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**MANAGEMENT IMPLICATIONS ASSOCIATED WITH CONSIDERATION OF
CARBON STORAGE AND ECOSYSTEM SERVICES IN PEATLAND AND BLUE
CARBON ECOSYSTEMS OF NATIONAL WILDLIFE REFUGES (USA)**

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National wildlife refuge managers in the United States are faced with the dilemma of maximizing benefits of habitat management with limited resources (the National Wildlife Refuge System (NWRS) is administered by the US Fish and Wildlife Service (FWS), Department of the Interior). Trade-offs must be made. Data on carbon storage and ecosystem services benefits of associated peatland and blue carbon ecosystems help refuge managers make better-informed decisions about the implications of habitat management, including restoration, in these ecosystem types. Scientists have been studying carbon storage in peatland and blue carbon ecosystems in refuges for more than two decades. While much of the research has focused on documenting and monitoring carbon stocks and fluxes, more recent research has focused on: 1) impacts of management actions, especially restoration, on carbon sequestration; and 2) ecosystem services associated with management of blue carbon and peatland ecosystems. Over the past four years, FWS has worked collaboratively with the US Geological Survey (USGS) to institute pilot projects evaluating carbon sequestration and ecosystem services in key wetland ecosystems in refuges around the USA. Pilot projects are now underway in pocosin peatlands in the south-eastern USA (Great Dismal Swamp and Pocosin Lakes NWRs), mangroves along the Gulf Coast of Florida (J.N. "Ding" Darling and Ten Thousand Islands NWRs), recently-restored tidal marshes in Puget Sound of Washington (Nisqually NWR), and freshwater boreal forest wetlands of east-central Alaska (Yukon Flats NWR). Each project is designed to answer basic scientific questions regarding carbon sequestration, while also providing data relevant for managers' conservation decision-making. Most projects are evaluating ecosystem services associated with carbon sequestration and ecosystem recovery, and some are developing carbon accounting methods. This presentation will highlight the collaborative FWS-USGS projects and explain the utility of resultant data and methods for conservation decision-making in peat and blue carbon ecosystems.

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