wetland restoration and management, habitat protection, invasive species control and potential expansion of refuges.

- ***The Science:*** Using conventional transmitters attached on black ducks captured on Blackwater National Wildlife Refuge in the Chesapeake Bay, the local habitat utilization of this species will be monitored. This will continue while the refuge implements the changes required by the Strategy to evaluate how these improvements in habitat and food resources influence local movements and habitat utilization of the black duck. This information will be used by the refuge and other managers to inform its plan for adapting to the potential impacts of sea-level rise on black duck populations.



- ***The Future:*** USGS scientists will be helping with the science portion of the adaptive management framework for the Blackwater National Wildlife Refuge. By 2020, FWS and partners will assess the effects of human disturbance, food resources and wetland structure on black duck daily movements and residency on wetlands. FWS will also characterize the relationship between black duck winter condition and seasonal survival of wintering black ducks and subsequent breeding success in the Chesapeake Bay watershed by 2020. Partners will develop an adaptive management framework to guide habitat decisions related to restoration and enhancement at the local (i.e., National Wildlife Refuge) scale by 2013.

Contact: Alicia Berlin at (301)497-5730 or aberlin@usgs.gov