

**Invitation for Public Comment on the List of Candidates
For the Environmental Protection Agency Science Advisory Board
Ecological Processes and Effects Committee**

June 24, 2014

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a *Federal Register* Notice on April 18, 2014 (79 FR 21922-21923) that it was inviting nominations of experts to be considered for the Administrator's appointment to the SAB Ecological Processes and Effects Committee. The SAB Ecological Processes and Effects Committee provides advice to the EPA Administrator, through the chartered SAB, on science and research to assess, protect and restore the health of ecosystems. For the Ecological Processes and Effects Committee, the SAB Staff Office sought nominations of experts within the disciplines of aquatic ecology; landscape ecology, terrestrial ecology; systems ecology; ecotoxicology; and ecological risk assessment.

The SAB Staff Office identified 9 candidates based on their expertise and willingness to serve. We hereby invite public comments on the attached List of Candidates for consideration by the SAB Staff Office. Comments should be submitted to Dr. Thomas Armitage, Designated Federal Officer, no later than July 18, 2014 at armitage.thomas@epa.gov. E-mail is the preferred mode of receipt. Please be advised that public comments are subject to release under the Freedom of Information Act.

Chen, Celia

Dartmouth College

Dr. Celia Chen is a Research Professor in the Department of Biological Sciences at Dartmouth College. She has been a lead scientist for 19 years in the Dartmouth Toxic Metals Superfund Research Program and has studied the fate and effects of metal contaminants in freshwater and estuarine ecosystems including the bioaccumulation and trophic transfer of mercury in lakes throughout the Northeast United States and coastal marshes from Maine to Maryland. She has also conducted research on using genomic tools as biomarkers of metal exposure for the model organisms, *Daphnia pulex* and *Fundulus heteroclitus*. She has investigated the effects of multiple stressors on aquatic organisms by developing methods for quantifying the antagonistic, synergistic, and additive effects of stressors such as organic contaminants, pH, food availability, and temperature. Dr. Chen has also studied the impact of environmental changes related to climate on demography and phenology of aquatic invertebrates, and more recently on the cycling and fate of methylmercury in marine ecosystems. Dr. Chen received her undergraduate degree in Biology and Environmental Studies at Dartmouth College, a master's degree in Biological Oceanography at the Graduate School of Oceanography of the University of Rhode Island and a Ph.D. in Ecology from Dartmouth College. She worked as a Staff Officer at the Marine Board of the National Research Council and has chaired regional and international workshops on mercury in marine ecosystems. In 2010-2012, she led a science translation initiative, the Coastal Marine Mercury Ecosystem Research Collaborative comprised of over 70 mercury scientists, to bring mercury science to national and international policy-makers. She is currently a Review Editor for the journal, *Ecohealth*, and has been a guest editor of special issues in *Environmental Research*, *Environmental Health Perspectives*, *Estuaries and Coasts*, and *Ecohealth*. She currently serves on the U.S. EPA Science Advisory Board Ecological Processes and Effects Committee as well as the Board of the North Atlantic Chapter of the Society of Environmental Toxicology and Chemistry, Gelfond Fund Advisory Committee at Stony Brook University, and the Scientific Advisory Committee of the Lake Sunapee Protection Association in New Hampshire. Her research has recently been supported by the National Institute of Environmental Health Sciences, the National Science Foundation, and the U.S. Department of Agriculture Forest Service.

Cobb III, George P.

Baylor University

Dr. George P. Cobb is a Professor at Baylor University, where he serves as Chair of the Department of Environmental Science. Dr. Cobb received a B.S. in Chemistry from the College of Charleston (1982). Thereafter, he received a Ph.D. in Chemistry from The University of South Florida (1989), where he developed sampling strategies to determine vapor/particle distribution of atmospheric organic chemicals. Dr. Cobb has published over 110 peer reviewed journal articles as well as numerous book chapters. Throughout his career, Dr. Cobb has developed novel sampling and analysis techniques to quantify a wide range of chemicals, including persistent organic pollutants, volatile organics, cholinergic insecticides, trace metals, explosives, and nanomaterials. Dr. Cobb's approaches allow quantification of toxicants at environmentally relevant concentrations, and as such, his techniques have been used to evaluate toxicant transport, transformation, and biological exposure. These approaches have often been used to assess risks in aquatic and riparian systems rapidly and cost effectively. Dr. Cobb and his research group recently employed novel microRNA techniques to assess organism susceptibility and response to toxicant exposure. This research has been funded by National Institute of Environmental Health Sciences, United States Environmental Protection Agency National Center for Environmental Research, Department of Defense, Department of Energy, as well as state and local governments. Dr. Cobb has served on more than one dozen United States Environmental Protection Agency (USEPA) Science Advisory Panels to evaluate risks of pesticides and genetically modified organisms. He also serves in leadership positions within the American Chemical Society, primarily within the Division of Environmental Chemistry and as a subcommittee chair for the Committee for Environmental Improvement. He previously served on the World Council for the Society of Environmental Toxicology and Chemistry (SETAC), and is a past President of SETAC North America.

David, Mark

University of Illinois

Dr. Mark David is a Professor in the Department of Natural Resources and Environmental Sciences at the University of Illinois at Urbana-Champaign (UIUC), where he has been on the faculty since 1985. He holds a B.S. in Forest Science from the Pennsylvania State University, an M.S. in Forest Biogeochemistry from the University of Maine, and a Ph.D. in Environmental Science from the State University of New York, College of Environmental Science and Forestry. Dr. David's research is focused on the biogeochemistry of nutrients in agricultural, forested, and aquatic ecosystems. He has conducted interdisciplinary research to study complex systems from a variety of approaches. Dr. David's recent and current research program examines agricultural and aquatic biogeochemistry of nitrogen and phosphorus, including linkages between agricultural and aquatic systems. He has studied nitrogen and phosphorus transformations and export at agricultural field, watershed, and regional scales; examined the use of cover crops, drainage water management, wetlands, and bioreactors for reducing downstream nutrient losses; and has evaluated the biogeochemistry of biofuels, particularly the response of the nitrogen cycle. Dr. David has authored or co-authored more than 134 refereed journal articles, and many oral and poster presentations at national meetings, along with other technical and non-technical publications. His research is highly cited: he was named as an Institute for Scientific Information (ISI) Highly Cited Researcher in Ecology and Environment. Dr. David has been elected as a Fellow in the Soil Science Society of America, the American Society of Agronomy, and the American Association for the Advancement of Science. Recently he received the American Society of Agronomy Environmental Quality Research Award. He has served as an associate editor for both the Soil Science Society of America Journal and for the Journal of Environmental Quality; has frequently served as a panel member for review of proposals for funding from the U.S. Department of Agriculture (USDA), National Science Foundation (NSF), and U.S. Environmental Protection Agency (EPA); and has served on review teams to assess departmental and programmatic activities at several other universities. Dr. David served on the EPA Science Advisory Board (SAB), Hypoxia Advisory Panel that conducted a reassessment of hypoxia in the Gulf of Mexico, including nutrient sources from the Mississippi River basin, as well a consultant to the SAB Ecological Processes and Effects Committee review of Nutrient Criteria Guidance. He is currently serving as an elected member of the Board of Directors of the American Society of Agronomy. National and state competitive grants have supported his recent biogeochemistry research in Illinois and the Midwest. This includes grants from USDA National Institute of Food and Agriculture, Illinois EPA, Illinois Nutrient Research and Education Council, Department of Energy, and the Energy Biosciences Institute.

Di Giulio, Richard

Duke University

Dr. Richard T. Di Giulio is Professor of Environmental Toxicology in the Nicholas School of the Environment at Duke University. At Duke, he also serves as Director of the Integrated Toxicology and Environmental Health Program, Director of the Superfund Research Center, and Co-Principal Investigator for the Center for the Environmental Implications of Nanotechnology. Dr. Di Giulio has published extensively on subjects including biochemical and molecular mechanisms of adaptation and toxicity, biomarkers for chemical exposure and toxicity, effects of chemical mixtures and multiple stressors, and chemical contamination of sediments. His current work focuses on mechanisms by which polycyclic aromatic hydrocarbons (PAHs) and nanomaterials perturb embryonic development in fish models (zebrafish and killifish), the evolutionary consequences of hydrocarbon pollution on fish populations, and the ecological and human health impacts of mountaintop coal mining in Appalachia. Additionally, he has organized symposia and workshops, and written on, the broader subject of interconnections between human health and ecological integrity. Dr. Di Giulio's research is supported by the National Institute of Environmental Health Sciences, the National Science Foundation, U.S. EPA, and the Foundation for the Carolinas. Dr. Di Giulio is a member of the Computational Toxicology Committee for the Board of Scientific Counselors, U.S. EPA, is a member of the National Academy of Science Committee on Exposure Assessment in the 21st Century, and is associate editor for Environmental Health Perspectives. Dr. Di Giulio received a B.A. in comparative literature from the University of Texas at Austin, the M.S. in wildlife biology from Louisiana State University and the Ph.D. in environmental toxicology from Virginia Polytechnic Institute and State University. He is an active member of the Society of Environmental Toxicology and Chemistry (SETAC), where he previously served on the Board of Directors, and the Society of Toxicology (SOT).

Johnson, Lucinda

University of Minnesota Duluth

Dr. Lucinda Johnson is Director of the Center for Water and the Environment at the University of Minnesota's Natural Resources Research Institute. Dr. Johnson holds a B.A. in Botany from Duke University, an M.S. in Entomology from State University of New York, College of Environmental Science and Forestry, and a Ph.D. in Zoology from Michigan State University. Dr. Johnson is an aquatic and landscape ecologist whose research focuses on the impacts of multiple stressors on aquatic ecosystems with emphasis on human activities (e.g., land use) and climate change. Much of her work has involved quantifying interactions between terrestrial and aquatic ecosystems, with particular emphasis on effects on communities and habitats. Dr. Johnson's current research activities involve: validating indicators of condition for Great Lakes coastal ecosystems; assessing climate change and land use change impacts on amphibian communities in the Prairie Pothole Region; and predicting climate change impacts on cold water fish communities in northern lakes and streams. Her research on amphibians specifically addresses the concept of functional landscape connectivity of wetlands with respect to changing hydrologic conditions associated with climate change. In addition, Johnson and her team consider the connectivity and spatial position of landscape patches (especially urban, agricultural land use) in predicting ecosystem processes and community structure in streams. Dr. Johnson serves on numerous advisory committees advising the State of Minnesota on climate change impacts on aquatic systems. Dr. Johnson has held leadership positions in the Association of Ecosystem Research Centers (President, 2008-2010; Secretary 2013-2015) and the Society for Freshwater Science (formerly North American Benthological Society; President, 2010-2011). She is a member of the U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Ecological Processes and Effects Committee and the SAB panel for the review of the EPA Water Body Connectivity Report. Johnson also was recently appointed to the International Joint Commission's Science Advisory Board for a three year term. She has participated on the SAB panel evaluating the effects of Mountain Top Removal Mining and the Conductivity Benchmark (2010-2011), and was recently appointed to serve on the agency's review panel for the Report on the Environment. Dr. Johnson's research is currently funded by grants from the U.S. EPA Great Lakes Restoration Initiative, the Minnesota Pollution Control Agency, and the U.S. Geological Survey Climate Change Program, and the Michigan Water Center.

Reash, Robin

American Electric Power

Mr. Robin Reash is a Consulting Environmental Scientist with American Electric Power's Environmental Services Division in Columbus, Ohio. His principal duties include conducting technical studies for wastewater compliance, conducting applied research on the fate and effect of power plant pollutants, and tracking the development of regulatory standards at the state and federal level. Mr. Reash received a B.A. degree from Wittenberg University and a M.S. degree from the Ohio State University. He has previous work experience with the Ohio EPA and the Oklahoma Water Resources Board. His areas of expertise include the bioaccumulation and terrestrial deposition of mercury and other trace elements, thermal biology and its effects, whole effluent toxicity, and trace element cycling. He has published over 30 papers in peer-reviewed journals and has authored or co-authored five book chapters. He is a Certified Fisheries Professional. Mr. Reash participated in two society of Environmental Toxicology and Chemistry (SETAC) Pellston workshops (indicators of reduced mercury deposition and environmental chemistry/ effects of selenium to aquatic life) and served on a U.S. EPA Science Advisory Board Panel evaluating EPA's methodology for deriving aquatic life criteria. In 2002 he served as an external peer reviewer for EPA's draft revised aquatic life criteria for selenium. He is currently serving on an external advisory group reviewing the development of numeric nutrient criteria in Ohio. He partners with the Electric Power Research Institute (EPRI) to conduct targeted applied research. His current research projects (funded by American Electric Power and the EPRI) are: 1) use of otolith microchemistry data to evaluate exposure of freshwater fish to bioaccumulative trace elements; 2) the toxicity of flue gas desulfurization (FGD)-influenced waste streams to laboratory organisms; and 3) evaluating the bioaccumulation patterns of mercury and selenium in freshwater fish, and their potential interactions. Mr. Reash currently serves on the editorial board of the journal Integrated Environmental Assessment and Management.

Schlesinger, William

Cary Institute of Ecosystem Studies

Dr. William H. Schlesinger is President Emeritus of the Cary Institute of Ecosystem Studies, a private ecological research institute on the grounds of the Cary Arboretum in Millbrook, NY. He assumed this position after 27 years on the faculty of Duke University. He completed his A.B. at Dartmouth (1972), and Ph.D. at Cornell (1976) and moved to Duke in 1980, where he retired in spring 2007 as Dean of the Nicholas School of the Environment and Earth Sciences and as James B. Duke Professor of Biogeochemistry. Dr. Schlesinger is the author or coauthor of over 200 scientific papers on subjects of environmental chemistry and global change and the widely-adopted textbook *Biogeochemistry: An Analysis of Global Change* (Academic Press, 2nd ed. 1997). He has published editorials and columns in the *Charlotte Observer*, *Chicago Tribune*, *Los Angeles Times*, *Philadelphia Inquirer*, and the *Raleigh News and Observer*. He was elected a member of the National Academy of Sciences in 2003, and was President of the Ecological Society of America for 2003-2004. He is also a fellow in the American Academy of Arts and Sciences, the American Geophysical Union, and the Soil Science Society of America. Dr. Schlesinger currently receives no federal research funding.

Stubblefield, William

Oregon State University

Dr. William Stubblefield is a senior research professor in the Department of Molecular and Environmental Toxicology at Oregon State University. Dr. Stubblefield has more than 25 years of experience in environmental toxicology, human and environmental risk assessment, derivation of water, sediment and soil criteria, and aquatic and wildlife toxicology studies. He has authored more than 50 peer-reviewed publications and technical presentations in the areas of aquatic and wildlife toxicology and risk assessment. He has conducted a variety of research programs aimed at the evaluation of the toxicity of metals and hydrocarbons in the environment. Dr. Stubblefield's research has examined acclimation induced changes in the responses of aquatic organisms to copper, zinc, and cadmium; evaluated the acute and chronic toxicity of manganese, cobalt, aluminum, methyl tert-butyl ether, petroleum hydrocarbon mixtures and a variety of other compounds; and quantified the effects of water quality characteristics, e.g., hardness, alkalinity, dissolved organic carbon, on the toxicity of several metals (e.g., nickel, lead, and silver). His current research examines methods/models that can be used to predict the toxicity of metals and hydrocarbons to aquatic organisms. Current sources of research funding include: the Cobalt Development Institute, European Aluminum Association, Iron Platform, and British Petroleum. Dr. Stubblefield is an active member of the Society of Environmental Toxicology and Chemistry (SETAC), where he served as President of the Society, member of the Society's Board of Directors, chairman of the SETAC's Metals Advisory Group, and member of the Editorial Board for Environmental Toxicology and Chemistry. He has been an invited participant at a number of national and international scientific and regulatory conferences, served on U.S. EPA and National Institute of Environmental Health Sciences (NIEHS) peer-review panels, and frequently act as a technical reviewer for a number of scientific publications. Dr. Stubblefield has a Ph.D. in Zoology and Physiology (emphasis in Environmental Toxicology) from the University of Wyoming, a M.S. degree in Toxicology/Toxicodynamics from the University of Kentucky, and a B.S. in Biology from Eastern Kentucky University.

von Stackelberg, Katherine

Harvard School of Public Health

Dr. Katherine von Stackelberg is a Principal at NEK Associates Ltd. and also holds a research affiliation as a Research Scientist at the Harvard Center for Risk Analysis. For the past several years, she has served as Leader of the Research Translation Core of a Superfund Research Program grant. Dr. von Stackelberg has over 25 years of experience as a human health and ecological risk assessor, developing integrated, risk-based modeling approaches to support sustainable environmental decision making. She has published on the use of uncertainty analysis in decision making, bioaccumulation modeling, and use of decision analytic approaches to integrate ecosystem services and risk assessment for more effective decision making. Dr. von Stackelberg serves as peer reviewer for numerous journals. She is on the editorial boards of Human and Ecological Risk Assessment and Risk Analysis and was recently appointed Area Editor for Ecological Risk Assessment for Risk Analysis. Dr. von Stackelberg is the current Chair of the U.S. EPA Board of Scientific Counselors and led the effort to explore the use of decision analytic tools and methods to support environmental decision making within the EPA Office of Research and Development. She is a member of the Scientific Advisors on Risk Assessment for the European Commission in Brussels, and serves on several technical committees of the Interstate Technology and Regulatory Council (ITRC), including complex sites, contaminated sediments, and risk assessment. She has served on several U.S. EPA funding and grant program peer review panels. Dr. von Stackelberg received an A.B. cum laude from Harvard College, and a Sc.M. and Sc.D. from the Harvard School of Public Health in Environmental Science and Risk Management. Her sources of research funding include the National Institute of Environmental Health Sciences (NIEHS) Superfund Research Program, the Electric Power Research Institute (EPRI), and the Department of Defense Strategic Environmental Research and Development Program (SERDP) and Environmental Security Technology Certification Program (ESTCP).