### DEPARTMENT OF THE INTERIOR BUREAU OF OCEAN ENERGY MANAGEMENT

**OCS Scientific Committee** 

#### MEMBERS EX OFFICIO MEMBERS NOAA REPRESENTATIVES COMMITTEE OFFICIALS



## COMMITTEE MEMBERS

#### Taber D. Allison

Director

Research and Evaluation American Wind Wildlife Institute 1110 Vermont Avenue, NW, Suite 950 Washington, D.C. 20005 office: (202) 330-3191 e-mail: tallison@awwi.org

Dr. Allison received his Ph.D. in Ecology from the University of Minnesota, a Master's in Forest Science from the Yale School of Forestry and Environmental Studies, and a B.A. degree in Biology from Wesleyan University. He is an ecologist with special expertise in wind-wildlife impacts. He joined American Wind Wildlife Institute in December 2010 to direct all research initiatives. Previously, he was Vice President for Science, Policy and Climate Change at the Massachusetts Audubon Society where he led Mass Audubon's environmental evaluation of wind energy and climate change. He has served as Program Officer at the National Science Foundation, was Director of the Rocky Mountain Biological Laboratory, and taught at Ohio State University and the University of Colorado.

Director Research and Evaluation American Wind Wildlife Institute 1110 Vermont Avenue, NW, Suite 950 Washington, D.C. 20005 office: (202) 330-3191 e-mail: tallison@awwi.org

Discipline: Ecology/Biology (Sea birds; Wind-Wildlife Impacts)

#### Robert J. Diaz Vice-Chair

Professor of Marine Science Virginia Institute of Marine Science College of William and Mary P.O. Box 1346 Gloucester Pt., Virginia 23062 office: (804) 684-7364 e-mail: diaz@vims.edu

Dr. Diaz is a Professor of Marine Science at the Virginia Institute of Marine Science, College of William and Mary. He received a Ph.D. from the University of Virginia in marine science and a Doctor Honoris Causa from Gothenburg University, Sweden, for his contributions to marine and estuarine ecology. In 2011 he was named Virginia Outstanding Scientist of the year. Professor Diaz has over 40 years of experience working on environmental issues in a variety of marine and freshwater habitats around the globe from the intertidal to the deep-sea. He has served on science advisory and review committees for private foundations, state and federal agencies, and international organizations. He specializes in documenting the effects of both natural and human disturbance to ecosystems, and is an internationally recognize expert on animal-sediment-interactions, the effect of eutrophication (over enrichment of the seas) and hypoxia (low dissolved oxygen dead zones) on ecosystem services and functions.

Discipline: Ecology/Biology (Toxicology/Ecosystem)

#### Kenneth H. Dunton

Professor Department of Marine Science The University of Texas at Austin 750 Channel View Drive Port Aransas, Texas 78373-5015 office: (361) 749-6744 e-mail: ken.dunton@mail.utexas.edu

Dr. Dunton received his Ph.D. from the University of Alaska-Fairbanks (1986), and is currently a professor in Marine Science at The University of Texas at Austin. He is a biological oceanographer whose research is focused on estuarine and coastal processes. Although his work spans from the Arctic to the Antarctic, his continuous studies of the arctic coastal ecosystem has spanned three decades and over 3000 research dives. Funded by the National Science Foundation's (NSF) Arctic System Science's Shelf-Basins Interactions study from 1999 to 2008, he examined the distribution and biomass of benthic biota and changes in trophic structure based on the application of stable isotopic signatures. He has also performed intensive studies of nearshore shelf arctic benthic communities and kelp beds since 1977 under funding from the Outer Continental Shelf Environmental Assessment Program, the Bureau of Ocean Energy Management, Regulation and Enforcement, NSF, Shell Alaska, BP Alaska, and the U.S. Fish and Wildlife Service. He recently received a three-year grant from NSF to examine the linkages between arctic watersheds and coastal lagoons along the eastern Alaskan Beaufort Sea coast, with particular emphasis on the lagoon systems of the Arctic National Wildlife Refuge. His work in the Gulf of Mexico has addressed the productivity of seagrass and marsh systems, and the trophic structure of the Flower Gardens coral reef community.

Discipline: Marine Benthic Communities of the Arctic Basin and Gulf of Mexico

#### Stephen L. Elgar *Parlimentarian*

Senior Scientist National Security Science & Engineering Faculty Fellow Applied Ocean Physics & Engineering Woods Hole Oceanographic Institution Woods Hole, MA 02543 office: (508) 289-3614 e-mail: Igar@whoi.edu

Dr. Elgar received his Ph.D. from Scripps Institution of Oceanography in 1985. His research interests include: observations and models of nearshore processes, including wave evolution across the continental shelf to the shoreline; the corresponding breaking-wave-driven circulation, and the subsequent changes to surfzone morphology (e.g., beach erosion and accretion); and analysis of nonlinear random processes, especially geophysical time series.

Discipline: Physical Oceanography (Nearshore/Remote Sensing)

#### Jerry A. Galt

Chief Oceanographer Genwest Systems 170 W. Dayton Street, Suite 106A Edmonds, Washington 98020 office: (425) 771-2700 e-mail: jerryg@genwest.com

Dr. Galt received his Ph.D. from the University of Washington in 1969. Areas of interest include Deep Water Horizon and multi-disciplinary scientific program combining theoretical research and real-time computer applications at accidental spill scenes. He directed the computer modeling component at over one thousand oil and chemical spill responses. He has extensive experience in computerized data systems, oil spill response and oceanographic modeling.

Discipline: Physical Oceanography (Oil Spill Modeling)

#### Richard A. Gould

Professor (Emeritus) 6109A Summer Street Honolulu, Hawaii 96821 e-mail: rgould49@gmail.com

Dr. Gould received his Ph.D. from the University of California, Berkley in 1965. He studied human cultural and behavioral adaptations to stress, risk, and uncertainty. Initially these studies looked at living societies – specifically, in NW California, in Australia's Western Desert, and in subarctic Finland and related the findings to archaeological remains. This interest later extended to the study of shipwrecks and losses at sea, with underwater fieldwork in Bermuda and in the Dry Tortugas, Florida. His areas of interest are forensic archaeology, ethnoarchaeology, and maritime archaeology.

Discipline: Social Sciences (Anthropology)

#### Mark A. Johnson

Professor of Marine Science Institute of Marine Science 111 O'Neill P.O. Box 757220 University of Alaska Fairbanks Fairbanks, Alaska 99775-7220 office: (907) 474-6933 fax: (907) 474-7204 email: majohnson@alaska.edu

Dr. Johnson is a physical oceanographer currently focusing on high latitude climate change with an emphasis on sea ice variations in the Arctic Ocean. His approach is to use historical and recent measurements to assess and characterize ice thickness and concentration. He is evaluating the performance of numerical models and assessing the accuracy of model forecasts of future ice conditions. This research is especially important along the ocean margins where marine navigation and access to resources are critical.

Discipline: Physical Oceanography (Arctic Region and Sea Ice)

#### Willett M. Kempton

Professor Marine Policy University of Delaware Newark, Delaware 19716 office: (302) 831-0049 e-mail: willett@udel.edu

Dr. Kempton received his Ph.D. from the University of Texas at Austin, 1977. He is Director of the Center for Carbon-free Power Integration and teaches renewable energy policy at the University of Delaware. Offshore wind is his main research interest. In early April 2010, he published a study in *Proceedings of the National Academy of Sciences* hypothesizing that a chain of offshore wind stations along the Atlantic could provide power to much of the Eastern Seaboard. Other fields of interest include: anthropological studies of policy; environmental and energy policy; offshore wind; vehicle-to grid power; citizens' environmental values and actions; cognitive anthropology; and power systems integration.

Discipline: Social Sciences (Anthropology/alternative Energy)

#### Gary P. Kofinas

Professor Department of Humans and Environment and Institute of Arctic Biology University of Alaska Fairbanks PO Box 75700 Fairbanks, Alaska 99775-7000 office: (907) 474-7078 e-mail: gary.kofinas@alaska.edu

Dr. Kofinas is Professor of Resource Policy and Management at the University of Alaska Fairbanks. His research has focused on the resilience and adaptation of high latitude social-ecological systems, community-based resource management systems drawing on traditional and local knowledge, subsistence economies of rural indigenous villages of the North, and adaptive co-management institutions. He is co-editor of the text, *Principles of Ecosystem Stewardship: Resilience-Based Resource Management* (Springer 2009) and served as Director of the Resilience and Adaptation Program, a graduate program in sustainability science at the University of Alaska Fairbanks. Dr. Kofinas received his Ph.D. from the University of British Columbia.

Discipline: Interdisciplinary Social-Ecological System Studies (Resource Policy and Stewardship

#### Lisa A. Levin

Professor Integrative Oceanography Division Scripps Institution of Oceanography 9500 Gilman Drive La Jolla, California 92093-0218 office: (858) 534-3579 e-mail: Ilevin@ucsd.edu

Dr. Levin received her Ph.D. from Scripps Institution of Oceanography, University of California, San Diego, in 1982. Research interests are: larval dispersal, population connectivity and its influence on population dynamics; ecology of deep-sea reducing environments (oxygen minimum zones, methane seeps); population and community ecology of soft-sediment habitats; wetlands ecology, species invasion and restoration; animal-sediment-plant-geochemical interactions; and ecosystem-level consequences of species invasion. She also has more than 30 years' experience working in both shallow and deep-sea marine benthic environments.

Discipline: Physical Oceanography (Biological Oceanography)

#### Milton S. Love

Research Biologist Marine Science Institute University of California, Santa Barbara Santa Barbara, California 93106 Office: (805) 898-2935 e-mail: love@lifesci.ucsb.edu

Dr. Love is a research biologist at the Marine Science Institute, University of California, Santa Barbara. He has conducted research on the marine fishes of California for over 40 years and is the author of over 90 publications on the fishes of the Pacific Coast. For the past 15 years, and using a manned research submersible, Dr. Love has carried out surveys of the fish populations living around natural reefs and oil/gas platforms throughout the southern California Bight. In 2007 the American Fisheries Society awarded Dr. Love the Carl R. Sullivan Award for Conservation Resources.

Discipline: Ecology/Biology (Fisheries/Deep Sea)

#### I. Roderick Mather

Professor Department of History University of Rhode Island 80 Upper College Road, Suite 3 Kingston, RI 02881 office: 401.874.4093 e-mail: roderick@uri.edu

Dr. Mather received his Ph.D. from the University of Oxford (United Kingdom), in 1995. His research interests include: Historical and Archaeological Maritime Landscapes (particularly the Outer Continental Shelf, Southern New England, Virginia and Lake Huron); Underwater Geophysical Survey and Mapping; GIS Applications for Underwater Archaeology; Archaeological Method, Theory and Ethics; The Evolution of Shipbuilding Technology; Revolutionary War Shipwrecks in Narragansett Bay; Development and Change in the Atlantic World (15<sup>th</sup>–19<sup>th</sup> centuries); and European Maritime Empires.

Discipline: Social Sciences (Archeology)

#### Richard J. McLaughlin

Professor and Endowed Chair Harte Research Institute for Gulf of Mexico Studies Texas A&M University - Corpus Christi 6300 Ocean Drive, Unit 5869 Corpus Christi, Texas 78412-5869 office: (361) 825-2010 e-mail: Richard. Mclaughlin@tamucc.edu

Dr. McLaughlin received his J.S.D., Doctorate in Law from the Boalt Hall School of Law, University of California at Berkeley, in 1997, and is the Harte Research Institute's Endowed Chair of Marine Policy and Law. He has been actively involved in a variety of leadership positions in the marine policy field, is a former Fulbright Scholar to Japan and has published over sixty articles and monographs on ocean and coastal policy issues. In the classroom, his instruction has included Admiralty, Coastal Management and Ocean Law, and Environment/Marine Policy. He has superior knowledge of marine policy and legal issues including the international law of the sea, ocean energy policies, ocean governance, and marine ecosystem-based management.

Discipline: Social Sciences (Marine Policy and Law)

#### Lorrie D. Rea *Chair*

Steller Sea Lion Research Program Division of Wildlife Conservation Alaska Department of Fish and Game 1300 College Road Fairbanks, Alaska 99701-1551 office: (907) 459-7367 email: lorrie.rea@Alaska.gov

Dr. Rea received her Ph.D. from the University of Alaska, Fairbanks, in 1995. Her general research interest encompasses the metabolism and nutritional physiology of terrestrial and marine mammals and is particularly interested in questions dealing with lipid metabolism in large mammals and how physiological processes are adapted to periods of food limitation and fasting in the wild. Most of her recent research addresses health, diet, and body condition assessment of Steller sea lions in Alaska. She is currently a wildlife physiologist with the Alaska Department of Fish and Game, Division of Wildlife Conservation.

Discipline: Biology (Endangered Species; Arctic Marine Mammal Health)

#### Sandra R. Werner

Research Scientist ExxonMobil Upstream Research Company P.O. Box 2189 Houston, Texas 77252-2189 office: (713) 431-6358 e-mail: sandra.r.werner@exxonmobil.com

Dr. Werner received her Ph.D. from the Joint Program in Oceanography/Applied Ocean Science and Engineering, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, Cambridge/Woods Hole, Massachusetts in 1999. She has developed metocean criteria for the Gulf of Mexico and operations worldwide and has modeled hurricane-induced currents in the Gulf of Mexico. She has also performed comprehensive studies of inter-annual variations of Arctic sea ice and climate, oversaw shoreline erosion and sediment transport studies including scour protection studies for offshore platforms, and managed environmental monitoring program offshore Sakhalin (Sakhalin Gray Whales) comprising field studies (biology, physical oceanography, marine sound), and presentations to regulatory authorities.

Discipline: Physical Oceanography (Engineering/Ocean Modeling)

### *EX OFFICIO* FEDERAL MEMBERS

#### Tommy P. Beaudreau

Director Bureau of Ocean Energy Management 1849 C Street, N.W. Washington, D.C. 20240 office: (202) 208-3500

Mr. Beaudreau is the first director of the Bureau of Ocean Energy Management (BOEM), which is responsible for overseeing the environmentally and economically responsible development of the Nation's offshore resources. BOEM manages the conventional and renewable ocean energy and mineral resources on 1.7 billion acres of the U.S. Outer Continental Shelf (OCS).

Mr. Beaudreau joined the Department of the Interior in June 2010 to help develop and lead the Department's aggressive reforms of offshore energy management and oversight following the Deepwater Horizon blowout and oil spill, including the reorganization of the former Minerals Management Service. He served as the senior advisor to the director of the Bureau of Ocean Energy Management, Regulation and Enforcement, where he played an integral role in designing and implementing the Bureau's broad reform agenda with respect to the regulation of offshore oil and gas development.

BOEM was established in October 2011. The agency's responsibilities include leasing, plan administration, environmental studies, National Environmental Policy Act (NEPA) analysis, resource evaluation, economic analysis and the offshore renewable energy program.

Prior to his work at Interior, Mr. Beaudreau was a partner at the law firm Fried, Frank, Harris, Shriver & Jacobson LLP, where his practice focused on, among other things, internal investigations, including reviews of government agencies pursuing reform. Mr. Beaudreau is a graduate of Yale University and received his law degree from the Georgetown University Law Center.

#### Kathryn D. Sullivan

Assistant Secretary of Commerce for Environmental Observations and Prediction, Deputy Administrator, and the Acting Chief Scientist of NOAA Office of the Under Secretary National Oceanic and Atmospheric Administration 1401 Constitution Avenue, NW, Room 5128 Washington, DC 20230 office: 202-482-6236 e-mail: kathryn.sullivan@noaa.gov

On May 2, 2011, Dr. Sullivan was appointed by President Obama as assistant secretary of commerce for environmental observation and prediction and deputy administrator for the National Oceanic and Atmospheric Administration (NOAA). She is also serving as NOAA's acting chief scientist. She is a distinguished scientist, renowned astronaut and intrepid explorer.

As assistant secretary, Dr. Sullivan plays a central role in directing Administration and NOAA priority work in the areas of weather and water services, climate science and services, integrated mapping services and Earth-observing capabilities. She provides agency-wide direction with regard to satellites, space weather, water, and ocean observations and forecasts to best serve American communities and businesses. As Deputy Administrator, she oversees the smooth operation of the agency.

Dr. Sullivan's impressive expertise spans the frontiers of space and sea. An accomplished oceanographer, she was appointed NOAA's chief scientist in 1993, where she oversaw a research and technology portfolio that included fisheries biology, climate change, satellite instrumentation and marine biodiversity.

Dr. Sullivan was the inaugural director of the Battelle Center for Mathematics and Science Education Policy in the John Glenn School of Public Affairs at Ohio State University. Prior to joining Ohio State, she served a decade as President and CEO of the Center of Science and Industry (COSI) in Columbus, Ohio, one of the nation's leading science museums. Dr. Sullivan joined COSI after three years' service as Chief Scientist.

Dr. Sullivan was one of the first six women selected to join the NASA astronaut corps in 1978 and holds the distinction of being the first American woman to walk in space. She flew on three shuttle missions during her 15-year tenure, including the mission that deployed the Hubble Space Telescope. Dr. Sullivan has also served on the National Science Board (2004-2010) and as an oceanographer in the U.S. Navy Reserve (1988-2006)

Dr. Sullivan holds a bachelor's degree in earth sciences from the University of California at Santa Cruz and a doctorate in geology from Dalhousie University in Canada.

# NOAA REPRESENTATIVES

#### Paul A. Sandifer

c/o Hollings Marine Laboratory 331 Fort Johnson Road Charleston, South Carolina 29412 office: 843-762-8814 e-mail: paul.sandifer@noaa.gov

Paul Sandifer is the Senior Science Advisor to the Administrator of the National Oceanic and Atmospheric Administration where he leads a variety of efforts to strengthen the overall NOAA science enterprise, and works on implementation of the President's Ocean Policy, NOAA's healthrelated activities, development of science policy related to biodiversity and ecosystem services, coastal management, aquaculture, and other areas. He is also Chief Science Advisor for NOAA's National Ocean Service where he handles a diverse science portfolio. Sandifer is co-chair of the Ocean Science and Technology Interagency Policy Committee of the National Ocean Council (NOC) and a member of the NOC Steering Committee. He also co-chairs the Subcommittee on Integrating Science and Technology for Sustainability of the Committee on the Environment, Natural Resources and Sustainability (CENRS) and is a member of the Institute of Medicine's Roundtable on Environmental Health Sciences, Research and Medicine and also of the National Academies Roundtable on Science and Technology for Sustainability. He was a member of the US Commission on Ocean Policy, the Marine Board of the National Research Council, and he currently serves on a number of other boards and committees. He is an Honorary Life Member of the World Aquaculture Society, a Fellow of the American Association for the Advancement of Science, and a NOAA Research Fellow. Prior to coming to NOAA, Sandifer had a distinguished 31-year scientific and management career with the South Carolina Department of Natural Resources, including service as Director of the Marine Resources Division and as Director of the agency. He holds academic appointments at the College of Charleston, the Medical University of South Carolina and University of South Carolina and is author or co-author of numerous scientific and technical publications in aquaculture, marine science, and ocean policy. Dr. Sandifer received a B.S. degree in biology from the College of Charleston and the Ph.D. in Marine Science from the University of Virginia.

#### Richard L. Merrick

NOAA Fisheries Service Partnerships & Communications 1315 East West Highway Silver Spring, MD 20910 office: 301-427-8000 e-mail: richard.merrick@noaa.gov

Dr. Merrick began serving as Director, Scientific Programs and Chief Science Advisor in September 2011. In this capacity, he leads NOAA Fisheries' efforts to provide the science needed to support sustainable fisheries and ecosystems and to continue our country's progress in ending overfishing, rebuilding fish populations, saving critical species, and preserving vital habitats. As the head of NOAA Fisheries' scientific operations, Dr. Merrick will direct NOAA's six regional Fisheries Science Centers, including 30 NOAA Fisheries laboratories. He joined NOAA Fisheries in 1985 as a marine mammal staff scientist at the Alaska Fisheries Science Center. In 1997, he transferred to the Northeast Fisheries Science Center, where he initially served as Branch Chief for Protected Species, and then as Chief of the Resource Evaluation and Assessment Division where he directed this Center's assessment, ecological, and social-science research for fish and protected species. He has led various regional and national efforts to improve fishery and protected resources science, and has broad experience in dealing with a wide variety of controversial fishery and protected species.

Dr. Merrick's education includes a Ph.D. in fisheries from the University of Washington; a master's of science degree in biological oceanography as well as a master's degree in marine resource management from Oregon State University; and a master's degree in city and regional planning and a bachelor of science degree from Clemson University.

## COMMITTEE OFFICIALS

#### Alan D. Thornhill Executive Director and Federal Officer

Chief Environmental Officer Office of Environmental Programs Bureau of Ocean Energy Management 1849 C Street, N.W. Washington, D.C. 20240 phone: (202) 208-6249 -- fax: (202) 208-6048 e-mail: alan.thornhill@boem.gov

Dr. Alan Thornhill was named as the first CEO in November 2011, transitioning into the new Bureau from his previous tenure as Science Advisor to the Director (both MMS and BOEMRE) which he began in March 2010. Previously (2001-2010), Dr. Thornhill was the first Executive Director of the Society for Conservation Biology, where he launched the executive office, oversaw the development of a professional staff, and initiated programs that saw the global membership triple in seven years. Other experience includes, the Director of Learning and Communications for the Science Division at The Nature Conservancy, and Professor of Ecology and Evolutionary Biology at Rice University in Houston, Texas. For the past six years, Dr. Thornhill has taught in the Masters Program in the College of Natural Resources at Virginia Polytechnic Institute and State University. Dr. Thornhill earned his Bachelors and Ph.D. degrees in Ecology from the University of California, Irvine.

#### Rodney E. Cluck Executive Secretary

Chief

Environmental Sciences Division Bureau of Ocean Energy Management 381 Elden Street, HN-3115 Herndon, Virginia 20170-4817 phone: (703) 787-1087-- fax: (703) 787-1053 e-mail: rodney.cluck@boem.gov

Dr. Rodney Cluck holds a Ph.D. in environmental sociology from Mississippi State University and a Masters Degree in Rural Sociology from the University of Arkansas, Fayetteville. For 6 years, beginning in 1999, Dr. Cluck served as the senior Bureau social scientist where he developed and oversaw scientific studies and conducted National Environmental Policy Act analysis. In 2005, Dr. Cluck joined the Office of Alternative Energy Programs and became the project manager for the United States' first offshore wind facility. Dr. Cluck is currently the Chief of the Division of Environmental Sciences where he leads the Environmental Studies Program, the scientific backbone that informs policy decisions regarding leasing and development of ocean energy.