

2017 Biographies HSRP FAC Panel Members

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Dr. Larry Atkinson

Dr. Larry P. Atkinson, Samuel and Fay Slover Professor of Oceanography
Department of Ocean, Earth and Atmospheric Sciences, Old Dominion University



Education

B.S. and M.S. in 1964 and 1967, University of Washington, Seattle;
Ph. D. Dalhousie University, Halifax, Canada in 1972.

Professional Highlights

Prior to joining the faculty at Old Dominion University Larry was at the Skidaway Institute of Oceanography in Savannah, Georgia. He is a member of the Oceanography Society, the American Meteorological Society, the Marine Technology Society, the American Association for the Advancement of Science (AAAS) and a Fellow of the AAAS. He was editor of Oceanography (1993-1997) and Editor (1988 -1990) and Senior Editor of Journal of Geophysical Research - Oceans (1990-1992). He is the author or co-author of over 90 reviewed publications. He has served

on and was chair of the Department of Interior Science Advisory Committee for Outer Continental Shelf oil and gas production. From 2001 to 2004 he was with the inter-agency Ocean.US office creating the integrated ocean observing system for the US. He was on the board of the Mid-Atlantic Regional Association Coastal Ocean Observing Systems. He was chair of the National Science Foundation Ocean Observing Science Committee and is now the chair of their Ocean Observatories Initiative Facility Board. He is very active in the challenge of sea level rise and increased flooding risk in urban regions. Locally, he has been involved with coastal navigation issues with the local Virginia Maritime Association, the Virginia Port Authority and the National Ocean Service CO-OPS office in Chesapeake, VA. He was involved in the early offshore wind industry efforts off Virginia and other coastal states when he worked with Fugro on bathymetry and interactions of currents and waves with offshore wind structures and cables. Research projects have taken him to many locations around the world including Chile, Japan, Spain, Gulf of Mexico, Columbia River mouth, fjords in British Columbia, Gulf of Mexico, Caribbean Sea, Tropical Atlantic, Antarctic, US East coast and Santa Barbara Basin.

Dr. Lawson W. Brigham

Dr. Lawson Brigham, Distinguished Fellow, Center for Arctic Policy Studies,
University of Alaska Fairbanks

Dr. Lawson Brigham is Distinguished Fellow at the Center for Arctic Policy Studies and Affiliate Faculty at the International Arctic Research Center, University of Alaska Fairbanks. He is a Fellow at the Center for Arctic Study and Policy of the U.S. Coast Guard Academy. During 2004-2009 he chaired the Arctic Council's Arctic Marine Shipping Assessment and was Vice Chair of the Council's working group on Protection of the Arctic Marine Environment. Dr. Brigham was a career U.S. Coast Guard officer from 1970-95 and retired with the rank of Captain. At sea he commanded four Coast Guard cutters including



a patrol boat, Great Lakes icebreaker, offshore law enforcement cutter, and the polar icebreaker *Polar Sea* sailing in Alaskan, Arctic & Antarctic waters; he served as Chief of Strategic Planning. Dr. Brigham participated in over 15 Arctic and Antarctic expeditions, including *Polar Sea's* crossing of the Arctic in summer 1994.

Dr. Brigham has been a research fellow at Woods Hole Oceanographic Institution, a faculty member of the U.S. Coast Guard Academy and the Naval Postgraduate School, and Deputy Director of the U.S. Arctic Research Commission. He is a graduate of the U.S. Coast Guard Academy (BS), a distinguished graduate of the U.S. Naval War College, and holds graduate degrees from Rensselaer Polytechnic Institute (MS) and the University of Cambridge (MPhil & PhD). His research interests for more than three decades have focused on the Soviet/Russian maritime

Arctic, Arctic climate change, marine transportation, sea ice remote sensing, Arctic environmental protection, and polar geopolitics. Captain Brigham was a 2008 signer of the American Geographical Society's Flier's and Explorer's Globe, the Society's historic globe that has been signed by more than 75 explorers of the 20th century. This recognized *Polar Sea's* 1994 voyages as the first ship to reach the extreme ends of the global ocean (the North Pole and in the Ross Sea, Antarctica at the closest navigable position to the South Pole).

Mr. Lindsay Gee

Mr. Lindsay Gee, Consultant

Mr. Lindsay Gee has experience working at a national hydrographic service, then consulting in the broader offshore industry, and most recently in leading a small innovative company providing software and services to the international hydrographic industry. He has nearly four decades of experience working in the international hydrographic surveying and ocean mapping industry.



This includes conducting and managing operational hydrographic surveys for nautical charting, client representation for geodetic and geohazard surveys in the oil and gas industry, through to most recently leading the development of software applications to support hydrographic surveying and ocean mapping. During the latter 15 years he built a deep understanding and expertise in guiding the transfer of technology from research at partner ocean mapping research institutions, and leading the development of an agile company to successfully interpret industry requirements and trends. This ensured that research was optimized in industry leading commercial software applications for hydrographic and ocean mapping operations. Mr. Gee is

affiliated with the Hydrographic Society of America, Surveying and Spatial Sciences Institute, Australasian Hydrographic Society, Marine Technology Society and American Geophysical Union.

Ms. Kim Hall

Ms. Kim Hall, Principal & Founder, Brizo Maritime Consulting, LLC



Ms. Kim Hall founded Brizo Maritime Consulting, LLC in 2016 to pursue in-depth maritime security and nautical operations projects for government, industry, and academic clients. Kim was the prior Director of Technical and Regulatory Affairs, Operational and Security at the Cruise Lines International Association (CLIA) where she was widely recognized as a maritime security and operations expert and leader within the cruise industry. Over the past 13 years, Kim has gained practical experience with maritime partners, having worked directly with government and industry representatives during her time at CLIA, the Homeland Security Studies and Analysis Institute (HSSAI), and the Center of Naval Analyses (CNA). Kim was a Senior Analyst with the

Homeland Security Studies and Analysis Institute (HSSAI), supporting DHS S&T, USCG Headquarters, USCG Atlantic Area, and the National Strike Force Coordination Center. Prior to HSSAI, she was a research analyst in the Center for Naval Analyses' (CNA) Strategic Initiatives Group focusing on threats and issues pertaining to the global commons. She was the CNA field representative to the U.S. Naval Forces Central Command (NAVCENT), U.S. Fifth Fleet, and the Combined Maritime Forces in Manama, Bahrain, where she was the senior counter-piracy advisor. Kim's research experience includes maritime policy (national and international), U.S. Navy /Coast Guard operations and international outreach, and flag and port state politics and foreign policy. www.brizomaritime.com

Mr. William (Bill) Hanson, HSRP Chair

Mr. Bill Hanson, Vice President, US Business Development, Great Lakes Dredge & Dock Company



Professional Experience:

Mr. Hanson's current position is the Vice President of US Business Development for the Great Lakes Dredge & Dock Company, working primarily with Army Corps of Engineers and dredging policy issues as well as developing business opportunities for GLDD in the private and non-Corps sector.

Education:

Mr. Hanson holds a BS in Ocean Engineering from Texas A&M University where he serves on the Board of Industry Advisors for the Ocean Engineering Program and was honored as Distinguished Alumni in 2013.

Affiliations:

Appointed Member, Maritime Transportation System National Advisory Committee, (MTSNAC)

Appointed Member, U.S. Department of Commerce, International Trade Advisory Committee
Appointed Member, U.S. Department of Commerce, Advisory Committee on Supply Chain Competitiveness
Executive Committee Member, American Shore & Beach Preservation Association
Board Member, National Waterways Council
Vice Chair, Coast Builders Coalition (Louisiana)
Board Member, Bay Planning Coalition (San Francisco)
Member, American Society of Civil Engineers, Ports and Harbor Committee

Mr. Edward (Ed) J. Kelly

Mr. Edward Kelly, Executive Director, Maritime Association of the Port of New York/New Jersey



Mr. Kelly is the Executive Director of the Maritime Association of the Port of New York/New Jersey. Founded in 1873, the Maritime Association has a proud history of serving as a Maritime Exchange, industry association, and general advocate of the Maritime-related activities of the tri-state Port. Ed is responsible for managing the activities of the Association and developing the enhanced safety, security, ecological sanctity, and economic viability of the many maritime –related industries in the Port. Ed held a series of senior executive level positions in the Liner business including: President and CEO of Cho Yang (America), Inc.; Senior Vice President of Inchcape Shipping Services; President and CEO of Nippon Liner Systems (USA); and Executive Vice President of Y.S. Line (USA). He provided executive level consulting services to firms such as Maher Terminals, Inc.; The Port Authority of New York and New Jersey; Deutche

Afrika Line; Paul F. Richardson Associates; the Maritime Association of the Port of New York; and Strachan Shipping Agency. Ed had managed the Transportation, Logistics, and Management Division of the Global Maritime and Transportation School of the U.S. Merchant Marine Academy at Kings Point, New York. Ed has devoted many years as a Director of the New York Shipping Association, the Carriers Container Council, the USMX, and the Steamship Operators Intermodal Committee and served on joint labor /management committees and trust funds. He is the President of the Maritime Information Service of North America (MISNA), Vice President of the National Association of Maritime Organizations (NAMO), Vice Chairman of the Mid Atlantic Regional Association Coastal Ocean Observing System (MARACOOS), a Director of the United Seaman’s Service, and a Director of the Urban Assembly School of Global Trade and Transport. He was named as a member of New York City’s Mayoral Maritime Advisory Board. A graduate of the U.S. Merchant Marine Academy, he sailed as a deck officer on U.S. Flag ships. Ed completed an MBA at Pace University and has a certificate in Intermodal Transportation from the FDR Institute. He received an award for Outstanding Professional Achievement from the Kings Point Alumni Association and in 2009, the Journal of Commerce named Ed to their Leadership Roll in the Global Logistics Industry.

Ms. Carol Lockhart

Ms. Carol Lockhart, President, Geomatics Data Solutions, LLC



Carol Lockhart is an owner of Geomatics Data Solutions, Inc., a small business focused on acquisition, processing, and mapping of lidar & acoustic datasets. Carol has been surveying for over 20 years. She has acquired bathy lidar data worldwide and has been involved with the processing of coastal topo and bathy lidar data from most sensors available on the market. Geomatics Data Solutions owns a Chiroptera II and Dual-Head DragonEye system, and most recently has been focused on acquiring bathymetric lidar for nautical charting using a HawkEye III. Ms. Lockhart is member of the Hydrographic Society of America (THSOA). She is a recipient of the “Lt. Cmdr. Peter Johnson Best

Practices Award” presented by the Joint Airborne Lidar Bathymetry Technical Center of Expertise (JALBTCX) and the “Sebastian Sizgoric Technical Achievement Award” for her work with multiple bathymetric lidars.

Dr. David Maune

Dr. David F. Maune, PhD, CP, CFM, PSM, PS, GS, SP

Associate Vice President and Senior Remote Sensing project manager, Dewberry Consultants

Dr. David Maune manages major geospatial products and services contracts with the U.S. Geological



Survey (USGS) and National Oceanographic and Atmospheric Administration (NOAA) – both the National Geodetic Survey (NGS) and the Office for Coastal Management (OCM). He earned his MS and PhD degrees in geodesy and photogrammetry from The Ohio State University. He manages Dewberry’s statewide mapping of Alaska with airborne interferometric synthetic aperture radar (IFSAR) to satisfy urgent requirements for aviation safety and to help the state and federal agencies to manage the vast natural resources in America’s Last Frontier. He authored major positional accuracy standards, guidelines and specifications published by the Federal Emergency Management Agency (FEMA), the National Digital Elevation Program (NDEP), and the American Society for

Photogrammetry and Remote Sensing (ASPRS), including the *ASPRS Positional Accuracy Standards for Digital Geospatial Data* (2015). He is specialized in topographic mapping and elevation data and the editor of three editions of ASPRS’s “Digital Elevation Model Technologies and Applications: The DEM Users Manual”. For NOAA, he authored the *National Height Modernization Study, Report to Congress*, on how to modernize the national height system. For USGS, he authored the *National Enhanced Elevation Assessment* that served as the blueprint for the 3D Elevation Program (3DEP) which focuses on standardized lidar mapping nationwide. For the U.S. Army Corps of Engineers

(USACE), he authored EM 1110-1-1000, *Photogrammetric and Lidar Mapping* (2015). He authors a column in LiDAR Magazine. He is a retired U.S. Army Colonel, and served as Director, U.S. Army Topographic Engineering Center (TEC). He is an ASPRS Fellow and charter member of the National Geospatial Advisory Committee (NGAC); an ASPRS Certified Photogrammetrist (CP); and an ASFPM Certified Floodplain Manager (CFM). He is the 2016 winner of the ASPRS Photogrammetric Award.

Captain Anne McIntyre

Captain Anne McIntyre, Pilot, Columbia River Pilots



Capt. Anne L. McIntyre is a 1988 deck officer graduate of the California Maritime Academy. Upon graduation she was hired by Chevron Shipping Co. and served 8 years in both sea-going and shore-based positions. In 1996, she was selected by the Oregon Board of Maritime Pilots to become the first woman Columbia River Pilot. During her tenure as a Pilot, she has served in a number of management positions including Administrative Pilot, Commissioner, Oregon Board of Maritime Pilots and Vice Chair of the Lower Columbia River Harbor Safety Committee. In 2013, she earned a MS in Transportation and Engineering Management, also from the California Maritime Academy where she is an active member of the CMA Alumni

Association. In her spare time she enjoys sailing, reading, a variety of snow and water sports and viticulture.

Ms. Joyce E. Miller, M.S., C.H., HSRP Co-Chair

Ms. Joyce E. Miller, M.S., C.H., Director of Seafloor Data Services
Hawaii Mapping Research Group, University of Hawaii School of Ocean and Earth Science and Technology (retired 2015)



Education:

B.S. and M.S., German/mathematics education, Indiana University, 1969

Master's research in Marine Geology, University of Hawaii, 1974-1980

Professional Affiliations:

Certified Hydrographer, American Congress of Surveying and Mapping (ACSM) No. 199

Member, The Hydrographic Society of America and American Geophysical Union

Qualification Highlights:

Forty years of experience conducting geophysical and oceanographic surveys, specializing in multibeam mapping for charting, benthic habitat mapping, and deep sea geologic

research. She developed and taught multibeam and hydrographic training courses for Naval

Oceanographic Office (NAVOCEANO), Philippine Navy, and NOAA. She worked commercially as well as for government and academic institutions and has a broad understanding of requirements for effective hydrographic surveying. From her position as Director of Seafloor Data Services, Hawaii Mapping Research Group, she led numerous mapping projects for the University of Hawaii, the State of Hawaii, the Pacific Islands Benthic Habitat Mapping Center (PIBHC), and for NOAA partners, including the Office of Coast Survey and the Coral Reef Conservation Program. During the past 15 years she has led or participated in the acquisition and processing of multibeam data for 10,000 sq. km. of shallow coral habitats (0-150 m) and over 120,000 sq. km. in deeper Pacific waters. She participated in nautical charting surveys of Honolulu, Saipan, Tinian, and Rota (CNMI) harbors and cable surveys around Oahu and Maui counties. From 2001 to 2011 Ms. Miller worked with NOAA's Coral Reef Ecosystem Division. From 1990 to 2000 she worked for Science Applications International Corporation (SAIC) to develop applications for hydrographic charting surveys during the first commercial multibeam surveys in Long Island Sound and Martha's Vineyard.

Mr. Scott R. Perkins

Mr. Scott Perkins, Director, Federal Programs, Surveying And Mapping (SAM), LLC



Education

Baker University, Overland Park, KS Business Management
Ferris State University, Big Rapids, MI Photogrammetric Mapping

Certifications

Certified Geographic Information Systems (GIS) Professional
U.S. Small Business Administration, Office of the National Ombudsman's
Regulatory Fairness Board, Region VI I, 2008-2011

Affiliations

ASPRS, Director, Photogrammetric Applications Division 2016 – 2018
ASPRS, Regional Director, Past Region President, Treasurer. 2003–2013
MAPPS, Board of Directors 2004-2012

MAPPS-NOAA Liaison Committee, chairmen – 2006–2010

MAPPS-DOD/NAVFAC Committee, chairmen – 2005

SAME – KC Post Board of Directors – 2015 – 2017

Qualifications Scott R. Perkins has 30+ years of experience in private practice as a business owner engaged in the production of geospatial data, mapping products and providing primary acquisition services. Those service lines include aerial imagery acquisition using film and digital sensors, airborne and bathymetric LiDAR acquisition, mobile LiDAR, high definition laser scanning, land surveying, photogrammetric mapping, hydrographic surveying and GIS services. Mr. Perkins experience includes shoreline mapping using NTM and aerial imagery, hydrographic surveys on the Mississippi River and inland waterways, lakes and reservoirs, production of hydrographic charts and navigation charts of the Missouri River, and mapping and charting of ports and harbors on the Great Lakes.

- Surveying And Mapping, LLC, Director Federal Programs, 2014 - present

- Quantum Spatial, Vice President, Federal Programs, 2012-2014

- T-Kartor USA, St. Louis, MO, President, 2012

- Wilson & Company, Inc., Engineers & Architects, Kansas City, MO, Associate VP, Business Development, Shareholder, Officer 2008 – 2012

Captain Salvatore Rassello

Captain Salvatore Rassello, Director, Nautical Operations, Carnival Cruise Lines

Captain Rassello is a member of the shore-side marine operations division at Carnival Cruise Lines headquarters. He brings knowledge in maritime operations related to navigation and as a vessel operator. He has understanding of port operations at the corporate level and port administration. As Fleet Captain for Corporate Maritime Quality Assurance, he has background in maritime safety culture and knowledge of corporate and industry standards.

Captain Rassello represents the cruise industry as a member of the Cruise Lines International Association's (CLIA) Navigation & Hydrographic Working Group and Operations Working Group, comprised of representatives from all of the major ocean-going cruise lines. He has geographic areas of expertise in the Caribbean Sea, Gulf of Mexico, north and central Atlantic Ocean, and east Pacific Ocean.



Highlights: He is an experienced Master with 40 years of at-sea experience, 17 years spent as Master on Cruise ships. He is responsible for Safety of Navigation, Itinerary/ Voyage Passage Planning, Port Operations, and Port Assessments for the entire fleet of 24 ships. He represents CCL at CSMART Governance committee and all other nautical related trainings at the Corporate Maritime Training Center (CSMART) in the Netherlands. He is certified in Maritime (BRM/ECDIS), Bridge Resource Management/Electronic Navigation and Marine Incident Investigation Certified and Deputy Director for the Company SIRP (Ship Incident Response Plan).

Education and Qualifications:

Francesco Caracciolo Maritime Academy, Italy.

Licensed Ocean Going Master by the Italian Maritime Ministry of

Transportation and IMO Certified.

Licensed Instructor for Firefighting, PSSR, and Personal Survival Techniques.

Certified Ship's Security Officer- Certified trainer for BRM/ECDIS.

Mr. Edward Saade

Mr. Edward J. Saade, President, Fugro (USA) Inc. & Regional Director Americas – Marine

Edward J. Saade has 40+ years of Hydrographic, Coastal Zone Management, Geospatial Survey and Ocean Engineering experience. Since 2014, Mr. Saade has been serving as Americas Regional Director for the Fugro Marine Division and in June of 2015 was promoted to the President of Fugro (USA) Inc., serving Fugro in both capacities.



His responsibilities include the management of the largest of Fugro's Regional Divisions, overseeing a staff of 1200, operating from eleven primary offices located from Alaska and Canada to Brazil, with multiple offices in the USA, Mexico, Colombia and Trinidad and Tobago; operating in virtually every country in the Region. He has overseen the expansion of Fugro's capabilities to become the world leader in hydrographic LiDAR, multi-beam and backscatter data acquisition and mapping techniques for charting, Coastal Zone and Essential Fish Habitat analysis. These techniques have been directly applied to the offshore oil and gas and construction industries and a wide variety of national hydrographic offices including NOAA, CHS (Canada), GCS

(Kingdom of Saudi Arabia, RAN (Australia) and SHOM (France). He has been actively involved in high resolution geophysical survey data acquisition and interpretation programs, both domestically and overseas. He holds a bachelor's degree in geology from the University of California, Santa Barbara, and completed Ph.D. courses and research in marine geophysics at the Hawaii Institute of Geophysics. Mr. Saade is a California Professional Geophysicist, and has authored/coauthored over 70 reports and studies related to seafloor geology and sub-bottom conditions.

Ms. Susan Shingledecker

Ms. Susan Shingledecker, Vice President and Director, Environmental Programs for the BoatU.S. Foundation for Boating Safety and Clean Water

Ms. Shingledecker is Vice President and Director of Environmental Programs for the BoatU.S. Foundation for Boating Safety and Clean Water. Susan works to educate recreational boaters on safety and environmental issues and oversees the Foundation's environmental programs including: the marine debris and monofilament recycling programs, the Help Stop the Drops clean fueling program, boat pumpout and invasive species education as well as the clean water grants program. She currently sits on Advisory Boards for the Maryland Clean Marina programs, the Chesapeake Bay Observing System and the Pacific Oil Spill Prevention Education Task Force.



Ms. Shingledecker has worked in the environmental field at the international, national and state level over ten years covering a broad range of issues including: coastal policy, sustainable tourism, climate change, sea level rise, wastewater treatment, renewable energy and energy efficiency. Prior to BoatU.S, Susan developed outreach programs for renewable and energy efficiency, advised Governors' staffs on environmental policy and worked with coastal hotels and resorts to minimize their environmental impacts. Ms. Shingledecker has been an avid recreational boater for over 25 years and started boating at the age of eight on Lakes Erie and Ontario. Susan holds a Master of Environmental Management from Duke University's Nicholas School of the Environment.

Mr. Gary Thompson

Mr. Gary Thompson, Chief, North Carolina Geodetic Survey



Mr. Thompson has worked for the North Carolina Geodetic Survey (NCGS), which is the agency responsible for developing and maintaining North Carolina's official survey base, since 1977. As Section Chief since 1994, he has been continually modernizing the agency to keep up with advances and spatial data needs in the engineering, surveying, mapping, and scientific fields. He put the agency's modernized technologies, expertise, and quality control to the test while on the research team that conducted Light Detection and Ranging (LiDAR) aerial mapping research projects with NASA. He incorporated the results of those projects in to practice while on the program management team that completed the engineering and surveying project that produced a statewide set of Digital Flood Insurance Rate Maps

(DRIRMs) for North Carolina. Mr. Thompson promulgates outreach and technological transfer by conducting workshops with engineers and surveyors and by serving on three college advisory boards. During his career, he has participated in numerous state and national professional organizations and has managed/coordinated national and state conferences. He authored and co-authored numerous articles and issue papers on floodplain mapping and LiDAR technology. He currently serves on the National Geospatial Advisory Committee (NGAC) and continues to conduct seminars throughout the state on a wide variety of topics important to the engineering and surveying professions.

Biographies HSRP Non-Voting Members

Mr. Andy Armstrong

Capt. (NOAA, Ret.) Andrew A. Armstrong III, Co-Director, NOAA/University of New Hampshire Joint Hydrographic Center



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 is the Bathymetric Data Acquisition team leader for the U.S. Interagency Extended Continental Shelf Task Project where he has been responsible for mapping nearly 875,000 square nautical miles of the seafloor in the Arctic Ocean, the U.S. Pacific Islands, and along the U.S. Atlantic and Pacific margins. Andy 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. Throughout his

NOAA career, he has specialized in hydrographic surveying and seafloor mapping. He has 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 an M.S. in technical management from The Johns Hopkins University.

Ms. Juliana P. Blackwell

Ms. Juliana P. Blackwell, Director, National Geodetic Survey, NOS



Ms. Juliana P. Blackwell is the Director of NOAA's National Geodetic Survey (NGS). As Director, she is responsible for the financial, administrative and programmatic performance of NGS, the lead federal agency for positioning activities in the Nation. She oversees the management and delivery of the National Spatial Reference System (NSRS), the nation's consistent coordinate system for latitude, longitude, height, shoreline, gravity measurements and shoreline information throughout the United States. The NSRS supports a wide range of important activities including mapping and charting, navigation, flood risk determination, transportation, land use and ecosystem

management. Ms. Blackwell serves as Chair of the Federal Geodetic Control Subcommittee of the Federal Geographic Data Committee, exercising government-wide leadership in the development and improvement of geodetic surveying specifications, methods, instrumentation, and data transfers. She is a member of NOAA's Hydrographic Services Review Panel, a federal advisory committee providing advice to the NOAA Administrator on matters related to hydrographic services. She represents NOAA on the interagency Alaska Mapping Executive Committee and the 3D Elevation Program Executive Forum. A graduate of Tufts University, Ms. Blackwell earned a Bachelor of Science degree in mathematics. She received a master's in business administration from the University of Maryland's Robert H. Smith School of Business.

Mr. Richard Edwing

Mr. Richard Edwing, Director, Center for Operational Oceanographic Products and Services, NOS



Richard Edwing 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 his role, he oversees and continues to improve this 24-hour a day operation to provide mariners, coastal managers, and many other users with real-time data on ocean conditions along America's 95,000-mile coastline. Edwing's career with NOAA spans three decades with much of that time spent advancing NOAA's navigation services mission to provide the nation with up-to-date ocean, weather, mapping and positioning data and tools for safe transits to and from U.S. ports.

He started with NOAA in 1976 in the Marine Boundary Program, a partnership between NOAA and coastal states to establish tidal data such as base elevations in sensitive wetland areas vulnerable to urban growth. He later advanced through various positions in the field and at NOAA headquarters, including several years as division chief of the National Ocean Service's policy, planning and analysis division, where he shaped NOAA's priorities for ocean issues, as well as identified budget needs to advance and modernize ocean science for the twenty-first century. Graduating in 1976 from George Washington University, Edwing earned a Bachelor of Science degree in oceanography, and later completed graduate level work in civil engineering at the University of Maryland. For two hundred years, CO-OPS and its predecessor agencies have provided the critical oceanographic data needed to protect life, property, and the marine environment. Today, the Center manages NOAA's Physical Oceanographic Real-Time System, the National Water Level Program, and National Current Observation Program—major national systems critical to keeping America's oceans, coasts, and Great Lakes safe, healthy and productive.

Dr. Larry Mayer

Dr. Larry Mayer, Director, Center for Coastal & Ocean Mapping, and Co-Director, Joint Hydrographic Center, University of New Hampshire

Larry Mayer is a Professor and the Director of the School of Marine Science and Ocean Engineering and The Center for Coastal and Ocean Mapping at the University of New Hampshire. He graduated magna cum laude with an Honors degree in Geology from the University of Rhode Island in 1973 and



received a Ph.D. from the Scripps Institution of Oceanography in Marine Geophysics in 1979. At Scripps, he worked with the Marine Physical Laboratory's Deep-Tow Geophysical package, applying this sophisticated acoustic sensor to problems of deep-sea mapping and the history of climate. After being selected as an astronaut candidate finalist for NASA's first class of mission specialists, Larry 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 1982, he became an Assistant Professor in the Dept. of Oceanography at Dalhousie University and in 1991 moved to the University of New Brunswick to take up the NSERC Industrial Research Chair in Ocean Mapping. In 2000 Larry became the founding director of the Center for Coastal and Ocean Mapping at the University of

New Hampshire and the co-director of the NOAA/UNH Joint Hydrographic Center. Larry participated in more than 90 cruises (over 70 months at sea!) in 35 years, and has been chief or co-chief scientist of numerous expeditions, including two legs of the Ocean Drilling Program and eight mapping expeditions in the ice covered regions of the high Arctic. He served on, or chaired, many international panels and committees and a large number of publications on a variety of topics in marine geology and geophysics. He was a member of the President's Panel on Ocean Exploration, National Science Foundation's Advisory Committee for the Geosciences, and chaired a National Academy of Science Committee on national needs for coastal mapping and charting as well as the National Academies report on 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 the Chair of the National Academies of Science's Oceans Studies Board, a member of the State Dept.'s Extended Continental Shelf Task Force and the Navy's SCICEX Advisory Committee. In 2016 he was appointed by President Obama to the Arctic Research Commission. Larry's 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.

Biography for the HSRP Designated Federal Officer

Rear Admiral Shepard M. Smith

Rear Admiral Shepard M. Smith, Designated Federal Officer, HSRP; and Director, Office of Coast Survey, NOS, NOAA



Rear Admiral Shepard M. Smith became the director of the Office of Coast Survey (OCS) on August 26, 2016. Hallmarks of his career have been his leadership in the modernization of NOAA's charting systems and transformation of NOAA's hydrographic technologies. That leadership and experience are now be applied to expanding Coast Survey's data capabilities and supporting a data-enabled maritime economy, among other challenges.

Smith returns to Coast Survey as commanding officer of NOAA Ship *Thomas Jefferson*, on which he served three tours during his NOAA career. Smith became NOAA's first commanding officer to operationalize unmanned surface vehicles for mapping shallow areas previously inaccessible and uncharted. Smith served as the chief of Coast Survey's Marine Chart Division where he changed the nation's charting tradition by restructuring chart production and distribution. That modernization made U.S. navigational data more accessible to the public through a wider range of electronic formats, faster and more accurately. During ship assignments, he surveyed Alaska on NOAA Ship *Rainier*, was on the interagency response teams for the search and recovery of TWA flight 800, Egypt Air flight 990, the private plane piloted by John F. Kennedy, Jr., and commanded *Thomas Jefferson* during her six-week response to the Deepwater Horizon oil spill.

Smith's other assignments with Coast Survey include chief of the Atlantic Hydrographic Branch, and deputy hydrographer. In NOAA, Smith served as the deputy director of the Office of Response and Restoration, on the staff of the USCG LANTAREA headquarters, and as a senior advisor to the assistant secretary of environmental observation and prediction. He was the NOAA representative to the Allied Maritime Sub Group, on the U.S. delegation to the International Hydrographic Organization's (IHO) Hydrographic Services and Standards Committee and was the chairman of the IHO Data Quality Working Group. *Thomas Jefferson*, under his command, was awarded a Commerce Gold Medal for heroism. He graduated with a bachelor of science in mechanical engineering from Cornell University in 1993. He has a master of science in ocean engineering in 2003, and completed the IHO Category "A" program, both at the University of New Hampshire.