

**Invitation for Public Comment on the List of Candidates for the
EPA Science Advisory Board (SAB)
Great Lakes Restoration Initiative Action Plan Review**

March 14, 2011

The US Environmental Protection Agency (EPA) Great Lakes National Program Office requested the Science Advisory Board (SAB) to form an SAB panel to review the Great Lakes Restoration Initiative Action Plan. The Action Plan describes restoration priorities, goals, objectives, measurable ecological targets, and specific actions to protect and restore the chemical, biological, and physical integrity of the Great Lakes.

The SAB Staff Office announced in a *Federal Register* Notice (Volume 75, Number 185, Pages 58383-58385) published on September 24, 2010 that it was forming the SAB Great Lakes Restoration Initiative Action Plan Review Panel to provide an independent review of the Action Plan. To form the panel, the EPA SAB Staff Office sought public nominations of nationally recognized and qualified experts in one or more of the following areas; limnology, landscape ecology, restoration ecology, ecotoxicology, population biology, aquatic biology, fisheries and wildlife management, invasive species, water chemistry, environmental engineering, environmental monitoring, and environmental assessment. Additionally, the SAB Staff Office identified its particular interest in these areas with respect to the design, management, and implementation of environmental protection and restoration programs.

The SAB Staff Office identified 36 candidates based on their relevant expertise and willingness to serve. Biosketches for these candidates are provided below.

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. Please be advised that comments received are subject to release under the Freedom of Information Act. Comments should be submitted to Mr. Thomas Carpenter, Designated Federal Officer, no later than April 4, 2011. E-mailing comments to Mr. Carpenter at carpenter.thomas@epa.gov is the preferred mode of receipt.

Great Lakes Restoration Action Plan Review Panel Biosketches

Albright, Elizabeth

Loyola University Chicago

Dr. Elizabeth A. Albright is an Instructor in the Masters of Urban Affairs and Public Policy Program at Loyola University of Chicago. She received a BA in Chemistry from The College of Wooster (Wooster, OH), an MPA and MSES from the School of Public and Environmental Affairs (SPEA) at Indiana University (Bloomington, Indiana), and a PhD in the environment from the Nicholas School of the Environment at Duke University (Durham, North Carolina). She has studied river basin management processes and local-level adaptation to extreme climatic events. Dr. Albright received both a Fulbright Scholarship and a grant from the National Science Foundation to support her research. She recently was awarded the 'Best Paper by an Emerging Scholar Award' at the 2010 Midwest Political Science Association Annual Conference. Prior to earning her doctorate, Dr. Albright worked as a water quality modeler developing water restoration management plans and stakeholder outreach programs for the state of North Carolina.

Allredge, J. Richard

Washington State University

J. Richard Allredge is currently Professor of Statistics at Washington State University. He holds a PhD from Texas A&M University. Areas of expertise include applied statistics, biometry, spatial statistics, statistical methods in wildlife resource selection, agricultural statistics, and ecology. He serves as a member of the Independent Scientific Advisory Board and the Independent Scientific Review Panel for the Northwest Power Conservation Council. He is an Elected Member of the International Statistical Institute and a Fellow of the American Statistical Association.

Baker, Joel Eric

University of Washington Tacoma

Professor Joel Baker holds the Port of Tacoma Chair in Environmental Science at the University of Washington Tacoma, is the Science Director of the Center for Urban Waters in Tacoma, and is the Executive Director of the Puget Sound Institute. He earned a B.S. degree in Environmental Chemistry from SUNY Syracuse and M.S. and Ph.D. degrees in Civil and Environmental Engineering from the University of Minnesota. Dr. Baker's research interests center about the transport of organic contaminants in the environment, specifically atmospheric transport and deposition, aerosol chemistry, the dynamics of contaminant transport in estuaries, and modeling the exposure and transfer of chemicals in aquatic food webs. He teaches courses in water quality modeling, environmental chemistry, and quantitative methods. He has co-authored over ninety papers on contaminant cycling in the Great Lakes, the Chesapeake Bay and coastal waters, and edited Atmospheric Deposition of Contaminants to the Great Lakes and Coastal Waters (SETAC Press, 1997). He was the lead author on a scientific review of PCBs in the Hudson River, a contributing author to the Pew Oceans Commission report Marine Pollution in the United States, and a member of the NRC's Committee on Oil in the Sea, chaired the New York Harbor Model Evaluation Group, advised the European Commission on water quality modeling, and served on the Board of Directors of the Society of Environmental Toxicology and Chemistry. Dr. Baker is an ex officio member of the Puget Sound Partnership Science Panel, which he chaired from 2007-2009. In 2010, he was awarded the Conservation Research Award by the Seattle Aquarium Society.

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Bergman, Harold

University of Wyoming

Harold L. Bergman is Professor of Zoology and Physiology, J.E. Warren Distinguished Professor of Energy and the Environment, and former Director of the Haub School and the Ruckelshaus Institute of Environment and Natural Resources at the University of Wyoming. Dr. Bergman earned a PhD in Fisheries Biology at Michigan State University and has been on the UW faculty since 1975. He has authored or co-authored over 100 research articles and edited four books on diverse topics related to his principal research interests in environmental toxicology, fish physiology, and environmental policy. He has received numerous research and teaching awards, and he has served on a number of national and international advisory and review panels dealing with environmental and natural resource policy. In 2009, he was appointed to the National Research Council's Board of Agriculture and Natural Resources. At the Ruckelshaus Institute and Haub School from 1998-2008, Bergman along with faculty and staff colleagues, focused on collaborative approaches to natural resource management and on assessment and valuation of benefits and costs of natural resource development.

Bilby, Robert E.

Weyerhaeuser Co

Dr. Robert E. Bilby has conducted research on stream ecosystems, salmon and the effects of forestry on both since 1975. He currently is the Chief Environmental Scientist for Weyerhaeuser Company and is responsible for coordinating environmental research efforts on all company forest lands and developing collaborative programs with federal, academic and ENGO research organizations. Prior to assuming his current position, Bilby managed the Environmental Forestry Research Program in Weyerhaeuser's Western Forestry Research Program and in the late 1990s managed the Watershed Processes program at the National Marine Fisheries Service's Northwest Fisheries Science Center in Seattle. He is an affiliate faculty member at the University of Washington's College of the Environment. Dr. Bilby has served for the last ten years as a member of a scientific advisory board for the Northwest Power and Conservation Council that provides technical guidance for fish and wildlife restoration efforts within the Columbia River Basin. Bilby's research has included investigation of the role of large wood in streams and the impact of forestry on this material, response of stream trophic systems to disturbances, relationships between habitat characteristics and salmon productivity and the contribution that spawning salmon make to the nutrient capital and productivity of streams. He received a B.S. in zoology from the University of Rhode Island and a Ph.D. in aquatic ecology from Cornell University.

Boyer, Elizabeth

Pennsylvania State University

Dr. Elizabeth Boyer is an Associate Professor of Water Resources in the School of Forest Resources at the Pennsylvania State University. She serves as Director of the Pennsylvania Water Resources Research Center, and as Assistant Director of Penn State Institutes of Energy & the Environment. Prior to her current position, Dr. Boyer was on the faculty at the State University of New York at Syracuse (assistant professor) and at the University of California at Berkeley (associate professor). She holds a B.S. in Geography from the Pennsylvania State University, and an M.S. and Ph.D. in Environmental Sciences (hydrology option) from the University of Virginia. Dr. Boyer's research explores coupled hydrological and ecological processes that affect water quality (e.g., nutrients, matrix ions, and trace metals) and water quantity (e.g., streamflow and water yield). She is particularly interested in how human activities and environmental variability influence conditions and trends in streams, rivers, and estuaries. Dr. Boyer is a member of the American Geophysical Union, American Water Resources Association, American Society of Limnology and Oceanography, and the Ecological Society of America. She has Chaired the American Geophysical Union's technical committee on Water Quality, and has Chaired the international Gordon Research Conference on Catchment Science: Interactions of Hydrology, Biology and Geochemistry. She has recently served on the EPA Science Advisory Board ad-hoc committee on Mountaintop Mining.

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Casselman, John

Queen's University

Dr. John M. Casselman: Adjunct professor, Biology Department, Queen's University, Kingston, Ontario, and former senior scientist (retired) of Fisheries Research Section, Ontario Ministry of Natural Resources; supervised fisheries research on Lake Ontario. A fisheries ecologist and environmental physiologist, have studied and published numerous scientific papers (152), book chapters, and co-edited special publications on fish, fisheries, and aquatic ecosystems of the Great Lakes and by invitation have studied fish and fisheries throughout the world (e.g., Rift Valley lakes of Ethiopia for Canadian International Development Agency, lakes and rivers of the Tibetan Plateau for Chinese Academy of Sciences, and Canadian Arctic for National Science Foundation). Have conducted diverse studies on fish and fisheries ranging from age, growth, and production of fish stocks to species populations and community dynamics to climate change sensitivity, response, and adaptation. Cross-appointed at numerous universities, supervisor and committee adviser to graduate students at seventeen universities. Have conducted research on the Great Lakes for numerous funding agencies, including Natural Sciences and Engineering Research Council of Canada. Appointed adviser to Ontario Ministry of Natural Resources Lake Ontario and St. Lawrence River Fisheries Advisory Committee, Zone 20; Ontario Federation of Anglers and Hunters Fish Committee; Canadian science adviser for public-at-large to commissioners of the Great Lakes Fishery Commission; adviser to International Joint Commission Science Advisory Board. Received 2005 Fruetel Memorial Award of Ontario Ministry of Natural Resources for significant contributions to Ontario's fisheries research, assessment, and management programs; 2008 Award of Excellence, the most prestigious award of the 138-year-old 10,000-member American Fisheries Society in recognition of original and outstanding contributions to fisheries science and aquatic biology for lifetime achievements as a researcher, mentor, and leader; 2009 Ontario Commercial Fisheries Association Partnership Award for contributions to sustainability of fish resources through many years of fisheries research and management; 2009 Great Lakes Fishery Commission Award for distinguished scientific contributions toward understanding healthy Great Lakes ecosystems.

Chapra, Steven

Tufts University

Dr. Steven C. Chapra is Professor of Civil and Environmental Engineering and the Louis Berger Chair for Computing and Engineering at Tufts University. Dr. Chapra received BE and ME degrees in environmental engineering from Manhattan College and a PhD in Environmental and Water Resources Engineering from the University of Michigan. Before joining the faculty at Tufts, Dr. Chapra worked for EPA, the Great Lakes Environmental Research Laboratory (NOAA), Texas A&M University and the University of Colorado. He has also served as a visiting professor at Duke University, the University of Michigan, Imperial College London, and the University of Washington. He is a member of the American Society of Civil Engineers, the Association of Environmental Engineering and Science Professors, the International Association for Great Lakes Research, and the American Public Health Association. His research focuses on surface water-quality modeling and advanced computer applications in environmental engineering. He has published over 100 papers, reports and software packages, and has authored seven textbooks including Surface Water-Quality Modeling, the standard text in that area. His research has been used in a number of decision-making contexts including the 1978 Great Lakes Water Quality Agreement. He has been the recipient of the Rudolph Hering Medal for the outstanding paper in environmental engineering and the Chandler-Misener Award for the outstanding article on Great Lakes research. He has taught over 65 workshops on water-quality modeling in the United States and internationally. Finally, he has been recognized as the outstanding teacher among the engineering faculties at both Texas A&M (1986 Tenneco Award) and the University of Colorado (1992 Hutchinson Award). He was also awarded the 1987 Meriam-Wiley Distinguished Author Award by the American Society for Engineering Education and was the first recipient of the AEESP Wiley Award for Outstanding Contributions to Environmental Engineering and Science Education.

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Chen, Celia

Dartmouth College

Dr. Celia Chen is a Research Associate Professor in the Department of Biological Sciences at Dartmouth College. She has also been a lead scientist for 16 years in the Dartmouth Toxic Metals Superfund Research Program. She received her BA in Biology and Environmental Studies at Dartmouth College (Hanover, NH) and an MS in Biological Oceanography at the Graduate School of Oceanography of the University of Rhode Island (Narragansett, RI) and a Ph.D. in Ecology from Dartmouth College. After finishing her Ph.D., she became a lead scientist in the Superfund Research Program. She has studied the fate and effects of metal contaminants in freshwater and estuarine ecosystems including the bioaccumulation and trophic transfer of mercury in lakes throughout the Northeast US including Lake Champlain. Her more recent metals research has investigated metal bioavailability and bioaccumulation in coastal marsh food webs from Maine down to NJ. She has also conducted research on developing genomic tools as biomarkers of metal exposure for the model organisms, *Daphnia pulex* and *Fundulus heteroclitus*. She has investigated the effects of multiple stressors on aquatic organisms by developing methods for quantifying the antagonistic, synergistic, and additive effects of stressors such as organic contaminants, pH, food availability, and temperature. Dr. Chen has also studied the impact of environment changes due to climate change including effects of warming on demography and phenology of aquatic invertebrates and she was a contributor to the 1995 IPCC Report on Climate Change. She served on the Hubbard Brook Research Foundation Science Links Panel on mercury in the environment and has chaired regional and international workshops on mercury in marine ecosystems. She is currently a Review Editor for the journal *Ecohealth* and serves on the Scientific Advisory Committee of the Lake Sunapee Protection Association and on the Scientific Council of Biodiversity Research Institute.

Collier, Tracy

National Oceanic and Atmospheric Administration

Tracy Collier currently serves as the science advisor to NOAA's Oceans and Human Health Program, where he provides science direction in the areas of chemical contaminants, pathogens, and algal toxins and their effects on human and ecosystem health, for US coastal waters and the Great Lakes. The OHH Program also investigates benefits from the sea, including the development of novel drugs. Until recently, Dr. Collier was director of the Environmental Conservation Division of NOAA's Northwest Fisheries Science Center, where he supervised a research enterprise comprised of approximately 90 scientists. His expertise is in the area of environmental toxicology, where he conducted some of the first work on metabolism of PAHs by aquatic animals, and throughout his career has emphasized field assessments and biologically based monitoring aimed at understanding the stresses posed by toxic chemicals on aquatic ecosystems. More recently he has overseen studies on the effectiveness of restoration efforts, especially in urbanizing areas. When the Puget Sound Partnership undertook an aggressive effort to protect and restore Puget Sound, Dr. Collier was asked to oversee a rapid effort to catalog existing regional environmental indicators and determine their utility for measuring progress in meeting Partnership goals. Over 700 indicators were described, binned, and evaluated, in the areas of protecting habitats and species, human health, water quality, and water quantity. Dr. Collier received his PhD from the University of Washington, he holds faculty appointments at Oregon State University and Washington State University, and he consults for NOAA through a cooperative agreement with the University Corporation for Atmospheric Research. He serves on a number of regional, national, and international panels and committees, including the recently created Delta Independent Science Board in California. Until recently, he was an editor for *Environmental Toxicology and Chemistry*, and he has over 130 scientific publications.

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Diamond, Miriam L.

University of Toronto

Dr. Miriam L. Diamond is Professor at the University of Toronto in the Department of Geography and Program in Planning with cross-appointments to the Department of Chemical Engineering and Applied Chemistry and the Dalla Lana School of Public Health. She received her B.Sc. in Biology from the University of Toronto, M.Sc. from the University of Alberta in Zoology, M.Sc.Eng from Queen's University (Kingston Ontario) in Mining Engineering, and her Ph.D. in environmental engineering from University of Toronto. After one year as a post-doctoral fellow at the Institute for Environmental Studies at the University of Toronto, she joined the University's faculty. Her research focuses on understanding the sources, emissions, fate and exposure from and to chemical contaminants in natural and human environments. This research has included assessments of contaminants vis-a-vis the Great Lakes and Remedial Action Plans for several Areas of Concern in the lakes. Dr. Diamond is a member of the Science Advisory Board of the International Joint Commission of Canada and currently sits on National Academies of Sciences Institute of Medicine panel reviewing the exposure of Blue Water Navy Vietnam Veterans to Agent Orange. She is a member of the Editorial Advisory Board for the journal Environmental Science and Technology and a member of the Board of Directors of the Canadian Environmental Law Association. She is a Fellow of the Canadian Geographical Society and was named Canadian Environmental Scientist of the Year in 2007 by that society.

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.

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Findlay, Christopher

University of Ottawa, Institute of Environment

Scott Findlay is Associate Professor in the Department of Biology at the University of Ottawa and a Research Scientist at the Center for Cancer Therapeutics at the Ottawa Hospital Research Institute. He received his B. Sc. (Hon.) from Queen's University and his Ph.D. from the Department of Zoology, University of Toronto where he worked on evolutionary game theory. From 1992-1996, he was the Director, Physical Sciences, of the St. Lawrence Ecosystem Recovery Project, a \$2.25 million EcoResearch program funded by Canada's federal Green Plan. His main research interests concern the quantification of risks posed to ecosystem structure and function by human activities, the notion of scientific weight of evidence in administrative decision-making and science-informed policy, integration of traditional and western scientific knowledge in aboriginal community health, and the role of Darwinian evolution in cancer progression and cancer therapy. From 2003-2009, he was the Director of the Institute of the Environment at the University of Ottawa, and in July 2003 he was awarded the University of Ottawa Prize for Excellence in Teaching. In April 2005, he was appointed to the Science Advisory Board of the International Joint Commission, and in 2008 to the Challenge Advisory Panel to advise on the federal government's Chemical Management Plan. In September 2009, he was appointed to the Expert Advisory Panel to the Commissioner of Environment and Sustainable Development. In 2011, he was commissioned by the National Judicial Institute of Canada to produce a manual for Canada's judiciary and litigators on the interpretation of scientific evidence in the courtroom.

Havens, Kirk

College of William & Mary

Dr. Kirk Havens is Director of the Coastal Watersheds Program for the Virginia Institute of Marine Science at the College of William & Mary. He received a BS (biology) and MS (oceanography) from Old Dominion University (Norfolk, VA) and PhD in Environmental Science and Public Policy from George Mason University (Fairfax, VA). He serves as the gubernatorial appointee to the Chesapeake Bay Program Scientific and Technical Advisory Committee and also on the Albemarle Pamlico National Estuary Program (APNEP) Scientific and Technical Advisory Committee. He also serves on the APNEP Policy Board. He was a partner in the EPA Science to Achieve Results (STAR) Estuarine and Great Lakes (EaGLE) Program to develop environmental indicators for use by states in assessing the biological health of estuaries and the Great Lakes. He is currently working on the Mid Atlantic Regional Wetland Assessment and EPA's National Wetland Assessment. He is actively involved in development of indicators of aquatic health for the Chesapeake Bay and the Albemarle Pamlico sound. He is the lead investigator of marine debris issues in the Chesapeake Bay, particularly derelict fishing gear. He specializes in estuarine ecology, public policy, and adaptive management process and prioritization.

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Koonce, Joseph

Case Western Reserve University

Joseph F. Koonce is Professor of Biology at Case Western Reserve University with a secondary appointment as Professor in the Department of Electrical Engineering and Computer and Science. He received his A.B. Degree from Dartmouth College and M.S. and Ph.D. Degrees from the University of Wisconsin, Madison, in Zoology. From 2000 to 2009, he served as Chair of the Department of Biology at Case Western Reserve University. Dr. Koonce has broad research interests in aquatic systems ecology. As the leader of the Lake Erie Ecological Modelling Project, his current research interests focus on modeling cross-scale interaction of stressors on the large-scale structure and function of ecosystems. He has served on a number of Boards and advisory committees for the Great Lakes Fishery Commission, the International Joint Commission, National Research Council, and the U.S. Environmental Protection Agency. He served as the Ecosystem Partnership Coordinator for the Great Lakes Fishery Commission (1992-1993), as U.S. Co-chair of the Habitat Advisory Board of the Great Lakes Fishery Commission (1997-1999), and is currently a member of the Science Advisory Board of the International Joint Commission. Dr. Koonce has extensive experience in undergraduate biology teaching and curriculum development. Through his leadership as a Program Director for Case Western Reserve University's Howard Hughes Medical Institute grant, the Biology Department has developed a new, principles-based core curriculum for biology and a new degree program in Systems Biology. He was a National Academies Education Fellow in the Life Sciences in 2004-2005 Summer Institute on Undergraduate Education in Biology and has enabled participation of other faculty in the Institute to form a team to implement additional changes of instructional format for undergraduate biology courses.

Landis, Wayne

Western Washington University

Dr. Wayne Landis is Professor and Director, Institute of Environmental Toxicology Huxley College of the Environment, Western Washington University. He received a B.A. in Biology from Wake Forest University, (1974), an M.A. in Biology from Indiana University (1978), and a Ph.D. in Zoology from Indiana University (1979). Dr. Landis' areas of expertise and research activities include: environmental toxicology, the effects of toxicants on populations, and ecological risk assessment at large spatial and temporal scales. His research contributions also include: co-development of the Community Conditioning Hypothesis, the use of multivariate analysis in microcosm data analysis, creation of the Action at a Distance Hypothesis for landscape toxicology, the application of complex systems theory to risk assessment, and development of the Relative Risk Model for multiple stressor and regional-scale risk assessment and specialized methods for calculating risk due to invasive species and emergent diseases. Dr. Landis has authored over 130 peer-reviewed publications and government technical reports, made over 220 scientific presentations, edited four books, and wrote the textbook, Introduction to Environmental Toxicology, now in its fourth edition. He has consulted for industry; non governmental organizations as well as federal (U.S. and Canada), state, provincial, and local governments. Dr. Landis has served on the American Society of Testing and Materials (ASTM) Committee on Publications overseeing a variety of environmentally related symposia proceedings. He serves on the editorial boards of the journals Human and Ecological Risk Assessment and Integrated Environmental Assessment and Management, and is the ecological risk area editor for Risk Analysis. He is a member of the Society of Environmental Toxicology and Chemistry (SETAC) and served on the SETAC Board of Directors from 2000-2003. In 2007 he was named a Fellow of the Society for Risk Analysis.

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Leschine, Thomas

University of Washington

Thomas Leschine is Director and Professor at the School of Marine Affairs and Adjunct Professor of Fisheries at the University of Washington. He is currently a member of the Marine Board of the National Research Council. His research interests are in the areas of environmental decision-making in relation to marine environmental protection and the use of scientific and technical information and expertise in environmental decisions. He has served on numerous National Research Council panels and chaired the NRC Committee on Remediation of Buried and Tank Wastes, 1996-2000. In Washington State he serves on the Nearshore Science Team of the Puget Sound Nearshore Partnership, a multi-agency consortium developing a major program of environmental restoration for Puget Sound, and also as a member of the Science Panel of the Puget Sound Partnership. In 2008-09 he advised the Joint Legislative Audit and Review Committee of the Washington State Legislature on the alignment of taxation policies and risk in relation to funding for the State's spill prevention and response programs. He served on the Washington State Pilotage Commission, by appointment of the Governor, from 1992-98. Earlier, he led the U.S Coast Guard team that produced the Federal On-Scene Coordinator's Report following the 1989 T/V Exxon Valdez oil spill (1993). Following service in 2007-08 on an NRC panel that developed a comprehensive framework for assessing the risks of oil spills in the Aleutian Islands, he was appointed to the NRC's Marine Board (2008). Dr. Leschine received his PhD in mathematics from the University of Pittsburgh, specializing in mathematical logic. His transition to a career in marine policy came by way of a post-doctoral position in marine policy, and later as a policy associate, at The Woods Hole Oceanographic Institution in Woods Hole, Massachusetts.

McAfee, Brenda

Environment Canada

Dr. Brenda McAfee is senior science advisor in Ecosystem Priorities and Biodiversity, Environment Canada, where she works on the Convention on Biological Diversity (CBD), leading inland waters, invasive species, and sustainable use issues and providing Canada's focal point for the Cartagena Protocol on Biosafety. Dr. McAfee leads an issue team and is lead negotiator for Canada on species and habitats for the Great Lakes Water Quality Agreement revision. For the past two years she has also been working on Canada's input to the establishment of an Intergovernmental Platform on Biodiversity and Ecosystem Services. She has a BSc and MSc from Acadia University and a PhD in Forest Science from Laval University. She has held research positions at two laboratories of the National Research Council of Canada (working on toxicology and embryogenesis, with National Resources Canada (phytoremediation and ecotoxicology) and with Forintek Canada, now FP Innovations (working on biological control. Dr. McAfee has served on advisory panels on biodiversity research for the Forestry and Forest Products Research Institute, Tsukuba Japan and Agriculture and Agri-food Canada and has been a reviewer of strategic grant proposals for the Natural Science and Engineering Council of Canada. She has also been nominated to represent Canada in technical expert groups on Sustainable Use and Protected Areas for the CBD. Her experience includes responsibility for planning, coordination and monitoring of a national research program on forest biodiversity for the Canadian Forest Service (nine years) and for the design and delivery of a circum-boreal science program for the International Model Forest Network.

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McKinney, Larry

Harte Research Institute

Dr. McKinney received his PhD from Texas A&M University in 1976. He is the Executive Director of Harte Research Institute for Gulf of Mexico Studies where he leads a interdisciplinary team that integrates science, policy and socio-economic expertise to help assure an economically and environmentally sustainable Gulf. Dr. McKinney acts as state lead for the Ecosystem Assessment and Integration Team of the Gulf Alliance. He chairs the Flower Gardens National Marine Sanctuary Advisory Committee and the Texas Sea Grant Science Advisory Committee. He is a member of NASA's SSC Applied Sciences Steering Committee and board member of the Texas Academy of Sciences.

Miller, Carol

Wayne State University

Carol Miller is Professor and Chair of the Department of Civil and Environmental Engineering at Wayne State University. She is an active water resources researcher, having received grants from the National Science Foundation, Great Lakes Protection Fund, Engineering Foundation, and others. Her research has included both surface and subsurface water supplies and has recently included topics with a water/energy interface. She is co-Director of the Urban Watershed Environmental Research Group (UWERG) at WSU. Dr. Miller is a licensed Professional Engineer in the State of Michigan and past chair of the State Licensing Board. She is a past recipient of the Engineering Educator of the Year award from the Michigan Society of Professional Engineers. Dr. Miller currently serves on the Science Advisory Board of the International Joint Commission.

Oris, James

Miami University

Dr. James Oris is a Professor in the Department of Zoology and is the Associate Dean for Research and Scholarship at Miami University in Oxford, Ohio. He received a B.A. in Biology from Wittenberg University (1979) and a Ph.D. in Environmental Toxicology and Fisheries and Wildlife from Michigan State University (1985). Dr. Oris's areas of research interest center on the ecological toxicology of chemicals in aquatic systems. His primary interest is the study of the fate and effects of polycyclic aromatic hydrocarbons and mercury in freshwater systems. Sediment toxicity, photo-induced toxicity, long-term reproductive toxicity, routes of uptake, and environmental factors that may alter fate and effects have been areas of study. These studies have ranged from the use of molecular biomarkers to landscape-scale ecological assessments. Dr. Oris is also interested in standard toxicity test development and methodology, including the statistical modeling and analysis of toxicity dose-response relationships. He has published over 90 peer-reviewed scientific research articles and over 170 abstracts for presentations at scientific meetings. Dr. Oris has served on editorial or review boards of 8 journals, 6 books and 9 granting agencies. He served as the President (2004-2005) of the Society of Environmental Toxicology and Chemistry (SETAC) North America.

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Paerl, Hans

University of North Carolina - Chapel Hill

Dr. Hans W. Paerl is Kenan Professor of Marine and Environmental Sciences, at the UNC-Chapel Hill Institute of Marine Sciences, Morehead City. His research includes; microbially-mediated nutrient cycling and primary production dynamics of aquatic ecosystems, environmental controls of microalgal production and harmful algal blooms, and assessing the causes and consequences of man-made and climatic (storms, floods) nutrient enrichment and hydrologic alterations of inland, estuarine and coastal waters. His studies have identified the importance and ecological impacts of atmospheric nitrogen deposition as a new nitrogen source supporting estuarine and coastal eutrophication. He is involved in the development and application of microbial and biogeochemical indicators of aquatic ecosystem condition and change in response to human and climatic perturbations. He heads up the Neuse River Estuary Modeling and Monitoring Program, ModMon (www.unc.edu/ims/neuse/modmon) and ferry-based water quality monitoring program, FerryMon (www.ferrymon.org), which employs environmental sensors and a various microbial indicators to assess near real-time ecological condition of the Pamlico Sound System, the USA's second largest estuarine complex. In 2003 he was awarded the G. Evelyn Hutchinson Award by the American Society of Limnology and Oceanography for his work in these fields and their application to interdisciplinary research, teaching and management of aquatic ecosystems. Dr. Paerl holds a PhD in Ecology and Limnology from the University of California at Davis.

Phenicie, Dale

Environmental Affairs Consulting

Dale K. Phenicie is an environmental affairs consultant serving industrial and industry trade association clients. He has 45+ years experience in conducting and managing environmental studies focusing on water quality assessments, analytical methods, ecosystem protection, and industrial environmental management systems and practices. His academic background is in industrial and pulp and paper mill chemistry. He has a degree in Industrial Chemistry Technology from Ferris State University, Big Rapids, Michigan and a degree in Paper Technology from Western Michigan University, Kalamazoo, Michigan. Analytical methods developed or improved/applied by Mr. Phenicie include those for measuring mercury and other heavy metals in water, fish, and other biota; as well as the measurement of contaminants from industrial processes in plant effluents, receiving streams, air, groundwater, and contaminated soils. He has directed the clean-up and restorations of contaminated sites, devolved restoration and remediation plans for PCB impacted sites, and led programs to phase-out and retire PCB containing equipment from industrial facilities. Mr. Phenicie pioneered the development of formal hazardous chemical management and environmental management systems in industrial settings and has authored award winning papers on these topics. He has specialized in Great Lakes toxics issues during the past 20 years serving on numerous Great Lakes multistakeholder working groups including the International Joint Commission's Virtual Elimination Task Force, a U.S. EPA Region 5 working group on Great Lakes Initiative Water Quality Criteria development, coordinated industry involvement in the Great Lakes Binational Toxics Strategy where he focused on characterizing and reducing use and releases of PCBs, dioxin, hexachlorobenzene, benzo (a) pyrene, and mercury. As part of this work Mr. Phenicie evaluated contaminant levels in several industrial products including pesticides, treated lumber and other wood products, petrochemicals and chemical plant process by-product streams. He has produced numerous reports regarding chemical contaminant trends.

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Roman, Michael

University of Maryland Center for Environmental Science

Michael R. Roman Mike Roman is currently a Professor and the Director of the Horn Point Laboratory of the University of Maryland Center for Environmental Science. He received a B.A. degree from Lake Forest College, an M.S. degree from the City College of N.Y., and a Ph.D. from the University of New Hampshire. Dr. Roman worked at the Rosenstiel School of Marine and Atmospheric Science from 1976 until 1981 when he joined the University of Maryland. His main research interests are in biological oceanography and zooplankton ecology on which he has published over a 100 research papers. He has participated in a number of interdisciplinary oceanographic studies ranging from work on warm-core Gulf Stream rings, physical-biological interactions in estuarine plumes, field programs of the Joint Global Ocean Flux Study (JGOFS) in the Equatorial Pacific and Arabian Sea, and the ecological impacts of hypoxia in coastal waters. Dr. Roman served as Chair of the Scientific Steering Committee of the Coastal Oceanographic Processes Program, Chair of the National Academy of Sciences committee planning long-term research in the Gulf of Alaska after the Exxon Valdez oil spill, on the National Academy of Sciences committee to review the impact of major programs on ocean research, as co-chair of the Committee of Visitors for NSF Ocean Sciences and currently is Vice-Chair of the IGBP Program on Integrated Marine Biogeochemistry and Ecosystem Research (IMBER). Roman currently serves as President of the Oceanography Society.

Rowe, Andy

ARCEconomics

Dr. Andy Rowe has thirty years experience as an economist and evaluation consultant in North America, Europe, South Asia, the Western Pacific and the Caribbean. He has a PhD from the London School of Economics, studied national economic planning at the University of Glasgow and holds an MPhil in regional economics and epistemology from Memorial University of Newfoundland and a BA in economics and agricultural economics from the University of Guelph. He is a former President of the Canadian Evaluation Society and served on National Council of the Society for five years. Dr. Rowe works with federal agencies, foundations and multilateral agencies to improve programs in the conservation and environmental sectors in the U.S., on evaluation of conflict resolution in the US and Canada and sustainable development assignments in India and the Western Pacific. His recent work includes evaluations of the Chesapeake Bay Small Grants program of the National Fish and Wildlife Foundation, the Packard Foundation Ecosystem Based Management Initiative, environmental conflict resolution at US EPA DOI and US Institute for Environmental Conflict Resolution, the Locally Managed Marine Areas Network in the Western Pacific, and the Science Subprogram at the Packard Foundation. He has developed methods used by federal agencies to evaluate conflict resolution and judge the economic and environmental effects of resource and conservation decisions. He is currently working on improving the conceptual framing of evaluation in resource, environmental and conservation settings. After almost twenty years of consulting in Canada Dr. Rowe moved to the U.S. in 1998, and returns to Canada to spend approximately half the year at his family cottage at the top of Lake Huron.

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Sample, David

Virginia Tech

David Sample is an assistant professor and extension specialist in the department of Biological Systems Engineering at Virginia Tech. He received a BS and ME from the University of Florida (Gainesville, FL) in environmental engineering and a PhD from the University of Colorado (Boulder, CO) in Civil Engineering (Water resources). Dr. Sample has approximately 22 year of experience including both consulting and municipal government before coming to Virginia Tech in 2008. Dr. Sample's research focuses upon improving our management of urban water. He is currently researching the effectiveness of different Low Impact Development (LID) Practices and other Best Management Practices (BMPs) with innovative designs. Dr. Sample has developed numerous natural and urban watershed models, developed monitoring plans, and conducted watershed improvement plans; including economic analysis of alternatives. Dr. Sample is a registered engineer in 8 states, and is a Diplomate of the American Academy of Water Resources Engineers. In 2008, Dr. Sample was appointed to the U.S. Chesapeake Bay Program Science and Technical Advisory Committee (STAC). He also has served on the Virginia BMP Clearinghouse for the Virginia Department of Conservation and Recreation since 2008. He has been a member of the Urban Water Resources Research Council of the American Society of Civil Engineers/Environmental and Water Resources Institute since 2003, and has co-chaired a Task Committee on implementing Low Impact Development in Combined Sewer Areas since 2009.

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.

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Scavia, Donald

University of Michigan

Dr. Donald Scavia is the Graham Family Professor of Sustainability, Professor of Natural Resources and Environment, Professor of Civil and Environmental Engineering, Special Counsel to the U-M President for sustainability, and Director of the Graham Environmental Sustainability Institute at the University of Michigan. He received a BS and MS in Environmental Engineering at Rensselaer Polytechnic Institute and a PhD in Environmental Engineering from the University of Michigan. As a research scientist at NOAA's Great Lakes Environmental Research Laboratory (1975-1990), he studied food-web dynamics and nutrient cycles and develop ecological models of Great Lakes ecosystems. He held a number of ocean and Great Lakes research administration positions at NOAA headquarters (1990-2003), including Director of the National Centers for Coastal Ocean Science and Chief Scientist of the National Ocean Service. He joined the U-M faculty in 2004 where he develops models, assessments, and policy analyses on the effects of human activities on coastal marine and Great Lakes ecosystems. He serves on National Wildlife Federation Great Lakes Leaders Council, and on science advisory boards for the Environmental Law and Policy Center, the Healing our Waters Coalition, the North American Nitrogen Center, U-M Risk Science Center, U-M Erb Institute for Global Sustainable Enterprise, and the U-M Center for Advancing Research & Solutions for Society. He was a member of the National Research Council Committee on Missouri River Recovery and on EPA's Board of Scientific Counselors' Subcommittee reviewing EPA's STAR and GRO Fellowship Programs. He was the Director of the Michigan Sea Grant Program (2004-2009), Director of the Cooperative Institute for Limnology and Ecosystems Research (2004-2007), Associate Editor of Estuaries (1998-2007), Associate Editor of Frontiers in Ecology and Environment (2002-2006), on the Board of Directors for the American Society for Limnology and Oceanography (1987-1990), and Secretary of the International Association for Great Lakes Research (1983-1986).

Silbey, Paul

University of Guelph

Paul Sibley is an Associate Professor in Environmental Biology at the University of Guelph. Paul received his B.Sc. (Marine Biology) and M.Sc. (Environmental Biology) from the University of Guelph, and Ph.D. (Biology) from the University of Waterloo. Paul spent three years (1994-1997) as a research scientist at the U.S. EPA Mid-Continent Ecology Division where he helped to direct a research program on the development, application, and validation of sediment toxicity test methods. Paul's current research interests focus on issues of water quality and environmental management including: invertebrate and sediment toxicology of novel and emerging compounds (with emphasis on testing, methods development, and validation), ecosystem-level responses to contaminants using field-based systems (assessment of lab-to-field extrapolation issues), development of risk assessment methodologies, and disturbance ecology (impacts of forest harvesting on boreal aquatic systems). Paul has also previously served on a USEPA Science Advisory Panel in 2004 and served as president of the Society of the Society of Toxicology and Environmental Chemistry North America from 2008-2009.

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Simenstad, Charles

University of Washington

Charles ("Si") Simenstad is a Research Professor in the University of Washington's School of Aquatic and Fishery Science, where he coordinates the Wetland Ecosystem Team. He holds a B.S. and M.S. from the University of Washington. Prof. Simenstad is an estuarine and coastal marine ecologist who has studied estuarine and coastal marine ecosystems throughout Puget Sound, the Washington coast, and Alaska for over thirty years. He is an American Association for the Advancement of Science Fellow, Estuarine and Coastal Sciences Association Council member, associate editor of three scientific journals and recipient of the 2009 NOAA-AFS Nancy Foster Award for Habitat Conservation. His research has focused on food webs of estuaries and coastal ecosystems, and particularly their support of juvenile Pacific salmon and other nekton, and the associated ecological processes that are responsible for enhancing nekton production and life history diversity. Recent research has integrated basic ecosystem interactions with applied aspects of restoration, creation and enhancement of estuarine and coastal wetland ecosystems, and ecological approaches to evaluating the success of coastal wetland restoration at ecosystem and landscape scales, including the role of coastal restoration in benefitting ecosystems functions, goods and services. Prof. Simenstad's current research includes studies of juvenile salmon rearing in, and restoration of, estuarine/coastal ecosystems in estuaries of the Pacific Northwest—Columbia River, San Francisco Bay-Delta, Russian River—and Alaska—Fox River, Kachemak Bay--USA; developing and testing an estuarine ecosystem classification system for the Columbia River estuary; initiating a new, interdisciplinary study of restoration process at Liberty Island in the Sacramento River delta; and serving as Chair of the Nearshore Science Team (NST) of the Puget Sound Nearshore Ecosystem Research Program (PSNERP) that is providing scientific guidance in developing a feasibility plan for large-scale restoration of estuarine and nearshore ecosystems of Puget Sound.

Stahl, Jr., Ralph

Dupont

Dr. Ralph G. Stahl is a principal consultant for the Dupont Corporation. A native of Houston, Texas, Dr. Stahl received his B.S. in Marine Biology from Texas A&M University (cum laude) in 1976, his M.S. in Biology from Texas A&M University in 1980 and his Ph.D. in Environmental Science and Toxicology from the University of Texas School of Public Health in 1982. After receiving his Ph.D., he was a Senior Postdoctoral Fellow in the Dept. of Pathology at the University of Washington in Seattle where he investigated the impact of genetic toxins on biological systems. Dr. Stahl joined the DuPont Company in 1984 and in the intervening years has held both technical and management positions in the research and consulting arenas. His research over the last 20 years has focused primarily on evaluating the effects of chemical stressors on aquatic and terrestrial ecosystems. Dr. Stahl has been involved with oceanographic studies in the Atlantic, Pacific, Gulf of Mexico and Caribbean Sea, biological and ecological assessments at contaminated sites in the US and Europe, and numerous toxicological studies with mammals, birds and aquatic organisms. He has been selected by USEPA, Army Corps of Engineers, SERDP, National Academy of Science, the Water Environment Research Foundation, NOAA and others to national peer review panels on ecological risk assessment, endocrine disruption in wildlife, and natural resource injury determination. Ralph is active in the Society of Environmental Toxicology and Chemistry, serving on the Ecological Risk Assessment Advisory Group and the Technical Committee, and is a Diplomate of the American Board of Toxicology. He has authored over 25 peer reviewed publications and two books in environmental toxicology and most recently has been responsible for leading DuPont's corporate efforts in ecological risk assessment and natural resource damage assessments for site remediation. Dr. Stahl chairs the American Chemistry Council's (formerly CMA) Environmental Technical Implementation Panel that is implementing ecological research under the chemical industry's Long Range Research Initiative.

Great Lakes Restoration Action Plan Review Panel Biosketches

Stark, John D.

Washington State University

Dr. John D. Stark is a professor of Ecotoxicology at Washington State University. He is also the Director of the Washington State University Puyallup Research and Extension Center and Co-Director of the Washington Stormwater Center which was established in 2009. Dr. Stark is a member of the Puget Sound Partnership (PSP) Science Panel that is tasked with restoring Puget Sound by 2020. Dr. Stark earned a B.S. degree in Biology from Syracuse University, a B.S. degree in Forestry from SUNY Syracuse, an M.S. degree in Entomology from Louisiana State University and a Ph.D. in Toxicology from the University of Hawaii. Dr. Stark's research interests focus on protection of endangered species and ecological risk assessment of pollutants with particular emphasis on salmon and aquatic invertebrates. He is a population modeler specializing in population viability analysis. Dr. Stark also teaches courses in toxicology. He has published over 90 peer-reviewed papers in scientific journals, numerous book chapters, and a book on ecological risk assessment entitled "Demographic Toxicity: Methods in Ecological Risk Assessment". Dr. Stark serves on the editorial boards of several scientific journals. He received the Recognition Award in Insect Physiology, Biochemistry and Toxicology in 2001 and the C.W. Woodworth Award in 2005, both from the Entomological Society of America and Excellence in Research Award from WSU in 2010. Dr. Stark is a visiting scholar for the CREAM Consortium of the European Union. CREAM (Mechanistic Effect Models for Ecological Risk Assessment of Chemicals) is a Marie Curie Initial Training Network that is working to develop mechanistic effect models for ecological risk assessment of chemicals.

Taylor, William

University of Waterloo

Dr. William David Taylor is a Professor of Biology at University of Waterloo. From 2003 until 2010 he was the Canada Research Chair in Limnology. He received his BSc and PhD (Zoology) from the University of Toronto. He was a Postdoctoral Fellow at University of Waterloo (with H.B. Noel Hynes) and Visiting Fellow at the National Water Research Institute, Environment Canada (with Brian F. Scott and David R.S. Lean) before joining the faculty of University of Waterloo in 1981. His research interests include aquatic food webs, especially the microbial loop, and nutrient cycling, and he has worked Great Lakes Ontario, Erie and Huron, and on smaller lakes, wetlands and rivers in the Great Lakes Basin. Much of his current research is on the freshwater phosphorus cycle. He also has worked on African Great Lakes Malawi and Victoria, and in many other locations around the world. He currently serves on the Science Advisory Board of the International Joint Commission, including its working groups on nearshore eutrophication, invasive species, and beach health. Dr. Taylor serves on the Editorial Board of the African Journal of Aquatic Sciences, and he is a member of the American Society of Limnology and Oceanography, the International Society of Limnology, the Society of Canadian Limnologists, and the International Association for Great Lakes Research.

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Thom, Ron

Pacific Northwest National Laboratory

Dr. Ron Thom, who leads the nineteen members of the CER technical group at the Marine Sciences Laboratory, has conducted research in coastal and estuarine ecosystems since 1971. He holds a BS from California State College, an MA in biology for California State University, and a PhD in Fisheries for the University of Washington. His research includes coastal ecosystem restoration; adaptive management of restored systems; effects of pollution; benthic primary production; climate change; and ecology of fisheries resources. He has worked on programs in systems in California, Washington, Oregon, Alaska, Massachusetts, Nebraska, Alabama, and the Gulf of Mexico. Over his 39-year professional career, Dr. Thom has directed approximately 200 multidisciplinary ecological studies. He has published five book chapters, over 60 peer reviewed journal articles, hundreds of reports, made hundreds of professional presentations, and served on numerous professional committees. From 1985-1989 he chaired the Technical Advisory Committee of the Puget Sound Estuary Program. In 2009, was appointed to serve on the new Science Team that will guide research conducted by the Puget Sound Straits Commission. Because of the growing international reputation of Dr. Thom and his group, he was invited to present a keynote address on Coastal Ecosystem Restoration in South Korea in June 2009. Based on this presentation and discussions with Korean scientists and federal agency officials, he was invited to formulate a research collaboration agreement with Inha University, South Korea, that will focus on a coastal ecosystem restoration program for that county. At the invitation of Chinese scientists in 2010, he developed and signed an agreement for joint cooperative research in coastal restoration between PNNL and East China Normal University, State Key Laboratory of Estuarine & Coastal Research in Shanghai, China. Ron serves as an Affiliate Associate Professor, School of Aquatic and Fisheries Sciences, University of Washington. In 2010, Dr. Thom was elected to the Washington State Academy of Sciences based on career accomplishments. The Academy advises the Governor and Legislature on science issues.

Watson, Sue

Aquatic Ecosystem Management Research Division, Environment Canada

Dr Watson is a Research Scientist with the National Water Research Institute (Canadian Centre for Inland Waters with Environment Canada). Dr Watson received her BSc (Biology) and MSc. (Biology: Limnology) from McGill University working on algal-nutrient issues. She received a PhD. in Freshwater Ecology from the University of Calgary, with a focus on noxious algal outbreaks, taste and odor and associated changes in water quality. She continued to pursue this topic as a postdoctoral fellow Natural Sciences and Engineering Research Council of Canada before joining the Environment Canada. Dr. Watson serves as an adjunct faculty member at the universities of McMaster York and Waterloo, with supervision at undergraduate, graduate and postdoctoral levels. Her current work continues to address algal related issues such as harmful algal blooms, taste-odor, toxins and foodweb interactions, and how these are related to eutrophication and drinking water/source-water management in the Great Lakes. Her work has also addressed these issues in Lake Winnipeg / Lake of the Woods and a diversity of other aquatic systems in Canada including, the prairies, the National Mountain Parks and the Northwest Territories (bioremediation of mining sites). Dr. Watson works in international collaborations with academic, government, industry and other partners in the USA, Europe, and Taiwan. She is an associate editor for Water Science and Technology and serves in an advisory role to the International Joint Commission Great Lakes Science Advisory Board, drinking water consortia, source water protection collaboratives (e.g. OWWRC) local stewardship and remediation groups (e.g. Great Lakes Areas of Concern RAPs, Lake Winnipeg Science Committee, Ontario Waterworks). She currently serves on the boards for the International Water Association and American Water Works Association specialty groups on taste and odor and diffuse pollution, and the Canadian Psychological Culture Centre. Watson has authored or co-authored numerous peer reviewed papers and book chapters and co-edited special issues of national & international scientific journals (e.g. *Phycologia*, *Water Science and Technology*, *Water Quality Research Journal of Canada*).

Great Lakes Restoration Action Plan Review Panel Biosketches

Weis, Judith S.

Rutgers University

Dr. Judith Weis is a Professor, Department of Biological Sciences, Rutgers University, Newark NJ. She previously served as Associate Dean for Academic Affairs at the University. She also has served as American Association for the Advancement of Science (AAAS) Congressional Science Fellow with the Senate Environment and Public Works Committee, and Program Director at the National Science Foundation. She has been a visiting scientist at EPA, both at the research lab at Gulf Breeze FL and in the Office of Water (Ocean and Coastal Protection Division). She received her bachelor's degree from Cornell University, and M.S. and Ph.D. from New York University. Dr. Weis' research has focused on estuarine ecology and ecotoxicology. She has published about 200 refereed papers, focusing mainly on stresses in the estuarine environment and their effects on organisms, populations and communities. Particular areas of focus have been effects of metal contaminants on growth, development, and behavior; development of tolerance to contaminants in populations living in contaminated areas; effects of parasites on behavior and ecology of fish; interactions of invasive and native crab species; effects of invasive marsh plants on estuarine ecology and on fate of metal contaminants. Much of her research focuses on estuaries in the New York/New Jersey Harbor area. Dr. Weis has served on numerous advisory committees and has held leadership positions: Boards of Directors of the Society of Environmental Toxicology and Chemistry (SETAC), Association for Women in Science (AWIS) and the American Institute of Biological Sciences (AIBS); Chair of the Biology Section of American Association for the Advancement of Science (AAAS) in 2000; and President of AIBS in 2001. She is a fellow of the American Association for the Advancement of Science (AAAS). She has served on advisory committees for the U.S. EPA: Scientific and Technical Achievement Awards (STAA) and the initial review committee for the Report on the Environment (ROE) for the U.S. EPA Science Advisory Board, and the Endocrine Disruptors Screening and Testing Advisory Committee – EDSTAC). She has served on advisory committees for the National Oceanic and Atmospheric Administration (NOAA). She has been a member of the Marine Board of the National Research Council, and currently serves on the National Sea Grant Review Panel of NOAA. Dr. Weis has previously been on the Editorial Boards of Transactions of the American Fisheries Society and Bulletin of Environmental Contamination and Toxicology (BECT) and was Associate Editor of BECT. She is currently on the Editorial Board of BioScience. Dr. Weis' sources of recent grant support include: U.S. Geological Survey - Water Resources Research Program; National Science Foundation - Division of Environmental Biology; NOAA, and Meadowlands Environmental Research Institute.