

## Development of Salt Marsh Assessment Methods For National Wildlife Refuges



- **The Challenge:** The U.S. Fish and Wildlife Service (FWS) needs tools to guide decisions regarding the protection, management, and restoration of salt marsh ecosystems on National Wildlife Refuges in the face of uncertain responses to global, regional, and local threats. Ecosystem monitoring targeted towards management objectives helps assess resource status, identifies causes of system change, and evaluates how conservation objectives are being achieved through management actions



- **The Science:** We are developing a salt-marsh monitoring plan that is integrated explicitly into conservation decisions on National Wildlife Refuges and is feasible to implement with a minimum amount of refuge staff time. Structured decision making was used to provide an organizing framework for linking monitoring criteria to management goals and strategies. In partnership with National Wildlife Refuge staff, we have evaluated rapid-assessment vs. intensive monitoring metrics within undisturbed, impaired, and managed marshes throughout the northeast (Maine to Virginia, FWS Region 5) and the Pacific Northwest (Washington and Oregon, FWS Region 1).



- **The Future:** The final monitoring approach will be meaningful in terms of management goals and cost-effective to implement. It is expected that monitoring protocols resulting from this partnership will be applied broadly within coastal refuges.