ACTION ITEM

Consideration and Possible Appointment of Delta Independent Science Board Members

Summary

Dr. Lisamarie Windham-Myers, the Delta Lead Scientist, will report on the search to fill current and upcoming vacancies on the Delta Independent Science Board (Delta ISB), and provide recommendations to the Council for possible appointments.

Requested Action

Dr. Windham-Myers recommends that the Council make the following appointments, each for a five-year term:

1. Dr. Peter Goodwin for a term from October 1, 2025, through September 30, 2030; and

2. Dr. Cathleen Jones, Dr. Steve Lindley, Dr. Tanya Heikkila, Dr. Diane McKnight, and Dr. Lisa Wainger each for a term from September 1, 2025, through August 31, 2030.

If appointed, this would be the second term for Dr. Tanya Heikkila, Dr. Diane McKnight, and Dr. Lisa Wainger.

Background

The Delta ISB was created by the Sacramento-San Joaquin Delta Reform Act of 2009 (Delta Reform Act) to provide oversight of the scientific research, monitoring, and assessment programs that support adaptive management of the Delta through periodic reviews (Water Code Section 85280(a)(3)). The Council appoints the Delta Independent Science Board in accordance with Section 85280 of the Delta Reform Act (Water Code Section 85280).

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)).

Current Delta ISB Membership.

Member	Term Ends
Inge Werner (Chair)	October 31, 2027
Diane McKnight (Chair Elect)	August 31, 2025
Lisa Wainger (Past Chair)	August 31, 2025
Virginia Dale	August 31, 2025
Tanya Heikkila	August 31, 2025
Anna Michalak	October 31, 2027
Robert Naiman	August 31, 2025
Jayantha Obeysekera	May 31, 2027
Kenneth Rose	January 14, 2029
VACANT	

There is currently a vacancy on the Delta ISB due to Dr. Tom Holzer's resignation from his second five-year term on January 31, 2025. During his time on the Delta

ISB from 2018 to 2025, Dr. Holzer was instrumental in leading Delta ISB reviews on water supply reliability estimation and subsidence, along with many other reviews.

Dr. Virginia Dale, Dr. Tanya Heikkila, Dr. Diane McKnight, Dr. Robert Naiman, and Dr. Lisa Wainger's first term on the Delta ISB will end on August 31, 2025.

The search to fill current and upcoming vacancies began with the posting of a recruitment flyer in February 2025, advertising for internationally prominent scientists with expertise in physical hydrology, geology, ecology, and/or Traditional Knowledge to serve on the Delta ISB. Other desired qualifications included experience working collaboratively and with an ecosystem perspective in California's Sacramento-San Joaquin Delta and/or other complex socio-ecological systems. Applications were due in March 2025, along with a required letter of interest, a curriculum vitae, and a list of five references.

Delta ISB Nominations

The recruitment process resulted in thirteen applications for the Delta ISB. In addition, current Delta ISB members Dr. Tanya Heikkila, Dr. Diane McKnight and Dr. Lisa Wainger expressed an interest in serving a second term.

All members who are finishing their first term have done an excellent job. Dr. Virginia Dale and Dr. Bob Naiman have decided not to pursue a second term. During their time on the Delta ISB, Dr. Dale was instrumental in leading the Delta ISB review on monitoring, while Dr. Naiman was instrumental in leading the Delta ISB review on food-webs, among other reviews.

Dr. Windham-Myers, with staff from the Council's Delta Science Program and the U.S. Geological Survey, reviewed the thirteen applications received during the recruitment process and selected nine applicants for interviews based on prior work on panels, publication record, engagement on resource management issues, experience working in complex systems, and the expertise that they would bring to the Delta ISB. Based on the application materials, interviews, and reference checks, Dr. Windham-Myers recommends Dr. Peter Goodwin, Dr. Cathleen Jones, and Dr. Steve Lindley for appointment to the Delta ISB. If appointed, the term of office for Dr. Jones and Dr. Lindley would be from September 1, 2025, through August 31,

2030. The term of office for Dr. Goodwin will be from October 1, 2025, through September 30, 2030.

Dr. Tanya Heikkila, Dr. Diane McKnight and Dr. Lisa Wainger who expressed an interest in a second term were also considered, which Dr. Windham-Myers supports. Dr. Lisa Wainger and Dr. Tanya Heikkila were instrumental in leading a review on decision-making under deep uncertainty, while Dr. McKnight led a review on the draft Cyanobacterial Harmful Algal Bloom Monitoring Strategy for the Sacramento-San Joaquin Delta. If appointed to a second term, the term of office for Dr. Tanya Heikkila, Dr. Diane McKnight, and Dr. Lisa Wainger will be from September 1, 2025, through August 31, 2030.

Nominee Bios

All of the nominees meet the criteria, specified in the Delta Reform Act, to serve on the Delta ISB, as described in the bios below, and in their curriculum vitae.

Second Term Appointments

Tanya Heikkila

Co-Director, Center for Policy and Democracy; Professor, 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 Center for Policy and Democracy. 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). Her 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, she 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 see Dr. Heikkila's curriculum vitae (Attachment 1).

Diane McKnight, Ph.D.

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 United States Geological Survey. Her research focuses on the coupling of hydrology, aquatic ecology, and water quality. Dr. McKnight 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. She 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 received a B.S. in mechanical engineering, M.S. in civil engineering, and her Ph.D. in environmental engineering, all from Massachusetts Institute of Technology. She is the current chair-elect of the Delta ISB.

For more information, please see Dr. McKnight's curriculum vitae (Attachment 2).

Lisa Wainger, Ph.D.

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. Dr. Wainger 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 the 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. She 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. She was chair of the Delta ISB from 2022 to 2024, and now serves as past chair.

For more information, please see Dr. Wainger's curriculum vitae (Attachment 3).

First Term Appointments

Peter Goodwin, Ph.D.

Professor Emeritus, University of Maryland Center for Environmental Science
Past President, University of Maryland Center for Environmental Science

Dr. Peter Goodwin served as the President of the University of Maryland Center for Environmental Science, an independent graduate university for the environment within the University System of Maryland (USM) and served as the Vice-Chancellor of Environmental Sustainability for USM. Dr. Goodwin was also Lead Scientist for the Delta Stewardship Council 2012 to 2015. He is the founder and Director Emeritus of the Center for Ecohydraulics Research at the University of Idaho, an interdisciplinary institute working on the simulation of ecological response to management actions or changes in physical processes of rivers, lakes, estuaries and wetlands. Dr. Goodwin has participated in nature-based solutions for river restoration, coastal sustainability, and flood management throughout California, the US and international programs such as the multi-national Patagonian Ecosystems Research Center in Chile. He has undertaken numerous modeling studies of estuarine, coastal and tidal wetland systems, including Mugu Lagoon, San Elijo Lagoon, Venice Lagoon, San Dieguito Lagoon, the Russian River Estuary, Napa Salt Ponds and Delaware Bay. He served as President of the International

Association for Hydro-Environment Engineering and Research (IAHR) from 2017-21. From 2024 to 2025, he chaired the Committee for the Review of the Long-term Operations of the Central Valley Project and the State Water Project for the National Academies of Science, Engineering and Medicine. Dr. Goodwin obtained his Ph.D.in Hydraulic and Coastal Engineering from the University of California, Berkeley.

For more information, please see Dr. Goodwin's curriculum vitae (Attachment 4).

Cathleen Jones, Ph.D.

Senior Research Scientist, Jet Propulsion Laboratory, California Institute of Technology

Dr. Cathleen Jones spent two decades working as an experimental nuclear physicist at Argonne National Laboratory and the California Institute of Technology (Caltech) before joining the Radar Science and Engineering Section at Jet Propulsion Laboratory (JPL) in 2004. At JPL, her career interests turned to radar remote sensing using synthetic aperture radar (SAR), working first as a systems engineer during the design and building the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) radar system, then in development of SAR processing algorithms, and most recently in the use of SAR interferometry (InSAR) and polarimetry (PolSAR) for pioneering applications of Earth science techniques to real-world problems. Major geophysical advances include demonstration and refinement on the use of InSAR for measuring land subsidence and more localized surface deformation impacting levees and aqueducts, and research in oil slick detection, tracking, and characterization. Her work with the California Department of Water Resources (DWR) was recognized with the Remote Sensing and Drought Science Service Award from DWR in 2015, and with the Kevin J. Neese Award from the Groundwater Resources Association of California in 2019. Most recently, she is involved in studies of the processes controlling land building in deltas as Deputy Principal Investigator for the Delta-X Earth Venture-Suborbital-3 study (2019-present). She has been an Adjunct Professor in the Dept. of Physics and Technology at The Arctic University of Norway in Tromso since 2016. She has been the NASA-ISRO Synthetic Aperture Radar (NISAR) Science Team Applications lead since 2016, and is applications lead for the study team formed by NASA to evaluate science and technology needs to advance the 2017 Decadal Survey's Surface Topography and Vegetation Targeted Observable (2020-2023). She has twice been

awarded the NASA Exceptional Achievement Medal. Dr. Jones obtained a Ph.D. and M.S. in Physics from Caltech.

For more information, please see Dr. Jone's curriculum vitae (Attachment 5).

Steve Lindley, Ph.D.

Director, National Marine Fisheries Service Southwest Science Center's Fisheries Ecology Division and Santa Cruz Laboratory (Retired)

From 2011 to 2025, Dr. Steve Lindley was director of the National Marine Fisheries Service's Southwest Fisheries Science Center's Fisheries Ecology Division and Santa Cruz Laboratory, where he oversaw ~100 people working in diverse areas, including fish ecology, aquatic habitats, climate, oceanography, hydrology, geomorphology, genetics, and economics. His own research has focused on connections between many of these fields and the population dynamics of salmon and sturgeon, with the goal of developing and applying quantitative integrated models that can guide decision-making around water management, habitat restoration, and conservation of anadromous fishes. The resulting models have been successfully applied in several biological opinions relating to the design and operations of California's state and federal water projects and have improved the effectiveness of conservation measures for winter-run Chinook salmon. Throughout his career, he served on a variety of review panels. Dr. Lindley was a member of several biological review teams that synthesized available data to determine the status of salmon and sturgeon populations across the US west coast and led a team of diverse experts in the development of quantitative recovery criteria for Central Valley salmonids. This work resulted in a series of widely cited publications that laid the scientific foundation of salmon conservation under the US Endangered Species Act in California's Central Valley. Dr. Lindley obtained a Ph.D. in Biological Oceanography from Duke University.

For more information, please see Dr. Lindley's curriculum vitae (Attachment 6).

Fiscal Information

N/A

List of Attachments

Attachment 1: Dr. Tanya Heikkila's Curriculum Vitae

Attachment 2: Dr. Diane McKnight's Curriculum Vitae

Attachment 3: Dr. Lisa Wainger's Curriculum Vitae

Attachment 4: Dr. Peter Goodwin's Curriculum Vitae

Attachment 5: Dr. Cathleen Jones' Curriculum Vitae

Attachment 6: Dr. Steve Lindley's Curriculum Vitae

Contact

Lisamarie Windham-Myers, Ph.D.

Delta Lead Scientist

Phone: (916) 275-6888