

Review of the Edwards Aquifer Habitat Conservation Program

Committee

Danny D. Reible

Chair

Danny Reible is currently the Donovan Maddox Distinguished Engineering Chair at Texas Tech University. He previously served as Director of the multi-university consortium, the Hazardous Substance Research Center South and Southwest (1995-2007) while at Louisiana State University and as the Bettie Margaret Smith Chair of Environmental Health Engineering (2004-2013) and Director of the Center for Research in Water Resources (2011-2013) at the University of Texas. Dr. Reible was inducted into the National Academy of Engineering in 2005 for his work in identifying management approaches for contaminated sediments. He has led the development of in-situ sediment capping and has evaluated its applicability to a wide range of contaminants and settings including PAHs from fuels, manufactured gas plants and creosote manufacturing facilities, PCBs, and metals. His current research activities are focused on sustainable water management and the assessment and remediation of contaminated sites. Specific projects include passive sampling of mobile phase contaminants using solid phase microextraction and diffusion gel thin film profiling for the assessment of bioavailability of organic and metal contaminants and the development of permeable treatment barriers as a contaminated sediment treatment approach. He received his B.S. from Lamar University, and his M.S. and Ph.D. in chemical engineering from the California Institute of Technology.

Jonathan D. Arthur

Member

Jonathan Arthur, P.G. is State Geologist and Director of the Florida Geological Survey, an office of the Florida Department of Environmental Protection. Dr. Arthur received his B.S. and Ph.D. from Florida State University and is a Fellow of the Geological Society of America. He is also president-elect of the Association of American State Geologists, a member of the Florida Board of Professional Geologists, and past president of the Florida Association of Professional Geologists. He has authored or co-authored more than 40 articles for scientific publication and has served on numerous committees related to restoration of the Florida Everglades. His research interests include hydrogeology and hydrogeochemistry, including aquifer storage and recovery (ASR), with emphasis on aquifer chemical and mineralogical characterization and fate of metals and metalloids. Dr. Arthur was a member of the NRC Committee on Sustainable Underground Storage of Recoverable Water.

M. Eric Benbow

Member

Eric Benbow is an associate professor of entomology at Michigan State University. Prior to this, he was an assistant professor of entomology at Dayton University. His research involves basic and applied multiple-scale studies on the biology and ecology of aquatic ecosystems, how terrestrial and aquatic ecosystems are coupled, and the influence of human activities on those processes—with an emphasis on invertebrate communities. Specific projects include the ecology of microbial-invertebrate interactions and their role in mycobacterial disease emergence in West Africa; understanding the dynamics of marine-derived nutrients and natural disturbance in ecosystem structure and function among managed watersheds of southeast Alaska; the community ecology of small lake and quarry invertebrates; and watershed biomonitoring projects in Vietnam, the Republic of Palau, Hawaii, and Ohio. He has studied water withdrawal and watershed development in the tropics, including monitoring how invertebrate communities respond to these impacts. Dr. Benbow serves as a consultant to the World Health Organization on Buruli ulcer, the Republic of Palau for stream bioassessment, and the New Jersey Forensic Science Commission, Forensic Anthropology and Associated Forensic Specialties Sub-Committee; as an expert witness in a contested case involving Hawaiian streams; and as an Executive Committee member for the North American Forensic Entomology Association. He received his B.S. and Ph.D. in biology from the University of Dayton.

Stuart E. Findlay

Member

Stuart E. G. Findlay is an aquatic ecologist at the Carey Institute of Ecosystem Studies. Dr. Findlay's research interests encompass characterization and microbial assimilation of dissolved organic carbon in aquatic ecosystems, delivery of carbon from terrestrial to aquatic ecosystems, carbon and nutrient processing in tidal wetlands, and ecosystem functions mediated by submerged aquatic vegetation. He has been conducting research on the Hudson River ecosystem for over 18 years, and is interested in watershed restoration issues as well as a variety of approaches to making scientific information more useful for ecosystem management. He received his B.A. in environmental science from the University of Virginia, his M.S. in marine science from the University of South Carolina, and his Ph.D. in zoology from the University of Georgia.

K. David Hambright

Member

David Hambright is a professor of biology at the University of Oklahoma. During the past decade his research has centered on the ecology, evolution, and management of the invasive and toxigenic golden alga, *Prymnesium parvum*, in lakes and rivers in Oklahoma, Texas, West Virginia, and Pennsylvania. He has recently begun a new long-term research effort aimed at coupling satellite-based remote sensing, digital field photography, and long-term water quality monitoring data on Oklahoman lakes in the effort to develop real-time monitoring capabilities aimed at ensuring public safety on the many public-access recreational lakes in the state. expertise includes research in climate-change and water quality interactions, wetland restoration and habitat and species conservation, paleolimnology, ecosystem modeling, and biodiversity, as well as experience in working with diverse research and modeling teams, interest groups, and stakeholders in politically sensitive systems. He received his B.S. in biology from the University of North Carolina-Charlotte, his M.S. in biology from Texas Christian University, and his Ph.D. in ecology and evolutionary biology from Cornell University.

Lora Harris

Member

Lora A. Harris is an associate professor at the University of Maryland Center for Environmental Science, based at the Chesapeake Biological Laboratory. She is an estuarine ecologist who applies field and modeling approaches to address important questions regarding nutrient dynamics, primary production and ecosystem structure and function in a range of estuarine ecosystems. She is interested in climate impacts on estuaries and lagoons, with a particular focus in salt marsh and sea grass ecosystems. Some of her most recent work has involved participatory modeling efforts involving stakeholders and managers seeking solutions to improve water quality and restore seagrasses in Delmarva coastal lagoons and a collaboration with wastewater engineers to understand the restoration trajectories of hypoxic estuaries. Dr. Harris works closely with state and regional agencies in both a research and advisory capacity. She received her B.S. from Smith College and her Ph.D. from the University of Rhode Island.

Steve A. Johnson

Member

Steve A. Johnson is an associate professor at the University of Florida. He is a freshwater biologist who focuses on natural resource ecology and the conservation and invasion ecology of amphibians and reptiles. Before joining the University of Florida, he worked as the State Sea Turtle Program Coordinator in North Carolina, and as a research wildlife biologist with the U.S. Geological Survey. At the USGS, he coordinated efforts for the national Amphibian Research and Monitoring Initiative in the southeastern United States. Dr. Johnson's area of expertise is natural history and conservation of amphibians and reptiles, and he has worked extensively with imperiled species. He is a member of several professional societies, including the Society for Conservation Biology, Herpetologists League, and The Wildlife Society. He received his B.S. and M.S. in biology from the University of Central Florida, and his Ph.D. in wildlife ecology and conservation from the University of Florida.

James A. Rice

Member

James A. Rice is a professor of applied ecology at North Carolina State University. Working mainly with fish, his research focuses on questions at the interface of basic and applied ecology with the intent to advance knowledge of how aquatic ecosystems function and how to effectively manage and restore them. He employs field studies, experiments, lab analyses and simulation modeling, and he has worked with a wide variety of organisms and life stages (larval to adult) in systems ranging from ponds, reservoirs and the Great Lakes to streams, large rivers and coastal estuaries. Areas of particular interest include predator prey interactions and food web dynamics in aquatic systems; direct and indirect fish responses to hypoxia; bioenergetics modeling of predation and habitat effects; and impacts and management of introduced species. He received his B.A. in biology from St. Louis University and his M.S. and Ph.D. in zoology from the University of Wisconsin-Madison.

Kenneth A. Rose

Member

Kenneth Rose is the E. L. Abraham Distinguished Professor in Louisiana environmental studies at Louisiana State University. His current research is focused on modeling population dynamics of fish and aquatic food webs, and how they respond to a variety of types of stressors including changes in water flows and quality, lethal and sub-lethal effects of contaminants, hypoxia, alteration of physical habitat, and climate change. He recently published a model of the population dynamics of the delta smelt, which is a listed species in the California Delta that is center of controversy about how much water can be pumped out of the system for irrigation and water supply, and he has also published on lower trophic level (algae and micro and macro zooplankton) food web dynamics. Dr. Rose was a member of review teams for several biological opinions involving delta smelt and salmon. He has served on two NRC committees, including the Committee on Sustainable Water and Environmental Management in the California Bay-Delta that evaluated the mitigation and conservation actions of biological opinions and the science underlying the short-term and long-term environmental and water usage decision-making of the system. He received his B.S. from SUNY Albany and his M.S and Ph.D. in fisheries science from the University of Washington.

J. C. Stevenson

Member

J. Court Stevenson is Professor Emeritus at the Horn Point Laboratory of the University of Maryland Center for Environmental Science. His primary areas of interest are coastal zone resources and water quality management issues; ecology of marsh and sea grass systems; effects of sea-level rise on wetlands and coastal shorelines; and the environmental history of Chesapeake Bay and its watershed. He served on the National Academies Committee to Review the St. Johns River Water Supply Impact Study. Dr. Stevenson received his B.S. in biology from Brooklyn College of the City University of New York, and his Ph.D. in botany from the University of North Carolina at Chapel Hill.

Laura Toran

Member

Laura Toran is the Weeks Chair in Environmental Geology at Temple University in Philadelphia. She has 30 years of experience in modeling and monitoring groundwater. Her recent research activities include using karst springs to understand transport in karst, monitoring urban stormwater and streams, and developing hydrogeophysical techniques to predict groundwater-surface water interaction. She teaches classes in groundwater hydrology including modeling with MODFLOW. She served in the NRC Committee on Opportunities for Accelerating Characterization and Treatment of Waste at DOE Nuclear Weapons Sites. Dr. Toran received her B.A. in geology from Macalester College and her Ph.D. in geology from the University of Wisconsin.