

**Invitation for Public Comment on the List of Candidates for the
EPA Science Advisory Board (SAB)
Nutrient Criteria Review Panel**

August 11, 2010

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a Federal Register Notice (Volume 75, Number 118, Pages 35026-35027) published on June 21, 2010 that it was forming the SAB Nutrient Criteria Review Panel to review and provide independent expert advice on methods and approaches for developing numeric nutrient criteria for Florida's estuarine and coastal waters, downstream protection values in streams to protect those waters, and criteria for flowing waters in the south Florida region (including canals). To form the Panel, the SAB Staff Office sought public nominations of nationally recognized and qualified experts in one or more of the following areas, particularly with respect to assessing nutrient effects in freshwater, estuarine and coastal ecosystems: biology; chemistry; biogeochemistry; ecology; limnology; oceanography; modeling; and statistics. The SAB Staff Office has identified 38 candidates based on their relevant expertise and willingness to serve.

The SAB Staff Office Director will make the final decision about who will serve on the Panel based on all relevant information. This will include a review of the confidential financial disclosure form (EPA Form 3110-48), relevant information gathered by staff, and public comments. For the EPA SAB Staff Office, a balanced Panel is characterized by inclusion of candidates who possess the necessary domains of knowledge, the relevant scientific perspectives (which, among other factors, can be influenced by work history and affiliation), and the collective breadth of experience to adequately address the general charge. Specific criteria to be used in evaluating a candidate include: a) scientific and/or technical expertise, knowledge, and experience; b) availability and willingness to serve; c) absence of financial conflicts of interest; d) absence of appearance of a lack of impartiality; e) skills working in advisory committees and panels; and f) for the panel as a whole, diversity of scientific expertise and viewpoints.

We hereby invite comments on the attached List of Candidates for consideration by the SAB Staff Office in the formation of this Panel. Comments should be submitted to Ms. Stephanie Sanzone, Designated Federal Officer, no later than September 3, 2010. E-mailing comments (sanzone.stephanie@epa.gov) is the preferred mode of receipt.

Nutrient Criteria Review Panel Candidates

Anderson, Donald

Woods Hole Oceanographic Institution

Dr. Donald M. Anderson is a senior scientist in the Biology Department of the Woods Hole Oceanographic Institution (WHOI). He earned three degrees from MIT – a BS in Mechanical Engineering, and an MS and PhD in Civil and Environmental Engineering. Anderson is the former director of WHOI's Coastal Ocean Institute (COI), and presently serves as Director of the Cooperative Institute for North Atlantic Research (CINAR). As Director of CINAR, Anderson facilitates research on many important coastal issues, ranging from fisheries ecology and conservation of threatened resources to climate change, eutrophication, and coastal processes. He also serves as Director of the U.S. National Office for Marine Biotoxins and Harmful Algal Blooms. His personal research focus is on toxic or harmful algal blooms (HABs), commonly called "red tides", utilizing approaches ranging from molecular and cellular studies of toxin genetics and regulation to the large-scale oceanography and ecology of the "blooms" of these microorganisms. Eutrophication and pollution are implicated in many HAB outbreaks worldwide. Anderson serves on the Scientific Steering Committee for the GEOHAB (Global Ecology and oceanography of Harmful Algal Blooms) core project on HABs and Eutrophication, and has written several papers on that specific topic. He also was a member of the National Research Council Committee on the Causes and Management of Coastal Eutrophication. Along with an active field and laboratory research program ranging from molecular and genetic studies to large-scale oceanographic surveys, Anderson is heavily involved in national and international program development for research, monitoring, and training on red tides, marine biotoxins, and HABs. He has testified multiple times before Congressional committees, and has been actively involved in legislation and appropriations related to HABs and hypoxia. He is also an advisor to several foreign countries and international aid organizations on eutrophication, red tides, algal blooms, and HABs. He is the author, co-author, or editor of over 240 scientific papers and 12 books. His awards include the Stanley W. Watson Chair for Excellence in Oceanography from WHOI, the Environmental Hero award from NOAA, the David L. Belding Award from the Massachusetts Marine Fisheries Advisory Commission, and the Yasumoto Lifetime Achievement Award from the International Society for the Study of Harmful Algae (ISSHA).

Aneja, Viney

North Carolina State University

Dr. Viney Aneja is a Professor in the Department of Marine, Earth, and Atmospheric Sciences, North Carolina State University. He obtained his B. Tech. degree in Chemical Engineering from the Indian Institute of Technology, Kanpur, India; and MS and Ph.D. degrees from the Department of Chemical Engineering, N. C. State University, Raleigh, N.C. In 2001 he was also appointed Professor of Environmental Technology, Department of Forestry and Environmental Resources. He is the recipient of the 2007 North Carolina Award in Science, the highest award a civilian can receive from the Governor of North Carolina; the 2001 Lyman A. Ripperton Award from the Air and Waste Management Association for "distinguished achievement as an educator"; and the 1998 Frank Chambers Award of the Air and Waste Management Association for "outstanding achievements in the science and art of air pollution control". At North Carolina State University Dr. Aneja has developed one of the nation's leading agricultural air-quality research programs (<http://www.meas.ncsu.edu/airquality>). He has published over 140 scientific papers, 112 book chapters and conference proceedings, 5 US patents, and two books on his research. His recent work has concentrated on the critical issue of the contribution of animal feeding operations to air quality; quantifying the emissions, transformation, transport and fate of pollutants in the environment. In addition to appearing in the peer reviewed literature, his research has been featured on CNN, ABC, CBS, NBC, National Public Radio, Public Broadcasting System, The New York Times, The Associated Press, Environmental Manager, and Fortune magazine. He has served on the editorial boards of the international journals Environmental Pollution, Chemosphere, Journal of the Air and Waste Management Association, and Environmental Manager; and currently serves as Associate Editor for International Journal of Air Quality, Atmosphere, and Health; International Journal of Applied Environmental Sciences; The Open Environmental & Biological Monitoring Journal and the Scientific Journals International. In 2006, the North Carolina Governor, Hon. Mike Easley, appointed Dr. Aneja to the Hazardous Materials Task Force to examine current regulations for hazardous waste storage facilities, and recommend changes to tighten the rules governing these facilities, including legislation if needed, to fully protect the state's citizens and environment. Dr. Aneja was the only research scientist invited to participate on the task force. In 2000 he was a member of the North Carolina Delegation to the Netherlands on Agricultural Air Quality, and in 2001 he was leader of the U.S. Department of State Delegation to France on Environment Science and Technology. He has also served on the editorial boards of the journals Environmental Pollution, Chemosphere, Journal of the Air and Waste Management Association, Environmental Manager; and serves as Associate Editor for International Journal of Air Quality, Atmosphere, and Health, and the International Journal of Applied Environmental Sciences.

Bierman, Victor

LimnoTech

Dr. Victor J. Bierman, Jr., is a Senior Scientist at LimnoTech, an environmental science and engineering consulting firm whose home office is located in Ann Arbor, Michigan. He earned an A.B. in Science from Villanova University, and an M.S. in Physics and a Ph.D. in Environmental Engineering from the University of Notre Dame. He is a former U.S. EPA National Expert in Environmental Exposure Assessment, and a former Associate Professor in the Department of Civil Engineering at the University of Notre Dame. He is also a Board Certified Environmental Engineering Member of the American Academy of Environmental Engineers. Dr. Bierman serves on an Independent External Review Panel for the U.S. Army Corps of Engineers St. Johns Bayou and New Madrid Floodway (MO) Consolidated NEPA Document and Project Work Plan, and is a former member of the U.S. EPA Science Advisory Board, Ecological Processes and Effects Committee, to review draft technical guidance on development of numeric nutrient criteria. He also peer reviewed a U.S. EPA linked watershed-water quality modeling system as an alternate approach for development of numeric nutrient water quality criteria. Dr. Bierman has 37 years of experience in the development and application of water quality models for eutrophication and the transport and fate of toxic chemicals. He conducts research and development on projects for federal, state and regional government clients. He also provides scientific peer review and expert testimony on a variety of environmental issues for government agencies, and industrial, regulatory and private clients. He works on assessment and solution of problems related to nutrients, nuisance algal blooms, nitrogen fixation, hypoxia and ecosystem processes. He has conducted these studies in watersheds, lakes, rivers, estuaries and coastal marine systems. He also works on toxic chemical transport, fate, partitioning and bioaccumulation, and has conducted studies in major river systems, estuaries, the Great Lakes, and at U.S. EPA Superfund sites.

Boyer, Elizabeth

Pennsylvania State University

Dr. Elizabeth W. Boyer is Associate Professor, School of Forest Resources, Pennsylvania State University; Assistant Director, Penn State Institutes of Energy and the Environment; and Director, Pennsylvania Water Resources Research Center. Until recently, Dr. Boyer was Assistant Professor in the Department of Environmental Science, Policy and Management at the University of California, Berkeley. She holds a B.S. degree from Penn State University in the Department of Geography (concentration in remote sensing and geographic information), M.S. and Ph.D. degrees from the University of Virginia in the Department of Environmental Sciences (concentration in hydrology), and has had post-doctoral experience at Cornell University in the Program in Biogeochemistry and Environmental Change. Prior to her current position, she served on the faculty at the State University of New York's College of Environmental Science and Forestry, and has held adjunct positions at Cornell University and at Syracuse University. Dr. Boyer's research program addresses coupled hydrological and ecological processes that affect water quality (particularly nutrients and sediments) and water quantity (streamflow and water yield) issuing from watersheds. She is interested in how human activities such as land use change and urbanization and natural variability such as droughts and floods influence ecosystems and water quality conditions in surface waters. She is the co-chair of the upcoming Gordon Conference on Catchment Science: Interactions of Hydrology, Biology and Geochemistry, and is an active participant in activities of the American Geophysical Union and the Consortium of Universities for the Advancement of Hydrologic Science.

Boynton, Walter

University of Maryland

Dr. Boynton is currently a Professor at the University of Maryland Center for Environmental Science (UMCES), one of the 13 institutions of the University System of Maryland. Dr. Boynton earned his BS degree in biology from Springfield College, MS degree in Marine Science from the University of North Carolina and a PhD degree in Environmental Engineering from the University of Florida. He has been a member of the faculty of the Center's Chesapeake Biological Laboratory since 1975. As an estuarine ecologist, Dr. Boynton has conducted research for 34 years in the Chesapeake Bay region as well as in the Baltic Sea, Mexican coastal waters and other coastal environments of the United States. He has published about 100 papers in professional journals and books and has been active as well in writing articles for the general public. Dr. Boynton has emphasized writing of technical documents for environmental management agencies on subjects ranging from nutrient enrichment of coastal waters and the effects this has on water quality, sea grasses and estuarine food webs to issues related to estuarine fish communities. Dr. Boynton has also been active in developing large reviews of estuarine processes that are of particular utility to environmental managers. Dr. Boynton has served in a number of professional leadership and advisory roles. He was the co-leader and later the leader of long-term studies of Chesapeake Bay funded by the National Science Foundation. He was a member of the team that designed and implemented the Chesapeake Bay Monitoring Program, he authored the key report on which the Maryland Coastal Bays Program is based, was a member of the Maryland Governor's Oil Spill Prevention Advisory Commission, was the treasurer and now President-elect of the Estuarine Research Federation, a member of the Patuxent River Commission, received the first UMCES President's award for Excellence in Science Application and recently received the Odum Award for Lifetime Achievement from the Coastal and Estuarine Research Federation. Dr. Boynton has served on an EPA SAB panel reviewing the hypoxia issue in the northern Gulf of Mexico and served on an EPA workgroup examining nutrient criteria in coastal and estuarine waters. He currently chairs the Chesapeake Bay Program's Tidewater Monitoring and Analysis Workgroup (TMAW).

Bronk, Deborah

Virginia Institute of Marine Science

Dr. Bronk is a Professor in the Department of Physical Sciences at the College of William & Mary's Virginia Institute of Marine Science (VIMS). She received her undergraduate degree in Biology and Marine Science at the University of Miami and her doctorate at the University of Maryland. Prior to her move to VIMS she was a post-doctoral scholar at the University of California, Santa Cruz and an assistant and associate professor at the University of Georgia. Dr. Bronk's research program focuses on nitrogen biogeochemistry and the relationship of nitrogen flux to carbon and other nutrients. She has been a member of many interdisciplinary research programs and her own research group has addressed a broad range of basic questions of nitrogen uptake and recycling and applied questions including bioavailability of effluent organic nitrogen and coastal eutrophication. She has participated in or led fifty research cruises to environments spanning the salinity spectrum, including many in Florida coastal waters and the Gulf of Mexico. Dr. Bronk was elected and currently serves as President of the American Society of Limnology and Oceanography and as a member-at-large of the Council of Scientific Society Presidents. She has also served on numerous review panels for the National Science Foundation (NSF) and National Oceanographic and Atmospheric Administration (NOAA) and is a frequent reviewer for the leading funding agencies and journals in a range of disciplines. Dr. Bronk is currently a member of the U.S. National Committee for the Intergovernmental Oceanographic Commission and the U. S. Carbon Cycle Science Plan Working Group. She was a former chair and is a current member of the Ocean Time-Series Advisory Committee and a former member of the Ocean Carbon and Biogeochemistry Scientific Steering Committee.

Burkholder, JoAnn

North Carolina State University

Dr. JoAnn Burkholder is a William Neal Reynolds Distinguished Professor, a Fellow of the American Association for the Advancement of Science (AAAS), and the Director of the Center for Applied Aquatic Ecology at North Carolina State University. She received a Ba.S. in zoology from Iowa State University, a M.S. in aquatic botany from the University of Rhode Island, and a Ph.D. in botanical limnology from Michigan State University. She has authored or co-authored more than 150 peer-reviewed publications, and her research over the past 35 years has emphasized human alterations of aquatic ecosystems, especially assessment of the influences of land use changes on nutrient loading and the effects of cultural eutrophication on aquatic ecosystems. Dr. Burkholder is a consultant for the U.S. EPA SAB Ecological Processes and Effects Committee Augmented for the Ballast Water Advisory, and she is a member of professional societies such as the American Society of Limnology and Oceanography, the American Association for the Advancement of Science (AAAS), and Sigma Xi. She has been invited to testify before the U.S. House and Senate as an expert on water quality and impacts from harmful algal blooms. She has held Governor-appointed policy positions on the NC Coastal Futures Committee, and on the NC Marine Fisheries Commission where she served as Chair of the Habitat and Water Quality Committee. She also served as science advisor on a governor-appointed environmental commission in Maryland, and received an Admiral of the Chesapeake Award for her assistance. Dr. Burkholder has received numerous other awards such as the Distinguished Service in Environmental Education Award from the Environmental Educators of NC, the Borlaug Award for Service to the Environment and Society, the J. Compton Lifetime Achievement Award for leadership in river conservation from River Network, and the AAAS Scientific Freedom and Responsibility Award.

Chapman, Piers

Texas A&M University

With a Ph.D. in marine chemistry from the University of Bangor (Wales), Dr. Piers Chapman has a long record of working on problems relating to nutrients in the coastal environment, starting when he was a chemist with the Yorkshire Water Authority in the U.K. Following this, he worked on coastal issues connected for the Sea Fisheries Research Institute in Cape Town, South Africa, where his work covered pollution control, coastal circulation and the chemistry of upwelling systems. Currently head of the Oceanography Department at Texas A&M University in College Station, he is working on aspects of the hypoxia problem off the Louisiana-Texas coast, with funding from NOAA. His work on advisory committees has included membership of an analytical methodology group for monitoring the Humber estuary (U.K.), the South African Marine Pollution Monitoring Committee, several South African committees concerned with oil pollution, the chairmanship of the Hydrographic Programme Planning Committee for the World Ocean Circulation Experiment, and membership of local committees such as the Advisory Board to Louisiana Governor's Applied Coastal Research and Development Program, the Louisiana Coastal Area Plan Science Coordination Team, and of the Louisiana Sea Grant Advisory Board. He is currently co-chair of an international Working Group of the Scientific Commission for Oceanic Research. Many of these groups were concerned with nutrients in coastal waters. He is also a Fellow of the U.K. Royal Society of Chemistry, and has published over 50 research papers and presented the results of his work at many national and international conferences.

Cloern, James

United States Geological Survey

Dr. Cloern leads the USGS team that collects water quality measurements in San Francisco Bay and is an aquatic ecologist who began working for the USGS in 1976. He is well published on the topic of estuarine nutrient dynamics including a major paper on coastal eutrophication in 2001 (Cloern, J.E. 2001. Our evolving conceptual model of the coastal eutrophication problem. *Marine Ecology Progress Series* 211: 223-253.) Dr. Cloern has experience conducting research in lakes, streams, and estuaries, using field measurements and numerical modeling to identify the patterns and mechanisms of ecosystem variability. His focus is on ecology and biogeochemistry of aquatic ecosystems, focused around a long term (31-year) investigation of San Francisco Bay that has included study of: primary production, algal and zooplankton community dynamics, plankton diversity, ecosystem metabolism, carbon budgets, resource limitation of algal growth, grazing by benthic suspension feeders, disturbance by introduced species, impacts of climatic/hydrologic variability, mechanisms and biogeochemical significance of algal blooms, benthic and pelagic nutrient regeneration, stable isotopes and lipid biomarkers to characterize sources of organic matter, coastal eutrophication, and ecosystem variability at time scales from hours to decades and spatial scales from thin layers to watersheds." Dr. Cloern participates on a number of technical committees including the USEPA STAR Grant Program, Environmental Indicators in the Estuarine Environment, Scientific Advisory Committee 2004; USGS Tampa Bay Studies Program, Science Advisory Committee, 2004-2005; USEPA, National Nutrient Criteria Program, Experts Workgroup, 2005-2006; National Center for Ecological Analysis and Synthesis, Working Group "Interactions Between Nearshore Ocean and San Francisco Estuary", 2008-present. Jim has BS (1970) and MS (1973) degrees in zoology from the University of Wisconsin, and a Ph.D. in zoology/limnology from Washington State University (1976).

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 is focused on 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 wetlands for reducing downstream nutrient losses; and has been evaluating the interactions of nutrients (nitrogen and phosphorus), algal growth, and dissolved oxygen with resulting impacts on biotic integrity in Illinois streams and rivers. Dr. David has authored or co-authored more than 115 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. 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, 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 recently 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. National and state competitive grants have supported his recent biogeochemistry research in Illinois and the Midwest. This includes grants from U.S. Department of Agriculture Cooperative State Research, Education, and Extension Service (CSREES) National Integrated Water Quality Program, NSF Biocomplexity in the Environment Coupled Human/Natural Cycles, the Illinois Council for Food and Agricultural Research, and work on bioenergy crops and the environment through the Energy Biosciences Institute.

Diaz, Robert

College of William and Mary

Dr. Robert Diaz is currently a Professor of Marine Science with the Virginia Institute of Marine Science, College of William and Mary in Virginia. He received a Ph.D. in Marine Science from the University of Virginia in 1977 and in 1996 a Doctor Honoris Causa from Gothenburg University, Sweden for his contributions to benthic ecology over the years. His area of expertise and research interests center around understanding the consequences of low dissolved oxygen (hypoxia) to ecosystem functioning and organism-sediment interactions (bioturbation). In particular, how perturbations of functions and processes influence energy flow. He has estimated the relative resource value of the various estuarine and marine benthic habitat types and how hypoxia affects energy flows. The goal is to quantify energy flow between habitats and develop environmentally sound management strategies. In addition, he is also interested in the application of the statistical and numerical methods to biological data, and broadly interested in the ecology and taxonomy of estuarine and marine invertebrates with specialization in oligochaetes.

Giblin, Anne

Marine Biological Laboratory

Dr. Anne E. Giblin is a Senior Scientist at the Ecosystems Center at the Marine Biological Laboratory. She is also the lead principal investigator of the Plum Island Ecosystem Long Term Ecological Research site (PIE-LTER). Dr. Giblin holds a B.S. from Rensselaer Polytechnic Institute where she majored in biology and a Ph.D. in ecology from the Boston University Marine Program. Dr. Giblin's major research interest has been on the cycling of elements in the environment, especially the biogeochemistry of nitrogen, sulfur, iron, and phosphorus. Much of her work has been focused in soils and sediments where she has examined element cycling under different conditions of oxidation and reduction. A major theme of her research has been to examine how sediment processes either ameliorate or augment the effects of anthropogenic inputs of elements to ecosystems. She has worked on topics such as the effects of acid deposition on the sulfur cycle of lakes, the mobility of trace metals in salt marsh sediments, the controls on the availability of phosphorus in tundra soils, and the controls of denitrification in marine and lake sediments. Much of her research on the nitrogen cycle has been centered on understanding how ecosystems respond to high nutrient inputs from wastewater and fertilizer. She is currently examining how hydrologic disturbances may alter nitrogen cycling in estuaries. Dr. Giblin has served on advisory panels for the National Research Council, the National Science Foundation, the National Oceanographic and Atmospheric Agency, and a number of environmental organizations. She also served as the president of the Estuarine Research Federation, Chaired the advisory board of the Cooperative Institute for Coastal and Estuarine Environmental Technology, and currently serves on the advisory board of the Denitrification Research Coordination Network.

Hanrahan, Grady

California Lutheran University

Dr. Grady Hanrahan is the John Stauffer Endowed Professor of Applied Analytical Chemistry at California Lutheran University. With experience in directing undergraduate and graduate research, he has taught in the fields of Analytical Chemistry and Environmental Science at California State University, Los Angeles and California Lutheran University. He is the author of five books and numerous peer-reviewed papers, primarily in the areas of environmental monitoring and modeling. He is active in the development of statistical, kinetic and soft computational modeling techniques to study the behaviour and transport of environmental pollutants in environmental matrices. Dr. Hanrahan has been the lead- or co-investigator on successful grant awards funded by the National Science Foundation (NSF), the National Institute of Health (NIH) and the U.S. Environmental Protection Agency (EPA). These studies have had substantial impacts on assessing the correlation between the chemical composition of aquatic and terrestrial systems and the potential impact of long-term exposure on human health in low-income, agricultural-based communities. Dr. Hanrahan received in B.S. degree in Life Sciences from Indiana State University. His Ph.D. in Environmental Analytical Chemistry was awarded by the University of Plymouth, England. His postdoctoral work at the Louisiana Universities Marine Consortium involved survey cruises to characterize the spatial distribution of the Mississippi River plume and its associated constituents (primarily nutrients) during the development of coastal bottom water hypoxia. He recently held a visiting faculty appointment at the California Institute of Technology.

Healy, Frank

Trinity University

Dr. Frank Healy is an associate professor in the Department of Biology at Trinity University in San Antonio, TX. He holds a B.S. degree in biology from St. Mary's College of Maryland, an M.S. degree in plant pathology from the University of Maine, and a Ph.D. degree from Cornell University, where he concentrated in molecular plant pathology, microbiology, and biochemistry. Dr. Healy worked in the areas of microbial physiology and metabolic engineering at the University of Florida, where his research focused on fermentative and respiratory metabolism of *Escherichia coli*. He has been teaching for nine years in the areas of microbiology, genetics, and molecular biology. His current research focuses on the regulation of microbial secondary metabolism and the development of freshwater algae as biocatalysts for lipid production. His work has been funded by the United States Department of Agriculture, the National Science Foundation and the Howard Hughes Medical Institutes.

Heck, Jr., Kenneth L.

Dauphin Island Sea Lab

Dr. Kenneth L. Heck, Jr is Professor of Marine Science at the University of South Alabama, and Chief Scientist at the Dauphin Island Sea Lab. He received a B.S. in Biology from the University of West Florida, and the M.S. and PhD degrees in Biology from Florida State University. Dr. Heck's research interests have focused on ecological interactions in coastal habitats, with emphasis on seagrasses and their associated macrofauna. His research efforts include a global assessment of seagrass "nursery" value, and experimental investigations of herbivory, nutrient enrichment and overfishing as they impact seagrass ecosystems. He carries out both laboratory and field studies of coastal ecosystems at the population and community levels, and employs a team approach to problem solving. The ultimate goals of Heck's research are to better understand the relative importance of physical-chemical and biological factors as they influence the health of coastal nursery habitats, as well as a more detailed understanding of how the exceptionally high levels of plant and animal productivity are sustained in seagrass ecosystems. Dr. Heck serves on numerous advisory committees, including those of the NOAA Coastal Oceans Program, the Mobile Bay National Estuary Program, and the Gulf of Mexico Fishery Management Council.

Hendrickson, John

St. Johns River Water Management District

John Hendrickson is an environmental specialist at the St. Johns River Water Management District. His research and expertise are in the areas of water modelling and establishing total maximum daily loads for the Lower St. Johns River Basin. Mr. Hendrickson currently serves on the Florida DEP's Nutrient Criteria Technical Advisory Committee.

Howarth, Robert W.

Cornell University

Dr. Robert Howarth is the David R. Atkinson Professor of Ecology & Environmental Biology at Cornell University, where he also directs the Agriculture, Energy & Environment Program, and he is an Adjunct Senior Scientist at the Marine Biological Laboratory in Woods Hole, MA. He earned a BA in Biology from Amherst College in 1974 and a Ph.D. jointly from MIT and the Woods Hole Oceanographic Institution in 1979. Howarth's research focuses on the sources and effects of nutrient pollution in coastal marine ecosystems. He is the Founding Editor of the journal *Biogeochemistry* and was Editor-in-Chief of the journal from 1983 to 2004. Howarth chaired the National Academy of Sciences Committee on Causes and Consequences of Coastal Marine Eutrophication from 1998-2000, co-chaired the International SCOPE Nitrogen Project from 1992 to 2002, directed the North American Nitrogen Center of the International Nitrogen Initiative from 2003-2006, and has been chair of the International SCOPE Biofuels Project on environmental effects of biofuels since 2007. From 2000 to 2002, Howarth directed the Oceans Program at Environmental Defense. He was the co-lead author of the chapter on responses to nutrient pollution for the Millennium Ecosystem Assessment in 2005 and served as a consultant to the Pew Oceans Commission on nutrient pollution from 2002-2003. From 2006-2008, Howarth served as a member of the EPA's Science Advisory Board Panel on Hypoxia in the Northern Gulf of Mexico, and from 2007 to 2008 he served as President of the Coastal & Estuarine Research Federation. Howarth also represents the State of New York on the Science and Technical Advisory Committee of the Chesapeake Bay Program. He has edited 7 books and authored more than 180 papers.

Kostka,Joel

Florida State University

Dr. Joel E. Kostka is professor of the department of Earth, Ocean, and Atmospheric Science at Florida State University where he is also Associate Director of the Institute for Energy Systems, Economics, and Sustainability. He holds a B.S. from Western Illinois University where he concentrated in biology, an M.S. in marine biology from the University of Charleston, and a Ph.D. from the department of marine science at the University of Delaware. Dr. Kostka's research addresses problems in environmental science, and in particular, much of his research has involved water quality and nutrient cycling in terrestrial and coastal marine ecosystems. Dr. Kostka joined Florida State University in 1999 and has since built an internationally recognized research program in the area of biogeochemistry and environmental microbiology. Dr. Kostka received a competitive National Science Foundation Postdoctoral Fellowship in Marine Biotechnology in 1994-1995 to study at the University of Wisconsin. He was awarded the Ralph E. Powe Junior Faculty Enhancement Award by the U.S. Department of Energy in 2000 and he was recipient of the Developing Scholar Award for research excellence at Florida State University in 2005. He serves on the editorial boards of the journal of Applied and Environmental Microbiology and Marine Biology Research. Dr. Kostka has served on nine national or international review panels for environmental research in the past 10 years. He is currently the Microbiology Team Leader for the Oak Ridge Integrated Field Research Challenge funded by the U.S. Department of Energy's Environmental Remediation Sciences Program. Recently, Dr. Kostka was named as chair-elect of Division N- Microbial Ecology of the American Society for Microbiology. He teaches courses in microbial ecology, microbial diversity, field methods in biogeochemistry, and oceanography.

Li,Zheng-Hua

University of Tennessee

from Nanjing University, China in Quaternary Geology in 1995. In 1996, as a research scientist, he joined State Key Laboratory of Loess and Quaternary Geology, Chinese Academy of Sciences (CAS), China. In 1997, he was promoted as a Associate Professor. In 1997, he was appointed as Interim Associate Director of the Stable Key Laboratory of Loess and Quaternary Geology, CAS. In 1998, he joined University of Wollongong, Australia as a Senior Research Fellow to conduct paleoclimate study. Since 1999, he has been working in University of Tennessee, as a Senior Research Associate / Research Associate Professor. He is the principle investigator of Stable Isotope Laboratory at Department of Earth and Planetary Sciences, UTK. Dr Li has a variety of research interests, including stable isotope applications in biogeochemical cycle and water cycle, paleoenvironmental reconstruction using floodplain sediments, tree rings, and cave deposits in southeastern USA. In collaboration with Dr Lee Cooper at University of Maryland, and Dr Lisa Muller at University of Tennessee, he has been involved in using stable carbon, nitrogen, oxygen, and hydrogen isotopes of fish tissue and bear hair to evaluate wildlife nutrition history.

McClelland,Scott

CampDresser & McKee

Scott I. McClelland is a vice president for Camp Dresser & McKee Inc. He holds a B.A. from Florida State University where he concentrated on mathematics and physics. He also holds a M.S. from the University of South Florida in physical oceanography related to the mathematical modeling of deep ocean and estuarine circulation. Mr. McClelland has worked for 34 years in the environmental and regulatory fields, including almost 9 years with the Florida Department of Environmental Regulation, where he worked on water quality model development and application of the mathematical models on surface water quality impact studies for the state. His experience includes total maximum daily load study and implementation, stormwater funding studies and implementation, stormwater master planning, federal discharge permitting and compliance, water quality and quantity modeling, water quality assessments, wasteload allocation, and nonpoint source impact studies. Mr. McClelland is currently managing projects for the state of Florida in preparing studies for Florida impaired waters and facilitating Basin Management Action Plans. He has helped prepare the Reasonable Assurance Documentation for the Florida Keys and pollutant load reduction studies for the Caloosahatchee River. Mr. McClelland has also supported the state of Florida as a member of various advisory committees over the last 10 years: Impaired Water Technical Advisory Committee, invited to help develop the Impaired Waters Rule for the selection and prioritization of impaired waters in Florida; Numeric Nutrient Rule Technical Advisory Committee to help prepare numerical criteria for nutrients in Florida; Designated Uses and Classification Refinement Policy Advisory Committee to help revise the classification system for Florida waters.

McGlathery,Karen

University of Virginia

Dr. McGlathery studies marine macrophyte production and dynamics, as the biogeochemical and physical controls of nutrient availability in coastal environments, and the interaction between macroalgae and seagrasses. Additionally, her work examines the role that the ecophysiology of macrophytes plays in the processes of coastal and estuarine systems at a community and ecosystem level. This work is aimed at elucidating the effects and recovery of shallow coastal systems from eutrophication. Dr. McGlathery currently serves as the lead principle investigator of the Virginia Coast Reserve Long Term Ecological Reserve (LTER) program. In the past, Dr. McGlathery has also acted as a science advisor for the National Research Council Committee on Causes and Consequences of Eutrophication of the Ocean Studies Board.

McLaughlin, Douglas

National Council for Air and Stream Improvement

Dr. Douglas McLaughlin is a Principal Research Scientist with the National Council for Air and Stream Improvement (NCASI), a non-profit environmental research organization that focuses on environmental topics of interest to the forest products industry. He holds Bachelors and Masters degrees in Biology and Aquatic Biology, respectively, from the University of Wisconsin - Green Bay. He received his Ph.D. from the University of Wisconsin - Madison where he studied the environmental behavior of polychlorinated biphenyls. He has conducted applied water resources research for over 25 years and has extensive experience in the application of statistical methods to the analysis of field and laboratory data to inform water resources management. Recent research involves the use of regression analysis and other statistical methods to characterize relationships among variables relevant to surface water nutrient management, evaluate time trends in exposure to hydrophobic organic contaminants, and to support wastewater treatment plant optimization. This work also explores the effect of data analysis choices, including the treatment of nondetects, on environmental decision making. Other research topics include the characterization of uncertainty in aquatic life water quality criteria, the implementation of thermal water quality standards into NPDES permits, the characterization of watersheds for water quality management using GIS, incorporating natural background concentrations and temporal variations into water quality criteria, surface water monitoring program design, and others. Dr. McLaughlin has served since 2003 as NCASI's representative on the Advisory Committee on Water Information, a multi-organization committee established under the Federal Advisory Committee Act to serve the Executive Branch of the United States. He is currently a member of the National Water Quality Monitoring Council, an ACWI sub-group dedicated to the coordination of consistent and scientifically defensible methods and strategies to improve water quality monitoring, assessment and reporting. He is co-chair of the Water Quality Statistics and Assessment workgroup of the NWQMC, which is a new collaborative effort to develop an internet-accessible catalog of statistical methods, their recommended uses, and available guidance documents for water scientists and managers to use in addressing water information topics.

Meyer, Judith L.

University of Georgia

Dr. Meyer is a Distinguished Research Professor Emeritus at the Odum School of Ecology, University of Georgia (UGA), where she served on the faculty from 1977 – 2006. She received a B.S. in zoology from University of Michigan, a M.S. in marine biology from University of Hawaii, and a Ph.D. in ecology from Cornell University. Dr. Meyer's research interests center around stream ecosystems, in particular water quality and nutrient dynamics, stream food webs, headwater and urban streams, riparian zones, human impacts on stream ecosystems, and stream restoration practices. She has studied urban streams in Atlanta, blackwater rivers in Georgia, and mountain streams in the Southern Appalachians, where she led one of National Science Foundation's Long-term Ecological Research sites. Dr. Meyer's research has resulted in 175 peer-reviewed publications. She is a former President of the Ecological Society of America and helped found the River Basin Center at UGA, where she was a Co-Director. She currently serves on EPA's Science Advisory Board, chairs its Ecological Processes and Effects Subcommittee, and is a member of the Scientific and Technical Advisory Committee of American Rivers. Dr. Meyer received the Award of Excellence in Benthic Science from the North American Benthological Society, which is the foremost scientific society for stream researchers.

Mottaleb, M. Abdul

Northwest Missouri State University

Dr. M Abdul Mottaleb is a staff analytical chemist at the Center for Innovation and Entrepreneurship, Department of Chemistry/Physics at Northwest Missouri State University. He holds a Ph.D. in analytical and environmental chemistry from the Strathclyde University, Glasgow, United Kingdom and was an associate professor of chemistry, research scientist, research fellow and research associate at the University of Rajshahi (Bangladesh), Baylor University (Texas), Dongduk Women's University (Seoul, South Korea) and U.S. Environmental Protection Agency (Las Vegas, Nevada), respectively, for twenty years prior to moving to the Northwest Missouri State University in July 2009. He has served as a member of advisory committee and editorial board for the International Journal of Chemical and Biological Sciences and Maejo International Journal of Science and Technology. His research received an EPA Science Achievement Award (SAA) in Chemistry and Science and Technology Achievement Award (STAA) in 2005 for development and application of analytical tools for measurement of biomarkers of exposure (hemoglobin adducts of nitromusks) in ecologically sentinel species of fish. Dr. Mottaleb's research concentrates on occurrence, transport and fate of anthropogenic contaminants in aquatic ecosystems, biotransformation/bioavailability of persistent organic pollutants and pharmaceutical and personal care products, bioconcentration of fragrances (nitro musks) and toxic chemicals in the different environmental compartments and aquatic organisms.

Noll, Mark

State University of New York

Dr. Mark R. Noll is an associate professor and former chair of the Department of Earth Sciences at the State University of New York College at Brockport, and currently serves as Special Assistant to the Provost. He holds a B.S. in earth science from Millersville (PA) University, a M.S. in geology from the New Mexico Institute of Mining and Technology, and a Ph.D. from the University of Delaware in soil physical chemistry. Prior to Brockport, Dr. Noll held various positions in industry working in the area of environmental remediation and technology development. His work at Applied Research Associates involved the development of the Groundwater Remediation Field Laboratory at Dover AFB, DE. These efforts led to his team receiving a Special Recognition Award from the USEPA Region III Administrator. His current research involves the cycling of nutrient and toxic materials in the watersheds and wetlands of Lake Ontario and New York's Finger Lakes, and building GIS based models, both numerical and empirical, for evaluating the impact and risk of excess nutrient contributions of storm flow runoff to surface water bodies. Much of his research relates to practical problems associated with the best practices for management of water resources. Another research area of his is on how students learn science and in the development of water science curriculum that makes the learning relevant, especially to students in urban settings. Dr. Noll is also involved in public education and outreach in the region, and sits on the board of the Genesee Valley Water Education Collaborative. He is currently serving as the National Vice-President, Northeastern Province of Sigma Gamma Epsilon, the national earth science honor society, and is frequently called on to serve as a review panel member for the US Environmental Protection Agency and the National Science Foundation. Nominator's bio: Dr. Noll has over 20 years of experience in the environmental industry and in academia. He brings a blend of traditional research skills combined with management expertise and an understanding of regulatory driven environmental science to solving practical problems. His primary expertise is in the cycling and management of nutrients and toxic metals and organics in surface and subsurface water, soils and sediments. Most recently, his research focus has turned to the impacts of stormwater runoff from non-point source areas on surface water quality, especially the impact of phosphorus.

Ortner, Peter

University of Miami

Dr. Peter Ortner is a research professor in the division of marine biology and fisheries of the University of Miami, Rosenstiel School of Marine and Atmospheric Science and also the director of the Cooperative Institute for Marine and Atmospheric Studies. He holds a B.A. in philosophy from Yale University, a Ph.D. in biological oceanography from Woods Hole Oceanographic Institution, and a J.D. in environmental law (and LL.M. coursework in ocean and coastal law) from the University of Miami, School of Law. Dr. Ortner's research interests include physical regulation of biological systems; coastal zone management, ecosystem restoration, and fisheries management science and policy; coastal ecosystem effects of hurricane landfall; coastal ecosystem implications of regional and global climate change and climate variability; fisheries oceanography; marine sources of biogenic volatiles and radiatively important trace substances; and zooplankton sampling technology, particularly optical or acoustic and volunteer observing ship technology development. He has also served in a variety of managerial and research positions in the National Oceanic and Atmospheric Administration (NOAA), most recently as acting director and chief scientist of NOAA's Office of Oceanic and Atmospheric Research's (OAR) Atlantic Oceanographic and Meteorological Laboratory (AOML) and as director of special programs in the Ocean Sciences Division of the Geosciences Directorate for the National Science Foundation. Dr. Ortner has published more than 80 referred publications and more than 20 grey literature reports or workshop proceedings.

Paerl, Hans W.

University of North Carolina

Dr. Paerl studies the nutrient production dynamics of aquatic microbes at the base of the estuarine and coastal food webs, focusing on environmental controls of algal (planktonic and benthic) production, community structure, and assessment of the causes and consequences of human-induced eutrophication of rivers, lakes, estuaries and coastal oceans. He heads the Institute of Marine Sciences' Microbial Ecology/Nutrient Cycling Laboratory and holds a joint appointment in the Department of Environmental Sciences and Engineering. Major research projects underway include investigations of: - sources of excess nitrogen to the Neuse River basin, estuary, and nearshore waters- the genetic potential and physiological controls of nitrogen fixation in two temperate, N-limited estuaries- impacts of atmospheric nitrogen deposition on phytoplankton dynamics and eutrophication - phytoplankton ecophysiological responses to changing N input dynamics in the Neuse River

Price, Harry

Stetson University

Dr. Harry Price received his Bachelor's Degree in Biological Science and a minor in Chemistry from the University of Illinois Chicago in 1986. He earned his doctorate in Chemistry at the University of Illinois Chicago in 1991. His graduate work focused on polycyclic aromatic hydrocarbon-DNA interactions. After receiving his Ph.D., he was awarded a research fellowship at Johns Hopkins University where he conducted research in the area of tropical disease, specifically, the development of drug resistance in the parasite responsible for African sleeping sickness. His interdisciplinary background has provided him with a diverse skill set that incorporates experimental and computational methods. Since 1995 Harry has taught Chemistry and Biochemistry at the university level. Currently he is an Associate Professor of Chemistry and Director of the Biochemistry Program at Stetson University in Florida. He has conducted and published research in areas related to chemistry, biology, and biochemistry. As a biochemist he has a unique understanding of the complex interactions that occur in living systems, as well as, the importance that dynamic and steady-state conditions have in the cycling of nutrients such as nitrogen, phosphorous, and carbon. He taught a chemistry course for several years that focused on the use of satellite imagery, and both national and international databases to bring to the forefront of student awareness, the release and spread of anthropogenically generated pollutants and their environmental impact. As an experienced academician/scientist, he can contribute: experience reviewing complex data, analyzing it and developing statistical models; designing reliable experiments to uncover single or multiple relationships and provide an objective view from the perspective of an outside reviewer. His exceptional ability to discuss scientific matters with great fluency and clarity makes it possible for him to work in a group of diverse expertise and provide significant, respected input.

Reckhow, Kenneth

Duke University

Dr. Kenneth H. Reckhow is a professor at Duke University with faculty appointments in the School of the Environment and the Department of Civil and Environmental Engineering. From 1996 to 2004 he served, on a part-time basis, as Director of the University of North Carolina Water Resources Research Institute. He is a past president of the National Institutes for Water Resources, past President of the North American Lake Management Society, and past Chair of the North Carolina Sedimentation Control Commission. Dr. Reckhow served as Chair of National Academy of Sciences Panel on the USEPA Total Maximum Daily Load Program, as a member of the National Academy of Sciences Panel on USGS National Water Quality Assessment, and as a member of the National Academy of Sciences Panel on Restoration of the Everglades Ecosystem. He is currently Chair of the National Academy of Sciences Panel on the Evaluation of Chesapeake Bay Progress Implementation for Nutrient Reduction to Improve Water Quality. In addition, Dr. Reckhow has taught several short courses on water quality modeling and monitoring design, and he has written eight technical guidance manuals on water quality modeling. Dr. Reckhow's recent and current research focuses on Bayesian network (influence diagram) modeling of environmental contaminants in aquatic ecosystems; his recent and current teaching covers water quality assessment/modeling and decision/risk analysis. He is now serving, or has previously served, on the editorial boards of Risk Analysis, Water Resources Research, Water Resources Bulletin, Lake and Reservoir Management, Journal of Environmental Statistics, and Urban Ecosystems. He received a B.S. in engineering physics from Cornell University and a Ph.D. from Harvard University in environmental systems analysis.

Reddy, Ramesh

University of Florida

Dr. K. Ramesh Reddy is a Graduate Research Professor (distinguished professorship) of Biogeochemistry and Chair of the Department of Soil and Water Sciences at the University of Florida. He holds a B.S. and M.S from AP Agricultural University-India and a Ph.D. from the Department of Agronomy at the Louisiana State University, Baton Rouge, La. Dr. Reddy's research addresses problems in science and technology in topical areas of biogeochemistry with emphasis on macro-elemental cycling; soil and water quality; wetlands and aquatic ecosystem restoration; carbon sequestration and greenhouse gases. His research group effectively integrated biogeochemical principles to address these issues. This led to interdisciplinary work with scientists from various disciplines including ecology, biology, limnology, and engineering. He served on the U. S. National Committee on Soil Science, National Academy of Sciences. He currently serves on U. S. National Committee – Everglades Restoration, National Academy of Sciences. Dr. Reddy also served on U.S. Environmental Protection Agency, Science Advisory Board Panel. He was invited to participate in a think tank meeting hosted by the National Environment Research Council and the Global Environmental Research Committee of the Royal Society, London, England. Dr. Reddy currently serves as wetland consultant with the International Atomic Energy Commission. His current research projects are funded by the National Science Foundation and Florida's state agencies. He serves as a member of several editorial boards of journals. Dr. Reddy is author or coauthor of 350+ refereed journal articles, one text book, edited 5 books, numerous non-refereed publications, and invited presentations. His career research is now summarized in a text book authored by Dr. Reddy. Publications can be viewed at the WBL web site: <http://wetlands.ifas.ufl.edu/publications/>. He was named as "Highly Cited Researcher" in Ecology and Environment by ISI (Institute for Scientific Information). He is one of the three scientists at UF named in this category.

Sanders, James

Skidaway Institute of Oceanography

Dr. James Sanders is Director of the Skidaway Institute of Oceanography, a campus of the University System of Georgia. He received his B.S. from Duke University in Zoology and his Ph.D. from the University of North Carolina in Marine Sciences, then was a postdoctoral investigator at Woods Hole Oceanographic Institution. Prior to his arrival in Savannah in 2001, Dr. Sanders was on the faculty and served as Director of the Academy of Natural Sciences' Estuarine Research Center in Maryland from 1981 to 1999, then was Chairman of the Department of Ocean, Earth and Atmospheric Sciences at Old Dominion University in Virginia. Dr. Sanders is known for his interests within the area of nutrient and trace element biogeochemistry: how trace elements are transported through coastal zones, transformed by chemical and biological reactions during transport, and how they can impact aquatic ecosystems. He serves as a consultant to federal and state science agencies and industrial groups in the U.S. and Europe. He is a member of numerous scientific societies, is President of the National Association of Marine Laboratories and a Trustee of the Consortium for Ocean Leadership. He is the author of over 75 scientific publications.

Schneider, David C.

Ocean Sciences Centre

Dr David Schneider is professor at the Ocean Science Centre, Memorial University, St. John's Canada, where he recently served as Associate Dean of Science. He holds B.Sc. from Duke University and Ph.D from S.U.N.Y. Stony Brook. He teaches model-based statistics in the largest enrolment graduate course at Memorial. His publication record includes over 100 articles in the peer reviewed literature, 20 review articles and book chapters, and 30 technical reports to US and Canadian federal agencies. His research focus is the problem of scaling from local measurement to ecosystem scale effects; his textbook on the topic has recently gone to a second edition. His field research experience includes New England, Alaska, the Grand Banks of Newfoundland, Peru, Panama, Labrador, New Zealand, and Florida. His service to other advisory committees, primarily in a statistical capacity, includes Expert Panel Hibernia for Offshore Oil Environmental Effects Monitoring Program (Canada), Terra Nova Baseline Design Advisory on Offshore Oil (Canada), Environmental Effects Monitoring Advisory Committee (Newfoundland Transshipment Facility at Whiffen Head), U.S. E.P.A. Scientific Advisory Committee for Multiscale Experimental Ecosystem Research Center at Horn Point Maryland, Science Review Committee on Ecosystem Effects of Low Level Jet Training (Institute for Environmental Monitoring and Assessment, Canada), Validation Monitoring Panel on Salmonid Recruitment (University of Washington), and Science Advisory Group on Caribou (Newfoundland Department of Environment and Conservation). He has served as consultant to U.S. National Park Service on statistical design of long term monitoring protocols for water quality, invasive plant species, and species designated as at risk.

Sharpley, Andrew N.

University of Arkansas

Dr. Andrew Sharpley joined the Department of Crop, Soil and Environmental Sciences, University of Arkansas, Fayetteville in 2006. He is Chair of the Division of Agriculture's Environmental Task Force and Associate Director of the Watershed Research and Education Center. He received degrees from the University of North Wales, United Kingdom in 1973 and Massey University, New Zealand in 1977, and spent 25 years with the USDA-ARS in Oklahoma and then Pennsylvania. His research investigates the cycling of phosphorus in soil-plant-water systems in relation to soil productivity and water quality and includes the management of animal manures, fertilizers, and crop residues. He also evaluates the role of stream and river sediments in modifying phosphorus transport and response of receiving lakes and reservoirs. He developed decision making tools for agricultural field staff to identify sensitive areas of the landscape and to target management alternatives and remedial measures that have reduced the risk of nutrient loss from farms. These tools are now widely accepted by US EPA, NRCS, and the Comprehensive Nutrient Management Planning Strategy. He works closely with producers, farmers, and action agencies, stressing the dissemination and application of his research findings. With others in the Univ. of Arkansas's Division of Agriculture, Farm Bureau, Arkansas Natural Resources Commission, and various commodity and producer groups, is developing an on-farm demonstration, verification, and research program to show the benefits of Best Management Practices that protect water quality and promotes sustainability. He is the Environmental Issues and Perspectives Editor for the Journal of Environmental Quality, Fellow of the American Society of Agronomy and Soil Science Society of America and received their Applied Soil Science and Environmental Quality Research Awards and recently received USDA's Secretary's Honor and Technology Transfer Award for his contribution to developing simple risk assessment tools for use by farmers and action agencies as part of Comprehensive Nutrient Management Planning strategies. In 2008 was inducted into the USDA-ARS Hall of Fame. Dr. Sharpley served on National Academy of Science's Committee on "Causes and Management of Coastal Eutrophication;" USDA-CSREES-EPA "National Livestock Curriculum Project;" and EPA's Scientific Advisory Boards "Hypoxia in the Northern Gulf of Mexico" and "Review of Empirical Approaches for Nutrient Criteria Derivation."

Snyder, Richard

University of West Florida

Dr. Richard A. Snyder is Professor and Director of the Center for Environmental Diagnostics and Bioremediation (CEDB) at the University of West Florida. He holds a B.S. in Biology from the college of Charleston, SC, an M.S. and a Ph.D. from the Department of Zoology at the University of Maryland, College Park for work on microbial ecology and protist taxonomy. Dr. Snyder is a broadly trained ecologist working with both microscopic and macroscopic organisms, water quality and pollution. Nutrient dynamics have been a focus of agricultural runoff work, limiting factors for microbial/algal biofilm formation in estuaries, microbial community structure in karst groundwater, and fecal pollution as a source of nutrients in urban bayous and coastal areas. Other research projects have focused on persistent organic pollutants (PCBs, Dioxins, Methyl-Mercury). Snyder has also worked with local agencies on TMDL and other regulatory issues, and with a local utility, South Santa Rosa Utilities, Inc., as a member and chairman of their advisory board, dealing with the practical side of environmental and service issues that nutrient regulations will impact, and so is keenly aware of the impact of environmental regulation on practical operations necessary for the functioning of our society. He is a frequently sought after speaker and media contact for his ability to explain complex science issues to the general public

Solow, Andrew

Woods Hole Oceanographic Institution

Dr. Andrew Solow received his BA in Economics from Harvard University and his PhD in Geostatistics from Stanford University. He has worked at the Woods Hole Oceanographic Institution since 1985, where he is currently a member of the Scientific Staff and Director of the Marine Policy Center. Dr. Solow is an applied statistician. His research focus is environmental and ecological statistics. Dr. Solow has served on a number of scientific advisory panels including the US EPA and Massachusetts DEP Outfall Monitoring Science Advisory Panel, the CENR Gulf of Mexico Hypoxia Working Group, the National Research Council Commission on Geosciences, Energy, and Resources, and the US Ocean Commission Science Advisory Panel.

Steinman, Alan

Grand Valley State University

Dr. Alan Steinman is Professor of Water Resources and Director of the Annis Water Resources Institute at Grand Valley State University. He oversees research, educational activities, and outreach at the Institute, and maintains an active research lab currently focused on phosphorus cycling, aquatic metabolism, ecosystem restoration in the Great Lakes, and algal ecology. Prior to joining AWRI, Steinman was the Director of the Okeechobee Restoration Program at the South Florida Water Management District. Steinman received his Ph.D. in Botany and Aquatic Ecology at Oregon State University and did his postdoctoral research at Oak Ridge National Laboratory in nutrient cycling and disturbance ecology. He is the associate editor of two scientific journals, and serves on: the International Joint Commission's Upper Great Lakes Water Level Study, U.S. EPA Science Advisory Board's Report on the Environment – 2012 (as well as the 2003 and 2008 reports), and Central Michigan University's Biostation Science Advisory Board. In Michigan, Steinman has served on the State's Phosphorus Management Policy Advisory Committee and the Groundwater Conservation Advisory Council. He has published over 100 peer-reviewed scientific articles and book chapters, and given expert testimony before the US Congress and Michigan State Senate. His professional awards include Outstanding Reviewer Award from Journal of Environmental Quality, Environmental Excellence Award from the Muskegon Area Environmental Coordinating Council, Public Health Partnership Award from the Michigan Association for Local Public Health, and as part of the Everglades Restudy Team both the Joan Hodges Queneau Palladium Medal from the National Audubon Society and the Outstanding Planning Achievement Award from U.S. Army Corps of Engineers.

Tilton, Andrew

Johnson Engineering, Inc.

Andy obtained his B.S. in Civil Engineering (1978) University of Florida, and M.E. Hydraulics (1983). Andy joined Johnson Engineering in August 1978 and is currently the Director of the Water Resources Group. Andy was in charge of the water management portion of the Sanibel Causeway reconstruction. He also completed the surface water management design and permitting for the expansion of the Southwest Florida International Airport, with total costs exceeding \$400 million. In conjunction with the water management modeling and design, Andy was in charge of the NPDES municipal separate storm sewer system permit application for Lee County and coordinated the application for the City of Sanibel and City of Fort Myers. He is responsible for the firm's computer modeling of surface water systems. Andy is District Engineer for Telegraph Cypress Water Management District. The District covers about 28 square miles in Charlotte and Lee Counties. Work within the District includes annual inspections of water management facilities for the annual report required under Chapter 298 Regulations and dike inspections as required by South Florida Water Management District permitting. He is also the District Engineer for several Community Development Districts in Lee and Collier Counties.

Valiela, Ivan

Marine Biological Laboratory

Dr. Ivan Valiela is at the Ecosystems Center, at the Marine Biological Laboratory in Woods Hole, MA. For over 40 years, he has been doing research, teaching, and publishing in the areas of coastal ecosystems, and has published three texts that have received wide acclaim and are used in courses and as references. He has published over 200 papers in a wide variety of subjects, and has worked with a range of biological material, from bacteria to whales, in places as diverse as Antarctica, Portugal, Italy, Mexico, Panama, Spain, Argentina, Brazil, Canary Islands, and more. Within the US, he has published papers on Cape Cod, Florida, New Jersey, New York, and other states. Many of Valiela's publications deal with nutrient dynamics, management, and assessments. He has developed validated nutrient loading models that are user friendly, and has also included these and other models in an internet site that makes the models and issues available to users. He has participated in many efforts at outreach, making efforts to transfer the technical information to target audiences of users at different levels. Valiela serves on an international panel on Iberoamerican global change research, a NOAA ecosystems research and management working group, and serves on the CERF Governing Board. He also is Editor of Estuarine, Coastal and Shelf Science.

Zieman, Joseph C.

University of Virginia

Dr. Joseph C. Zieman is a professor of Environmental Sciences at the University of Virginia, and the former chair of the department. He holds a B.S. in Zoology from Tulane University, with a minor in chemistry. He has a M.S. and Ph. D. in marine science from the Rosenstiel School at the University of Miami. He held a post-doctoral fellowship at the Institute of Ecology at the University of Georgia. Dr. Zieman's major research interests are concerned with dynamic ecosystem processes in coastal ecosystems, such as succession and nutrient dynamics. Of primary interest are seagrass ecosystems, salt marshes, mangrove ecosystems and coral reefs. Earlier work showed that the coastal seagrasses and mangrove ecosystems served as vital nurseries for coastal fisheries. Coastal ecosystems are highly dynamic, and much of his current research is involved with partitioning the relative roles of anthropogenic impact versus natural climatic change as drivers of ecosystem change. Other current interests are in the determination of the early landscapes of south Florida. In addition, with other colleagues, he is exploring the use of modern tracers, such as stable isotopes, as indicators of ecosystem processes. He has served on numerous national and international committees.