

## **Salt Marsh Response & Resilience to Changing Conditions: Prospects for Management**

Thursday, April 26, 2018 | 9:30 a.m. - 4:30 p.m.

Sheraton Portsmouth Harborside Hotel, Portsmouth, NH

### **SPEAKER BIOGRAPHIES**

**Dr. Susan Adamowicz** is the Region 5 Salt Marsh LMRD Biologist for the Northeast Region of the US Fish and Wildlife Service. She is stationed at Rachel Carson NWR in Wells, ME but also has responsibilities at Parker River NWR (Newburyport, MA) and throughout the region. With over 25 years coastal work experience, she now focuses on innovative salt marsh restoration techniques, coastal resilience and the legacy effects of prior human alterations. A native Rhode Islander, Adamowicz still enjoys Del's Lemonade and swimming at Gooseberry Beach. Adamowicz currently serves as President-Elect of NEERS.

**Dr. David Burdick** is Research Associate Professor of Coastal Ecology and Restoration in the Department of Natural Resources at the University of New Hampshire, where he has taught wetlands courses over the past twenty years. His study of coastal science concentrates on coastal ecosystems by assessing human impacts and planning, implementing and assessing habitat restoration at the Jackson Estuarine Laboratory, where he serves as Interim Director. In 2012 he was awarded the Susan Snow-Cotter Visionary Award from the Gulf of Maine Council for the Marine Environment. He recently published a book with Charles Roman to translate and extend lessons learned from tidal restoration of salt marshes in the Northeast US and Canada. Outreach products include Dock Design with the Environment in Mind (to protect eelgrass), an Eelgrass Site Selection Model, and two habitat restoration atlases for coastal New Hampshire. Recent projects include: shoreline rehabilitation in NH and Maine, planning for sea level rise in Portsmouth NH, and measuring responses of salt marshes to rising sea level.

**Marc Carullo** is a GIS/environmental analyst with the Massachusetts Office of Coastal Zone Management, directing or supporting a variety of projects involving wetland monitoring and assessment, land cover/land use analysis, coastal and ocean planning, and project review. He is the project lead on CZM's effort to model the potential effects of sea level rise on coastal wetlands for enhanced planning, management, and policy development. Marc sits on the Northeast Ocean Council's Marsh Migration Steering Committee and participates in regional and national biological assessment of wetlands work groups. Marc has previously worked for the USFWS and NPS in GIS development and biological monitoring capacities.

**Caitlin Chaffee** has been a policy analyst with the Rhode Island Coastal Resources Management Council for over 11 years. In addition to developing policy on coastal habitats and stormwater management, she manages the Rhode Island Coastal and Estuarine Habitat Restoration Trust Fund and chairs the Fund's technical advisory committee. She works with federal, state and local partners to design and implement coastal habitat restoration projects. Chaffee received her master's degree in environmental science and management from the University of Rhode Island.

**Wenley Ferguson** is Save The Bay's Restoration Coordinator. She has worked at Save The Bay since 1990 on a variety of habitat and water quality assessment and restoration projects throughout Narragansett Bay and its watershed. Projects have included salt marsh, anadromous fish, and coastal buffer restoration projects and restoration monitoring. Wenley works with local, state and federal partners on the identification, design and implementation of salt marsh restoration and adaptation projects. Additionally, she works with municipal partners on stormwater infiltration and coastal adaptation projects.

**Dr. Neil K. Ganju** is a Research Oceanographer with the U.S. Geological Survey at the Woods Hole Coastal and Marine Science Center. His research spans the multiple disciplines that converge in estuarine systems. Research projects include numerical model development, field observations of hydrodynamics and water quality, wetland and coastal vulnerability assessments, geomorphic change, and eutrophication. Prior to joining the USGS in Woods Hole in 2008, he worked for the USGS at the California Water Science Center, on the San Francisco Bay Sediment Transport Project. He studied civil engineering at the University of Michigan (BSCE), the University of Florida (MSCE), and the University of California-Davis (Ph.D.).

**Bob Hartzel** is a Principal with Comprehensive Environmental Inc. (CEI) and leads CEI's Ecological Services practice. Bob is a Certified Lake Manager, Certified Professional in Sediment and Erosion Control, and wetland scientist with over 25 years of experience in managing coastal, riverine, lake, and wetland restoration projects in New England.

**Dr. Hilary A. Neckles** has worked as a coastal research ecologist with USGS Patuxent Wildlife Research Center stationed in Maine for the past 20 years. Currently, she also serves as President of the Coastal and Estuarine Research Federation (CERF, 2017-2019). Previously she held a research position at USGS National Wetlands Research Center in Louisiana. Her recent research has emphasized developing integrative approaches for salt marsh, seagrass, and estuarine ecosystem monitoring and assessment at multiple scales. She received a B.S. in Wildlife from University of Massachusetts, a M.S. in Wildlife from University of Minnesota, and a Ph.D. in Marine Science from the Virginia Institute of Marine Science.

**Dr. Kenneth B. Raposa** has been the Research Coordinator at the Narragansett Bay NERR for over 18 years and has published 27 manuscripts in peer-reviewed scientific journals. He recently co-led and published a national-scale marsh resilience assessment, co-led the 2014 RI salt marshes and sea level rise workshop in RI, coordinated an *Estuaries and Coasts* thematic issue focused on salt marshes and sea level rise, and is currently involved in two large-scale sediment addition projects in southern Rhode Island. He has dedicated his recent research toward understanding marsh responses to SLR and experimentally evaluating multiple adaptation strategies for enhancing marsh resilience. This includes conducting a field experiment testing thin layer sediment placement as a tool to build marsh resilience at eight NERRS with a 500k grant from the NERR Science Collaborative, and experimentally testing ways to facilitate marsh migration with a grant from the RI Coastal Resources Management Council.

**Ron Rozsa** is a plant community ecologist retired from the Coastal Management Program of CT DEP. Ron developed the restoration policies contained in the CT Coastal Management Act and organized the tidal wetland restoration program. He conceived of the idea for a site plan review committee comprised of resource experts, scientists and managers to advise on marsh restoration projects and to help mosquito control implement Open Marsh Water Management. In 1994, Ron collaborated with the USFWS Coastal Program to develop the designation document to nominate the lower Connecticut River as a Wetland of International Importance. In retirement, he worked on three resource plans including an Assessment Report for the Barn Island Wildlife Management Area. Ron volunteers time to help the Wildlife Division of DEEP by creating a website about Barn Island as a sentinel monitoring site and compiling historic data for this location, including a series of conceptual modules about marsh migration, the natural marsh, the ditched marsh and the reverting marsh.

**Dr. Stephen Smith** is a Plant Ecologist at the Cape Cod National Seashore, with expertise in plant physiology and plant community ecology. Stephen received a B.S. degree from Florida State University and a M.S and Ph.D. from the University of Miami. After spending five years working on the restoration of the Florida Everglades, he assumed his current position with the National Park Service in 2002. Stephen's current activities are focused on understanding the dynamics of spatial and temporal variability within plant and animal communities in all of the different ecosystems within the Seashore.

**Rachel Stevens** is the Wildlife Ecologist for NH's Fish and Game Department and Stewardship Coordinator for Great Bay National Estuarine Research Reserve.

**Dr. Mark H. Stolt** is a Professor of Pedology and Soil Environmental Science at the University of Rhode Island. He teaches soil morphology, classification, genesis, mapping, conservation and land use to graduate and undergraduate students. He coached the URI soils team for the last 20 years; with six top 4 finishes at the national contest and the national championship in 2011. His research focuses on riparian, palustrine, coastal, and subaqueous soils and landscapes. Mark has been the major professor for 25 graduate students publishing over 75 research papers. He is the president of the Society of Soil Scientists of Southern New England, Chairman of the New England Hydric Soils Technical Committee, and Chairman of the Fundamental Changes to Soil Taxonomy Task Force.

**Dr. R. Scott Warren**, Connecticut College Temple Professor Emeritus of Botany, has been studying tidal marsh and estuarine ecosystems for over 45 years. His research has included vegetation dynamics, macroinvertebrates and fish, marsh restoration, and the impacts of sea level rise and nutrient enrichment. While much of his work has been within Long Island Sound, he has also participated in multi-investigator projects at South Slough, OR and Plum Island Sound, MA. His research has been funded by the National Science Foundation, Connecticut and Oregon Sea Grants, Army Corps of Engineers, The Nature Conservancy, Connecticut Department of Environmental Protection, and the U. S. Fish and Wildlife Service and appears in a number of journals including NATURE, ECOLOGY, ECOLOGICAL APPLICATIONS, ESTUARIES & COASTS, MARINE ECOLOGY PROGRESS SERIES, NATURE, and RESTORATION ECOLOGY. He has been an associate editor for WETLANDS and ESTUARIES & COASTS and served on numerous state and federal advisory committees and review panels and as president of both the New England Estuarine Research Society and the Northeast Chapter of the American Society of Plant Physiologists. In 2009 he received the William A. Niering Outstanding Educator Award from the Coastal and Estuarine Research Federation.

**Dr. Elizabeth Watson** is an Assistant Professor in the Department of Biodiversity, Earth & Environmental Sciences at Drexel University in Philadelphia, and the Wetland Section Leader at the Patrick Center for Environmental Research at the Academy of Natural Sciences, the oldest natural sciences institution in the western hemisphere. With colleagues from National Estuary Programs, she coordinates coastal wetland monitoring at 11 sites in the Mid-Atlantic. She received her PhD in physical geography from the University of California, Berkeley, and was a post-doctoral researcher at the University of California Davis (with the Hydrologic Sciences group, studying floodplains) and at CICESE, a research laboratory in Baja California (studying remote sensing of wetlands). Prior starting at Drexel in 2015, she worked for the U.S. Environmental Protection Agency in Narragansett, Rhode Island, and for the Elkhorn Slough National Estuarine Research Reserve, in coastal Monterey Bay, California.

**Dr. Cathleen Wigand** is a research ecologist with the US EPA in Narragansett, Rhode Island, beginning her position in 1998. She received her PhD from the University of Maryland and conducted postdoctoral research at the Cary Institute of Ecosystem Studies in Millbrook, New York, prior to beginning her career with the US EPA. Her research and management interests span three broad areas: (1) monitoring and assessment of wetland condition and vulnerability; (2) multiple stressor effects (e.g., eutrophication, climate change, sea level rise, land development) on the structure, function, and provision of ecosystem services (e.g., water quality maintenance, flood abatement, carbon sequestration, biodiversity); and (3) macrosystems science using integrative, ecological, and socioeconomic approaches across varying spatial and temporal scales to engage stakeholders and decision-makers, and provide the science to assess tradeoffs for different management, restoration, and/or climate adaptation actions.