



NOAA HYDROGRAPHIC SERVICES REVIEW PANEL

2024 Members Biographies

	PAGE
HSRP Voting Members	
MS. MARY PAIGE ABBOTT	2
DR. QASSIM ABDULLAH	3
PROF. (CAPT.) ANUJ CHOPRA	3
CAPT. ALEX E. CRUZ	4
MR. SEAN M. DUFFY, SR.	5
DR. NICOLE ELKO	5
MS. SLOAN FREEMAN	6
MS. DEANNE HARGRAVE	7
MS. KIMBERLEY HOLTZ	7
CAPT. CAROLYN KURTZ	8
DR. H. TUBA ÖZKAN-HALLER	9
MR. ERIC PEACE	9
MS. REBECCA QUINTAL	10
MS. JULIE THOMAS	10
MR. NATHAN C. WARDWELL	11
HSRP Non-Voting Members	
CAPT. (NOAA, RET.) ANDREW (ANDY) A. ARMSTRONG III	12
MR. BRAD KEARSE	12
DR. LARRY MAYER	13
DR. MARIAN WESTLEY	13
Designated Federal Official	
REAR ADMIRAL BENJAMIN K. EVANS, NOAA	14



2024 Voting Members



Ms. Mary Paige Abbott

Commander at United States Power Squadrons® (Retired)

Ms. Mary Paige Abbott became a recreational boating safety advocate after a friend was struck and killed by a speedboat while swimming in a designated area. She is a 21-year member of the United States Power Squadrons, which was founded in 1914 and is now the national member-based recreational boating safety education organization known as America's Boating Club, with 24,000 members. Ms. Abbott served first as commander of USPS's Sanibel-Captiva squadron, then of District 22, which covers western Florida.

She was the rear commander (i.e. chair) of the National Membership Committee and National Marketing Committee before joining the National Bridge in 2016 as National Administrative Officer and later National Executive Officer in 2018. In 2020, she was elected Chief Commander, becoming the first female Chief in the U.S. Power Squadron's 108-year history.

Ms. Abbott started boating on the Great Lakes as a youth; her father served on the State of Michigan Waterways Commission and instilled in his family the importance of boater education, life jacket wear, and water safety. A graduate of the University of Massachusetts/Amherst, Ms. Abbott earned a BA degree in Marketing Communications. Her career centered on business-to-business marketing and ranged from volunteer and program management at Junior Achievement to promoting the pro-business environment for the City of Fort Wayne Economic Development Dept. In her final career position, Ms. Abbott served as Marketing Communications Manager at Essex International, Inc.

She moved from Fort Wayne, Indiana, to Sanibel, Florida in 1998. Ms. Abbott took American Sailing Association and Power Squadron sailing courses, successfully passing all courses from basic boating certification to celestial navigation to earn Senior Navigator status. She also holds the Boat Operator Certification for Inland Navigation and is a certified instructor. Ms. Abbott teaches Partner in Command, Cruise Planning, and OTin3. She and her husband sailed their Sabre 38 sloop on Lake Michigan and in Florida. They boated the inland waterways from Chicago, down the Mississippi River to New Orleans across to Fort Myers, FL. They transitioned to a Maritimo fly bridge motor yacht to travel the full Florida coast, the Keys and additionally made several trips to the Bahamas. Since relocating to Florida, her work has been primarily volunteer-based.



Dr. Qassim Abdullah

Vice President and Chief Scientist, Woolpert Inc., Adjunct Professor, Penn State and UMBC

Dr. Qassim Abdullah is a scientist with more than 45 years of combined industrial, research and development, and academic experience in analytical photogrammetry, digital remote sensing, and civil and surveying engineering. Dr. Abdullah obtained his doctorate and master degrees in photogrammetry from the Civil Engineering Department at the University of Washington in Seattle. He is the Vice President and Chief Scientist for Woolpert Inc. His responsibilities include designing and managing strategic programs to develop and implement new remote sensing technologies focused on meeting the evolving needs of geospatial users. He also serves as an adjunct professor at the University of Maryland and at Penn State, where he teaches graduate courses on unmanned aircraft systems (UAS), photogrammetry and remote sensing.

Among his achievements, Dr. Abdullah evaluated and introduced a Geiger-mode and single photon lidar to the geospatial industry while leading Woolpert research activities surrounding intelligent transportation systems, digital twin, smart cities, and UAS sensor calibration and workflow development. Dr. Abdullah is a Fellow with the American Society for Photogrammetry and Remote Sensing (ASPRS) and the creator and principal author of the new ASPRS Positional Accuracy Standards for Digital Geospatial Data. He received the organization's Lifetime Achievement Award in 2019, among other prestigious awards. He publishes a monthly column, "Mapping Matters," in the ASPRS journal. He also serves on the National Academy of Sciences Transportation Research Board Standing Committees: the New Users of Shared Airspace (AV095). Dr. Abdullah is a certified photogrammetrist and licensed professional surveyor and mapper in Florida, Oregon, Virginia, and South Carolina. He is also a certified thermographer and a certified GEOINT Professional in Remote Sensing and Imagery Analysis.



Prof. (Capt.) Anuj Chopra

Co-founder and CEO, ESGplus LLC

Captain Anuj Chopra is an international executive, enterprise risk manager, and big data champion who has successfully forged client relationships in the maritime industry for more than three decades. His deep experience developing ethical, customer-focused EQ and SQ cultures has led him to conclude high-value contracts with some of the largest shipping companies in the world. Captain Chopra cofounded ESGplus LLC, an international consulting firm focused on bringing resiliency, efficiency, and independent board advisory to clients invested in the global maritime supply chain. ESGplus promotes sustainability, increased safety standards, and reducing the environmental impact of the maritime industry as a whole. Captain Chopra guides ESGplus as a diversity-focused company, providing client value by promoting exemplary, transparent customer solutions for a sustainable and resilient maritime supply chain.

Captain Chopra spent nearly a decade as a Vice President of RightShip, negotiating high-level due diligence and compliance agreements for developing business across North and South America. Prior to RightShip, he served as the President of U.S. Operations for the Anglo-Eastern Group, with direct oversight of all vessels visiting U.S. ports, risk evaluation, and government relations. Captain Chopra began his seafaring career as a deck cadet, working his way up to Captain. He has commanded large bulk carriers and tankers and holds a Commonwealth Extra Masters Certificate of Competency and Shipping Management from the Indian Institute of Management, Ahmedabad. He serves as a Fellow of The Nautical Institute (Chair, U.S. Gulf Branch), an Ambassador for the Sailor Society, and on the Board of Directors at the Houston International Seafarers Center. He also teaches at the University of Houston, where he is an Adjunct Professor for the Supply Chain & Logistics Program. He is a Board Member and Treasurer of the North American Marine Environment Protection Association (NAMEPA). He continually mentors students and professionals in the maritime supply chain.



Capt. Alex E. Cruz

Owner, West Indies Marine Services, and Vice Chairman, South Coast Harbor Safety and Security Committee, Puerto Rico

Captain Alex Cruz is the owner of West Indies Marine Services and worked in the marine transportation sector for over 25 years. He has served as the Vice Chairman of the South Coast Harbor Safety and Security Committee of Puerto Rico since 2012, on the board of the Caribbean Coastal Ocean Observing System (CARICOOS), and as a Harbor Pilot for the Southeast Harbor Pilots. He was a Merchant Marine officer and has experience in Puerto Rico and the U.S.

Virgin Islands, as well as Alaska and U.S. east and west coasts. He is involved with the private sector and academia and in day-to-day management of Puerto Rico ports.

In 2000, Captain Cruz was appointed by the Governor of Puerto Rico to serve as a commissioner in the newly created Puerto Rico Pilotage Commission until 2013, including two years as president. He was a key player in the development of the LNG Terminal in Guayanilla and the Aguirre Gas port. In 1997 he was appointed State Harbor Pilot for all the seaports of Puerto Rico. From 1990-1997 he worked for Exxon Shipping Company as a Second and Third Mate navigating the waters of east and west coast of the U.S. and Alaska. As a naval reserve officer, he had the rank of LCDR, serving at U.S. and Puerto Rico naval and Coast Guard bases. He holds a B.S. in Maritime Transportation from Texas A&M University, and obtained a 3rd Mate license from the U.S. Coast Guard and a commission as an Ensign in the U.S. Navy Reserve. He is a Licensed Merchant Marine Officer with a Mater 1600 GRT vessel and Chief Mate Unlimited and First Class pilot for all the seaports of Puerto Rico and U.S. Virgin Islands.



Mr. Sean M. Duffy, Sr.

Executive Director, Big River Coalition

Mr. Sean Duffy directs the Big River Coalition, which is committed to protecting maritime commerce across the Mississippi River and Tributaries (MRT). The Coalition focuses on maximizing transportation efficiencies on the Mississippi River Ship Channel (Baton Rouge to the Gulf of Mexico), particularly through channel maintenance. The Big River Coalition is credited with the efforts to deepen the Mississippi River Ship Channel to 50 feet and secure increased federal investments for channel maintenance, with the first two phases of this project completed. Mr. Duffy leads with a vision of future deep-draft navigation on the MRT, ensuring that systematic approaches protect maritime commerce by maintaining fully authorized channel dimensions while also updating and maintaining navigation infrastructure, specifically focusing on vertical clearances at bridges and powerlines and the depth of pipelines under the Ship Channel. Deepening the Ship Channel to 50 feet and increasing the beneficial use of dredge material (or “sediment recycling”) were projects first promoted by the navigation industry through the Big River Coalition. Mr. Duffy also serves as an Executive Vice President / Maritime Advocate for the New Orleans Steamship Association and the Louisiana Maritime Association and CEO of Duffy Maritime Consultants. Mr. Duffy is a proponent of local industry, specializing in advocacy on Capitol Hill to secure supplemental funds for maintenance dredging and waterway maintenance. Previous employment includes various management positions, Boarding Agent, Deckhand, Stevedore General Superintendent and Marine Surveyor. Mr. Duffy is familiar with obstacles faced by the maritime industry, both nationally and those specific to Louisiana, and has been recognized for his efforts on coastal restoration through maintenance dredging. He became the HSRP Chair in September 2023 after serving as Vice Chair for a number of years.



Dr. Nicole Elko

Executive Director, American Shore and Beach Preservation Association, Executive Director of the South Carolina Beach Advocates, and President of Elko Coastal Consulting

Dr. Nicole Elko has 25 years of experience in coastal resource management and has managed or assisted with dozens of beach preservation projects along the U.S. Southeast and Gulf coasts. In 2023, Dr. Elko was named the new Executive Director for the American Shore and Beach Preservation Association (ASBPA). She first served at ASBPA for over twelve years as Science Director, providing science-based guidance to Congress, federal and state agencies, and local communities on national coastal resilience challenges. Prior to becoming Science Director, she served on the ASBPA’s Executive Committee, was a Vice-President and Secretary of the Association, and has been an ASBPA member for 20 years. Dr. Elko received her Ph.D. (Geology) from the University of South Florida after working with the U.S. Geological Survey’s Coastal Marine Geology Program, and while serving as the coastal coordinator for Pinellas County, FL.

Dr. Elko understands the challenges facing coastal practitioners such as flooding, erosion and other threats as she works with U.S. coastal communities on topics of resilience, research, and

restoration. She provides hydrographic services, including topographic and bathymetric survey data and water level data, to her clients in the Southeast. She has co-authored a book on coastal management, numerous technical reports, and over 35 journal publications, including *The Future of Nearshore Processes Research*, a seminal report that provides a research vision developed by the coastal research community. This led to her role as a co-Executive Director for the grass-roots U.S. Coastal Research Program. Regionally, Dr. Elko serves on South Carolina Governor McMaster's Floodwater Commission, and the Southeast Coastal Ocean Observing Regional Association (SECOORA) Science Committee. Dr. Elko teaches a "Beaches 101" training course to regulators and elected officials in the Carolinas. In her free time, she enjoys surfing with her family and serving as the Director of the Folly Beach Wahine Classic, the longest running all-female surf contest on the U.S. East Coast.



Ms. Sloan Freeman

Co-founder and CEO of Geodynamics LLC

Sloan Freeman is a coastal scientist with over 20 years of experience in the hydrographic survey industry. As the Director of Hydrospatial Operations at Geodynamics, Sloan Freeman manages the company's operations in hydrographic survey, coastal shoreline monitoring, offshore geophysical survey, and marine GIS applications. Based in North Carolina, Geodynamics' specialty areas include coastal monitoring and condition surveys, NOAA nautical chart updates, benthic habitat assessment, high-resolution marine geophysical surveys, offshore sediment resource mapping, and GIS analyses and database design. As a Woman Owned Small Business, Geodynamics successfully supported several federal contracts, including multi-year contracts with NOAA Office of Coast Survey, USACE Wilmington and Norfolk Districts.

Remaining narrowly focused on hydrographic surveys in coastal oceans, the company partners with coastal engineers, natural resource agencies, subsea telecom and offshore wind developers to provide highly accurate and repeatable surveys of seafloor bathymetry and geology. Sloan is a licensed NC Professional Land Surveyor and is currently pursuing certification as a Coastal Practitioner through the Coastal Zone Foundation. Prior to co-founding Geodynamics in 2001, Sloan worked in the research sector of marine ecology and environmental policy at the Duke University Marine Lab where she managed and coordinated research projects in the field of coastal science and geospatial analysis. Since 2021, Sloan has integrated Geodynamics' nearshore and offshore vessel-based survey fleet with the aerial topobathy survey capabilities of NV5 Geospatial. She completed a B.A. in Environmental Science from the University of Virginia and a Master's in Environmental Management (MEM) with a focus on Coastal Environmental Management from Duke University.



Ms. Deanne Hargrave

Geoscience Manager, Atlantic Shores Offshore Wind LLC

Ms. Deanne Hargrave plans, executes and delivers technically complex and logistically challenging offshore geophysical projects for Atlantic Shores Offshore Wind LLC, recently working for Shell for six years. Over the past 20 years, she has conducted numerous shallow hazard surveys, geotechnical investigations, seep surveys, and navigational positioning projects at worldwide locations.

Ms. Hargrave strives to anticipate industry technical requirements, interpret regulatory trends, and adopt innovative technologies. She began her career in 1998 as

a geotechnical engineer conducting onshore investigations with GeoEngineers. In 2004, as project manager and party chief for offshore geophysical and geotechnical investigations throughout Alaska, she was instrumental in creating Geo LLC, a company specializing in shallow hazard surveys for the oil and gas industry. In 2011, after acquisition of Geo LLC by Fugro, she was promoted to Operations Manager for Fugro Geo Services - Alaska, supervising technical personnel, implementing quality, health, safety and environmental management systems, and managing operations/logistics for large offshore projects in Alaska, the Caribbean, Brazil, and New Zealand. In 2014, she joined Shell in Alaska to deliver seabed clearance/geotechnical investigations and environmental baseline surveys. Ms. Hargrave was responsible for implementing Shell's multi-year Marine Mammal Monitoring and Mitigation Program, including an industry-leading underwater sound source verification program. She improved logistics and operational efficiency by managing project risks and collaborating with stakeholders. She successfully identified two innovative methods for completing subsea construction activities necessary in Arctic waters. She completed a B.S. in Civil Engineering at Gonzaga University, with continuing education in Arctic Engineering and Project Management at the University of Alaska Anchorage. She is a Professional Engineer licensed in Alaska and Texas.



Ms. Kimberley Holtz

Director of Survey at the Port of Long Beach

Ms. Holtz is the Director of Survey at the Port of Long Beach (POLB). She is both a licensed Geologist and Professional Land Surveyor in California. She obtained her Bachelor of Sciences Degree in Geology and Earth Sciences from California State University, Long Beach. In her current position, she is responsible for all bathymetry surveying, GPS/GNNS surveying, construction surveying, right-of-way surveying, unmanned aerial vehicle (UAV) surveying, and railroad surveying in the Port. Ms. Holtz has more than thirty-five years of land surveying experience in both private and public sectors, with more than twenty-five years in management positions. She has ten years of

experience measuring subsidence in the Port of Long Beach and along the coast of Long Beach. Ms. Holtz currently oversees all bathymetry surveys for the POLB. POLB submitted a bathymetry survey to NOAA and received a CATZOC A1 rating. She instituted a program to perform bathymetry surveys for the entire POLB every two years and to submit them to NOAA for CATZOC

rating. She updated all of the hydrographical procedures and software to match NOAA's procedures and software for bathymetry surveys. She obtained permission to create a full time UAV team, which included creating manuals, procedures, and safety programs and made the hydrographic team and UAV team available at all times if needed by the U.S. Coast Guard.

Ms. Holtz has been involved in geodesy for over thirty years. In the early 1990s, she was instrumental in the establishment and adjustment of the Orange County's passive GPS system. Ms. Holtz established the City of Long Beach Real Time Network, gave access to Jacobsen Pilots for their use while navigating ships in the Port and worked with NGS, USGS, California Department of Transportation (Caltrans), and California Spatial Reference Center (CSRC) in relationship to geodetic control. Ms. Holtz is involved in professional land surveying organizations and holds elected positions. She is the Chair of the CSRC which has the authority to establish and publish the official geodetic datum in California according to the Public Resources Code (PRC) §§8850-8902. In addition, Ms. Holtz gives presentations to encourage more diversity in the land-surveying field, especially in regards to women entering the field.



Capt. Carolyn Kurtz

Tampa Bay Pilots Association, Deputy Pilot Training Coordinator

Captain Kurtz attended the U.S. Merchant Marine Academy and upon graduation in 1986, she went to sea with Maritime Overseas Corporation and sailed as 3rd, 2nd, and Chief Mate, receiving her unlimited Master's license in 1993. In 1995 she was accepted into the Tampa Bay Pilots training program, becoming their first (and to date, only) female pilot. She has served as co-manager and training coordinator of TBPA, Secretary of the Florida Harbor Pilots Association, and as Chair of the Navigation Safety Advisory Council, an advisory board to the U.S. Coast Guard. She currently serves as Chair of both the Florida Board of Pilot Commissioners and the newly re-formed National Navigation Safety Advisory Council. She serves on the boards of the Mariners' Museum and Park, and First 10 Forward, a non-profit founded by Kings Point women grads benefiting girls and women pursuing non-traditional careers. She has been a guest instructor at Mitags and Maritime Pilots Institute, served on numerous professional panels, and is an active mentor with Women Offshore. In 2022, Carolyn was honored by Proclamation by the Secretary of the Florida Department of Business and Professional Regulation for her 27 years of service as a Tampa Bay Pilot. She was honored to be included as one of Marine Log's Top 20 Women in Maritime for 2022. Carolyn continues to be passionate about all things maritime and hopes that by sharing her experiences and knowledge she can help to broaden diversity and inclusion within the industry, strengthen pride in our shared maritime culture, and promote a high level of safety and professionalism amongst mariners.



Dr. H. Tuba Özkan-Haller

Dean and Professor, College of Earth, Ocean, and Atmospheric Sciences, Oregon State University

Dr. Tuba Özkan-Haller is the Dean and a professor in the College of Earth, Ocean, and Atmospheric Sciences at Oregon State University. She previously served as Associate Vice President for Research Administration and Development at OSU's central Research Office and as Associate Dean for Research and Faculty Advancement in the College of Earth, Ocean, and Atmospheric Sciences. As a faculty member, she focuses on the use of numerical, field, laboratory, and analytical approaches to arrive at a

predictive understanding of waves, circulation, and beach change in the nearshore ocean, including the continental shelf, the surf zone, inlets, and estuaries. The results of this work are being applied to navigational planning, for the development and design of wave energy conversion devices, and for forecasting of beach-goer hazards.

Dr. Özkan-Haller previously served as a member of the Ocean Studies Board of the National Academies of Science, Engineering and Medicine, and has participated in various Academies committees on marine hydrokinetic energy and long-term coastal change, including chairing a consensus study on the future of the U.S. Gulf Coast. Dr. Özkan-Haller is passionate about communicating science to the public and appeared in numerous documentaries produced by the History Channel, the National Geographic Channel, and Oregon Public Broadcasting, and has quoted in various news segments and newspaper articles, most recently about sneaker wave fatalities along the U.S. Pacific Northwest coastline. She is the recipient of the Office of Naval Research Young Investigator Award, the Outstanding Faculty Member Award at the University of Michigan, and the Pattullo Award for Excellence in Teaching Award and Woman of Excellence Award at OSU. She holds a B.S. in Civil Engineering from Boğaziçi University in Istanbul, Turkey, and a M.C.E. and Ph.D. in Civil Engineering from the University of Delaware.



Mr. Eric Peace

Vice President of Lake Carriers Association

Mr. Eric Peace joined the Lake Carriers' Association as the Director of Operations and Communications in 2019 after retiring as a Commander with more than 20 years in the Coast Guard. While in the service, he drove Coast Guard operations, specifically icebreaking. He served in command positions on three Great Lakes icebreakers including the USCGC MACKINAW, homeported in Cheboygan, MI. His final assignment in uniform was as the Program Manager for all ice operations at Coast Guard Headquarters in Washington, D.C. While in this position he published numerous policy papers and

strategic documents advocating for new Polar Icebreaker procurement and synergy in Coast Guard workforce experience between Great Lakes icebreaking sailors and those needed in the future on the new Polar Icebreakers. Mr. Peace earned a Master of Strategic Intelligence from the National Intelligence University after completing a thesis on U.S. and Canadian icebreaking and received a Bachelor of Science in Government from the U.S. Coast Guard Academy.



Ms. Rebecca Quintal

Director of Corporate Capture, SEACORP

Rebecca Quintal has over 20 years of experience working in the hydrographic survey community from spending up to 6 months a year at sea collecting hydrographic data, to running a data processing center, to serving as the Hydrographic Survey & Data Solutions Manager for the Maritime Systems Division of Leidos. She has worked on a wide range of marine survey projects from safety of navigation, cable and pipeline route surveys, dredge surveys, acoustic propagation, and Exclusive Economic Zone surveys. In addition to her role as a project manager for hydrographic survey services, she has led multiple Internal

Research and Development (IR&D) efforts including autonomous bathymetric survey and automatic contact detection capability for side scan sonar data. She received a B.S. in geology from Wright State University, an M.S. in oceanography from the University of Rhode Island, an MBA from the University of Rhode Island, and is a certified Project Management Professional (PMP). In 2018 she began a temporary corporate assignment as a Deputy Capture Manager for the Leidos Capture Management Rotation Program, supporting multiple corporate priority strategic captures. In 2019 she was selected for the Leidos Solution Architect Program, and became the Program Manager for a Navy underwater acoustic system Program of Record. In 2022 she began as Director of Corporate Capture at SEACORP, LLC focusing on U.S. federal government maritime programs.



Ms. Julie Thomas

Senior Advisor, Southern California Coastal Observing System (SCCOOS) and the Coastal Data Information Program (CDIP) Scripps Institution of Oceanography, La Jolla, CA (retired)

Ms. Julie Thomas began with the Scripps Institution of Oceanography in 1976, serving during the last several years as the Program Manager and Principal Investigator for the Coastal Data Information Program (CDIP). She served as the Executive Director for the Southern California Coastal Ocean Observing System (SCCOOS) from 2009 to 2018. She is now serving in an Advisory capacity for both of

the above mentioned programs. She is an advocate for sustained funding for real-time monitoring and model validation, working closely with many federal agencies, in particular NOAA and the U.S. Army Corps of Engineers, whose projects depend upon high quality, long-term wave data for infrastructure design and repair. Through the State of California, she has obtained sustained project funding, working closely with the recreational and commercial maritime community, including the U.S. Coast Guard and state Oil Spill Prevention and Response agencies. At the local and regional level, she is engaged with coastal issues, particularly those that are affected by energetic wave action, providing data for infrastructure design, shoreline change and sea level rise. Ms. Thomas has extensive outreach experience, including listening to comments from the maritime users/operators while walking the fishing

docks for many hours with nautical chart in hand to discuss the best location for a buoy deployment, and attending maritime industry meetings to help resolve their concerns. Her priorities are to maintain standards for collecting and disseminating high quality data, assure that these data are curated and archived at the NOAA National Centers for Environmental Information, and advocate for the integration and communication of information that helps ensure safety, economic and environmental resilience, and the sustainable use of coastal oceans. HSRP chairwoman from March 2021 to December 2023.



Mr. Nathan C. Wardwell

Managing Partner, JOA Surveys LLC

Mr. Nathan Wardwell is the Managing Partner of JOA Surveys LLC, a small business located in Anchorage, AK, that specializes in measuring water levels for tidal datum determinations. He began his career as an intern for the U.S. Geological Survey measuring stream discharge and sediment transport around Alaska's Cook Inlet. He received a B.S. in Environmental Science from Alaska Pacific University and an M.S. from the University of New Hampshire's Center for Coastal and Ocean Mapping (CCOM) with a focus in ocean

mapping. His graduate research included the use of Global Navigation Satellite Systems (GNSS) and a mobile platform for offshore geoid model validation.

While at CCOM, Mr. Wardwell had the opportunity to participate in United Nations Law of the Sea surveys of the Arctic and Atlantic oceans. He served as chair of the University of Alaska Anchorage Geomatics Advisory Board from 2016 to 2018. He has been a member of the Alaska Water Level Water (AWLW) Steering Committee since 2019. The AWLW is a group of federal, state and private stakeholders working to improve the quality, coverage, and accessibility to water level observations in Alaska's coastal zones through innovative technologies and collaborative partnerships. He is a member of The Hydrographic Society of America's Education Committee and the International Hydrographic Office's Hydrographic Surveys Working Group. As a field technician at the beginning of his career he was a member of a team that installed five long term tide stations in Alaska for the National Oceanic and Atmospheric Administration's (NOAA) National Water Level Observation Network. In 2013 he became the Director of an Environmental Field Services contract with NOAA's Center for Operational Oceanographic Products and Services and managed an effort to collect tidal and GNSS observations at more than 200 locations along the coasts of the U.S. and its territories for the National Ocean Service's VDatum Program. From 2010 to 2018 he managed the ground survey of more than 1000 bare earth locations across Alaska to validate IfSAR data collected through the USGS 3D Elevation Program to update topographic maps for the state.



2024 Non-Voting Members



Capt. (NOAA, Ret.) Andrew (Andy) A. Armstrong III

Co-Director, NOAA/University of New Hampshire Joint Hydrographic Center, NOS, NOAA

Captain Andrew Armstrong is Co-Director of the NOAA/University of New Hampshire Joint Hydrographic Center where leads NOAA's role in the research, mapping, and educational programs of the Center. He joined the NOAA Commissioned Officer Corps in 1974, following 4 years of commissioned service in the U.S. Navy. He retired from the NOAA Corps in 2001, continuing with NOAA as Co-Director of

the Joint Hydrographic Center in a civil service capacity. Captain Armstrong has specialized in hydrographic surveying and seafloor mapping throughout his NOAA career. He served on several NOAA hydrographic ships and field parties, conducting hydrographic and bathymetric surveys in Alaska and Hawaii, along the Pacific, Atlantic, Gulf of Mexico coasts, and in the Great Lakes. He served as commanding officer of NOAA Ship Peirce and NOAA Ship Whiting, and as chief of NOAA's Hydrographic Surveys Division. He has a B.S. in geology from Tulane University and a M.S. in technical management from The Johns Hopkins University.



Mr. Brad Kears

Acting Director, National Geodetic Survey, NOS, NOAA

William (Brad) Kears has been the Deputy Director of NGS since 2016. Immediately prior, Brad was a manager with Deloitte Consulting supporting projects at NOAA and the Department of Commerce. Brad is a retired NOAA Commissioned Officer with 28 years of service. He has served on NOAA ships and aircraft, and in NOAA program offices and field parties. He was the Director of NOAA's Commissioned Officer Personnel Center and Commanding Officer of NOAA's Aircraft Operations Center, home of the NOAA "hurricane hunter" aircraft. He received a Bachelor's degree in Geology

from the College of Charleston and a Masters of Aeronautical Science degree from Embry-Riddle Aeronautical University.



Dr. Larry Mayer

Director, Center for Coastal and Ocean Mapping, and Co-Director, Joint Hydrographic Center, University of New Hampshire

Dr. Larry Mayer is a Professor and Director of the Center for Coastal and Ocean Mapping (CCOM) at the University of New Hampshire. He received a Ph.D. from the Scripps Institution of Oceanography in Marine Geophysics (1979). After being selected as an astronaut candidate finalist for NASA's first class of mission specialists, Dr. Mayer went on to a Post-Doc at the School of Oceanography at the University of Rhode Island where he worked on the early development of the Chirp Sonar

and problems of deep-sea sediment transport and paleoceanography. In 2000, he became the founding director of CCOM.

Dr. Mayer has participated in more than 95 cruises (over 75 months at sea!) during the last 38 years, including 13 mapping expeditions in the ice-covered regions of the high Arctic. He is the recipient of the Keen Medal for Marine Geology and an Honorary Doctorate from the University of Stockholm. He was a member of the President's Panel on Ocean Exploration and chaired National Academy of Sciences studies on national needs for coastal mapping and charting and the impact of the Deepwater Horizon Spill on ecosystem services in the Gulf of Mexico. He was the co-chair of the NOAA's Ocean Exploration Advisory Working Group, the Vice-Chair of the Consortium of Ocean Leadership's Board of Trustees, and is currently the Chair of the National Academy of Sciences' Oceans Studies Board and the U.S. Committee for the Decade of Ocean Science. He is also a member of the U.S. State Department's Extended Continental Shelf Task Force, the Navy's SCICEX Advisory Committee, and Vice Chair of the Board of the Ocean Exploration Trust. In 2016, Dr. Mayer was appointed by President Obama to the Arctic Research Commission; in 2017, he was elected to the Hydrographic Society of America Hall of Fame. In 2018 he was elected to the National Academy of Engineering and in 2019 he was elected as a foreign member of the Royal Swedish Academy of Sciences. In 2020, Dr. Mayer became the first recipient of the Walter Munk Medal from The Oceanography Society and was elected a Fellow of the American Geophysical Union. His current research deals with sonar imaging and remote characterization of the seafloor as well as advanced applications of 3-D visualization to ocean mapping problems and applications of mapping to Law of the Sea issues, particularly in the Arctic.



Dr. Marian Westley

Director, Center for Operational Oceanographic Products and Services, NOS, NOAA

Marian Westley, PhD, is the Director of NOAA's Center for Operational Oceanographic Products and Services (CO-OPS), the nation's authoritative source for accurate, reliable and timely water-level and current measurements. In this role, she oversees and continues to improve this 24-hour a day operation to provide mariners, coastal managers, and many other users with historic, real-time, and forecast data on ocean conditions along America's 95,000-mile coastline. Dr. Westley's career with NOAA spans over twenty year with much of that time spent advancing climate research and the

transition of research to operations. She joined CO-OPS in 2017 as the Deputy Director and has been the acting Director since January 2023. Dr. Westley has a BA in Physics and English from Yale University and an MSc and PhD in Oceanography and a Graduate Certificate in Ocean Policy from the University Hawaii at Manoa.



NOAA HYDROGRAPHIC SERVICES REVIEW PANEL

2024 Designated Federal Official



Rear Admiral (lower half) Benjamin K. Evans

Director, Office of Coast Survey, NOS, NOAA

RDML Benjamin Evans is the Director of NOAA's Office of Coast Survey and U.S. National Hydrographer, responsible for overseeing NOAA's hydrographic services, including the mapping and charting of all U.S. coastal waters. He also represents the United States on interagency committees and in international hydrographic efforts. He leads NOAA's ocean mapping and nautical charting programs, continuing the transformation of the agency's navigation services to meet the needs of 21st century mariners. His focus is on applying Coast Survey's technical expertise to meet a broad range of requirements for authoritative ocean mapping data. He is an experienced hydrographer with over twenty-one years of

service in the NOAA Commissioned Corps, most of which has been in the NOAA mapping and charting community afloat and ashore.

RDML Evans has served in a wide range of leadership, technical, and policy roles, including command of NOAA Ships *Ferdinand R. Hassler* and *Rainier*, management positions in Coast Survey and the Office of Marine and Aviation Operations, on the staff of the NOAA Administrator and as the acting chief of staff of the NOS Assistant Administrator. He holds degrees in Physics from Williams College, and Ocean Engineering from the Massachusetts Institute of Technology/ Woods Hole Oceanographic Institution Joint Program where his research focused on uncrewed systems. He is an American Conference on Surveying and Mapping/Hydrographic Society of America Certified Hydrographer.