

North Carolina's Coastal Conference



April 14, 2015
McKimmon Center
North Carolina State University
Raleigh, N.C.

#NCCoastConf

Where Minds Collide, Opportunities Arise

Welcome to North Carolina's Coastal Conference.

This event is intended to be a space where the present and the future of the North Carolina coast converge.

Hosted by North Carolina Sea Grant, this University of North Carolina System-sponsored meeting has been designed as an ideal opportunity to bring up-to-date — and cutting-edge — information regarding our coast to an audience of professionals.

Tom Ross, president of the UNC system, has high hopes for this meeting. "This conference continues the traditional role that the UNC system has played in bringing together interested stakeholders on priority issues for the coast. I anticipate that these discussions will result in additional collaborative efforts to address the needs of North Carolina's coastal communities. It promises to be an interesting and important day."

Opportunity and potential: that's what excites me about this conference. This event will provide the time and space for those representing diverse coastal interests to meet and discuss opportunities and challenges, and to potentially build collaborations — and it hasn't happened quite like this before. It's a first for the UNC system and a first for me.

With integrated sessions designed to include insight from academia, government, industry and nonprofits, the perspectives and information offered undoubtedly will be useful in establishing new collaborations that benefit the coast.

Hear from experts and officials who will discuss issues that are relevant to North Carolina's coast. Conference presenters are leaders in many fields, including economics, transportation, energy, environment, industry and health. The secretaries of the N.C. Department of Environment and Natural Resources and N.C. Department of Transportation will make remarks alongside researchers and representatives from government, business and community groups.

Speakers will cover a wide range of topics that are relevant and specific to our coastal communities. A plenary discussion and three concurrent sessions will address energy resources, coastal economies, healthy coasts and communities, hazard preparation and response, marine industry development, and coastal infrastructure. If you have to choose between sessions, we also will be recording these talks. You can view what you missed online later on.

Take this opportunity to make your voice heard. The program includes time for you to ask questions of the speakers during the concurrent sessions. There will be many chances to network with public officials,

researchers and other coastal stakeholders during breaks, lunch and at the evening reception.

Learn about current and emerging issues that are changing — and could change — life along the state's shores. Come and mingle with the individuals and organizations that are focused on these matters.

Time, treasure and talent — a favorite phrase of one of my mentors — are not unlimited. Deliberately designing opportunities where the strengths of our state's academic institutions, local community organizations, state agencies and industry groups intersect can be constructive.

And the results of these interactions can be transformative.

Sea Grant is a long-term partner contributing science, education and support to our state. We are committed to the open and engaging exchange of information — activities that lead to new understanding of the functioning of our coastal systems and communities.

We look forward to actively working with partners across these intersections to strengthen existing collaborations and support opportunities moving forward.

I encourage you to engage and join us in these efforts at this conference and beyond. The sessions will spur some discussions as Sea Grant begins a new round of strategic planning. And we'd like to hear from you. Check www.ncseagrant.org for updates on future listening sessions.

After our daytime discussions at North Carolina State University's McKimmon Center in Raleigh, join us for an evening reception at the N.C. Museum of Natural Sciences' Nature Research Center. Directions are on the inside of the back cover in this program.

Do you see a place where Sea Grant intersects with your interests and priorities? If you do, contact me at snwhite3@ncsu.edu to discuss potential collaborative opportunities.

Finally a request: Please tag your social media posts with **#NCCoastConf** so that we can find and follow your thoughts throughout the day.



Susan N. White
Executive Director
North Carolina Sea Grant



North Carolina's Coastal Conference

Tuesday, April 14, 2015

8:00 am	Registration Opens	
8:45 – 9:00 am	Welcome & Opening Remarks (Room 1A&B) Engaging Communities, Government and Education in Supporting Coastal and Marine Resources Mladen Vouk, NC State University Interim Vice Chancellor for Research, Innovation and Economic Development	
9:00 – 10:45 am	Plenary Session (Room 1A&B) Making the Connection: Communities, the Coast and the Economy Moderator: Susan White, Executive Director of North Carolina Sea Grant Panelists: Rebecca Tippet, Director of Carolina Demography at UNC-Chapel Hill Phil Prete, Senior Environmental Planner for the City of Wilmington Cameron Moore, Executive Officer of the Wilmington-Cape Fear Home Builders Association David Eggleston, Director of NC State's Center for Marine Sciences and Technology	
10:45 – 11:00 am	Break (Room 1A)	
11:00 am – 12:30 pm	Concurrent Session I	
	Energy Resources (Room 1A&B)	Coastal Economies (Room 3)
11:00 – 11:25 am	Donald R. van der Vaart, Secretary N.C. Department of Environment and Natural Resources	William Hall, Professor UNC Wilmington
11:30 – 11:55 am	James Bennett, Chief of the Office of Renewable Energy Programs U.S. Bureau of Ocean Energy Management	Wit Tuttell, Executive Director Visit North Carolina
12:00 – 12:25 pm	Billy Edge, Professor NC State University & UNC Coastal Studies Institute	Alison Willis, Board of Directors North Carolina Catch
12:30 – 1:30 pm	Networking Lunch (Room 2A&B)	
1:30 – 3:00 pm	Concurrent Session II	
	Healthy Coasts and Communities (Room 1A&B)	Hazard Preparation and Response (Room 3)
1:30 – 1:55 pm	Louis Daniel, Executive Director N.C. Division of Marine Fisheries	Steve Pfaff, Warning Coordinator Meteorologist U.S. National Weather Service, Wilmington
2:00 – 2:25 pm	Reide Corbett, Professor East Carolina University & UNC Coastal Studies Institute	Braxton Davis, Director N.C. Division of Coastal Management
2:30 – 2:55 pm	Todd Miller, Executive Director North Carolina Coastal Federation	Margery Overton, Professor NC State University

3:00 – 3:15 pm	Break (Room 1A)	
3:15 – 4:45 pm	Concurrent Session III	
	Marine Industry Development (Room 1A&B)	Coastal Infrastructure (Room 3)
3:15 – 3:40 pm	Bob Peele, Director Wanchese Marine Industrial Park	Tony Tata, Secretary N.C. Department of Transportation
3:45 – 4:10 pm	Bob Rheault, Executive Director East Coast Shellfish Growers Association	Jim Medlock, Chief of Programs Management Branch U.S. Army Corps of Engineers, Wilmington District
4:15 – 4:40 pm	Rachel Noble, Professor UNC-Chapel Hill Institute of Marine Sciences	Larry Cahoon, Professor UNC Wilmington
4:45 – 5:00 pm	Closing Session: Conference Summary Highlights Susan White, North Carolina Sea Grant	
5:00 pm	Adjourn to Reception (<i>See map inside back cover.</i>)	
6:00 – 8:30 pm	Reception at N.C. Museum of Natural Sciences' Nature Research Center	
6:30 pm	<p>Emcee: Shannon Vickery, Director of Production for UNC-TV</p> <p>Remarks: Emlyn Koster, Director of the North Carolina Museum of Natural Sciences Thomas Ross, President of the University of North Carolina Harry Brown, Majority Leader of the North Carolina Senate</p> <p>Demonstrations of emerging tools and technologies will include:</p> <ul style="list-style-type: none"> • Coastal Emergency Risks Assessment nc-cera.renci.org • Hydrilla: An Emerging Concern ncseagrant.ncsu.edu/hydrilla • N.C. Coastal Atlas nccoastalatlas.org • N.C. Shellfish Lease Siting Tool uncw.edu/benthic/ • NextGen Air Transportation Program itre.ncsu.edu/ngat • North Carolina Science Now science.unctv.org • The Scientific Research and Education Network thesciren.org 	

Speaker Biographies

James Bennett

**Chief of the Office of Renewable Energy Programs
U.S. Bureau of Ocean Energy Management**

James Bennett has 35 years of federal service and has served in a variety of capacities around the U.S. Department of the Interior and the Bureau of Ocean Energy Management. Earlier this year, he was named chief of the Office of Renewable Energy Programs. Previously, he led the Division of Environmental Assessment, overseeing BOEM compliance with the National Environmental Policy Act and other environmental laws focusing on the Federal Outer Continental Shelf programs, including oil and gas, sand and gravel, and renewable energy. He is a graduate of the Departmental Manager Development Program and has earned two master's degrees, one in environmental planning from the University of Virginia and the other in computer systems management from the University of Maryland.



Harry Brown

**Majority Leader
North Carolina Senate**

Harry Brown is currently serving in his sixth term representing the 6th District in the North Carolina Senate, where colleagues elected him majority leader. As a co-chairman of the Senate Appropriations/Base Budget Committee, he notes that his priority during the legislative session is developing a balanced state budget. He also serves as vice-chairman of the Commerce and Redistricting Committees. Brown co-chairs the Joint Legislative Economic Development and Global Engagement Oversight Committee when the General Assembly is not in regular session. He is past chairman of the Jacksonville/Onslow Chamber of Commerce. A graduate of Campbell University, he is the owner of National Automotive Group, Inc. In 2008, his success as a small-business owner was recognized when he was nominated as a Time Magazine/Goodyear Final Four Finalist for National Automobile Dealer of the Year. He also is the past president of the North Carolina Automobile Dealers Association.



Larry Cahoon

**Professor
UNC Wilmington**

Lawrence B. Cahoon is a professor of biology and marine biology at the University of North Carolina Wilmington. His teaching and research interests include biological oceanography, limnology and a wide variety of water-quality issues. He has served on the N.C. Marine Science Council, Ocean Affairs Council and Ocean Resources Task Force. Currently funded research projects are examining the biological functions of ocean beaches, including responses to nourishment, performance of coastal wastewater and stormwater treatment systems, and effects of invasive species on aquatic ecosystems. Cahoon has won the UNCW Faculty Scholarship and graduate mentor awards. He holds a doctorate from Duke University.



Reide Corbett
Professor
East Carolina University, UNC Coastal Studies Institute

Reide Corbett is a coastal North Carolina native. He received his doctoral degree from Florida State University, and is a professor and senior scientist at East Carolina University. He also is the co-program head of Coastal Processes at the University of North Carolina Coastal Studies Institute. He is an expert in the use of radionuclides as tools for evaluating sources of sediments and timescales of processes in coastal systems. Corbett's research involves interdisciplinary teams that combine fieldwork, in situ observations, laboratory analyses and numerical modeling. His research focuses on nutrient and sediment dynamics in estuarine and open-ocean environments. His recent work has evaluated decadal- versus seasonal-scale sediment dynamics and storm-influenced sediment transport in the Gulf of Mexico, melt water and groundwater discharge along the continental shelf of the Western Antarctic Peninsula, shoreline change, sea-level rise and related wetland accretion in coastal North Carolina, and dispersal and post-depositional sediment processes that control strata development in New Zealand. Information acquired through Corbett's research will lead to a clearer understanding of estuarine and coastal processes, providing better management and preservation of these critical environments.



Louis Daniel
Executive Director
N.C. Division of Marine Fisheries

As director of the N.C. Division of Marine Fisheries within the N.C. Department of Environment and Natural Resources, Louis Daniel says his main priority is to accomplish the division's mission of protecting and enhancing marine resources for the state. He notes the job is becoming increasingly difficult as the population increases at the beach, citing the challenges of working with competing user groups of commercial and recreational fisheries. A native North Carolinian pursuing a pre-med track at Wake Forest University, he was closed out of an anatomy class and forced to choose between plant taxonomy and invertebrate zoology. He closed his eyes and let his finger do the choosing, blindly selecting invertebrate zoology. He says it was the best decision he ever made. Daniel acquired a solid background in estuary fisheries ecology while earning his master's degree at the College of Charleston. He then sought to develop expertise in estuarine ecology at all stages, earning a doctoral degree from the Virginia Institute of Marine Science. His professional career also includes working for the U.S. Fish and Wildlife Service, and multiple roles with DMF, including biological supervisor and executive assistant to the director.



Braxton Davis
Director
N.C. Division of Coastal Management

Braxton Davis is the director of the N.C. Division of Coastal Management, within the N.C. Department of Environment and Natural Resources. DCM is headquartered in Morehead City and oversees the state's coastal planning, permitting and Coastal Reserve programs for the 20 coastal counties. He is past chair of the Coastal States Organization and currently is chairing a multistate committee on beach and inlet management issues. Previously Davis served as the director of policy and planning for the South Carolina Coastal Management Program in Charleston. He earned his bachelor's degree in environmental sciences from the University of Virginia, master's degree in biological sciences from Florida International University, and doctorate in marine affairs from the University of Rhode Island.



Billy L. Edge
Professor
NC State University & UNC Coastal Studies Institute

Billy L. Edge is a coastal and ocean engineer with more than 45 years of experience bridging academic and practice communities. He received his bachelor's and master's degrees in civil engineering from the Virginia Polytechnic Institute and State University and his doctorate from the Georgia Institute of Technology. Edge is recognized internationally as an expert in coastal and dredging engineering. As both practicing engineer and professor, Edge has served the industry and provides an example for students of how classroom learning relates to the professional world. He has served as president of the governing board for the Coasts, Oceans, Ports, and Rivers Institute; and was honored with the American Society of Civil Engineers' Moffatt & Nichol Award, International Coastal Engineering Award and Wellington Prize. He is a member of the board of directors of ASCE, is a distinguished member of the ASCE, and is a diplomate in coastal engineering. Following teaching and research activities at Clemson and Texas A&M universities, he now serves as a professor at NC State University and is head of sustainable coastal engineering at the UNC Coastal Studies Institute.



David Eggleston
Director
NC State University's Center for Marine Sciences and Technology

David Eggleston is an alumni distinguished undergraduate professor at NC State University, and directs NC State's marine laboratory, the Center for Marine Sciences and Technology in Morehead City. He leads the marine ecology and conservation program at NC State, where his research spans fisheries ecology, habitat restoration, conservation biology, detecting ecological impacts, behavioral ecology, population dynamics and modeling, and marine science education. Eggleston has been conducting basic and applied marine research since 1985, and serves on the advisory boards of state, national and international coastal and marine science organizations. Eggleston has been recognized for excellence in research by the National Science



Foundation via an Early Career Award, excellence in outreach via an Outstanding Extension Service Award from NC State, and is a member of the N.C. Academy of Outstanding Teachers. He loves scuba diving, boating, fishing, and playing drums in his sons' band, The Brothers Egg.

William W. Hall Jr.
Professor of Economics and Senior Economist
UNC Wilmington

William W. (Woody) Hall Jr. is professor of economics and senior economist in the H. David and Diane Swain Center for Business and Economic Services, Cameron School of Business at the University of North Carolina Wilmington. A native of South Carolina, he received his undergraduate degree from Presbyterian College and his master's and doctoral degrees from Clemson University. He has been a member of the UNCW faculty since 1974. For a number of years, he and other UNCW faculty have analyzed and forecasted local economic activity. His professional interests also include economic impact modeling, including assessments of the economic impacts of natural disasters. The findings of that research have been published in *The Appraisal Journal*, *Journal of Business Forecasting*, *Journal of Economics and Finance*, *Journal of Management Studies*, *Journal of Real Estate Portfolio Management*, *Natural Hazards Review*, *North Carolina Medical Journal*, and *Review of Regional Studies*. The media regularly calls upon him for comment, analysis and forecasts of local, state and national economic activity.



Emlyn Koster
Director
N.C. Museum of Natural Sciences

Emlyn Koster holds a bachelor's degree from the University of Sheffield and a doctorate from the University of Ottawa, both in geology. Koster's early career included academic and research positions in Canada before moving to leadership at the Royal Tyrrell Museum of Paleontology, the Ontario Science Centre, the Liberty Science Center, the Institute for Learning Innovation, and now the North Carolina Museum of Natural Sciences. In 2014, in addition to hosting major conferences and providing the first free mobile app for museum visitors of all abilities (including those with vision or hearing limitations), the N.C. Museum of Natural Sciences received the Institute of Museum and Library Service Medal at the White House for outstanding community service. Koster also is an adjunct professor in marine, earth and atmospheric sciences at NC State University. His service includes presidencies of the Geological Association of Canada and the Global Giant Screen Theater Association, diplomatic missions, and global committee chairmanship for the Association of Science-Technology Centers, which involves liaising with the United Nations. Koster is a distinguished alumnus of the University of Ottawa.



Jim Medlock
Chief of Programs Management Branch
U.S. Army Corps of Engineers, Wilmington District

Jim Medlock is the chief of the Programs Management Branch for the Wilmington district, U.S. Army Corps of Engineers. He received a bachelor's degree in civil engineering from Texas Tech University and a master's in civil engineering, specializing in water resources, from the University of Texas at Arlington. He also has received a Level II Certification from the Corps' Program and Project Management Community of Practice and is a certified Project Management Professional. Medlock has proudly served the public for more than 37 years with the Corps in Texas and North Carolina. For the past 10 years, he has directed the development of the annual federal civil works budget for a diverse range of coastal and inland projects located within the eastern and central portions of North Carolina and the southern portion of Virginia. Further, he has overseen the execution of federal civil works appropriations and allocated nonfederal funds for studies, design, construction, and operations and maintenance activities.



Todd Miller
Executive Director
North Carolina Coastal Federation

Todd Miller founded the N.C. Coastal Federation in 1982, which now has 30 staff members, three offices, a multimillion-dollar budget, and more than 16,000 members and supporters. He is a coastal North Carolina native from Carteret County. In 2013, he was selected as a distinguished alumnus of the University of North Carolina at Chapel Hill from which he holds bachelor's and master's degrees. Miller is receiving the Peter Benchley Ocean Award in May 2015 for his lifelong work in protecting and restoring the natural resources of the North Carolina coast. Previous awards include The Old North State Award from the governor in 2007 and the National Wetlands Community Leader Award from the Environmental Law Institute in 2012. Miller is a founding board member of Restore America's Estuaries and has served on its board with other national leaders in coastal habitat restoration since 1995. He currently serves on the Board of Visitors for the UNC-CH Institute for the Environment and on the policy committee for the Albemarle-Pamlico National Estuary Partnership. As executive director, Miller formulates the federation's goals and policy positions, serves as the federation's spokesperson, and provides staff and operations oversight.



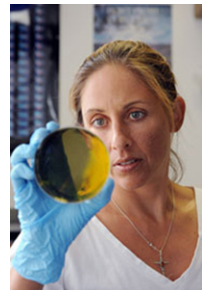
Cameron Moore
Executive Director
Wilmington-Cape Fear Home Builders Association

Cameron Moore serves as the executive officer for the Wilmington-Cape Fear Home Builders Association and the CEO of the Business Alliance for Sound Economy. Prior to this, he served six years as a governmental affairs director for BASE, where he worked extensively on policy and legislative matters related to the building and real estate industry locally as well as regionally. Moore has more than 12 years of public and private planning experience, including as the planning director for the Town of Leland in Brunswick County, and as a senior project manager with a multidisciplinary residential and commercial development company in North Carolina. Moore completed his bachelor's degree in geography with a concentration in environmental planning at the University of North Carolina Wilmington. He is a member of the American Planning Association, and its North Carolina chapter. He also is a certified planner through the American Institute of Certified Planners.



Rachel Noble
Professor
University of North Carolina at Chapel Hill's Institute of Marine Sciences

Rachel Noble is a professor at the University of North Carolina at Chapel Hill's Institute of Marine Sciences. Noble is director of the UNC-CH Institute for the Environment's Morehead City Field Site, a semester-long experiential learning program for natural science undergraduates. She is an environmental molecular microbiologist with expertise across freshwater, estuarine and coastal systems. Her research bridges the fields of environmental microbiology and microbial ecology. Her work includes the study of hydrological patterns of stormwater as related to microbial contaminant fate and transport, with a focus on the microbial contaminant impact on Virginia, North Carolina and California's economically important recreational and shellfish harvesting waters. Other work includes studies on pathogenic *Vibrio* bacteria; public notification, warning systems and automated measurement systems for water quality; and "Ecology of Marine Infectious Disease" for which she has received more than \$1 million in funding from the National Science Foundation/National Institutes of Health as part of a large multidisciplinary award to study the ecological interactions and modeling approaches for dangerous *Vibrio* pathogens in estuarine waters.



Margery Overton
Vice Provost and Professor
NC State University

Margery Overton is vice provost for academic strategy at NC State University, where she also is a professor in the Department of Civil, Construction and Environmental Engineering. Overton currently chairs the N.C. Science Panel on Coastal Hazards, which advises the N.C. Coastal Resources Commission. Overton's research focus has included coastal processes, beach and dune erosion, coastal hazard identification, and response strategies to improve the resilience of coastal environments. Her work has included modeling and analysis of short-term and long-term impacts due to storms and sea-level rise. Overton has been a key partner on the U.S. Department of Homeland Security Center of Excellence on Natural Disasters, Coastal Infrastructure and Emergency Management. Overton also previously led NC State's Faculty Senate.



Bob Peele
Director
Wanchese Marine Industrial Park

Bob Peele received a bachelor's degree in political science from NC State University in 1987. After his time in Raleigh, he served on the staffs of U.S. Congressmen Walter Jones Sr. and H. Martin Lancaster from 1987 to 1994, and as assistant director of the North Carolina Fisheries Association in New Bern in 1995. Peele was the coordinator for the Oregon Inlet Jetty Project from 1995 to 1998, and was the acting director of the Wanchese Seafood Industrial Park from 1998 to 2000. In 2000, he was named director of the Wanchese Park, where he serves today. His duties in the park include business recruitment and retention; staffing for the N.C. Seafood Industrial Park Authority; oversight of expansion efforts to other sites; and daily interaction with park tenants, officials, and the general public. Peele is originally from Williamston but now resides in Manteo.



Steven R. Pfaff
Warning Coordination Meteorologist
NOAA's National Weather Service, Wilmington

Steve Pfaff serves as the warning coordination meteorologist at the National Weather Service office in Wilmington. In that role since 2008, he is responsible for promoting weather safety outreach and awareness to the public. Pfaff also is responsible for providing emergency and decision-support services to emergency management officials, as well as a multitude of local, state and federal partners. He first arrived at NWS in Wilmington as a senior forecaster in 1998, and served as the marine program leader. Pfaff was a journeyman forecaster at NWS in Corpus Christi, Texas, from 1994 to 1998. Prior to joining NWS, he worked at WNBC-TV in New York where he prepared the forecast and graphics for Al Roker. Pfaff was an assistant environment scientist at GPU Nuclear in Forked River, N.J. He received his bachelor's degree in meteorology from Kean University in Union, N.J., in 1994.



Phil Prete
Senior Environmental Planner
City of Wilmington

Philip Prete is the City of Wilmington's senior environmental planner in charge of environmental and geospatial planning. Before beginning as Wilmington's first environmental planner in 2003, he was the environmental planner for the Town of Carrboro. Prior to joining local government, he worked in environmental program enforcement for state agencies in North Carolina and Texas, and as an environmental consultant to public and private sector clients. Prete has a master's degree in biology with a focus on ecology from North Texas State University and a master's degree in public health in environmental science and engineering from the University of North Carolina at Chapel Hill. He has more than 30 years of experience in the environmental field and was first certified as a Registered Environmental Professional in 1992 by the National Registry of Environmental Professionals.



Bob Rheault
Executive Director
East Coast Shellfish Growers Association

Bob Rheault started his aquaculture career in 1986 when he built a small shellfish hatchery in Rhode Island while he was working on his doctoral degree in biological oceanography at the University of Rhode Island. Rheault has done international consulting work on hatchery design and algal culture. He holds a design patent on the revolutionary under-dock floating upweller system he developed, and was one of the early pioneers of the niche-marketed specialty oyster boom. Rheault trademarked the Moonstone Oysters brand and established a marketing cooperative to distribute local cultured oysters nationwide. He sold his farm in 2007 and now serves as the executive director of the East Coast Shellfish Growers Association. Rheault's research interests include documenting and evaluating the environmental services provided by shellfish aquaculture, and using nutrient credit trading as a means to limit coastal eutrophication. He is a passionate and outspoken advocate for the shellfish industry.



Thomas Ross
President
University of North Carolina

Thomas W. Ross has served as president of the 17-campus University of North Carolina since January 2011. A graduate of Davidson College and the UNC-Chapel Hill School of Law, he previously has served as president of Davidson, executive director of the Z. Smith Reynolds Foundation, a Superior Court judge, and director of the N.C. Administrative Office of the Courts. He also has practiced law, served as a congressional staffer, and served on the faculty of the UNC-Chapel Hill School of Government. His many honors include the Rehnquist Award for Judicial Excellence, and Distinguished Alumni Awards from both Davidson and the UNC-Chapel Hill School of Law.



Tony Tata
Secretary
N.C. Department of Transportation

Gov. Pat McCrory appointed Tony Tata secretary of the N.C. Department of Transportation in January 2013. A West Point graduate, Tata retired in 2009 from the U.S. Army as a brigadier general after 28 years of service. While in the military, he led the development and implementation of infrastructure projects in Afghanistan, Macedonia, Kosovo, Croatia, Bosnia and the Philippines. After his military career, Tata continued his public service in education, first as chief operating officer of the Washington, D.C., public schools, then as superintendent of the Wake County Public School System. He now leads a department with an annual budget of more than \$4 billion and more than 12,000 employees.



Rebecca Tippett
Director
Carolina Demography at the Carolina Population Center at UNC-Chapel Hill

Rebecca Tippett is the director of Carolina Demography, at the University of North Carolina at Chapel Hill's Carolina Population Center. Her areas of expertise include population estimates and forecasts, migration and indicators of economic well-being. She uses data to inform decision-making and evaluation. Her past work includes designing and implementing surveys for state agencies to meet federal reporting guidelines, forecasting population trends to determine the demand for new schools, and evaluating the success of different estimating methodologies for the U.S. Census Bureau. She received her doctoral degree in sociology from Duke University, and regularly writes and presents about the impact of demographic and social trends in North Carolina.



Wit Tuttell
Executive Director
Visit North Carolina

In November 2013, Wit Tuttell was named executive director of Visit North Carolina. He oversees the strategic planning, policy development and marketing initiatives for North Carolina's official state tourism office and the industry sectors it serves. Formerly the N.C. Division of Tourism, Film, and Sports Development, the office was transferred to the nonprofit Economic Development Partnership of North Carolina in October 2014 and renamed Visit North Carolina. Tuttell has been with North Carolina tourism for eight years. During this time, the office has been recognized with numerous national awards for excellence in marketing and advertising. He recently was elected to the board of directors of the U.S. Travel Association. He also is a member of the National Council of State Travel Directors, as well as a board member of Travel South USA. He has more than 20 years of experience in the tourism industry, including working for Universal Studios Florida and the Orlando/Orange County Convention & Visitors Bureau, Inc. He graduated from the University of Florida and has been a reporter for the *Anchorage Times* in Alaska.



Donald R. van der Vaart
Secretary
N.C. Department of Environment and Natural Resources

Gov. Pat McCrory named Donald R. van der Vaart Secretary of the N.C. Department of Environment and Natural Resources effective Jan. 1, 2015. Since August 2014, van der Vaart had served as DENR's deputy secretary and as the department's energy policy advisor. Previously, van der Vaart worked as an engineering supervisor and later as program manager for the N.C. Division of Air Quality. He also teaches environmental policy and law at NC State University. His earlier work includes scientific research at Virginia Polytechnic Institute and State University, and RTI International. Van der Vaart also has experience in research and regulatory positions for energy and utility companies in the private sector. He holds a doctorate in chemical engineering from the University of Cambridge in England, a law degree from North Carolina Central University, a master's degree in chemical engineering from NC State, and a bachelor's degree in chemistry from the University of North Carolina at Chapel Hill. He is a licensed professional engineer and attorney in North Carolina. He has published numerous technical and legal articles, and holds two patents.



Shannon Vickery
Director of Production
UNC-TV

Shannon Vickery is the director of production for UNC-TV, overseeing the creation of more than 329 hours of original North Carolina-based programming each year. She also is an award-winning correspondent and producer. She has been working for UNC-TV since October 1995. Vickery is a graduate of the University of Missouri-Columbia with bachelor's degrees in broadcast journalism and political science. She also has a master's degree with an emphasis in health policy from Duke University.



Mladen Vouk
Interim Vice Chancellor for Research, Innovation and Economic Development
NC State University

Since December 2014, Mladen Alan Vouk has served as interim vice chancellor for research, innovation and economic development at NC State University. A professor of computer science, he has extensive experience in commercial software production and academic computing. Author or co-author of more than 300 publications, he has conducted groundbreaking research in software engineering, scientific computing and analytics, information technology and education, and high-performance computing. He is a member of the multidisciplinary team that developed the Virtual Computing Lab at NC State, one of the world's first cloud computing systems. Vouk earned a doctorate in solid-state physics at King's College London and a master's degree at NC State. He is a recipient of the International Federation for Information Processing's Silver Core award. He is an Institute of Electrical and Electronics Engineers fellow, and a recipient of the IEEE Distinguished Service and Gold Core Awards.



Susan White
Executive Director
North Carolina Sea Grant

Susan White is the executive director for North Carolina Sea Grant and the Water Resources Research Institute of the University of North Carolina. Both programs provide targeted research, outreach and education projects to address critical coastal, ocean and water-resource issues in the state and within the region. White previously was director of the National Oceanic and Atmospheric Administration's Hollings Marine Laboratory in Charleston, S.C. A past national research coordinator for NOAA's Estuarine Reserves Division and National Estuarine Research Reserve System, she has served on national and regional steering committees on topics including technology transfer, integrated drought monitoring and early warning, and climate's connections to health. White earned a doctorate from the University of Georgia and a bachelor's degree from Duke University.



Alison Willis
Board of Directors
North Carolina Catch

A Raleigh native, Alison Willis chose a unique way of life on North Carolina's coast. She graduated from NC State University with a bachelor's degree in business management. Her husband, Eddie Willis, is a fourth-generation commercial fisherman from Harkers Island. Together they own and operate Mr. Big Seafood and Core Sound Seafood. She also is a member of the N.C. Marine Fisheries Commission. She is a board member for Carteret Catch and North Carolina Catch. Those two organizations work to strengthen coastal communities by promoting the rich culture, health benefits and variety of resources surrounding North Carolina's commercial seafood industry and the rich natural resources of our state. The Willises consider their lives as North Carolina watermen to be a privilege — not a job, but a lifestyle.



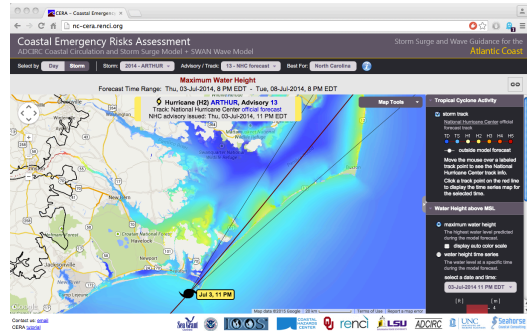
Tools Exhibited at Evening Reception

Coastal Emergency Risks Assessment

nc-cera.renci.org

Contact: Casey Dietrich, jcdietrich@ncsu.edu, 919-515-5277

The Coastal Emergency Risks Assessment, or CERA, group is a coastal modeling research and development effort providing operational advisory services. Using high-resolution computational models in an automated forecast system, the team generates real-time guidance about wind speeds, wave heights and periods, and water levels along the North Carolina coast. Guidance typically is released twice daily and, during extreme events, up to four times daily. The CERA online application, at nc-cera.renci.org, provides an easy-to-use, interactive interface that allows emergency managers and other stakeholders to quickly evaluate critical situations. This work has been supported by the National Oceanic and Atmospheric Administration, and Sea Grant programs in North Carolina and Louisiana, along with the U.S. Department of Homeland Security and the National Science Foundation. Local partners include the University of North Carolina at Chapel Hill, the Renaissance Computing Institute, Seahorse Coastal Consulting and North Carolina State University.

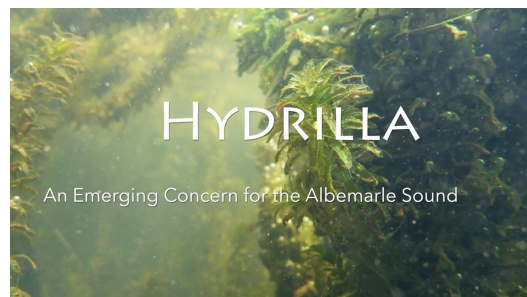


Hydrilla: Emerging Concerns

ncseagrant.ncsu.edu/hydrilla

Contact: Gloria Putnam, gloria_putnam@ncsu.edu, 919-513-0117

North Carolina Sea Grant is working with varied partners to raise citizen awareness about and quantify increasing problems with *Hydrilla verticillata*, an invasive aquatic plant in the coastal region. Developed with the Albemarle-Pamlico National Estuary Partnership, a video — *Hydrilla: An Emerging Concern for the Albemarle Sound* — offers perspectives of scientists, local officials and residents coping with choked canals. Citizen science efforts include work with the Chowan-Edenton Environment Group and the Chowan Soil and Water Conservation District to identify the extent of *Hydrilla* in the Chowan River. Sea Grant is expanding partnerships and sampling toward the Virginia border, and deeper into the Albemarle Sound. An article in the Spring 2015 issue of *Coastwatch* highlights more *Hydrilla*-related work, including a project by high-school students. Sea Grant provides research, education and outreach relating to current issues affecting the North Carolina coast and its communities.



N.C. Coastal Atlas

nccoastalatlus.org

Contact: Tom Allen, allenth@ecu.edu, 252-328-6624

The North Carolina Coastal Atlas is an active, geospatial portal and partnership providing access to uniquely coastal and marine GIS data, thematic maps and tools, and bibliographic research on the state's coast.

The Atlas is a fully online system that offers static and interactive maps and information for exploration, analysis, education and decision-making. A partnership — among East Carolina University, North Carolina Sea Grant, Albemarle-Pamlico National Estuary Partnership, the N.C. Department of Environment and Natural Resources, and other collaborators — guides the Atlas content and thematic focus.

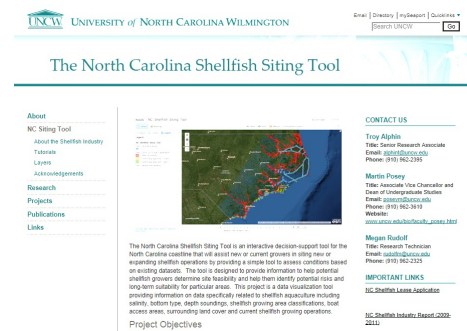


N.C. Shellfish Lease Siting Tool

uncw.edu/benthic/

Contact: Troy Alpin, alphint@uncw.edu, 910-962-2395

Created and maintained by the University of North Carolina Wilmington, this interactive, decision-support tool will assist new or current shellfish growers in siting new or expanding existing operations along the N.C. coast. By assessing conditions based on existing datasets, the tool helps potential shellfish growers to determine site feasibility and to identify potential risks and long-term suitability for particular areas. The visualizations relate to shellfish aquaculture, including salinity, bottom type, depth soundings, shellfish-growing area classifications, boat-access areas, surrounding land cover and current shellfish-growing operations. The tool includes a tutorial and brief video demonstration, along with links for information on permitting and franchise establishment at the N.C. Division of Marine Fisheries. Maps are updated, so check the site often. Initial funding was in a project with North Carolina Sea Grant that was funded by the National Sea Grant College Program.



NextGen Air Transportation Program

itre.ncsu.edu/ngat

Contact: Kyle Snyder, kyle_snyder@ncsu.edu, 919-515-9351

Known as NGAT, the NextGen Air Transportation Program is the only agency in North Carolina with Federal Aviation Administration and state approval to operate unmanned aircraft systems, or UAS, for research. Current research supports broad UAS integration for the FAA and industry partners. These studies include safe airspace utilization, autonomy, and command and control. Applications such as agriculture, surveying, environmental monitoring and public safety also are under development. NGAT funding is currently from the N.C. Department of Transportation through research grants, and from industry members through consortium dues. NGAT is part of the ASSURE Alliance that is pursuing additional federal designation and funding. Learn about the Alliance for System Safety of UAS Research Excellence at assureuas.org.

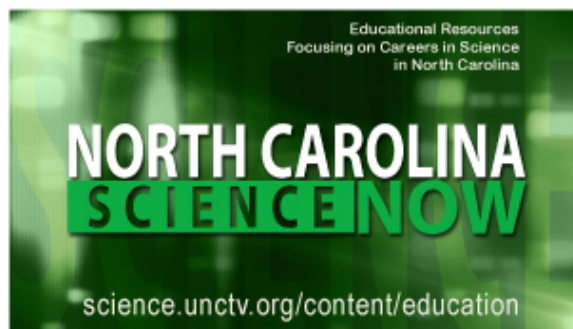


North Carolina Science Now

science.unctv.org

Contact: Frank Graff, *fgraff@unctv.org*, 919-549-7053

Emmy-nominated *North Carolina Science Now* is a weekly science series that airs Wednesdays at 7:30 p.m. during *North Carolina Now*, UNC-TV's flagship public affairs program. *North Carolina Science Now* spans the science spectrum from the mountains to the coast, highlighting the latest scientific findings of university research to their practical applications in laboratories and businesses throughout the state. In addition to the weekly broadcast segment, *North Carolina Science Now* houses educational content and multimedia materials including photo galleries, blogs, questions and answers, articles and infographics related to each story on a special science website: *science.unctv.org*. To allow for easy use in the classroom, all content is aligned for educators to the North Carolina Essential Science Standards, as well to as the Next Generation Science Standards. The series promotes awareness and understanding of STEM — science, technology, engineering and math. It is made possible through a generous grant from GlaxoSmithKline.



The Scientific Research and Education Network

thesciren.org

Contact: Justin Ridge, *ridge@unc.edu*, 812-322-6857

The Scientific Research and Education Network, or SciREN, is a program connecting scientists with educators in order to foster the dissemination of current research and ultimately enhance the science literacy of today's youth. Originally created by graduate students from the University of North Carolina at Chapel Hill's Institute of Marine Sciences, SciREN has expanded to include researchers from Duke University Marine Lab, as well as main campuses of UNC-Chapel Hill, Duke and NC State University, all in the Research Triangle. The SciREN team provides researchers with tools to make classroom-ready exercises that appeal to educators using North Carolina standards. The lessons or activities are then showcased at large networking events held at informal science education institutions, such as the N.C. Museum of Natural Sciences or the N.C. Aquarium at Pine Knoll Shores. Primary funding has been from the students' home institutions and/or academic departments. North Carolina Sea Grant has been a sponsor since SciREN's inception at a workshop hosted by the Centers for Ocean Sciences Education Excellence – Southeast. SciREN also has received a Kenan-Biddle (Duke/UNC-CH) grant to help build an online portal to increase the network's reach, and facilitate ongoing conversations between educators and researchers.



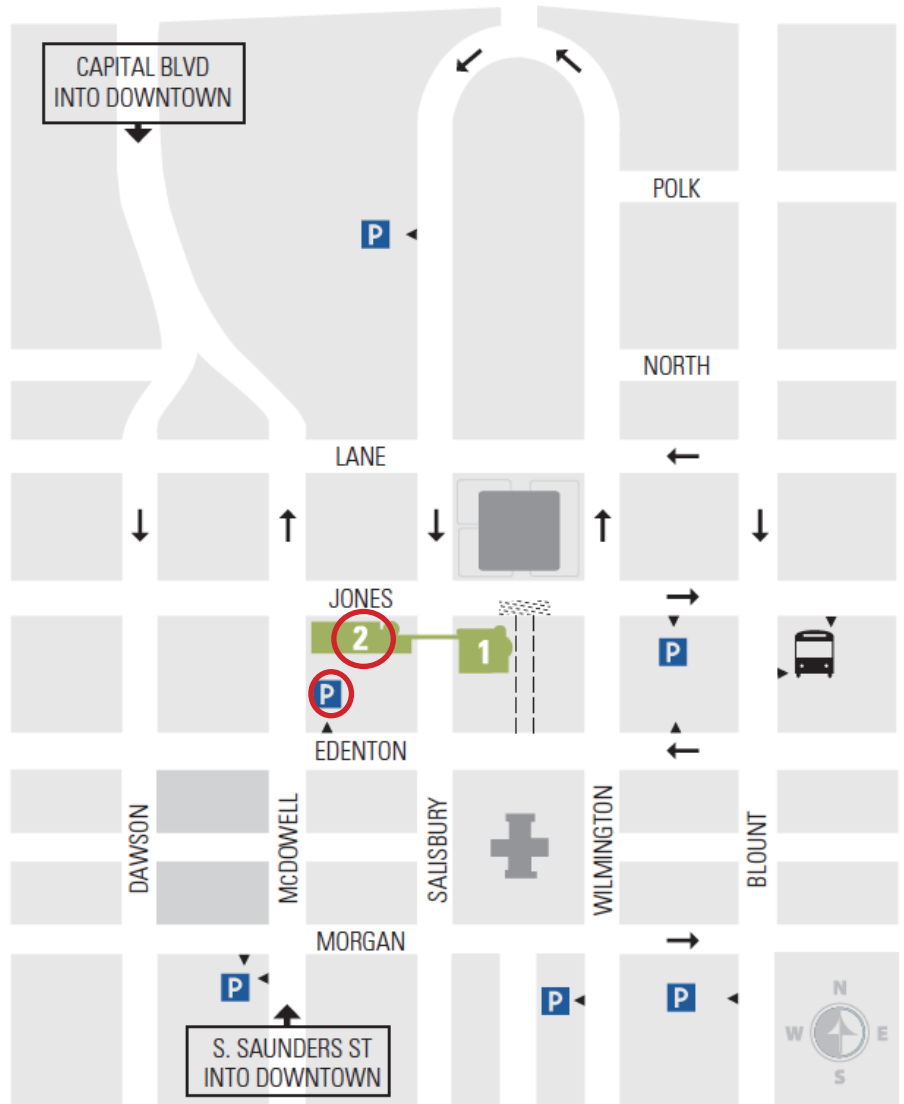
Directions from McKimmon Center to Reception at N.C. Museum of Natural Sciences' Nature Research Center

- Exit McKimmon Center, turn right onto Gorman Street.
- Turn right onto Western Boulevard.
- Continue straight onto Martin Luther King Jr. Boulevard.
- Merge onto McDowell Street via the ramp to Downtown.
- Continue on McDowell Street.
- Turn right onto W. Jones Street.
- Turn right onto Salisbury Street.
- Turn right onto Edenton Street. Green Square parking deck entrance is on right.
- Exit the deck on the north side. You will be at the back entrance to the Nature Research Center.

The street address for the Nature Research Center is 121 West Jones Street.

Legend

- NC Museum of Natural Sciences**
- 1** Main Building
- 2** Nature Research Center
- Bus Parking**
- Bus Drop-off**
- P **Automobile Parking**
- Bicentennial Plaza**
- State Capitol**
- Legislative Building**



**NORTH CAROLINA
Museum of Natural Sciences**
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