

SEDHYD-2023 Opening Session Agenda for Tuesday, May 9, 2023

9:00:00 AM	Jerry W. Webb, P.E., D.WRE , West Consultants and USACE (retired), SEDHYD-2023 Chair, West Virginia	Welcome
9:10:00 AM	Chandra S. Pathak, PhD, PE, F.ASCE , SEDHYD-2023 Conference Technical Program Chair, USACE (Retired), Washington, DC	SEDHYD Technical Program
9:20:00 AM	Amanda Cox, PhD, P.E. , SEDHYD-2023 Student Paper Competition Chair, Saint Louis University, Saint Louis, MO	SEDHYD Student Awards
9:35:00 AM	Gregory Morris, PhD, PE , President, Gregory L Morris Engineering, San Juan, Puerto Rico	Keynote Address: Reservoir Sedimentation
10:15:00 AM	Christopher Dunn, PE, D.WRE , Director, USACE Hydrologic Engineering Center, Davis, CA	Keynote Address: Hydrologic Modeling
10:55:00 AM	Short stretch break	
11:05:00 AM	Geoffrey Plumlee, Ph.D. , Chief Scientist, USGS	Keynote Address: USGS Mission Areas of Water, Hazards, & Ecosystems
11:45:00 AM	Katherine Skalak, PhD , Research Hydrologist, USGS, National Research Program, Reston, VA	Diversity, Equity Inclusion, Accessibility
12:00:00 PM	Closing and Lunch	

Keynote Speakers

Gregory Morris, PhD, PE. — Reservoir Sedimentation



During the 20th century, large investments were made building dams and reservoirs. However, with reservoir sedimentation diminishing reservoir storage volume and encroaching onto outlet works, the 21st century increasingly will see investment focused on activities to manage sedimentation problems to sustain operation of this critical infrastructure. Sediment management was not considered in the original design of most dams and to sustain dams and reservoirs in operation requires new and non-traditional approaches for design, operation, and monitoring.

Dr. Morris will first describe sedimentation patterns in reservoirs and the benefits that are threatened. He will then outline key concepts for successfully sustaining long-term storage capacity and benefits on which today's society depends. Examples will be given from sites around the world.

Dr. Morris is a professional engineer with over 40 years of experience, working on design problems and lecturing in over 30 countries. Dr. Morris is co-author of the [Reservoir Sedimentation Handbook](#) and numerous peer-reviewed publications. He seeks to make the water resources community more aware of cost-effective design and operational practices that can sustain operation of critical reservoir infrastructure.

Christopher Dunn, PE, D.WRE. — Hydrologic Modeling



Mr. Dunn has been the Director of the Hydrologic Engineering Center (CEIWR-HEC) since May 2006. He leads a staff of 50, consisting primarily of hydrologic engineers, economists, and computer scientists, and oversees an annual budget of approximately \$20 million. HEC's program focuses on hydrologic and hydraulic engineering, water management, and planning analysis encompassing research, software development, special projects, training and technology transfer, and technical assistance to USACE field offices, HQUSACE, and other agencies and nations.

The Center participates in a wide range of domestic, interagency, and international projects and activities including development of post wildfire hydrology and debris flow techniques; enhanced inundation mapping capabilities; technical assistance to Ecuador for the Rio Coca

waterfall collapse; water management model development and support of the nationwide CWMS implementation; leadership of the Sustainable Rivers Program; collaboration with FEMA through the Future of Flood Risk Data initiative; implementation of Forecasted Informed Reservoir Operations, and training in numerous international locations such as Brazil, Korea, Panama, the Mekong, and India. HEC adjusted its internal business processes to utilize the DevOps practice of continuous integration/continuous deployment to improve the customer experience by providing better products faster while reducing stress to the HEC staff.

Mr. Dunn holds a Bachelor and a Master of Science degree in Civil Engineering from The Pennsylvania State University; is a registered Professional Engineer in the State of Oregon; an active member of the American Society of Civil Engineers (ASCE); and is a Diplomate of the American Academy of Water Resources Engineers (D.WRE). Mr. Dunn's technical specialties include flood risk management and impact analysis, planning analysis, risk analysis, river hydraulics, stream stability and scour, surface water hydrology, storm water management, urban drainage design, watershed analysis, IWRM, along with extensive teaching experience.

Geoffrey Plumlee, Ph.D. — USGS Mission Areas of Water, Hazards, & Ecosystems



As Chief Scientist of the U.S. Geological Survey (USGS), Dr. Geoff Plumlee provides strategic scientific vision and counsel to the USGS Director and Executive Leadership Team on inter- and transdisciplinary USGS science research priorities, opportunities, activities, capabilities, and partnerships, particularly those that cross multiple USGS Mission Areas and Regions. He serves as an executive science liaison for the USGS with the Department of the Interior (DOI) and other Federal agencies and is the USGS/DOI principal or representative on various Federal interagency committees such as the Subcommittee on Global Change

Research and the National Science and Technology Council (NSTC) Joint Subcommittee on Environment, Innovation and Public Health. As reflected in his role as a USGS executive champion or co-champion of two USGS Employee Resource Groups, Geoff is committed to promoting a diverse and inclusive USGS workforce, and to enhancing USGS use-inspired science that better meets the needs of underrepresented and disadvantaged communities.

Geoff is a Fellow of the Geological Society of America (GSA), Past Chair of the GSA Geology and Health Division, a leader in the founding of the American Geophysical Union's (AGU) GeoHealth Section, past AGU Council Member, and past adjunct clinical assistant professor at the University of Colorado School of Public Health. He is author or coauthor of more than 140 scientific publications, including many in journals across a wide range of scientific disciplines. Geoff has received the Department of the Interior Superior and Meritorious Service awards, the inaugural AGU GeoHealth Section Award, the GSA Geology and Health Division Distinguished

Service Award, and the Society of Economic Geologists Waldemar Lindgren (Early Career Scientist) Award.

Diversity, Equity Inclusion, Accessibility

Katherine Skalak, PhD



Katherine Skalak is a Research Hydrologist in the Water Mission Area currently acting as the program manager for Integrated Water Prediction. She studied fluvial geomorphology and sediment transport, focused on understanding and predicting changes in the patterns and functions of landforms in response to human impacts and restoration efforts. In particular, dynamics of fine sediment and particle associated nutrients and contaminants on varying temporal and spatial scales, and management effects on fluvial systems. Dr. Skalak received her

undergraduate degree in environmental science from St. Joseph's University. She received her master's degree in Geology from the University of Delaware. A National Science Foundation GK-12 fellow, she completed her Ph.D in Geological Sciences from the University of Delaware and started as a post-doctoral researcher at U.S. Geological Survey in 2009. She became a Research Hydrologist in 2011.