

## Plenary Speakers for 7<sup>th</sup> Biennial Bay-Delta Science Conference



**Peter Goodwin, Ph.D.** is the Lead Scientist for the Delta Stewardship Council's Delta Science Program. As Lead Scientist, Dr. Goodwin works with the Delta Science Program staff, the Delta Independent Science board, agency scientists, and the scientific community at large to promote and coordinate the use of peer-reviewed science throughout the Delta Stewardship Council.

The DeVlieg Presidential Professor in Ecohydraulics and professor of civil engineering at the University of Idaho, Peter also is the founding and current director of the Center for Ecohydraulics Research. He is recognized internationally for his research with important contributions in the field of modeling flows, sediment transport, and river channel evolution.

Additional research interests include modeling physical processes in natural and disturbed aquatic systems, quantifying benefits of restoration activities, and integrating models of physical processes and biological responses.

He is a former CALFED Independent Science Board member and also serves as the scientific advisor for several government agencies addressing river and wetland management issues, including serving as the past chair of the Louisiana Coastal Area Science Board.

Peter has worked in river restoration, flood management, and estuarine ecosystem restoration projects throughout the United States and internationally. He is also the director of Idaho's Experimental Program to Stimulate Competitive Research (EPSCoR), a federal-state partnership intended to build research infrastructure and encourage collaboration in states historically having received a low amount of federal research funding.

He earned his undergraduate degree in civil engineering in 1978 from the University of Southampton, England. In 1982 he earned his master's degree in Hydraulic and Coastal Engineering from UC Berkeley, where he also obtained his Ph.D. in 1986.



**Director Marcia K. McNutt** is a distinguished scientist and administrator and the first woman director of the USGS in its 130-year history. Dr. McNutt previously served as president and chief executive officer of the Monterey Bay Aquarium Research Institute (MBARI), in Moss Landing, CA.

As a scientist, Dr. McNutt has participated in 15 major oceanographic expeditions and served as chief scientist on more than half of those voyages. She has published 90 peer-reviewed scientific articles. Her research has ranged from studies of ocean island volcanism in French Polynesia to continental break-up in the Western United States to uplift of the Tibet Plateau.

McNutt received a BA degree in Physics, summa cum laude, Phi Beta Kappa, from Colorado College in Colorado Springs. As a National Science Foundation Graduate Fellow, she studied geophysics at Scripps Institution of Oceanography in La Jolla, California, where she earned a PhD in Earth Sciences in 1978. She then spent three years with the USGS in Menlo Park, CA, working on earthquake prediction.

Dr. McNutt joined the faculty at MIT in 1982 where she became the Griswold Professor of Geophysics and served as Director of the Joint Program in Oceanography & Applied Ocean Science & Engineering, offered by MIT & the Woods Hole Oceanographic Institution.

She served as President of the American Geophysical Union from 2000-2002. She was Chair of the Board of Governors for Joint Oceanographic Institutions, helping to bring about its merger with the Consortium for Ocean Research and Education to become the Consortium for Ocean Leadership, for which she served as Trustee. She is a fellow of the American Geophysical Union, the Geological Society of America, the American Association for the Advancement of Science, and the International Association of Geodesy.

McNutt's honors and awards include membership in the National Academy of Sciences, the American Philosophical Society, and the American Academy of Arts and Sciences. She also holds honorary doctoral degrees from the University of Minnesota and from Colorado College. She was awarded by the American Geophysical Union the Macelwane Medal in 1988 for research accomplishments by a young scientist and the Maurice Ewing Medal in 2007 for her significant contributions to deep-sea exploration. She has served on numerous evaluation and advisory boards for institutions such as the Monterey Bay Aquarium, Stanford University, Harvard University, Science Magazine, and Schlumberger.

McNutt is a native of Minneapolis, MN, where she graduated class valedictorian from Northrop Collegiate School in 1970.



**Dr. Charles J. Vörösmarty** is a professor of civil engineering, a Distinguished Scientist with NOAA-Cooperative Remote Sensing Science and Technology Center and director of The City University of New York's Environmental Crossroads Initiative at The City College of New York. His research focuses on the development of computer models and geospatial data sets used in synthesis studies of the interactions among the water cycle, climate, biogeochemistry and anthropogenic activities. His studies are built around local, regional and continental to global-scale modeling of water balance, discharge, constituent fluxes in river systems and the analysis of the impacts of large-scale water engineering on the terrestrial water cycle.

Before he came to The City College of New York, he was a research full professor at the Institute for the Study of Earth, Oceans and Space at the University of New Hampshire, where he was founder and director of its Water Systems Analysis Group (<http://www.wsag.unh.edu>).

Dr. Vörösmarty is a founding member of the Global Water System Project that represents the input of more than 200 international scientists under the International Council for Science's Global Environmental Change Programs. He is spearheading efforts to develop global-scale indicators of water stress, to develop and apply databases of reservoir construction worldwide and to analyze coastal zone risks associated with water diversion. He recently won one of two national awards through the National Science Foundation to execute studies on hydrologic synthesis.

Dr. Vörösmarty also is on several national and international panels, including the U.S. Arctic Research Commission, the NASA Earth Science Subcommittee, the National Research Council Committee on Hydrologic Science, the National Science Foundation's Arctic System Science Program Committee and the Arctic HYDRA International Polar Year Planning Team. He also was on a National Research Council panel that reviewed NASA's polar geophysical data sets, the decadal study on earth observations, and is co-chair of the National Science Foundation's Arctic CHAMP hydrology initiative. He has assembled regional and continental-scale hydro-meteorological data compendia, including the largest single collection, Arctic-RIMS (covering northern Eurasia and North America). He was a consultant to the 24-agency United Nations World Water Assessment Programme and represented the International Council of Scientific Unions at the recent UN Commission on Sustainable Development meetings.



**Dr. Ellen Hanak** is an economist and senior policy fellow at the Public Policy Institute of California (PPIC). Her career has focused on the economics of natural resource management and agricultural development. Her expertise also includes climate change policies and public investment strategies.

Since joining PPIC in 2001, she has built an influential, multi-disciplinary water policy research program involving scholars from across California. She has also held research positions with the French agricultural research system (1992-2001), the U.S. President's Council of Economic Advisors (1988-1989), the World Bank (1982-1989), and the Brookings Institution (1989-1990).

In 1979 Dr. Hanak earned her undergraduate degree in history from Swarthmore College in Pennsylvania. She then earned her master's degree in economics in 1981 from the University of Dar es Salaam, in Tanzania. She obtained her Ph.D. in economics from the University of Maryland in 1992.

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