The 2017
Public Policy Forum
Presented by:

Feeding the Future:
An Ocean of Opportunity

#PPF17
Making Ocean-Friendly Choices

"Seafood Watch is an example of how business partnerships can improve the health of the ocean and the well-being of people worldwide." – Julie Packard

The ocean supplies us with food, helps regulate our climate and provides livelihoods and recreation for millions of people. Today, no part of the ocean remains unaffected by human activities. Your choices have a direct impact on how seafood is caught or farmed, and ultimately on the health of the ocean.
Welcome to the Consortium for Ocean Leadership’s 2017 Public Policy Forum

I am glad that you have joined us for this year’s forum, Feeding the Future: An Ocean of Opportunity. We have once again organized an exciting meeting to facilitate robust discussions and to find new opportunities for all of us to work together across academia, government, commercial, and non-profit sectors for the good of our ocean and human kind.

Feeding the Future is about the ocean’s role in nourishing an expanding global human population. Food safety and food security are two important components of this discussion. Seafood fraud; illegal, unreported, and unregulated fishing; aquaculture and mariculture; uses for wild-caught fisheries bycatch; livestock production and crop fertilizers containing fish meal; and how these all link to our national security are critical considerations.

Can we feed 10 billion people…
…without collapsing our marine resources?
…with emerging ocean knowledge and technologies?
…while conserving and utilizing the genetic diversity of wild fisheries?
…safely and securely?
…in a time of changing earth and ocean conditions?

These are the questions of the day. While I do not anticipate that we will answer all of these now, I do hope that, together, we will chart the courses ahead to answer them in the near future.

On behalf of our consortium of academic, research, aquaria, and industry members, I look forward to working with you on this and other issues where the ocean science community can serve as a critical link connecting science to policy and decision-making – providing information, expertise, and predictive capability to protect and support our nation and our oceanic planet. As in years past, we will post Forum presentations, video, and summary on our website: policy.oceanleadership.org. Please be in touch if you have questions and ideas or just to introduce yourself. We have much work before us to resolve the challenges associated with food security, food safety, and the myriad other ocean issues that we face.

Sincerely,

[Signature]

RADM Jonathan White, USN (Ret.)
President and CEO
Consortium for Ocean Leadership
Thanks to our sponsors!
March 8, 2017
Reserve Officers Association Building

8:15 AM  Registration and Continental Breakfast (provided)

9:00 AM  **Welcome Remarks**
Dr. Jackie Dixon, Chair, Consortium for Ocean Leadership Board of Trustees
RADM Jon White, President and CEO, Consortium for Ocean Leadership

9:30 AM  **Panel – Food Safety**
Dr. Megan Davis, Moderator, FAU Harbor Branch Oceanographic Institute
Dr. John Paul, University of South Florida
Mr. Bill Dewey, Taylor Shellfish Farms
Mr. Peter Koufopoulos, Seafood Safety Division, HHS

11:00 AM  **Leadership Roundtable**
David Golden, Moderator, Eastman Chemical Company
Congressman Don Young, House Oceans Caucus Co-Chair; AK-At Large
Congressman Jim McGovern, House Hunger Caucus Co-Chair; MA-2

12:00 PM  **Mr. John Henderschedt**
*Presidential Task Force on Combating IUU Fishing and Seafood Fraud*

12:30 PM  Lunch (provided)

1:30 PM  **Congresswoman Suzanne Bonamici**
*House Oceans Caucus Co-Chair; OR-1*

1:45 PM  **RADM Paul Becker**
*Keynote Address: Feeding 10 Billion*

2:30 PM  Break

3:00 PM  **Congressman Jared Polis**
*Earth and Space Science Caucus Chair; CO-2*

3:15 PM  **Panel – Food Security**
Dr. Rick Grosberg, Moderator, University of California, Davis
Dr. Carol Anne Clayson, Woods Hole Oceanographic Institution
Dr. Michael Rubino, NOAA
Mr. Sebastian Belle, Maine Aquaculture Association
Charles Kolo Rathburn, Senate Appropriations Committee

4:45 PM  **Senator Roger Wicker**
*Senate Oceans Caucus Co-Chair; MS*

5:00 PM  **Dr. Beth Dunford**
*Global Food Security Strategy*

5:15 PM  **Recommendations**
Dr. Megan Davis, Moderator, Food Safety Panel
Dr. Rick Grosberg, Moderator, Food Security Panel

5:45 PM  **Closing Remarks**
RADM Jon White, President and CEO, Consortium for Ocean Leadership

6:00 PM  Reception (Dirksen Senate Office Building, Room 106)
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Mr. John Henderschedt serves as Director of NOAA Fisheries’ Office of International Affairs and Seafood Inspection. In this role, he manages the execution of the office’s broad portfolio, which includes international fisheries and conservation engagement (regional fisheries management organizations, multilateral conservation agreements, bilateral consultations); administration of internationally-focused statutory authorities addressing IUU fishing, bycatch, and protection of marine mammals; delivery of NOAA’s Seafood Inspection Program services; and work to ensure access of U.S. seafood products to global markets.

Henderschedt has over 30 years of diverse experience in fisheries - working in the Alaska and West Coast groundfish fisheries, managing various aspects of food safety, seafood harvesting and production for domestic and international markets, and administering commercial fishing vessel safety and security programs. He held an appointment to the North Pacific Fishery Management Council from 2008 to 2015. Prior to joining NOAA Fisheries, Henderschedt also served as Executive Director of the Fisheries Leadership & Sustainability Forum, where he led professional development and capacity building programs for fisheries managers and stakeholders. Henderschedt has a B.A. in Russian Studies from Muhlenberg College.
Representative Suzanne Bonamici was sworn in as a member of the U.S. House of Representatives on February 7, 2012. She represents the First Congressional District of Oregon, which comprises the northwest portion of the state. Strengthening public education is one of Bonamici’s top priorities and one of the reasons she got involved in public service. Bonamici spent hundreds of hours volunteering in public schools before serving in the Oregon State Legislature, where she passed legislation to reduce testing in the state. As a member of the Committee on Education and the Workforce in Congress, she is dedicated to setting national policies that give educators and students the resources they need to succeed. Bonamici served a lead role in the passage of the bipartisan Every Student Succeeds Act (ESSA), which replaces No Child Left Behind and creates new K-12 education policies. She is also focused on making college more affordable and closing the skills gap. Bonamici is the founder and co-chair of the bipartisan Congressional STEAM Caucus, which aims to encourage innovation and creative thinking by integrating arts and design with science, technology, engineering, and math education.

Bonamici also serves as a member of the Committee on Science, Space, and Technology, and she is the top Democratic member on the Subcommittee on the Environment. From this position, she is working to address the causes and risks of global climate change and to ensure that policy decisions are based on science. As a representative of coastal Oregon, she is also working to draw attention to issues that affect this unique region, including ocean acidification, early tsunami warning systems, weather forecasting and monitoring, and debris removal.

She is also a co-chair of the House Oceans Caucus.
Admiral Paul Becker served around the globe for 30 years in peace, crisis, and combat. He most recently led the Presidential Transition’s Intelligence Community Landing Team, which provided policy input, strategic guidance, and operational counsel to new administration Cabinet secretaries. His military service includes Director of Intelligence for the Joint Chiefs of Staff where he was the principal intelligence advisor to the Chairman, the U.S. Pacific Command in Hawaii, the International Security Assistance Force Joint Command in Afghanistan and was a Naval Attaché to France. Becker founded the Becker T3 Group LLC in 2016, a consulting firm focused on global risk management, business intelligence, and cyber operations with expertise in Asia, the Middle East, and Europe. He holds an MPA from Harvard’s Kennedy School of Government and a BS from the U.S. Naval Academy. He is a member of the Council on Foreign Relations, maintains a Top Secret Clearance with Sensitive Compartmented Information (TS/SCI) access and is a certified Executive Coach.

A highly effective communicator and dynamic public speaker, his speeches, interviews, and articles have been widely published. He is a Senior Fellow with the Center for Naval Analyses and Professor of Practice at the University of Virginia’s Batten School of Leadership and Public Policy. Becker is a recipient of the U.S. Intelligence Community’s, Department of Defense’s and Navy’s Distinguished Service Medals, the National Military Intelligence Association’s Leadership Award, and the National Ethnic Coalition of Organizations’ Ellis Island Medal of Honor.
Congressman Jared Polis (D-CO-2)

Representative Jared Polis is an independent leader who uses his private and public sector experience to find pragmatic solutions to the challenges facing Colorado and the nation. First elected to represent Colorado’s Second Congressional District in 2008, Polis serves on the powerful Committee on Rules, the Committee on Education and the Workforce, the Committee on Ethics, and the House Democratic Steering and Policy Committee. He also a co-chair of the Earth and Space Science Caucus.

Polis believes that education is the single most meaningful investment America can make in its economic future and in its people. His efforts in this area focus on making accountability work at all levels, expanding educational models, and improving persistently failing schools with data-driven changes to successful achievement gaps. Polis also works with Democrats and Republicans to reform our nation’s immigration policies, to advance the cause of civil rights and equality for all, and to protect Colorado and the world’s natural beauty and environment. While still attending Princeton University, Polis co-founded his first company, American Information Systems, a success he followed with the launching of bluemountain.com and ProFlowers.com. He has been named an “Entrepreneur of the Year” by Ernst and Young.
Senator Roger F. Wicker (R-MS)

Senator Roger F. Wicker has represented the state of Mississippi in the U.S. Senate since 2007. He is a member of the Senate Republican leadership team. As a senior member of the Armed Services Committee, he chairs the Subcommittee on Seapower. He also serves on the following committees: Commerce, Science and Transportation; Environment and Public Works; and Rules. He is a co-chair of the Senate Oceans Caucus. Wicker is chairman of the U.S. Helsinki Commission and has served as the 1st Committee Chair in the OSCE’s Parliamentary Assembly since 2014. Wicker also served as a member of the U.S. Merchant Marine Academy Congressional Board of Visitors.

From 1995 to 2007, Wicker served in the U.S. House of Representatives. He started his career in public service in the Mississippi Senate representing Lee and Pontotoc counties. He received his bachelor and law degrees from the University of Mississippi.
Dr. Beth Dunford is the Assistant to the Administrator in the U.S. Agency for International Development’s (USAID’s) Bureau for Food Security, as well as the Deputy Coordinator for Development for Feed the Future, the U.S. Government’s global hunger and food security initiative. In this dual role, she coordinates implementation of Feed the Future across the U.S. government, oversees its execution, reports on results, and leads engagement with the external community to ensure that food security remains high on the development agenda. She also oversees USAID’s technical and regional expertise focused on improving food security to sustainably reduce hunger, poverty, and undernutrition.

A career Foreign Service Officer, Dunford most recently served as Director of USAID’s Mission in Nepal, overseeing the country’s massive earthquake recovery and reconstruction effort. Dunford has also served in Ethiopia and Afghanistan where she directed agriculture, resilience and emergency food assistance programs, as well as in a number of roles in Washington, D.C., including Deputy Assistant to the Administrator in the Bureau for Food Security and Senior Development Advisor to the Secretary of State’s Special Representative to Afghanistan and Pakistan. Dunford earned her bachelor’s degree from Northwestern University and her Ph.D. in Sociology from Michigan State University.
Dr. Megan Davis is the Associate Executive Director of Academic Affairs and Economic Development at Florida Atlantic University, Harbor Branch Oceanographic Institute (HBOI). For almost four decades, Davis has combined her strengths in aquaculture, marine ecology, education, business and project management to lead several team projects throughout the Caribbean and Florida. After graduating with her BSc in Aquaculture and Environmental Science from Florida Institute of Technology, she spent 10 years in the Turks and Caicos Islands as a co-founder and chief scientist of the world’s first queen conch farm. During this time, she was instrumental in developing commercial techniques for queen conch aquaculture and restoration. Davis continued her queen conch studies with Caribbean Marine Research Center in the Bahamas and completed her MSc and PhD at Florida Institute of Technology.

In 1996, she joined HBOI and was part of the team that retrained more than 700 commercial fishers, affected by a state enacted net ban, to be clam farmers. This program advanced the clam industry to be one of the leading aquaculture segments in Florida. She was actively involved in establishing HBOI’s 30-acre Aquaculture Development Park, which today continues to serve the industry through workforce training and development of new technology and production of species in recirculating, zero discharge systems. In a partnership with Darden Restaurant, Inc., Davis led the science team on developing components of a large-scale spiny lobster aquaculture project in the Caribbean. She was also lead HBOI administrator for a 10-year cooperative agreement program with USDA-ARS at HBOI, which advanced domestic warmwater marine fish. One of Megan’s passions is sharing information about healthy food choices through cooking demonstrations that are combined with presentations about sustainable seafood.
Dr. John H. Paul III is a Distinguished University Professor in the College of Marine Science of the University of South Florida. His specialty is marine microbiology, using the “Modern Tools of Biology” (molecular biology, genetics, genomics, and bioinformatics). His recent focus has been on the molecular detection of harmful algal blooms (HABs), bacteria, and viruses as well as the detection of seafood fraud and mislabeling. In 2014, he started the company PureMolecular LLC with his former graduate student, Robert Ulrich, Ph.D. to develop assays for handheld genetic identification technology. He has published over 170 articles in the refereed literature, has been awarded 13 U.S. Patents, and has edited one book.

Paul received his BA from Colgate University, his Ph.D. from the Rosenstiel School of Marine and Atmospheric Science of the University of Miami, and his postdoctoral training at the Naval Research Lab, Washington, D.C.
Since receiving his degree in shellfish biology from the University of Washington in 1981, Mr. Bill Dewey has worked as a shellfish farmer in Washington state. He is Director of Public Affairs for Taylor Shellfish Farms, the largest producer of farmed shellfish in the United States, and owns and operates his own Manila clam farm in Samish Bay.

He serves on a number of boards and committees locally and nationally including the Board of Directors of the National Aquaculture Association and the Pacific Shellfish Institute. He has participated for over twenty years with the Interstate Shellfish Sanitation Conference (ISSC), a cooperative program that implements the National Shellfish Sanitation Program and currently chairs the ISSC Traceability Committee. He served on Washington State’s Ocean Acidification Blue Ribbon Panel in 2011 and currently serves on the Washington Marine Resources Advisory Council (MRAC). MRAC advises Governor Inslee and the Washington Legislature on the state’s response to ocean acidification. In 2006 the National Shellfisheries Association honored Dewey with the David H. Wallace award in recognition of his service in promoting research, understanding, and cooperation among shellfisheries scientists, culturists, managers, producers, and regulators. In 2008 NOAA presented Dewey with their Environmental Hero award in recognition of his work to help develop and implement public policy that protects water quality, marine resources and supports sustainable aquaculture. In 2014, the National Aquaculture Association presented Dewey with the Joseph P. McCraren Award for Outstanding Contributions to the Aquaculture Industry.
Peter Koufopoulos
Food and Drug Administration’s Center for Food Safety and Applied Nutrition

Mr. Peter Koufopoulos is the Director of the Division of Seafood Safety at U.S. Food and Drug Administration (FDA)’s Center for Food Safety and Applied Nutrition. He became the Director in March 2015 and prior to that had been the Chief over the seafood HACCP group since August 2010. During that time, Koufopoulos served as the Center’s point of contact for the Deepwater Horizon Oil Spill, he supported CFSAN efforts during the Fukushima Daiichi nuclear disaster, and most recently served on the Presidential Task Force to combat Illegal, Unreported, and Unregulated Fishing and Seafood Fraud. He has worked to support and further various staff-led seafood safety activities including new and updated guidance documents, Import Alerts and Compliance Policy Guides, sampling initiatives (including the expanded use of DNA technologies), and the various FSMA mandates including Systems Recognition work.

Prior to becoming Chief, Koufopoulos worked in the New England District office as both a Regional Shellfish Specialist and an Investigations Supervisor. As an Investigations Supervisor, he supervised FDA inspectors in both the Concord, NH and Highgate, VT Resident Posts managing the FDA inspections for all regulated products including food, drug, and medical devices. During his time as a Regional Shellfish Specialist, Koufopoulos performed evaluations of state molluscan bivalve shellfish programs; evaluating processing plant inspections, water quality and pollution assessments and illegal harvesting and deterrence activities. Koufopoulos started with the FDA in 2001. Prior to joining FDA, Koufopoulos worked for eight years for the South Carolina Department of Health and Environmental Control, the last four of those years as a District Supervisor in Charleston, South Carolina over their molluscan shellfish program. Koufopoulos earned his degree in marine biology from the University of South Carolina.
As Senior Vice President, Chief Legal and Sustainability Officer, and Corporate Secretary, Mr. David A. Golden has responsibility for Eastman’s Legal, Sustainability, Corporate HSES, and Global Public Affairs and Policy Departments, which have personnel in the United States, Latin America, Europe, and Asia. He also has overall responsibility for Eastman’s Ethics & Corporate Compliance program. Immediately prior to this position, he was Vice President, Associate General Counsel, and Corporate Secretary with overall responsibility for Eastman’s Legal Department.

Golden holds a B.S. degree in accounting from Brigham Young University and a J.D. degree, also from Brigham Young University, graduating Magna Cum Laude and Order of the Coif and serving on the management committee of the BYU Law Review. In addition, he completed the Advanced Management Program at Harvard Business School in 2012. Golden serves as President of the Eastman Foundation and is deeply involved in community, environmental, and civic affairs, leading Eastman’s global corporate and charitable partnership initiatives. He serves on the Tennessee Governor’s Council for Judicial Appointments as well as the Tennessee Trial Court Vacancy Commission and the Ballad Health joint board task force. Golden also serves on the inaugural Board of Trustees of East Tennessee State University, the advisory council for Western Governors University - Tennessee and the Niswonger Foundation Board. He is passionate about the importance of understanding the ocean and how it impacts our changing world. Under Golden’s leadership, Eastman is committed to better understanding the blue economy – what it means for our business and for our global environment.
Representative Don Young was re-elected to the 115th Congress in 2016 to serve his 23rd term as Alaska’s only representative to the United States House of Representatives. First sworn in as a freshman to the 93rd Congress after winning a special election on March 6, 1973, Young is today the 1st ranking Republican member and the 3rd ranking overall member of the House of Representatives. Young served as Chairman of the House Natural Resources Committee from 1995 to 2001 and then as the Chairman of the House Transportation and Infrastructure Committee from 2001-2007. In the 110th Congress, Young returned to the helm of the Resources Committee to lead his fellow Republicans as the Ranking Member. In the 112th Congress, he was chosen to serve as the Chairman of the Subcommittee on Alaska Native and Indian Affairs – a position he maintains today. Young currently serves as a senior Republican on the House Transportation and Infrastructure Committee and House Natural Resources Committee and is the House Oceans Caucus Co-Chair.

Young calls Fort Yukon, Alaska home; a remote village of approximately 700 people located seven miles above the Arctic Circle in Alaska’s central interior region. Born on June 9, 1933 in Meridian, California, he earned his associate degree at Yuba Junior College in 1952 and his bachelor’s degree in teaching at Chico State College in 1958. Between earning these degrees, he served in the U.S. Army’s 41st Tank Battalion from 1955 to 1957. When he first moved to Alaska, Young made a living in construction and tried his hand at commercial fishing, trapping, and in the search for gold. With the annual spring break-up of the river ice, he captained his own tug and barge operation to deliver products and supplies to villages along the Yukon River. Even today, he remains the only licensed mariner in Congress.
Congressman Jim McGovern
House Hunger Caucus Co-Chair (D-MA-2)

Since his election in 1996, Representative Jim McGovern has been widely recognized as a tenacious advocate for his district, a tireless crusader for change, and an unrivaled supporter for social justice and fundamental human rights. Currently serving his tenth term in Congress, McGovern serves as the second ranking Democrat on the powerful House Rules Committee, which sets the terms for debate and amendments on most legislation; and a member of the House Agriculture Committee. In 2014, McGovern was named Democratic Ranking Member on the House Committee on Agriculture’s Subcommittee on Nutrition. The Subcommittee’s jurisdiction includes policies and statutes relating to nutrition, including the Supplemental Nutrition Assistance Program and domestic commodity distribution and consumer initiatives. McGovern is also co-chair of both the Tom Lantos Human Rights Commission. McGovern is also a member of the House Oceans Caucus and a Co-Chair of the House Hunger Caucus.

McGovern has taken a leadership role in the fight against hunger at home and abroad, successfully expanding the McGovern-Dole International Food for Education and Child Nutrition Program, which helps alleviate child hunger and poverty by providing nutritious meals to children in schools in the world’s poorest countries. McGovern earned his Bachelor of Arts (‘81) and Masters of Public Administration (‘84) degrees from The American University, working his way through college by serving as an aide in the office of U.S. Senator George McGovern (D-SD).
FOOD SECURITY PANEL

Rick Grosberg, Ph.D. (Moderator)
University of California, Davis

Dr. Rick Grosberg is a marine biologist whose research has centered on understanding the distribution of biodiversity, especially the processes that explain how and why patterns of diversity differ on land and in the ocean. Much of his work explores the “black box” of marine science, namely how dispersal of millions of microscopic larvae controls ecological and evolutionary patterns in coastal marine systems. Over the last few years, his research has inevitably emphasized the impacts of climate change and other human activities on the ecological and evolutionary responses and resilience of marine populations and ecosystems.

Grosberg received his B.A. from the University of California, Santa Cruz in 1976 and his Ph.D. in 1982 from Yale. Following a NATO Postdoc at the University of Padova (Italy), he became a faculty member at UC Davis in 1983, where he is now a Professor of Evolution and Ecology and the Founding Director of the Coastal and Marine Sciences Institute, established in 2013. In that role, Grosberg coordinates a diverse and highly collaborative group of marine scientists on the main campus and Bodega Marine Laboratory, focused on addressing the grand challenges of a sustainable coastal ocean. Grosberg has served on the editorial boards of several major scientific journals and was Director of the Center for Population Biology at UC Davis from 2002-2007. Grosberg currently serves as an advisor to a number of state and federal agencies, including the Smithsonian Institution. He is an elected Fellow of the California Academy of Sciences and in 2010 was awarded the UC Davis’ highest award for Scholarly Achievement and Teaching. Grosberg’s work has been widely featured on NPR and in the New York Times, Discover, Scientific American, and the Huffington Post, among other media outlets.
Dr. Carol Anne Clayson is a Senior Scientist in the Department of Physical Oceanography at the Woods Hole Oceanographic Institution and the former Director of the Ocean and Climate Change Institute. She has been tenured faculty at Florida State University and Purdue University and while at FSU was the director of the Geophysical Fluid Dynamics Institute. Her research covers the areas of water and energy cycle variability, air-sea interaction, satellite remote sensing, and ocean modelling. She has spoken frequently on public-private partnerships and policy issues, including at the Council on Foreign Relationships and at the Economist’s 2017 World Ocean Summit in Bali.

Clayson is the recipient of an NSF CAREER award and the Office of Naval Research Young Investigator Award. She received a Presidential Early Career Award for Scientists and Engineers from President W. Clinton. She has served on multiple committees for the American Meteorological Society, including her current tenure as a member of the AMS Council. She has served in many capacities under the National Research Council, including as a member of the Board on Atmospheric Sciences and Climate and as a lead reviewer of the US Climate Change Science Programme Synthesis and Assessment Product. She is currently serving as the co-chair of the Climate Variability and Change Panel for the NRC Decadal Survey for Earth Science and Applications from Space. Her international activities include chairing the World Climate Research Programme’s GEWEX SeaFlux Project, dedicated to improved estimations of satellite air-sea turbulent heat fluxes. Clayson is also the inaugural leader of the WCRP Flux Task Team. Clayson received her BS degree in physics and astronomy from Brigham Young University and her MS and PhD degrees in Aerospace Engineering Sciences and the Program in Atmospheric and Oceanic Sciences from the University of Colorado, Boulder.
Michael Rubino, Ph.D.
National Oceanic and Atmospheric Administration, Fisheries Service

Dr. Michael Rubino is the Director of the Office of Aquaculture at NOAA’s Fisheries Service. The office seeks to foster marine aquaculture through policy, science, technology transfer, outreach, and international collaboration. Rubino has led the development of aquaculture regulations for federal waters, the National Shellfish Initiative, NOAA and DOC aquaculture policies, and science tools for aquaculture management.

Earlier, he worked at the World Bank and the International Finance Corporation where he designed environmental investment funds. He also was the CEO of an aquaculture R&D company and a partner in a shrimp farm in South Carolina.

He holds a Ph.D. in Natural Resources from the University of Michigan.
Mr. Sebastian Belle began his career as a commercial fisherman, working his way through university as a mate on offshore lobster boats. Currently, Belle is the Executive Director of the Maine Aquaculture Association, a private non-profit association representing Maine shellfish and finfish growers. Belle sits on the National Organics Standards Board Aquaculture Task Force, the Standards Oversight Committee of the Global Aquaculture Alliance and the Boards of Directors for the USDA Northeast Regional Aquaculture Center and the International Salmon Farmers Association. Prior to joining the Maine Aquaculture Association, Belle was the state aquaculture coordinator working for the Maine Department of Marine Resources and managed commercial salmon and tuna farms.

Belle holds degrees in fisheries biology and agricultural economics and has served as a technical consultant and manager on over twenty commercial aquaculture ventures in nine countries. Belle has authored numerous articles and several book chapters on the development and implementation of Best Management Practices and Risk Control Programs on commercial aquaculture operations. In addition to his role as the Maine Aquaculture Association’s Executive Director, Belle is President of Econ-Aqua, a consulting firm specializing in aquaculture project design, operations management, financial due diligence and risk analysis and control.
Charles Kolo Rathburn
Professional Staff, U.S. Senate Committee on Appropriations

Mr. Charles Kolo Rathburn is a professional staff member of the Senate Appropriations Committee, where he works on the Subcommittee on Commerce, Justice, Science, and Related Agencies. In this role, Rathburn oversees funding for agencies at the Department of Commerce, the National Science Foundation, and the Office of Science and Technology Policy, among others. He first came to Capitol Hill in 2010 as a John H. Knauss Sea Grant Fellow, a program administered by the National Oceanic and Atmospheric Administration. Kolo was placed in the office of Mississippi Senator Roger Wicker (R-Miss.) to work on ocean, coastal, and marine policy. He was also responsible for handling issues related to Senator Wicker’s work as a senior member of the Senate Committee on Commerce, Science, and Transportation. This included major legislation to restore the Gulf Coast after the 2010 BP oil spill in the Gulf of Mexico. Kolo obtained a B.S. in Biology from Chaminade University of Honolulu in 2005, a M.S. in Marine Biology from the Grice Graduate Program in Marine Biology at the College of Charleston in 2009, and is currently a second-year law student at American University’s Washington College of Law.
## MEMBERS OF THE CONSORTIUM FOR OCEAN LEADERSHIP

The Consortium for Ocean Leadership (COL) is a Washington, D.C.-based nonprofit organization that represents the leading ocean science and technology institutions — public and private, academia, aquaria, and industry. Our mission is to shape the future of ocean science and technology. In addition to our advocacy role as the voice of the ocean research and technology community, COL manages a variety of community-wide research and education programs in areas of ocean observing, ocean exploration, and ocean partnerships.

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Maryland
Johns Hopkins University
National Aquarium
Severn Marine Technologies, LLC
University of Maryland Center for Environmental Science

Massachusetts
Massachusetts Institute of Technology
University of Massachusetts
Woods Hole Oceanographic Institution

Michigan
University of Michigan

Mississippi
University of Mississippi
University of Southern Mississippi

New Hampshire
University of New Hampshire

New Jersey
Monmouth University
Urban Coast Institute
Rutgers University

New York
Columbia University Lamont-Doherty Earth Observatory
Stony Brook University

North Carolina
Duke University Marine Laboratory
East Carolina University
North Carolina State University
University of North Carolina at Chapel Hill
University of North Carolina at Wilmington

Oregon
Oregon State University

Pennsylvania
Pennsylvania State University

Rhode Island
University of Rhode Island

South Carolina
South Carolina Sea Grant Consortium
University of South Carolina

Tennessee
Eastman Chemical Company

Texas
Harte Research Institute
Sonardyne, Inc.
Texas A&M University
University of Texas at Austin

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U.S. Arctic Research Commission

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Marine Technology Society
National Ocean Industries Association
Southeastern Universities Research Association

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University of Wisconsin-Milwaukee School of Freshwater Sciences

Australia
Institute for Marine and Antarctic Studies at the University of Tasmania

Bermuda
Bermuda Institute of Ocean Sciences

Canada
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