

## **Todd S. Bridges, Ph.D.**

### **Senior Research Scientist for Environmental Science**

U.S. Army Corps of Engineers,  
U.S. Army Engineer Research and Development Center  
Vicksburg, MS



Dr. Bridges is the U.S. Army's Senior Research Scientist for Environmental Science. He became a Senior Professional (ST) within the U.S. Army in 2006, where his responsibilities include leading research, development and environmental initiatives for the U.S. Army and U.S. Army Corps of Engineers (USACE). His primary areas of research activity at the U.S. Army Engineer Research and Development Center concern: 1) the science and engineering of sustainable infrastructure development; 2) risk and decision analysis methods applied to water resources infrastructure and environmental systems; and 3) assessment and management of sediment and environmental contaminants. Dr. Bridges research activities support goals related to infrastructure resilience and environmental restoration.

Dr. Bridges is the Program Manager for the Dredging Operations Environmental Research (DOER) program, one of the Corps' largest civil works R&D programs, where he directs the execution of more than \$6 million in research annually. He is the National Lead for the USACE Engineering with Nature® (EWN®) initiative, which includes a network of research projects, field demonstrations, and communication activities to promote sustainable, resilient infrastructure systems; the EWN® Initiative was awarded the 2013 USACE Environmental Award in Natural Resource Conservation and the 2014 USACE Sustainability Award for Green Innovation, and the 2019 Outstanding Achievement Award from the Renewal Natural Resources Foundation. Dr. Bridges led the focus on Natural and Nature-Based Features (NNBF) within the USACE's North Atlantic Coast Comprehensive Study following Hurricane Sandy, and currently leads an international collaboration to develop guidelines on the use of NNBF for coastal and fluvial systems. He has chaired international working groups for the London Convention and Protocol which developed technical guidance for assessing sediments as well as managing risks associated with CO<sub>2</sub> sequestration operations in the world's oceans. He is the Chair of the Environmental Commission for the World Association for Waterborne Transport Infrastructure (PIANC).

Dr. Bridges' work has been supported by programs within the USACE; the U.S. Army, Navy, and Department of Defense; the U.S. Environmental Protection Agency; and the private sector. His research activities have been recognized through receipt of several USACE and U.S. Army Research and Development Awards, the Government Service Award from the Society of Environmental Toxicology and Chemistry (2009), the Outstanding Practitioner Award from the Society for Risk Analysis (2012), the Army Engineer Association's Bronze Order of the de Fleury Medal (2014), and the Department of the Army Meritorious Civilian Service Award (2008). In addition to his basic and applied research, Dr. Bridges is also active in providing technical support to USACE Districts, USEPA Regions, the private sector, and others.

Dr. Bridges has served on the editorial boards for the journals of *Integrated Environmental Assessment and Management*, *Environmental Toxicology and Chemistry*, and *Dredging Engineering*. He is a member of the Society for Risk Analysis, the Society of Environmental Toxicology and Chemistry, the Society of American Military Engineers, The American Geophysical Union, PIANC, and is a member of the Board of Directors for the Western Dredging Association. Dr. Bridges also serves as an Adjunct Assistant Professor with the College of Engineering at the University of Georgia.

Over the last 25 years, Dr. Bridges has published more than 60 journal articles, book chapters, books and numerous technical reports. He received his B.A. (1985) and M.A. (1988) in Biology/Zoology from California State University, Fresno and his Ph.D. (1992) in Biological Oceanography at North Carolina State University.