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Climate-Safe Infrastructure Working Group Members, Project Team & Co-Facilitators

Climate Safe Infrastructure Working Group Members



Dr. Amir Aghakouchak, P.E., University of California, Irvine

Amir Aghakouchak is an Associate Professor of Civil and Environmental Engineering at the University of California, Irvine. His research focuses on climate extreme and crosses the boundaries between hydrology, climatology, remote sensing. Amir is the principal investigator of several research grants funded by the National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), National Oceanic and Atmospheric Administration (NOAA), and the United States Bureau of Reclamation (USBR). Website: <http://amir.eng.uci.edu/>



Nancy Ander, P.E., California Department of General Services

Nancy Ander is the Deputy Director of the Office of Sustainability at the Department of General Services (DGS). She is responsible for greening state facilities. Her responsibilities include the development of sustainability policies and implementation of energy efficiency improvements, solar and wind installations, electric vehicle infrastructure development, recycling and other areas within state facilities. Nancy's team strives to ensure that state buildings are leading by example in advancing California's clean energy and sustainability goals.

Prior to this role, Nancy was a Principal Manager at Southern California Edison (SCE), one of the state's four major investor-owned utilities. At SCE, Nancy led the overall strategy for SCE's energy efficiency and demand response programs in alignment with regulatory requirements and in consideration of grid implications. Additionally, Nancy oversaw the development of climate action plans at local governments and large institutions.

Before coming to SCE, Nancy supported public policy at the California Energy Commission (CEC). At the CEC she developed energy codes and managed research to develop innovative technologies in Renewables and Energy Efficiency. Most notably, Nancy developed and managed the first Public Interest Research program for energy efficiency at the CEC and helped to lead the program to national prominence. Nancy has a bachelor's degree in Civil Engineering and is a registered CA engineer.



John Andrew, P.E., California Department of Water Resources

John T. Andrew is Assistant Deputy Director of the California Department of Water Resources, where since 2006 he has overseen the Department's climate change activities. His previous organizational affiliations include the Stege Sanitary District, the CALFED Bay-Delta Program, the California Department of Health Services, the Lawrence Berkeley National Laboratory, and the US Environmental Protection Agency. Andrew has over 25 years of experience in water resources and environmental engineering and holds degrees in Civil Engineering and Public Policy from the University of California at Berkeley.



Gurdeep Bhattal, P.E., California Department of Transportation

Gurdeep Bhattal is currently working as a Senior Transportation Engineer in the Hydraulics and Stormwater Branch within the California Department of Transportation (Caltrans) Headquarters Division of Design. As both a registered Civil and Mechanical Engineer, Gurdeep provides support to Caltrans Districts Statewide by developing guidance, policies, procedures, and standards for hydraulic designs for roadways and associated facilities. During 19 years with Caltrans, he designed drainage facilities, addressed failures of drainage facilities, and provided drainage designs for highway projects. During 10-years as a Project Engineer with a sugar manufacturing company, he developed designs for fluid flows involving pumping/piping/heat exchanger systems, developed pump curves, completed mass balances of fluid flows, stream flows and related power generation at a 4.5 MW power plant.



Martha Brook, P.E., California Energy Commission

Martha has been at the California Energy Commission (CEC) for over two decades; there she has become a highly respected expert in long term energy demand forecasting, building energy efficiency standards, and research and development of energy efficient technologies for residential and commercial buildings. Martha is currently the technical advisor to Commissioner Andrew McAllister, where she provides support on all areas of building and appliance energy efficiency, as well as energy data collection, organization, analysis and publication.

Martha has a Bachelor of Science in Environmental Resources Engineering from California State University, Humboldt and is a California Professional Mechanical Engineer.



Dr. Dan Cayan, University of California, San Diego: Scripps Institution of Oceanography

Dr. Dan Cayan is a climate researcher at the Scripps Institution of Oceanography, UC San Diego. Cayan's work is aimed at understanding climate variability and changes over the Pacific Ocean and North America and how they affect the water cycle and related sectors over western North America. He has specific interests in regional climate in California and has played a leading role in a series of California climate vulnerability and adaptation assessments. He is also involved with programs to deliver improved climate information to decision makers: The California Nevada Applications Program (CNAP), sponsored by the NOAA RISA Program and the Southwest Climate Science Center, sponsored by the US Geological Survey, Department of Interior.



James Deane A.I.A., C.D.T., LEED AP, P.M.P., California High Speed Rail Authority; Parsons Brinckerhoff

James brings more than 28 years of experience in project, program, and enterprise management and has successfully led teams in the definition, design, documentation, and delivery of their vision across an expansive range of planning, infrastructure, and facility types. He has worked on several internationally significant programs and projects such as London 2012, Masdar, and Astana Expo 2017. As the Senior Supervising Architect of the Rail Operations Group, Development and Design Section for the California High-Speed Rail Authority, James is responsible for developing the program-wide station design delivery mechanisms and is keenly focused the integration of the States and the Authority's sustainability and resilience goals and objectives.



Dr. Noah Diffenbaugh, Stanford University: Stanford Woods Institute for the Environment

Dr. Noah Diffenbaugh is a Professor in the School of Earth, Energy and Environmental Sciences and Kimmelman Family Senior Fellow in the Woods Institute for the Environment at Stanford University. He studies the climate system, including the processes by which climate change could impact extreme weather, water resources, agriculture, and human health. Dr. Diffenbaugh is currently Editor-in-Chief of the peer-review journal *Geophysical Research Letters*. He has served as a Lead Author for Working Group II of the Intergovernmental Panel on Climate Change (IPCC), and has provided testimony and scientific expertise to the White House, the Governors of California and Indiana, and U.S. Congressional offices. Dr. Diffenbaugh is a recipient of the James R. Holton Award from the American Geophysical Union, a CAREER award from the National Science Foundation, and a Terman Fellowship from Stanford University. He has also been recognized as a Kavli Fellow by the U.S. National Academy of Sciences, and as a Google Science Communication Fellow.



Dr. David Groves, RAND Water and Climate Resilience; Pardee RAND Graduate School

David Groves is codirector of the RAND Water and Climate Resilience Center, a senior policy researcher at the RAND Corporation, and a professor at the Pardee RAND Graduate School. He is a key developer of new methods for decision-making under deep uncertainty, and works directly with natural resources managers worldwide to improve planning for the uncertain future. His primary practice areas include water resources management and coastal resilience planning, with an emphasis on climate adaptation and resilience.

Groves has worked with major water agencies throughout the United States, including the U.S. Bureau of Reclamation, California Department of Water Resources, Metropolitan Water District of Southern California, and Denver Water, helping them to address climate variability and change in their planning. He also works internationally, most recently in China, Peru, and Mexico. Groves also works on coastal sustainability issues, most notably in the Bay Delta, South Florida, and Coastal Louisiana. In particular, he led a RAND team that developed the planning framework and decision support tool used to formulate Louisiana's 50-year, \$50 billion Coastal Master Plan.

Groves received degrees in Geological and Environmental Sciences (B.S.) and Earth Systems (M.S.) from Stanford University, an M.S. in Atmospheric Sciences from the University of Washington, and a Ph.D. in policy analysis from the Pardee RAND Graduate School.



Dr. Kristin Heinemeier, P.E., University of California, Davis: Energy Efficiency Center

Dr. Kristin Heinemeier is Principal Engineer with the University of California Davis' Energy Efficiency Center. For over 30 years, in different capacities, she has focused on the gaps between the way things are supposed to work and how they really work, and ways to realize efficiency in the real world. Her work seeks to improve programs, codes and standards, technologies and industry best practices by focusing on substantial transformation of the way that heating, ventilation, and air-conditioning system installation, maintenance, and service are delivered. Kristin was one of the founders of the Western HVAC Performance Alliance. Her other key partners include the California Community Colleges, California Energy Commission, California Public Utilities Commission, and utility Emerging Technology programs. Kristin was awarded the ASHRAE Fellow award, in recognition of many years of service to the industry. Prior to her appointment at UC Davis, she worked for Lawrence Berkeley National Lab, Honeywell International, Texas A&M University, and PECL. She received her Ph.D. in building science from the University of California, Berkeley and is a licensed mechanical engineer.



Dr. Robert Lempert, RAND Corporation: Frederick S. Pardee Center for Longer Rare Global Policy and the Future Human Condition

Robert Lempert is a principal researcher at the RAND Corporation and Director of the Frederick S. Pardee Center for Longer Range Global Policy and the Future Human Condition. His research focuses on risk management and decision-making under conditions of deep uncertainty. Dr. Lempert's work aims to advance the state of art for organizations managing risk in today's conditions of face-paced, transformative, and surprising change and helping organizations adopt these approaches to help make proper stewardship of the future more commonly practiced. Dr. Lempert is co-PI of the NSF-funded Sustainable Climate Risk Management (SCRIM) research network and co-PI of a MacArthur-foundation funded project conducting urban climate risk management in several U.S. cities. Dr. Lempert is a Fellow of the American Physical Society, a member of the Council on Foreign Relations, a chapter lead for the Fourth US National Climate Assessments and a lead author for Working Group II of the United Nation's Intergovernmental Panel on Climate Change (IPCC). Dr. Lempert was the Inaugural EADS Distinguished Visitor in Energy and Environment at the American Academy in Berlin and the inaugural president of the Society for Decision Making Under Deep Uncertainty (<http://www.deepuncertainty.org>). A Professor of Policy Analysis in the Pardee RAND Graduate School, Dr. Lempert is an author of the book *Shaping the Next One Hundred Years: New Methods for Quantitative, Longer-Term Policy Analysis*.



Dr. Cris Liban, P.E., ENV SP, Los Angeles County Metropolitan Transportation Authority; City of Los Angeles; National Council for Environmental Policy and Technology, USEPA

Dr. Cris B. Liban is an internationally recognized expert in the field of resource management, energy technologies, transportation, environmental protection, and sustainability. Dr. Liban's work has been making a tremendous impact around the world as his visionary framework and processes of environmental stewardship is continually used as a model of many similar programs. His award-winning and ISO 14001:2015 certified environmental and sustainability program has become the US national template in the transportation industry. In this program of empowerment, he has directly inspired thousands of Angelenos (and many in the transit industry around the world) to become environmental and sustainability leaders not only in their place of work, but most importantly in their families, communities and beyond.

He is currently the Executive Officer for Environment and Sustainability at the LA County Metropolitan Transportation Authority. LA Metro is the 3rd largest transportation agency in the United States in the 20th largest economy in the world. He was appointed by President Barack Obama's US Environmental Protection Agency Administrator as a Council Member of the USEPA National Advisory Council for Environmental Policy and Technology where he and his colleagues provide policy guidance and future direction of the USEPA. Dr. Liban also holds concurrent Commissioner political appointments in the Los Angeles County Beach Commission and the City of Los Angeles Board of Transportation Commissioners. In those capacities, he contributes to the development and implementation of safe, resilient, equitable and environmentally protective policies throughout Southern California.



Dr. Kyle Meng, University of California, Santa Barbara: Bren School of Environmental Science and Management

Kyle Meng is an Assistant Professor at the Bren School and the Department of Economics at the University of California, Santa Barbara and a Faculty Research Fellow at the National Bureau of Economic Research. He studies environmental, energy, and natural resource economics with a focus on climate change impacts and policies. His research appears in leading economics and science journals, including the American Economic Review, Nature, and PNAS. He received his Ph.D. in Sustainable Development from Columbia University and his bachelor's in Civil and Environmental Engineering from Princeton University.



Dr. Deb Niemeier, P.E, NAE, University of California, Davis

For two decades, Deb Niemeier, Professor in the Dept. of Civil and Engineering and Professor in the School of Education at UC Davis, has focused on integrating models for estimating mobile source emissions with transportation modeling. Her primary research interest has been on developing highly accurate, accessible processes and emissions modeling and travel behavior models that can be used in the public sector, including the identification and modeling of environmental health disparities and improved understanding of formal and informal governance processes in urban planning. She is currently working with collaborators in sociology and political science broadly examining the intersection of governance processes in regional planning and climate change outcomes, and better connecting urban planning processes with mitigation of environmental disparities. She is a member of the graduate faculty in Computer Science; Transportation, Technology, and Policy; Education, and Geography. She currently sits on the Executive Committee of the Graduate Geography Group. In 2014, she was named a Fellow of the American Association for the Advancement of Science (AAAS) for "distinguished contributions to energy and environmental science study and policy development." In 2015, she was named a Guggenheim Fellow for foundational work on pro bono service in engineering. In 2017, she was elected to the National Academy of Engineering.



Bruce Swanger, P.E., California Department of Transportation

Bruce Swanger has 26 years of experience with the California Department of Transportation (Caltrans) and is a licensed civil engineer in California, Nevada, and Arizona. His career focus has been predominantly in the hydrologic and hydraulic field associated with transportation infrastructure and the riverine and coastal environments. Mr. Swanger is currently the Caltrans State Hydraulics Engineer and is responsible for managing and developing the Caltrans statewide hydraulics and storm water design guidance, procedures, and standards for inclusion in the Caltrans Highway Design Manual and Project Planning and Design Guide. He has been involved with steady, unsteady, and two-dimensional hydraulic modeling of large culverts and bridges, preparing on-site and offsite hydrologic studies, designing rock and vegetated stream bank revetments, performing stream and habitat remediation design and analysis associated with fish and aquatic organism passage, analyzing sediment transport, assessing stream stability, performing scour and floodplain analysis, determining influences from tidal events coinciding with storm events on beachfront culverts and bridges, and performing wave-run-up studies.



Chester Widom, FAIA, California Department of General Services: Division of State Architect

Chester A. Widom, FAIA was the founding partner of WWCOT, a 185 person (at the time of his retirement from the firm) architectural, interior design, planning and forensics firm with four offices in California and an office in Shanghai, China. After leaving WWCOT, he served as the Senior Architectural Advisor for the Los Angeles Community College District's \$6.1 Billion construction program. In December of 2011, Governor Brown appointed him California State Architect. As a former President of both the National American Institute of Architects (AIA) and the California Council AIA, Chet is recognized as an international leader in the profession. He has been awarded Honorary Fellowship by the Japan Institute of Architects, The Federacion Colegios de Arquitectos de la Republica de Mexicana and by the Royal Architectural Institute of Canada and, served as the 2011 Chancellor of the College of Fellows for the American Institute of Architects. He is the 2011 recipient of the AIA's Edward C. Kemper Award for service to the profession. Chet was the 16th recipient of the Distinguished Alumni Award by the School of Architecture at USC where he has taught and currently sits on the school's Board of Councilors. He has been a frequent guest lecturer at numerous universities including Harvard, Yale and UCLA. In addition to his leadership of both the National and California AIA, he previously served on the Building and Safety Commission, the City Planning Commission and the Elected Charter Reform Commission for the City of Los Angeles, and as a member of the Hospital Building and Safety Board for the State of California (OSHPD). In 2010 and 2011 he served as member of the Bond Oversight Committee for the Los Angeles Unified School District.

Project Team Members



Keali'i Bright

Keali'i Bright is the Deputy Secretary for Climate and Energy at the California Natural Resources Agency where he is responsible for agency related climate adaptation, natural and working land carbon management, energy and oil production and Salton Sea programs. Keali'i brings to this position over a decade of experience in state natural resources and environmental policy development. Prior to this appointment, he served the Brown Administration as the Deputy Secretary for Legislative affairs at the Natural Resources Agency which was preceded by his work for the Legislature as the principle consultant on natural resources, environmental protection, energy, transportation and other issues for the Assembly Budget Committee.



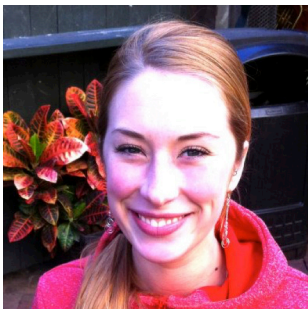
Guido Franco, P.E.

Guido Franco is the Team Lead for Climate Change and Environmental Research in the Energy Commission's Research Division. Mr. Franco led the preparation of the 1998 inventory of greenhouse gases for California that prompted the passage of a law requiring the periodic update of the inventory. He was the main author of the 2003 Climate Change Research Plan and he directed its implementation. He has been one of the main forces behind the three California Climate Assessments. The first one in 2006 was influential in the passage of Assembly Bill 32. He has been an Editor of two special issues of the prestigious journal Climatic Change on climate impacts and adaptation options for California. More recently, he was a member of the federal advisory committee that produced the National Climate Assessment delivered to the President and the US Congress on May 6, 2014. He is currently involved in the preparation of the 2018 National Climate Assessment and is co-led the preparation of California's Fourth Climate Change Assessment. Mr. Franco is a registered engineer in California and holds a Master's Degree in Engineering from UC Berkeley.



Joey Wraithwall

Joey is the Special Assistant for Climate Change at the California Natural Resources Agency. He was appointed to the position by Governor Jerry Brown after serving at the agency in several positions, including as associate governmental program analyst, staff services analyst, and executive fellow. Since 2014, Joey has assisted in the development and implementation of policies to adapt to and reduce the impacts of climate change. In his current position, Joey is the primary contact for the Safeguarding California Plan, the State's climate adaptation strategy, and is the agency lead for California's Fourth Climate Change Assessment. He supports and coordinates other climate adaptation activities and policies for the administration. Joey lives in Sacramento, California.



Elea Becker-Lowe

Elea Becker Lowe currently serves the Natural Resources Agency as an analyst in the Monitoring and Stewardship unit to track and monitor conservation projects across the state. She recently graduated from the Middlebury Institute of International Studies with a master's degree in International Environmental Policy. As a student she worked with the Natural Resources Agency's Climate Team to develop policy and practices to help the state of California adapt to the effects of climate change.

Co-Facilitators



Susi Moser, Ph.D., Director, Susanne Moser Research and Consulting

Dr. Susanne C. Moser, is an internationally renowned climate change adaptation expert and well known to the State of California for ongoing work with various state agencies since 1999. Since establishing an independent research and consulting firm in Santa Cruz in 2008, she has assisted the Energy Commission with synthesizing the Third Climate Change Assessment, CNRA with the drafting of the first Safeguarding California adaptation plan, the Ocean Protection Council with leading the public engagement effort informing the Update of the State's Sea-Level Rise Policy Guidance. In addition, she initiated in 2006 and has been a co-lead with Dr. Hart in the (now) longitudinal California Coastal Adaptation Needs Assessment and has contributed her own research to the state's Third and Fourth Climate Assessments. As part of the latter, she and Dr. Hart are conducting innovative research on the teleconnected and cascading impacts of climate change on interconnected infrastructure lifelines in the Greater LA region. Almost all of her work is trans-disciplinary, i.e., integrating multiple disciplines and the perspectives of decision-makers, to ensure the highest possible degree of practical use of integrative and robust knowledge. Creative facilitation of multi-stakeholder workshops is one of her signature strengths.



Juliette F. Hart, Ph.D., Director of Outreach, Coastal Climate Impacts team, USGS Pacific Coastal and Marine Science Center

Dr. Juliette Finzi Hart is an Oceanographer with the U.S. Geological Survey's Pacific Coastal and Marine Science Center in Santa Cruz. She is the Director of Outreach for the Coastal Climate Impacts team. Dr. Hart is a contributing author to the Coastal Effects chapter for the 4th National Climate Assessment (currently underway). At the CA state level, she has recently been appointed as a member of the Ocean Protection Council Science Advisory Team working group as co-author for the CA 4th Climate Assessment Oceans and Coasts report and, as noted above, is working with Dr. Moser on two projects that are part of the CA 4th Climate Assessment, as well as being the co-lead with her on the California Coastal Adaptation Needs Assessment. Dr. Hart specializes in translating complex scientific information to a wide array of audiences (from interested citizens to high level decision-makers). Her daily tasks entail working directly with policy- and decision-makers throughout the state to both understand and subsequently utilize the best scientific information in their decision-making. Prior to joining USGS in July 2016, Dr. Hart was the Marine & Climate Science Specialist at the University of Southern California Sea Grant for 10 years, following completion of her Ph.D. in Ocean Sciences from USC in 2006, along with a graduate certificate in Environmental Sciences, Policy, and Engineering; Sustainable Cities in 2004.