



# *North Carolina* **Coastal Conference**

November 19-20, 2019

Wilmington, N.C.  
#NCCoastalConf  
[ncseagrant.org](http://ncseagrant.org)



# Agenda

Tuesday – November 19

<p><b>8:30 a.m.</b></p>	<p><b>Registration</b> Load presentations, set up posters and exhibits, enjoy coffee and morning refreshments</p>
<p><b>9:00 – 9:45 a.m.</b></p> <p><b>Lower Level Grand Ballroom</b></p>	<p><b>Welcome and Opening Session</b></p> <p><b>Susan White</b>, North Carolina Sea Grant <b>Jonathan Pennock</b>, National Oceanic and Atmospheric Administration National Sea Grant College Program <b>Christopher Finelli</b>, University of North Carolina Wilmington <b>Mladen Vouk</b>, North Carolina State University</p>
<p><b>9:45 a.m.</b></p> <p><b>Lower Level Grand Ballroom</b></p>	<p><b>Keynote</b></p> <p>Perspectives on Coastal Resilience <b>Michelle Covi</b>, Old Dominion University and Virginia Sea Grant</p>
<p><b>10:15 – 10:30 a.m.</b></p>	<p><b>Networking Break</b></p>
<p><b>10:30 – 12:00 p.m.</b></p> <p><b>Lower Level Grand Ballroom</b></p>	<p><b>Resilient Communities: Urban and Rural Perspectives</b></p> <p><b>Veronica Carter</b>, Brunswick County Voluntary Organizations Active in Disasters <b>Mark Willis</b>, NOAA National Weather Service, Wilmington <b>Lawrence Cahoon</b>, University of North Carolina Wilmington</p>
<p><b>12:00 – 1:30 p.m.</b></p>	<p><b>Lunch and Networking</b></p>
<p><b>1:30 – 3:00 p.m.</b></p> <p><b>Bellamy Room</b></p> <p>1:30 – 1:45</p> <p>1:45 – 2:00</p> <p>2:00 – 2:15</p> <p>2:15 – 2:30</p> <p>2:30 – 3:00</p>	<p><b>Concurrent Session 1</b></p> <p>Water Resources <b>Moderator:</b> Frank Lopez, North Carolina Sea Grant</p> <p>Adverse Ecological Impacts of Novel and Legacy Per- and Polyfluoroalkyl Substances (PFAS) in Coastal North Carolina, <b>Scott Belcher</b>, NC State</p> <p>Wastewater Treatment in the Coastal Plain: Planning for Resilience and Water Quality Protection, <b>Victor D’Amato</b>, Tetra Tech</p> <p>Watershed Education with the NC Watershed Stewardship Network, <b>Christy Perrin</b>, NC Water Resources Research Institute (WRRRI)</p> <p>Maintenance Costs of Stormwater Control Measures in North Carolina, <b>Sarah Waickowski</b>, NC State</p> <p>Q&amp;A with Panel</p>
<p><b>DeRosset Room</b></p> <p>1:30 – 1:45</p> <p>1:45 – 2:00</p> <p>2:00 – 2:15</p>	<p>Education and Learning Perspectives <b>Moderator:</b> Terri Kirby Hathaway, North Carolina Sea Grant</p> <p>RAIN: A School-to-Community Citizen Science Program, <b>Colleen Karl</b>, State Climate Office of North Carolina</p> <p>Using Pocket Lab Sensors to Uncover the Science Behind the Storm, <b>Harris Muhlstein</b>, UNC Wilmington MarineQuest</p> <p>Engaging Lifelong Learners Through Citizen Science, <b>Miriam Sutton</b>, Science by the Sea</p>

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2:15 – 2:30	Empowering Youth to Contribute to Climate Resilience Efforts in Their Communities, <b>Dana Haine</b> , UNC Institute for the Environment
2:30 – 3:00	Q&A with Panel
<b>Dudley Room</b>	<p><b>Coastal Economic Development</b>  <b>Moderator:</b> Chris Ellis, NOAA Office for Coastal Management</p>
1:30 – 1:45	Transient Boaters’ Potential for Economic Development on N.C. Communities Proximate to the Atlantic Intracoastal Waterway, <b>Hans Vogelsong</b> , ECU
1:45 – 2:00	What’s the Hook for Fisheries Education Efforts? Lessons Learned While Communicating Science to N.C. Saltwater Anglers, <b>M. Scott Baker Jr.</b> , North Carolina Sea Grant
2:00 – 2:15	From Rivers to Sounds: A Natural Resource-Based Model for Sustainable Coastal Ecotourism in the Bertie Peninsula and Waterscape, <b>Stanley Riggs</b> , ECU, NC Land of Water
2:15 – 2:30	Mariculture Workforce Development, <b>Jane Harrison</b> , North Carolina Sea Grant
2:30 – 3:00	Q&A with Panel
<b>Latimer Room</b>	<p><b>NC Sentinel Site Cooperative: Research Updates (Double Session) Session 1</b>  <b>Moderator:</b> Sarah Spiegler, North Carolina Sea Grant, NC Sentinel Site Cooperative</p>
1:30 – 1:40	Welcome and Introduction to NC Sentinel Site Cooperative, <b>Sarah Spiegler</b> , North Carolina Sea Grant
1:40 – 2:00	Marshes: North Carolina’s Coastal Wetlands in an Era of Sea Level Rise, <b>Jenny Davis</b> , NOAA
2:00 – 2:20	Marshes: Resilient Coastal Sites for Conservation in North Carolina and the South Atlantic United States, <b>Brian Boutin</b> , TNC
2:20 – 2:40	Dunes and Beaches: The Influence of Dune Aspect Ratio, Management and Beach Morphology on the Protective Services of Coastal Dunes, <b>Michael Itzkin</b> , UNC-Chapel Hill
2:40 – 3:00	Dunes and Beaches: Remote Sensing and Machine Learning Aid in Examinations of Land Change, <b>Justin Ridge</b> , Duke Marine Lab
<b>3:00 – 3:15 p.m.</b>	<b>Networking Break</b>
<b>3:15 – 4:45 p.m.</b>	<b>Concurrent Session 2</b>
<b>Bellamy Room</b>	<p><b>Community Preparedness and Resilience</b>  <b>Moderator:</b> Christy Perrin, North Carolina Sea Grant</p>
3:15 – 3:30	Hurricane Preparedness and Recovery: Down East Perspectives, <b>Karen Ampacher</b> , Core Sound Waterfowl Museum & Heritage Center
3:30 – 3:45	Strengthening Rural Resilience in N.C. Coastal Communities: Challenges and Opportunities, <b>Frank Lopez</b> , North Carolina Sea Grant
3:45 – 4:00	The Place We Call Home: A Critical Analysis of the Risk Perceptions and Place Attachments of Coastal Communities at Risk for Sea Level Rise in North Carolina, <b>Michelle Divil</b> , Florida A&M University
4:00 – 4:15	Deaf Community Partnerships and a Different, Different World: An Exercise in Hazard Communication Challenges, <b>Steven Pfaff</b> , NOAA National Weather Service
4:15 – 4:45	Q&A with Panel
<b>DeRosset Room</b>	<p><b>Species Science and Aquaculture</b>  <b>Moderator:</b> M. Scott Baker Jr., North Carolina Sea Grant</p>
3:15 – 3:30	Survival and Density of a Dominant Fish Species Across a Gradient of Urbanization in N.C. Tidal Creeks, <b>Paul Rudershausen</b> , NC State
3:30 – 3:45	UNCW Pilot Hatchery Studies Improve Availability and Cost of Black Sea Bass Fingerlings to Support Education, Outreach and Commercial Growout Trials in the Eastern U.S., <b>Wade Watanabe</b> , UNC Wilmington

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3:45 – 4:00	Sweating the Speckles: Darker Least Tern Eggs Become Hotter Under Direct Solar Radiation, <b>Rebekkah LaBlue</b> , UNC Wilmington
4:00 – 4:15	Partners in Slime: Headstarting Gopher Frogs at the N.C. Aquarium, <b>Carol Price</b> , N.C. Aquarium at Fort Fisher
4:15 – 4:45	Q&A with Panel
<b>Dudley Room</b>	Gullah/Geechee Resiliency: Traditional Knowledge Education from a Carolina Living Cultural Community <b>Moderator:</b> Queen Quet, Gullah/Geechee Nation
3:15 – 3:30	<b>Queen Quet</b> , Gullah/Geechee Nation
3:30 – 3:45	<b>Dan Rizza</b> , Climate Central
3:45 – 4:00	<b>Katie Derickson</b> , Gullah/Geechee Sustainability Think Tank
4:00 – 4:45	Discussion
<b>Latimer Room</b>	NC Sentinel Site Cooperative: Research Updates (Double Session) Session 2 <b>Moderator:</b> Sarah Spiegler, North Carolina Sea Grant, NC Sentinel Site Cooperative
3:15 – 3:35	People: Assessing the Damage from Hurricane Matthew and How People Surveyed Indicated an Increased Concern for Coastal Hazards, Including Sea Level Rise, <b>Carter Smith</b> , Duke Marine Lab
3:35 – 3:55	People: NWS Advancements and Building Partnerships Over the Past 10 Years: Improving Readiness for Hazardous Weather Events, <b>David Glenn</b> , NOAA National Weather Service
3:55 – 4:15	Water Quality: Impacts of the New Normal in Tropical Cyclone Rainfall and Flooding on Assessing and Managing Estuarine/Coastal Water Quality, <b>Hans Paerl</b> , UNC Institute for Marine Sciences
4:15 – 4:30	Water Quality: Nitrogen Inputs Along our Changing Coasts: Evaluating the Role of Onsite Wastewater in an Era of Climate Change, <b>Michael O'Driscoll</b> , ECU
4:30 – 4:45	Discussion
<b>4:45 – 5:30 p.m.</b>	<b>Networking Break</b>
<b>5:30 – 7:30 p.m.</b>	<b>Poster Session and Networking Reception at Hotel Ballast</b>

## Wednesday – November 20

<b>8:30 a.m.</b>	<b>Registration</b> Load presentations, enjoy coffee and morning refreshments
<b>9:00 a.m.</b>	<b>Welcome and Opening Session</b>
<b>Lower Level Grand Ballroom</b>	<b>Susan White</b> , North Carolina Sea Grant <b>John Nicholson</b> , North Carolina Department of Environmental Quality
<b>9:20 – 10:00 a.m.</b>	<b>Keynote</b>
<b>Lower Level Grand Ballroom</b>	NOAA's Blue Economy Initiative: North Carolina Connections Rear Admiral <b>Timothy Gallaudet</b> , U.S. Navy Retired, U.S. Department of Commerce, and National Oceanic and Atmospheric Administration

# Agenda continued

<b>10:00 – 10:15 a.m.</b>	<b>Networking Break</b>
<b>10:15 – 11:45 a.m.</b>	<b>Concurrent Session 3</b>
<b>Bellamy Room</b>	<p><b>Adaptations to Changing Conditions</b>  <b>Moderator:</b> Chris Ellis, NOAA Office for Coastal Management</p> <p>10:15 – 10:30 Science Advice to Policymakers: Lessons from North Carolina’s Sea Level Rise Controversy, <b>Jessica Weinkle</b>, UNC Wilmington</p> <p>10:30 – 10:45 Hurricane Florence’s Unique Aspects, Impacts and Decision-Support Services in Southeastern North Carolina and Northeastern South Carolina, <b>Reid Hawkins</b>, NOAA National Weather Service</p> <p>10:45 – 11:00 Understanding Climate Change Adaptation in Rural Eastern North Carolina: Perceptions of Risk and Barriers to Action, <b>Cynthia Grace-McCaskey</b>, ECU</p> <p>11:00 – 11:15 Coastal Resiliency and Shoreline Restoration: Design and Post-Construction Review of Living Shoreline Projects, <b>Ben Nash</b>, Brown &amp; Caldwell</p> <p>11:15 – 11:45 Q&amp;A with Panel</p>
<b>DeRosset Room</b>	<p><b>Estuarine Ecosystems</b>  <b>Moderator:</b> Sara Mirabilio, North Carolina Sea Grant</p> <p>10:15 – 10:30 Teaming Up on the Mean Green: Multi-institutional Collaborations to Address the Chowan River Bloom Problem, <b>Nathan Hall</b>, UNC-Chapel Hill; <b>Colleen Karl</b>, Chowan Edenton-Environmental Group</p> <p>10:30 – 10:45 Mapping Coastal Protection and Carbon Storage by North Carolina’s Coastal Habitats, <b>Katie Warnell</b>, Duke</p> <p>10:45 – 11:00 Two Years of Neuse Estuary Hypoxia Forecasts: Lessons Learned and Future Directions, <b>Daniel Obenour</b>, NC State</p> <p>11:00 – 11:15 Impacts of Invasive <i>Phragmites australis</i> on Nitrogen Processing, <b>Molly Yacano</b>, UNC-Chapel Hill</p> <p>11:15 – 11:45 Q&amp;A with Panel</p>
<b>Dudley Room</b>	<p><b>Lightning Talks</b>  <b>Moderator:</b> Sarah Spiegler, North Carolina Sea Grant, NC Sentinel Site Cooperative  <i>Each speaker is allotted five minutes.</i></p> <ol style="list-style-type: none"> <li>1. Cape Hatteras Lionfish Mitigation Case Study, <b>Jordan Bridges</b>, N.C. Aquarium on Roanoke Island</li> <li>2. Thriving in Sun, Salt and Sand: Seacoast Plants of the Carolinas, <b>Paul Hosier</b>, UNC Wilmington</li> <li>3. Science Communications Strategies, <b>Frank Graff</b>, UNC-TV</li> <li>4. Seaside/Saltmarsh Sparrow Ecology, <b>Evangelyn Buckland</b>, UNC Wilmington</li> <li>5. The State Climate Office of North Carolina, <b>Kathie Dello</b>, State Climate Office</li> <li>6. Using Citizen Science for Wetland Monitoring, <b>Kim Matthews</b>, Carolina Wetlands Association</li> <li>7. Student Perspectives on Coastal Change, <b>Evan Ferguson</b>, Dare County Public Schools</li> <li>8. Saltwater Intrusion in Shallow Coastal Aquifers, <b>Alex Manda</b>, ECU</li> <li>9. Green Infrastructure for Coastal Climate Resilience, <b>Nicole Barclay</b>, UNC-Charlotte</li> <li>10. NWS and Rip Currents in the Carolinas, <b>Victoria Oliva</b>, NOAA National Weather Service</li> </ol>
<b>Latimer Room</b>	<p><b>Albemarle-Pamlico National Estuary Partnership: Ecological Flows, Water Resources and Water Availability in the Coastal Plain</b>  <b>Moderator:</b> Stacey Feken, Albemarle-Pamlico National Estuary Partnership</p> <p>10:15 – 10:35 Progress on Ecological Flows Within the Coastal Plain, <b>Robert Christian</b>, ECU, and <b>Stanley Riggs</b>, ECU, NC Land of Water</p> <p>10:35 – 10:55 Water Resources Data to Support Coastal Plain Ecological Flow Assessment in the Albemarle-Pamlico Basin, <b>Mike O’Driscoll</b>, ECU</p> <p>10:55 – 11:15 Managing Competing Water Demands in the Coastal Carolinas, <b>Laura Gurley</b> and <b>Ana Maria Garcia</b>, USGS South Atlantic Water Science Center</p> <p>11:15 – 11:45 Q&amp;A with Panel</p>

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<b>11:45 – 1:15 p.m.</b>	<b>Lunch and Poster Presentation Awards</b>
<b>1:15 – 2:45 p.m.</b>	<b>Concurrent Session 4</b>
<b>Bellamy Room</b>	Marsh Interface: Edges of Land and Water <b>Moderator:</b> Gloria Putnam, North Carolina Sea Grant
1:15 – 1:30	Blue Carbon Stocks and Salt Water Intrusion: What Do We Really Know? <b>Matthew Ricker</b> , NC State
1:30 – 1:45	Monitoring the Influence of Disturbance and Bivalve Facilitation on Seagrass Bed Resilience, <b>Sarah Donaher</b> , UNC-Chapel Hill
1:45 – 2:00	Impacts of Incident Waves and Vegetation Properties on Wave Attenuation by Salt Marshes, <b>Jana Haddad</b> , UNC-Chapel Hill
2:00 – 2:15	Using Parasite Diversity to Quantify the Success of Coastal Habitat Restoration, <b>Christopher Moore</b> , ECU
2:15 – 2:45	Q&A with Panel
<b>Lower Level Grand Ballroom</b>	Investing in the Blue Economy via Sustainable Tourism: Roundtable Discussions <b>Moderator:</b> Emily Yeager, East Carolina University
1:15 – 1:35	Roundtable 1: Sustaining Ocracoke's Tourism Workforce, <b>Whitney Knollenberg</b> , NC State
1:35 – 1:55	Roundtable 2: Mariculture Tourism: Building the N.C. Oyster Trail, <b>Jane Harrison</b> , North Carolina Sea Grant
1:55 – 2:15	Roundtable 3: An Inventory of the Eastern Tar River's Blue Economy, <b>Emily Yeager</b> , ECU
2:15 – 2:45	Q&A with Panel
<b>Latimer Room</b>	Post-Storm Assessments <b>Moderator:</b> Jennifer Dorton, Southeast Coastal Ocean Observing Regional Association
1:15 – 1:30	A Tale of Two Storms: Geomorphic Response of Masonboro Island to Hurricanes Florence and Dorian and the Impact of Recovery in Between, <b>Joseph Long</b> , UNC Wilmington
1:30 – 1:45	Forecasting and Communicating Life-Threatening Storm Surge on Ocracoke and Hatteras Islands Associated with Hurricane Dorian, <b>Carl Barnes</b> , NOAA National Weather Service
1:45 – 2:00	Modeling and Validating Residential Flood Vulnerability at High Spatial Resolution in North Carolina's Coastal Region, <b>Narcisa Pricope</b> , UNC Wilmington
2:00 – 2:15	Direct Impacts of Hurricane Florence at Landfall and Subsequent Post-Storm Recovery: Wrightsville Beach, North Carolina, <b>Joni Thomas Backstrom</b> , UNC Wilmington
2:15 – 2:45	Q&A with Panel
<b>Dudley Room</b>	Carolina Wetlands Workshop <b>Moderators:</b> Rick Savage, Kim Matthews, Amanda Johnson, David Shouse, Carolina Wetlands Association
1:15 – 2:45 p.m.	The Value of Wetlands to the Communities
<b>2:45 – 3:00 p.m.</b>	<b>Networking Break</b>
<b>3:00 – 4:00 p.m.</b>	<b>Closing Session</b> Resilient Communities: Traditional and Emerging Sectors
<b>Lower Level Grand Ballroom</b>	<b>Janice Lee Allen</b> , North Carolina Coastal Land Trust <b>Stanley R. Riggs</b> , NC Land of Water <b>Chuck Weirich</b> , NOAA National Sea Grant College Program