

Speaker biographies, HSRP New England public meeting Portsmouth, NH, September 11-13, 2017

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CAPT (Ret. NOAA) Andrew A. Armstrong III

Co-Director, Joint Hydrographic Center, University of New Hampshire



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

Director, National Geodetic Survey, National Ocean Service, NOAA

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. Glenn Boledovich

Policy Director, and Chief, Policy and Constituent Affairs Division, Management and Budget Office, NOAA National Ocean Service



Glenn Boledovich is the policy director and chief of the Policy and Constituent Affairs Division for NOAA's National Ocean Service. He manages a team of policy and program analysts overseeing ocean and coastal policy development and implementation, including congressional relations, legislative analysis, interagency coordination and constituent relations. The team leads and coordinates NOS engagement in the budget formulation and appropriations process; congressional and legislative affairs; internal NOAA, inter-agency and constituent engagement and outreach; and performance management, and is the first stop for all incoming congressional, White House, IG, GAO, and FOIA inquiries. He began his career at NOAA in 1995 as a Knauss

Sea Grant Fellow. He is a Harry S. Truman Scholar and graduate of the University of Oregon School of Law.

Captain Richard Brennan

Chief, Hydrographic Surveys Division, Office of Coast Survey, NOAA NOS



Captain Brennan has served with the NOAA Corps for over 20 years, most recently as the chief of the Coast Survey Development Lab. He has sailed on nearly every hydrographic ship in the modern NOAA fleet. He has conducted surveys throughout U.S. waters, through the Gulf of Mexico and Caribbean to the Gulf of Maine, and from the Oregon coast to Chukchi Cap in the Arctic Ocean. Brennan's most recent sea assignment was as the commanding officer of the NOAA Ship Rainier, surveying Alaskan waters. Captain Brennan has also served as chief of Coast Survey's Atlantic Hydrographic Branch and as the mid-Atlantic navigation manager. Earlier, Brennan pursued a Master of Science degree in ocean engineering at the University of New Hampshire's Center for

Coastal and Ocean Mapping, specializing in ocean mapping, acoustics, and tidal error models. After that, he led the Hydrographic Systems and Technology Program at NOAA, with a focus on

transitioning new technology into fleet operations. Captain Brennan graduated from the Citadel in Charleston, South Carolina, with a Bachelor of Science degree in civil engineering. He completed the Harvard Kennedy School Senior Executive Fellows program in 2013.

Dr. Lawson W. 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. Thomas Chance

Chief Executive Officer, ASV Global

Mr. Chance is former CEO of C & C Technologies, and is the current CEO of ASV Global. C & C Technologies, founded by Mr. Chance in 1992, is a hydrographic surveying company headquartered in Lafayette, Louisiana, with 500 employees in 10 offices across the globe. C & C is a world leader in deep water AUV operations having done enough AUV surveys to encircle the globe more than eight times. C & C has supported NOAA's Office of Coast Survey as a hydrographic survey contractor for more than a decade. In 2015, Mr. Chance sold C & C

Technologies to Oceaneering International. C & C has since changed its name to Oceaneering Survey.



ASV Global, founded by Mr. Chance in 2010, is a leader in unmanned vessel technology. With 110 employees in offices on both sides of the Atlantic, ASV Global has built more than 85 ASVs for defense, scientific, and industrial sectors worldwide. The company's C-Worker 5 unmanned vessels have been used by NOAA, as well as NOAA's contractors to assist in hydrographic survey data collection. ASV Global is in the process of converting one of the Canadian Hydrographic Service HSLs to optionally unmanned. Mr. Chance has a Bachelor's of Science in Electrical Engineering from LSU, a Master's in Geodetic Surveying from Purdue University, and a Master's in Industrial Administration also

from Purdue. He has been involved with several marine related professional organizations including the Hydrographic Society of America and the Marine Technology Society. Mr. Chance has also received numerous awards for business and ocean technology.

Ms. Ashley Chappell

Integrated Ocean and Coastal Mapping Coordinator (IOCM), Office of Coast Survey, NOS, NOAA

After an exciting stint at National Geographic, Ashley joined the National Oceanic and Atmospheric Administration as an aeronautical chart cartographer in 1992. Her childhood



summers spent at Virginia Beach and a love of the sea soon necessitated a move to nautical charting for NOAA's Office of Coast Survey in 1995, where she produced charts of Alaska, the Pacific and Great Lakes waters. In 2000, she moved to policy, strategic planning, and budget formulation to support the worthy mission of safe and efficient marine transportation. Since then, Ashley has focused in large part on the emerging threats and opportunities from a warming Arctic, and the national need for better marine transportation system infrastructure and foundational geospatial data to support good decision-making in the coastal zone. She currently serves as NOAA's Integrated Ocean and Coastal Mapping Coordinator. She earned a B.A. in

Geography from the University of North Carolina at Chapel Hill in 1991, and a Master's degree in Geography and Cartographic Sciences from George Mason University in 1997. Ashley lives in Alexandria, Virginia with her husband and three children, where she advocates for elementary STEM education in her spare time.

Mr. Keith Dominic

Chief, Maritime Navigation Division Atlantic, National Geospatial-Intelligence Agency



Mr. Keith E. Dominic graduated from US Merchant Marine Academy in 1999 with a Bachelor's of Science in Marine Transportation, a USCG Third Mate Unlimited Tonnage License, and a commission in the US Navy Reserve, where he is now the rank of Commander. Additionally, Mr. Dominic obtained a Master's in National Security and Strategic Studies from US Naval War College. Mr. Dominic has worked in National Geospatial-Intelligence Agency's (NGA) Maritime Safety Office for over 17 years. During his tenure, he has held key leadership roles in several divisions, including Nautical Publications, World-Wide Navigational Warning Service (WWNWS), Littoral Planning Charts, Digital Nautical Charts, and as Arctic Lead for the Source Directorate. Keith has also represented NGA and the United States at multiple

International Hydrographic Organization meetings to include teaching multiple capacity building courses on Maritime Safety Information (MSI). Today, Keith is Chief of Maritime Navigation Division-Atlantic. His primary responsibility is for the management and production of Littoral Planning Charts and Digital Nautical Chart (DNC), covering from the East coast of North and South America to the Arctic Ocean, the Mediterranean Sea, Persian Gulf, and the Western Indian Ocean.

Dr. Paul Doremus

Performing the duties of Assistant Secretary for Conservation and Management, NOAA



Dr. Paul Doremus is performing the duties of Assistant Secretary for Conservation and Management. He is responsible for driving NOAA's programs in areas ranging from enabling marine transportation to managing our nation's fisheries and protecting and preserving coastal resources. He also serves as the Deputy Assistant Administrator for Operations at NOAA Fisheries where he is the Chief Operating Officer. He is responsible for the day-to-day management of the agency's operations and oversees NOAA Fisheries' financial and business processes; works to

strategically align and improve the performance of NOAA Fisheries; and ensures NOAA Fisheries has effective and efficient infrastructure for its mission, ranging from fleet and facilities to information technology and workforce. Before coming to NOAA Fisheries, he was the Assistant Administrator for the Office of Program Planning and Integration where he was responsible for NOAA's long-term strategic plan, NOAA-wide strategy implementation, and NOAA's corporate performance evaluation methods and measures.

He served as Director of the Program Office for the National Institute of Standards and Technology (NIST), where he led the development and implementation of NIST's long-range strategic plan and performance evaluation system and practices; provided the NIST Director and senior managers with technical, economic, policy, and program analyses and counsel; and helped NIST improve its relationships with government and private sector customers and stakeholders. He served as a Senior Analyst in the Commerce Department's Office of Technology Policy, and as Project Director in the congressional Office of Technology Assessment. His work and academic background center on corporate strategy and performance management, portfolio planning and evaluation, science and technology policy, and the intersection of economics and public policy. He received his B.A. in Political Science from the Pennsylvania State University and his Ph.D. in Government from Cornell University.

Mr. Richard Edwing

Director, Center for Operational Oceanographic Products and Services, National Ocean Service, NOAA

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.

Mr. W. Jeff Lillycrop

Lead Technical Director for Civil Works, USACE



Mr. Lillycrop is the Lead Technical Director for Civil Works (CW) Research & Development, and Technical Director (TD) for Navigation R&D at the Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers (USACE). As Lead CW TD, he is responsible for integration of the Environmental, Flood Risk Management, and Navigation R&D and as Navigation TD, he is responsible for six R&D programs covering a wide range of topics including navigation infrastructure, channel dredging and performance, coastal inlets and sedimentation, surveying and mapping technologies, eNavigation, regional sediment management, and many more. He is Chair of the Committee on the Marine Transportation System Integrated Action Team for R&D. Jeff has worked for ERDC since 1986. From 1996 to 2007, he was stationed at the

Mobile District, as Chief of the Spatial Data Branch, Operations Division and Director of the Joint Airborne Lidar Bathymetry Technical Center of Expertise, a partnership between the Navy, NOAA, USGS, and Corps of Engineers. From 1984 to 1986, he worked at the Jacksonville District, Planning Division's Coastal Branch. Mr. Lillycrop holds a master's of science in coastal and oceanographic engineering from the University of Florida and has published over 50 papers related to airborne lidar surveying and mapping, sediment management, and other topics related to navigation and coastal engineering.

Ms. Carol Lockhart

President, Geomatics Data Solutions, Inc.



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.

Mr. Doug Lockhart

Vice President and General Manager, Teledyne CARIS, Inc.



Doug Lockhart is Vice President and General Manager of Teledyne CARIS a software company specializing in hydrographic processing, analysis and charting. During his 8 years with Teledyne, Mr. Lockhart has filled a number of additional roles including the transition management of Teledyne Oceanscience, business case creation, design and development management of the MB1/MB2 line of small, integrated multibeam sonars, serving on the Teledyne Optech Boards of Directors, advising on business and product strategy, and directing the RD Instruments engineering group.

Previously, Mr. Lockhart served as Chief Scientist at Fugro Pelagos, a commercial marine survey company, and as Senior Engineer at the Marine Mineral Technology Center at the University of Mississippi. In these roles Mr. Lockhart developed and exploited expertise in underwater acoustics, seismic and sonar mapping applications, Lidar, GIS, and marine operations. Mr. Lockhart holds a BS and MS in Petroleum Engineering from the University of Alaska.

Dr. Dave F. Maune

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. Dave is certified with the following PhD, CP, CFM, PSM, PS, GS, SP.

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 in Geology from the University of Rhode Island and received a Ph.D. from the Scripps Institution of Oceanography in Marine Geophysics.

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 to work on 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 he 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/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 or chaired many international panels and had a large number of publications on 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, chaired a National Academy of Science Committee on national needs for coastal mapping and charting, and the National Academies report on the impact of the Deepwater Horizon Spill on ecosystem

services in the Gulf of Mexico. He co-chaired NOAA's Ocean Exploration Advisory Working Group, was Vice-Chair of the Consortium of Ocean Leadership's Board of Trustees, is the Chair of the National Academies of Science's Oceans Studies Board, a member of the State Department's Extended Continental Shelf Task Force, Navy's SCICEX Advisory Committee, and the Arctic Research Commission. Larry's current research deals with sonar imaging and remote characterization of the seafloor, advanced applications of 3-D visualization to ocean mapping problems, and applications of mapping to Law of the Sea issues, particularly in the Arctic.

Ms. Rebecca T. Quintal

Hydrographic Survey & Data Solutions Manager, Marine Survey & Engineering Solutions, Leidos Engineering



Ms. Quintal is currently the Hydrographic Survey Data Solutions Manager for the Maritime Systems Division of Leidos, with experience in hydrographic survey, marine geology, geographic information systems, and design of fiber optic cable routes. Ms. Quintal recently led an Internal Research and Development (IR & D) effort in preparation for an autonomous bathymetric survey as part of the U.S. Navy's Advanced Naval Technology Exercise (ANTX 2017). She received a B.S. in geology from Wright State University in 1995, an M.S. in oceanography from the University of Rhode Island in 2005, an MBA from the University of Rhode Island in 2012, and is a certified Project Management Professional.

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. *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.

Capt. EJ Van den Ameele

Director, Coast Survey Development Lab, Office of Coast Survey, National Ocean Service, NOAA

Captain Van Den Ameele has served 23 years in the NOAA Corps, where he has spent the



majority of his career in hydrographic survey operations, marine technology implementation, and business process improvements. Prior to joining the Coast Survey Development Laboratory, he was commanding officer of NOAA Ship *Rainier*, conducting hydrographic surveys in the Pacific Northwest, Alaska, and the Arctic. He has also previously served aboard NOAA Ships *Mount Mitchell*, *Surveyor*, *Rainier*, and *Fairweather*. His previous assignments include serving as chief of business operations at Office of Marine and Aviation Operation's Marine Engineering Branch in Newport, Oregon, and as the chief of the Coast Survey's Hydrographic Systems and Technology Program. He has also held assignments at the Atlantic Hydrographic Branch in Norfolk,

Virginia, and the Pacific Hydrographic Branch in Seattle, Washington. He holds a bachelor's degree in engineering from Lafayette College in Easton, Pennsylvania, a master's certificate in technology management from the University of Washington.