U.S. Army National Guard Joint Base Cape Cod Small Arms Ranges and Their Impact on the Cape Cod Sole Source Aquifer

Committee

Gregory B. Baecher

Chair

GREGORY B. BAECHER (NAE) is a Glenn L. Martin Institute Professor of Engineering at the University of Maryland. He works principally in risk management and resilience of civil infrastructure. His research interests focus on the reliability of civil infrastructure and risks posed by natural hazards, and the response of infrastructure to those hazards. In recent years, his research has dealt with dam safety and with the response of levee systems to flooding, including actuarial issues related to flood and other natural hazard insurance. He has also worked on quantitative methods in facilities management, especially federally-owned facilities, and on information technology applications to facilities management. He is a recipient of the Commander's Award for Public Service from the U.S. Army Corps of Engineers, and recipient of the Thomas A. Middlebrooks Award and State-of-the-Art Award both from the American Society of Civil Engineers. He is co-author of publications on Reliability and Statistics in Geotechnical Engineering (2003), Risk and Uncertainty in Dam Safety (2004), and Protection of Civil Infrastructure from Acts of Terrorism (2006). Dr. Baecher received his Ph.D. (1972) and Sc.M. (1970) degrees from the Massachusetts Institute of Technology, and his B.S.C.E. (1968) from the University of California at Berkeley. He has been involved in several enterprise risk management efforts including the (US) Interagency Performance Evaluation Taskforce on Hurricane Katrina, the Natural and Chronic Risk assessment for the Panama Canal Authority (ACP), and the Joint (hydropower) Industry Project on Spillway Safety. He has co-authored 19 National Academy studies on risk management in federal practice including those on Mt St Helens and Spirit Lake, the National Bio-Ag Defense Laboratory at Manhattan KS, the Department of Homeland Security's approach to risk analysis, and a review of the Risk Assessment Bulletin of the Office of Management and Budget. He is a part-time resident of Cape Cod.

Barbara A. Bekins

Member

BARBARA A. BEKINS (NAE) is a retired research hydrologist with the U.S. Geological Survey, Water Mission Area, based at Moffett Field, California. Her research area is the fate and transport of contaminants in groundwater. She has published articles on natural attenuation of crude oil, jet fuel, creosote, and nitrate, as well as a compilation of case studies for eight classes of groundwater contaminants including metals and radionuclides. She is a fellow of the Geological Society of America and the American Geophysical Union and a member of the National Academy of Engineering. She earned a Geology Ph.D. from the University of California, Santa Cruz, in 1993. She was a member of the National Academy of Sciences Committee on Intrinsic Remediation, which authored the book Natural Attenuation for Groundwater Remediation.

Ellen Gilinsky

Member

ELLEN GILINSKY is president of Ellen Gilinsky, LLC, which she started in January 2017 to work with government, industry, and the private sector on finding environmental solutions to water challenges. From 2011 through 2016, she was the Associate Deputy Assistant Administrator for Water at the Environmental Protection Agency, where she played a key role in water programs at the federal, state, and local levels, working closely with diverse stakeholders in the water quality, quantity, and agriculture sectors, and serving as co-chair of the Mississippi River/Gulf of Mexico Hypoxia Task Force. Prior to this appointment, she served as director of the Water Division at the Virginia Department of Environmental Quality. She is board chair of the Soil and Water Conservation Society through August 2026. Dr. Gilinsky received her BA in Biology from the University of Pennsylvania and her PhD in Zoology, with a concentration in aquatic ecology, from the University of North Carolina at Chapel Hill. She currently holds an appointment to the National Academy of Sciences Water Science and Technology Board.

Christopher S. Griggs

Member

CHRISTOPHER S. GRIGGS is a Senior Research Physical Scientist at the U.S. Army Engineer Research and Development Center (ERDC), where he leads research in environmental chemistry, water security, and advanced materials for environmental applications. His work supports resilient water systems and environmental solutions for national security and public health. His research focuses on designing novel polymer composites, graphene-based materials, and other engineered sorbents to detect, separate, and remove emerging contaminants, including PFAS, toxic metals, and cyanotoxins. Before joining ERDC, Dr. Griggs worked in the private sector in water treatment, environmental compliance, and engineering consulting with Applied Research Associates, Severn Trent, and CH2M Hill (now Jacobs). He has authored more than 50 peer-reviewed publications and holds nine U.S. patents. Dr. Griggs earned a Ph.D. in Analytical Chemistry from the University of Alabama.

Gerald J. Lukowski

Member

GERALD (JERRY) J. LUKOWSKI currently serves as Director of Public Works and Water & Sewer for the Town of Watertown, Connecticut, where he oversees roadways, bridges, engineering, transfer station, and utility operations. Previously, he served as Transportation Director of Property, Facilities and Real Estate for the Connecticut Department of Transportation and completed a distinguished 35-year military career with the Connecticut Army National Guard, culminating as Chief of Staff/Command Administrative Officer and attaining the rank of Brigadier General in the State of Connecticut and Colonel federally. Mr. Lukowski's expertise includes public works administration, infrastructure planning, facilities and real estate management, utilities, transportation systems, construction management, and large-scale capital program execution. Throughout his career, he has managed complex organizations, statewide operations, and major construction and infrastructure portfolios, including oversight of nearly $1 billion in military construction and facilities funding. He has also led operations within municipal government, public utilities, and educational facilities systems. His professional certifications include Licensed State Building Official, Certified Water Distribution Operator, Certified Highway Road Master, and Certified Construction and Facility Management Officer. Mr. Lukowski earned a Master of Science in Environmental Engineering and a Bachelor of Science in Civil Engineering from the University of New Haven and completed the U.S. Army Engineer Officer Advanced Course as a Distinguished Honor Graduate.

Kurt D. Pennell

Member

KURT PENNELL is the 250th Anniversary Professor of Engineering in the School of Engineering at Brown University. Previously, Dr. Pennell was Chair of the Department of Civil and Environmental Engineering at Tufts University, and the Bernard M. Gordon Senior Faculty Fellow in Environmental Engineering. Prior to moving to Tufts, Dr. Pennell was a Professor in the School of Civil and Environmental Engineering at the Georgia Institute of Technology and held an adjunct faculty appointment in the Department of Neurology at the Emory University School of Medicine. His current research focuses on the environmental fate and remediation of per- and polyfluoroalkyl substances (PFAS), the use of high resolution mass spectrometry to characterize the exposome and associated metabolic responses. Dr. Pennell has published over 250 referred journal articles and book chapters, is a registered Professional Engineer (PE), a Board Certified Environmental Engineer (BCEE), a Fellow of the American Society of Civil Engineers (ASCE), and a Fellow of the Association of Environmental Engineering and Science Professors (AEESP). He has received several research and teaching awards, including the Strategic Environmental Research and Development Program (SERDP) Project of the Year in Environmental Restoration, National Institutes of Health K25 Career Award, and the Order of Omega Faculty Member of Year Award. He earned his PhD from the University of Florida in 1990. Dr. Pennell served on the National Research Council (NRC) committee that evaluated "Alternatives for Managing the Nation's Complex Contaminated Groundwater Sites."

Jennifer Richmond-Bryant

Member

JENNIFER RICHMOND-BRYANT is an Associate Professor in the Department of Forestry and Environmental Resources at North Carolina State University. She joined NC State in 2019 as an Associate Professor of the Practice after holding previous positions at the U.S. Environmental Protection Agency (EPA) and City University of New York. Her research specializes in human exposure to air pollution with a focus on communities experiencing environmental health disparities. She is a project director with the Louisiana State University Superfund Research Program, where she has conducted a field campaign to assess air pollution and health impacts of emissions from an open burn/open detonation hazardous waste thermal treatment facility in Colfax, LA and is PI of a time-sensitive grant to explore impacts to air pollution exposure due to operational changes at the Colfax site. Dr. Richmond-Bryant was appointed to the U.S. Environmental Protection Agency’s Board of Scientific Advisors on January 12, 2025 and served on the World Health Organization Global Air Pollution and Health Technical Advisory Group on Exposure Assessment from 2021-2025. She received a PhD in Environmental Sciences and Engineering from the University of North Carolina at Chapel Hill in 2003.

Ivan Rusyn

Member

IVAN RUSYN is a University Professor in the Department of Veterinary Physiology and Pharmacology in the College of Veterinary Medicine and Biomedical Sciences at Texas A&M University. He is also Director of Texas A&M University Superfund Research Center. His laboratory has an active research portfolio with a focus on the mechanisms of action of environmental toxicants, the genetic determinants of susceptibility to toxicant-induced injury, and the use of new approach methods in regulatory toxicology. His studies on the health effects of environmental agents have resulted in over 350 peer-reviewed publications. He was a member of the Research Committee of the Health Effects Institute and was on the Board of Scientific Councilors of the National Institute of Environmental Health Sciences. Dr. Rusyn received his M.D. from Ukrainian State Medical University in Kyiv and his Ph.D. in Toxicology from the University of North Carolina at Chapel Hill. He has served on several committees of the National Academies, including committees that reviewed the formaldehyde and styrene assessments in the National Toxicology Program 12th Report on Carcinogens. He chaired the Committee to Review Report on Long-Term Health Effects on Army Test Subjects and recently served on the committee to Review of EPA's 2022 Draft Formaldehyde Assessment.

Kamini Singha

Member

KAMINI SINGHA is a University Distinguished Professor and the Associate Dean of Research and Faculty Affairs Earth and Society Programs at the Colorado School of Mines. Her research interests are focused on groundwater hydrology and hydrogeophysics. Dr. Singha is an award-winning teacher, the recipient of numerous awards including two Fulbrights, and is a Fellow of the American Geophysical Union and the Geological Society of America. She served as the U.S. National Groundwater Association's Darcy Lecturer in 2017 and was the AGU Witherspoon Lecturer in 2022. She earned her B.S. in geophysics from the University of Connecticut and her Ph.D., in hydrogeology, from Stanford University. She has previously served the National Academies as an author of the Characterization, Modeling, Monitoring, and Remediation of Fractured Rocks consensus report in 2015 and as a planning committee member for the Workshop on Groundwater Recharge and Flow in 2018.

Martin Stute

Member

MARTIN STUTE is the Alena Wels Hirschorn '58 and Martin Hirschorn Emeritus Professor in Environmental & Applied Sciences at Barnard College. He has been a Professor at Barnard College, Columbia University since 1995. He was also affiliated with the Lamont-Doherty Earth Observatory and a member of the Department of Earth and Environmental Science at Columbia University. His research interests include water resources, contaminant transport in groundwater, environmental tracer applications in hydrology, carbon sequestration, unconventional gas production, paleoclimate, and mathematical modeling of environmental phenomena. He received his MS equivalent and PhD from the Heidelberg University in Germany.

Julia Varshavsky

Member

JULIA VARSHAVSKY is an Assistant Professor of Environmental Health at Northeastern University (NU), with a joint appointment in the Department of Health Sciences, Bouvé College of Health Sciences, and the Department of Civil and Environmental Engineering, College of Engineering. Dr. Varshavsky is Core Faculty in NU's Social Science Environmental Health Research Institute, where she leads a multi-generational lab focused on the integration of molecular epidemiology and toxicology with exposure science to inform research and decision-making. Dr. Varshavsky serves on the science advisory team for the Collaborative for Health and Environment, a leading environmental health organization, and as a member of Project Targeting Environmental-Neuro Development Risks (TENDR). She is a Co-Investigator in the Environmental influences on Child Health Outcomes (ECHO) study, where she serves on the ECHO Implementation Task Force. Before NU, she served as a research scientist for the California Office of Environmental Health Hazard Assessment and as a postdoc at University of California San Francisco's Program on Reproductive Health and the Environment. Dr. Varshavsky was recently named a 2026 Frontiers of Science Fellow by the NAS. She received her PhD and MPH from the University of California, Berkeley School of Public Health.

Sarah Juckett

Staff Officer