ASSESSING THE CONDITION OF GULF OF MEXICO COASTAL WETLANDS

Janet A. Nestlerode (US EPA), Virginia D. Engle (US EPA), John Macauley (US EPA), Pete Bourgeois (USGS), and P. Thomas Heitmuller (USGS)
U.S. Environmental Protection Agency, Gulf Ecology Division
1 Sabine Island Drive
Gulf Breeze, Florida 32561

ABSTRACT

The Environmental Protection Agency (EPA) and U.S. Geological Survey (USGS) initiated a two-year regional pilot survey in 2007 to develop, test, and validate tools and approaches to assess the condition of northern Gulf of Mexico (GOM) coastal wetlands. Sampling sites were selected from estuarine and palustrine wetland areas with herbaceous, forested, and shrub/scrub habitats delineated by the US Fish and Wildlife Service National Wetlands Inventory Status and Trends (NWI S&T) program and contained within northern GOM coastal watersheds. A multi-level iterative survey approach was applied to multiple wetland classes at 100 probabilistically-selected coastal wetlands sites. The first level provides information at the landscape scale about land use and environmental stressors associated with the watershed in which each wetland site is located. Level two, a rapid assessment conducted through a combination of office and field work, is based on best professional judgment and on-site evidence. The third level, an intensive site assessment, involves on-site collection of vegetation, water, and sediment samples to establish an integrated understanding of current wetland condition and validate methods and findings from Levels 1 and 2. The results from this survey, along with other regional pilots from the mid-Atlantic and West Coasts, will contribute to a design and implementation approach for a national wetlands condition assessment to be conducted by EPA’s Office of Water in 2011.

KEYWORDS

Coastal wetlands, Gulf of Mexico, Rapid Assessment Methods, Condition Assessment