



ACTION ITEM

Appointment of Members of the Delta Independent Science Board

Summary: Dr. John Callaway, the Delta Lead Scientist, will report on the results of the year-long search to fill six upcoming vacancies on the Delta Independent Science Board (Delta ISB) and provide his nominations to the Council for their approval.

Requested Action

Dr. Callaway will make a recommendation for the Council to appoint Dr. James Cloern, Dr. Virginia Dale, Dr. Tanya Heikkila, Dr. Diane McKnight, Dr. Robert Naiman, and Dr. Lisa Wainger for membership on the Delta ISB. The terms for all six nominees would start on September 1, 2020 for 5-year terms

Background

The Delta ISB was created as part of the Delta Reform Act of 2009 to provide oversight of the scientific research, monitoring, and assessment programs that support adaptive management of the Delta (Water Code Section 85280(a)), and to provide independent scientific advice about the Delta Plan (Water Code Section 85308(a)). The Delta Reform Act specifies the following criteria for Delta ISB members:

The Delta Independent Science Board shall consist of no more than 10 members appointed by the Council. The term of office for members of the Delta Independent Science Board shall be five years. A member may serve no more than two terms (Water Code Section 85280(a)(1)).

Members of the Delta Independent Science Board shall be nationally or internationally prominent scientists with appropriate expertise to evaluate the broad range of scientific programs that support adaptive management of the Delta. The members shall not be directly affiliated with a program or agency subject to the review activities of the Delta Independent Science Board (Water Code Section 85280(a)(2)).

The Council first appointed 10 members to the Delta ISB in 2010. On June 9, 2020, Dr. Joy Zedler ended her first term and she has decided not to pursue a second term. On August 31, 2020, five of the original members who were appointed in 2010 will conclude their second term, and cannot continue to serve per the Delta Reform Act. The members concluding their second term include: Dr. Elizabeth Canuel, Dr. Tracy Collier, Dr. Richard Norgaard, Dr. Vince Resh, and Dr. John Wiens.

The search to fill these six vacancies began on June 25, 2019, with the posting of a recruitment flyer advertising for internationally prominent scientists, with a wide range of expertise, to serve on the Delta ISB. The flyer solicited prominent scientists with expertise in biology, chemistry, physical sciences, and social sciences. To help with outreach, the recruitment flyer was also distributed to various organizations, including (1) the Coastal and Estuarine Research Federation, (2) the National Society of Black Engineers, (3) Society for Advancement of Chicanos/Hispanics and Native Americans in

Science, and (4) the Association of Women in Water, Energy, and the Environment. In addition, Dr. Callaway solicited individuals to apply for the upcoming vacancies based on input from the Delta ISB and the larger Delta community.

Delta ISB Nominations

Based on this extensive search, 40 applications were received by the September 30, 2019 deadline. Applications included a letter of interest, a curriculum vitae, and a list of five references. Dr. Callaway, with staff from the Delta Science Program and the U.S. Geological Survey, reviewed the applications and selected 18 candidates for interviews based on prior work on panels, publication record, stature, engagement on resource management issues, experience working in complex systems, and the expertise that they will bring to the Delta ISB.

Based on the application materials, interviews, and reference checks, Dr. Callaway would like to nominate the following six individuals for the Council's consideration for appointment. All of these nominees meet the criteria, specified in the Delta Reform Act, to serve on the Delta ISB. If appointed by the Council, all of the nominees will start on September 1, 2020. With Dr. Zedler's term concluding on June 9, 2020, there will only be nine members on the Delta ISB from June 10 to August 31.

Dr. James Cloern

Senior Scientist Emeritus, U.S. Geological Survey in Menlo Park, California.

Dr. James (Jim) Cloern's research over four decades addresses comparative ecology and biogeochemistry of estuaries to understand how they respond as ecosystems to climatic-hydrologic variability and human disturbance. His team investigation of San Francisco Bay included studies of primary production; nutrient cycling; algal and zooplankton community dynamics; ecosystem metabolism and food web dynamics; disturbance by introduced species; ecosystem restoration; and past and projected future responses to a changing climate. His career achievements have been recognized with selection as Fellows of the American Geophysical Union (AGU) and Association for the Sciences of Limnology and Oceanography (ASLO) and as recipient of the Woods Hole Oceanographic Institution B.H. Ketchum Award; Delta Science Program Brown-Nichols Achievement Award; ASLO Ruth Patrick Award; Coastal and Estuarine Research Federation Odum Lifetime Achievement Award; and Department of Interior's Distinguished Service Award. He is currently an Adjunct Senior Fellow at the Public Policy Institute of California, and editor-in-chief of *Limnology and Oceanography Letters*.

For more information, please refer to [Dr. Cloern's website](https://sfbay.wr.usgs.gov/access/wqdata/overview/people/jim.html):
<https://sfbay.wr.usgs.gov/access/wqdata/overview/people/jim.html>

Dr. Virginia Dale

Adjunct Professor, University of Tennessee

Dr. Virginia Dale is an adjunct professor at the University of Tennessee and Corporate Fellow Emeritus at Oak Ridge National Laboratory. Her research focuses on environmental decision making, ecosystem management in view of disturbances and climate change, sustainability of agricultural landscapes and energy systems, and

stakeholder engagement. She earned a M.S. in Mathematics from the University of Tennessee and a Ph.D. in Mathematical Ecology at the University of Washington. Her work has resulted in 11 books and more than 260 scientific articles. She has served on national scientific advisory boards for five U.S. agencies (the Departments of Agriculture, Interior, Energy, and Defense, and the Environmental Protection Agency) and several committees of the National Academies of Science. She was among the international scientists who contributed to the Intergovernmental Panel on Climate Change Scientific Assessment that in 2007 received the Nobel Peace Prize with former Vice President Al Gore. In 2006, she was the Distinguished Scientist for Oak Ridge National Laboratory. She was the Distinguished Landscape Ecologist of the US Regional Association of the International Association for Landscape Ecology in 2013 and chair of that society from 2000 to 2002.

For more information, please refer to [Dr. Dale's website](http://eeb.bio.utk.edu/people/virginia-dale/):
<http://eeb.bio.utk.edu/people/virginia-dale/>

Dr. Tanya Heikkila

Professor and Associate Dean, School of Public Affairs, University of Colorado, Denver

Dr. Tanya Heikkila is a leading scholar in the field of environmental policy and governance and is a professor at the University of Colorado Denver's School of Public Affairs, where she co-directs the Workshop on Policy Process Research. Previously, Dr. Heikkila was an Assistant Professor at Columbia University's School of International and Public Affairs (2002 to 2009) and a post-doctoral fellow at Indiana University's Ostrom Workshop in Political Theory and Policy Analysis (2001 to 2002). Dr. Heikkila's scholarship focuses on how environmental governance processes can be designed to facilitate collaboration, foster learning, and resolve conflicts. Her research has explored these issues in the context of interstate watersheds, large-scale ecosystem restoration, and unconventional oil and gas development. She has over 100 publications, including six books and over 50 peer-reviewed articles. In addition, Dr. Heikkila has conducted training workshops for practitioners of environmental governance, served as a member of the Aspen Institute Dialogue on Energy Governance (2016 to 2018), and has taken on various leadership roles in interdisciplinary research programs. She holds an M.P.A. (1996) and Ph.D. (2001) from the University of Arizona.

For more information, please refer to [Dr. Heikkila's website](https://publicaffairs.ucdenver.edu/people/faculty-and-staff-directory/person-detail/tanya-heikkila-ucd19865):
<https://publicaffairs.ucdenver.edu/people/faculty-and-staff-directory/person-detail/tanya-heikkila-ucd19865>

Dr. Diane McKnight

Professor in the Department of Civil, Environmental and Architectural Engineering and a Fellow of the Institute of Arctic and Alpine Research at the University of Colorado.

Dr. Diane McKnight began her career with the U.S. Geological Survey. Her research focuses on the coupling of hydrology, aquatic ecology, and water quality. She has studied streams, lakes, and wetlands in diverse regions, including the arctic tundra in Alaska, polar desert streams in Antarctica, alpine lakes in the Rocky Mountains, and wetlands in Botswana. Dr. McKnight has been President of the American Society of

Limnology and Oceanography and editor of Journal of Geophysical Research-Biogeosciences and has served on numerous committees for the National Research Council. She is a fellow of the American Geophysical Union (AGU) and the American Association for the Advancement of Science (AAAS), a member of the National Academy of Engineering, and received the John Dalton Award from the European Geophysical Union. From 2015 to 2018, she served as a program officer with the Arctic Program at the National Science Foundation (NSF). Dr. McKnight is currently the 2019 to 2020 Association of Environmental Engineering and Science Professors Distinguished Lecturer and Chair of the Executive Board of the Long Term Ecological Research Network.

For more information, please refer to [Dr. McKnight's website](https://www.colorado.edu/even/faculty/diane-mcknight):
<https://www.colorado.edu/even/faculty/diane-mcknight>

Dr. Robert Naiman

Emeritus Professor, School of Aquatic & Fishery Sciences, University of Washington

Dr. Robert Naiman's research explores the structure and dynamics of river ecosystems – including riparian vegetation, and the role of large animals in influencing ecosystem dynamics. These activities laid the foundation for 11 books on aquatic ecology and watershed management and produced more than 230 journal articles. He is an Institute for Scientific Information (ISI) Highly Cited Researcher and former United Nations Educational, Scientific and Cultural Organization (UNESCO) Chair in Sustainable Rivers. He has chaired several national and international committees on water issues, participated on advisory panels for the US National Science Foundation, chaired UNESCO committees, consulted for government research organizations in France and South Africa, and advised conservation organizations as well as private foundations. In recognition for his research and collaborations, Dr. Naiman was awarded the title of Doctor Honoris Causa by the Université Paul Sabatier (Toulouse, France) and received the Eminent Scientist award from the Ecological Society of America. Career highlights include being a research scientist at the Woods Hole Oceanographic Institution, director of Streamside Studies at the University of Washington, visiting scientist with the Centre National de la Recherche Scientifique (Toulouse, France), visiting professor at the University of the Witwatersrand (Johannesburg, South Africa), and professor at the Centre of Excellence in Natural Resource Management at the University of Western Australia. Until recently he was a member of the Independent Scientific Advisory Board, and the Independent Review Panel, for the restoration and management of the Columbia River (USA). His academic degrees are from California State Polytechnic University (B.S.), University of California, Los Angeles (M.A.), and Arizona State University (Ph.D.)

For more information, please refer to [Dr. Naiman's curriculum vitae](https://deltacouncil.ca.gov/pdf/isb/2020-06-17-naiman-cv-delta-isb.pdf):
<https://deltacouncil.ca.gov/pdf/isb/2020-06-17-naiman-cv-delta-isb.pdf>

Dr. Lisa Wainger

Research Professor, University of Maryland Center for Environmental Science

Dr. Lisa Wainger researches the optimal design of environmental restoration investments using a suite of ecological and economic models to evaluate costs, benefits and risks of options and to identify incentive changes that could motivate action. She pioneered techniques to include land spatial configuration into economic valuation and wetland mitigation policy. She is also known for work developing economically-based non-monetary benefit indicators to improve the representation of tradeoffs in natural resource decision-making. As a research professor at an interdisciplinary research center, University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, she has published widely on water quality, invasive species management, ecosystem service valuation, aquaculture, and commercial and recreational fishing, among other topics. Dr. Wainger received her Ph.D. (environmental and ecological economics) from the University of Maryland, College Park and her B.S. (earth science) from the University of California, Santa Cruz. She serves on multiple science advisory boards to governmental and non-governmental organizations and is past chair of the Scientific and Technical Advisory Board to the Chesapeake Bay Program partnership.

For more information, please refer to [Dr. Wainger's website](http://www.umces.edu/lisa-wainger):
<http://www.umces.edu/lisa-wainger>

Fiscal Information

Funding for the Delta ISB is part of the current Delta Science Program budget. Delta ISB members are compensated for their time and travel. No additional funding is required for this recruitment.

List of Attachments

No attachments

Contact

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