

2027 WATER QUALITY FOR FISHERIES SYMPOSIUM

Preliminary Agenda

January 28-29, 2027

Sturgeon City Environmental Education Center
50 Court Street, Building 100, Jacksonville, North Carolina 28540

DAY ONE | THURSDAY, JANUARY 28

Coastal Habitats, Contaminants and Future Resilience

8:30-9:00 a.m.

Registration, Coffee and Networking

9:00-9:15 a.m.

Welcome and Symposium Overview

Lisa Rider

Executive Director, Coastal Carolina Riverwatch

Opening remarks, symposium purpose, and introduction of the symposium facilitator.

Monica Gibbs

Symposium Facilitator

Facilitator welcome, participant orientation, overview of the two-day program, and introduction of Lisa Murabito.

Lisa Murabito

Executive Director, Sturgeon City

Welcome to Sturgeon City Environmental Education Center and introduction to its environmental and STEAM education mission.

9:15-10:20 a.m.

Panel 1: Habitat, Coastal Management and Fisheries Production

Current science and management actions connecting habitat protection, coastal resilience and productive fisheries.

Ian Kenny

UNC-Chapel Hill

Quantifying Pathways between Seagrass and Fisheries Production in North Carolina Estuaries

Bennett Paradis

North Carolina Division of Marine Fisheries

Eastern Oyster Fishery Management Plan Amendment 5 and Deep-Water Oyster Recovery Areas

Michelle Brodeur, PhD

Coastal Habitat Protection Plan Biologist, North Carolina Division of Marine Fisheries

An ecosystem-level approach to the North Carolina Coastal Habitat Protection Plan

Jennifer Fickler

Coastal Resiliency Specialist, North Carolina Division of Coastal Management

Turning Resilience Plans into Projects: Nature-Based Infrastructure, Habitat Protection and Water-Quality Benefits

Tal Ben-Horin, PhD

North Carolina State University

Harmful Algal Blooms and Algal Toxins in NC Seafood

Five 10-minute presentations followed by 15 minutes of moderated discussion and audience Q&A.

10:20-10:30 a.m.

Morning Break

10:30-11:15 a.m.

Panel 2: Seagrass, Submerged Aquatic Vegetation and Fisheries Habitat

Statewide trends, emerging mapping tools, community science and the importance of submerged aquatic vegetation to coastal fisheries.

Timothy A. Ellis, PhD

Quantitative Ecologist, Albemarle-Pamlico National Estuary Partnership

North Carolina Seagrass Status and Trends: What the 2026 APNEP Assessment Means for Fisheries

Jessie C. Jarvis, PhD

Professor, University of North Carolina Wilmington

NC SAV Watchers: Evaluating Community-Science Data for Submerged Aquatic Vegetation Monitoring

Madeline Payne

UNC-Chapel Hill; APNEP-North Carolina Sea Grant and Sea Grant-Space Grant Fellow

Hidden Seagrass Loss: Fine-Scale Mapping of Deepwater-Edge Change and Implications for Fisheries Management

Three 10-minute presentations followed by 15 minutes of moderated discussion and audience Q&A.

11:15-11:20 a.m.

Transition Break

11:20 a.m.-12:15 p.m.

Panel 3: PFAS, Plastics and Emerging Contaminants in Fisheries Waters

Current research on contaminants affecting coastal waters, seafood, aquatic organisms and public health, with attention to practical prevention and collaborative monitoring.

Maria Rodgers, PhD

Assistant Professor, NC State University Center for Marine Sciences and Technology

PFAS and Other Contaminants in Coastal Food Webs: What Oyster and Fish-Health Research Is Showing

Kayla West

Research Director and Lab Manager, Plastic Ocean Project

From Monofilament to Microplastics: Practical Prevention, Community Research and Coastal Cleanup Solutions

Linus Stoltz

Data Manager, Commercial Fisheries Research Foundation

Fishermen as Research Partners: Building Useful and Trusted Coastal Observing Data

Three 10-minute presentations followed by approximately 25 minutes of moderated discussion and audience Q&A.

12:15-1:00 p.m.

Provided Lunch, Poster Session and Workshop Orientation

Student and partner posters will be available for viewing during lunch. Rebecca Ward, PhD will introduce the afternoon workshop process and prepare participants for the FutureScape exercise.

1:00-4:00 p.m.

Envisioning Transformations: FutureScape Workshop

Workshop Lead: Rebecca Ward, PhD

North Carolina State University

This three-hour interactive workshop will use the Envisioning Transformations: FutureScape game to help participants explore possible futures for coastal water quality, fisheries, habitat, infrastructure, working waterfronts, and community resilience.

- Current environmental, social and economic pressures
- Possible future conditions and competing priorities
- Decisions that could improve or worsen future outcomes
- Transformational policies, investments and partnerships
- Practical steps for protecting water quality and sustaining fisheries

Each group will document its primary future scenarios, shared priorities, strategies and unresolved questions for the Friday morning report-out.

4:00-4:15 p.m.

Day-One Reflections and Day-Two Preview

Closing observations, instructions for the FutureScape report-out and an overview of Friday's climate, wastewater, policy and field sessions.

DAY TWO | FRIDAY, JANUARY 29

Climate, Monitoring, Wastewater, Policy and Coastal Livelihoods

8:30-9:00 a.m.

Registration, Coffee and Networking

9:00-9:05 a.m.

Day-Two Welcome and Overview

Monica Gibbs

Symposium Facilitator

Brief welcome, Friday orientation, and transition into the FutureScape report-out and the day's climate, monitoring, wastewater, policy, and field sessions.

9:05-9:30 a.m.

FutureScape Report-Out and Follow-Up Discussion

Facilitated by Rebecca Ward, PhD

Workshop groups will report their primary scenarios, concerns, shared priorities, and recommended actions. The facilitated discussion will identify themes that cut across fisheries, habitat, water quality, infrastructure, public health, coastal development, and community resilience. Results will help inform future research, policy development, partnerships, and Water Quality for Fisheries programming.

9:30-9:40 a.m.

Partner Spotlight: A View from Above - SouthWings and Coastal Water Quality

Riley Lewis

Eastern Program Manager, SouthWings

Dr. Rolf Wallin

Volunteer Pilot, SouthWings

A 10-minute joint presentation on SouthWings' conservation-aviation model and its support for Coastal Carolina Riverwatch and other organizations. Riley Lewis and Dr. Rolf Wallin will highlight how volunteer conservation flights provide an aerial perspective for documenting water-quality, habitat, and land-use concerns; strengthening monitoring, public education, and partnerships; and supporting efforts to protect the quality of water and quality of life in coastal North Carolina.

9:40-10:40 a.m.

Panel 4: Climate, Water Quality Monitoring and a Changing Coast

Climate projections, long-term monitoring and biological indicators that help communities understand how changing conditions affect coastal water quality, fisheries, aquatic organisms and quality of life.

Tim Glotfelty, PhD

Research Scholar, State Climate Office of North Carolina, North Carolina State University

North Carolina Climate Science Report: Coastal Plain and Projected Heat Extremes for Onslow County, 2045-2074

Observed, modeled, and projected temperature trends for North Carolina's Coastal Plain, including projected extreme-heat conditions in Onslow County.

Stacy Zhang, PhD

North Carolina State University

Blue Crab Health in a Changing Estuary: Hematodinium, Habitat Conditions and Fisheries Implications

Hematodinium prevalence in juvenile blue crabs, habitat conditions, seagrass connections and potential implications for blue crab health and fisheries management.

Byron Toothman, PhD

North Carolina Coastal Reserve & National Estuarine Research Reserve

NERRS System Wide Monitoring Program: What can we learn from long-term collecting water quality data?

An introduction to the NERRS System-Wide Monitoring Program (SWMP) with real-world examples of events and changes observed over different time scales.

Three 15-minute presentations followed by 15 minutes of moderated discussion connecting climate projections, long-term water-quality monitoring, habitat conditions, blue crab health, fisheries management, and coastal quality of life.

10:40-10:55 a.m.

Morning Break

10:55-11:40 a.m.

Co-Keynote: From Community Priorities to Science-Informed Policy and Decision-Making

Rachel Noble, PhD

Mary and Watts Hill Jr. Distinguished Professor of Marine Sciences

UNC-Chapel Hill Departments of Earth, Marine, and Environmental Sciences and Environmental Sciences and Engineering

Emma Dempsey

PhD Candidate and Research Assistant

UNC-Chapel Hill: Noble Laboratory- Institute of Marine Sciences

Connecting Communities, Science, and Solutions: Assessing the Impacts of Small-Scale and Aging Wastewater Systems in North Carolina.

A 45-minute co-keynote discussion connecting community engagement and priority-setting with science-based research and data collection, and examining how credible evidence and collaborative partnerships can directly inform water-quality policy, management, funding, and decision-making. The session will include remarks from both speakers, facilitated discussion and audience Q&A.

11:40 a.m.-12:40 p.m.

Panel 5: Wastewater, Septic Systems, Pathogens and Public Health

Science, regulation, funding, and implementation pathways for protecting coastal communities and fisheries waters.

Facilitator: Christina Boxberger

White Oak Waterkeeper, Coastal Carolina Riverwatch

Natalie Nelson, PhD

Associate Professor, North Carolina State University

Tidal Flooding, Sewage Exfiltration and Fecal Contamination in Low-Lying Coastal Communities

Trish Angoli, PE

Engineer, On-Site Water Protection Branch, Division of Public Health, North Carolina Department of Health and Human Services

On-Site Wastewater Systems and Protection of Public Health and the Environment - Past, Present, and Future

Victor A. D'Amato, PE

Supervisor, Viable Utilities Unit, Division of Water Infrastructure, North Carolina Department of Environmental Quality
From Infrastructure Need to Funded Project: Wastewater, Decentralized Systems, Technical Assistance and Viable-Utility Pathways

Three 12-minute presentations followed by approximately 24 minutes of facilitated, action-oriented discussion and audience Q&A.

12:40-1:25 p.m.

Provided Lunch and Afternoon Transition

Participants will select one of the two policy workshops offered immediately after lunch. Those joining afternoon tours or working sessions will receive meeting-location and transportation instructions.

1:25-2:25 p.m.

Concurrent Policy Action Workshops - Participants Choose One Session

Option A: North Carolina Plastic Pollution Prevention Policy Workshop

Facilitated by the North Carolina Plastic Pollution Prevention Coalition

This interactive workshop will focus on policies and practical strategies for preventing plastic pollution before it enters waterways and fisheries habitats.

- Source reduction and single-use plastics
- Fishing, aquaculture and recreational debris
- Stormwater pathways and tire-associated pollution
- Local-government and state policy options
- Producer responsibility and industry participation
- Public education, research and data needs
- Priority recommendations for North Carolina

Participants will identify practical policy priorities, partnership opportunities and follow-up actions.

Option B: Wastewater Policy and Infrastructure Workshop

Facilitator: Victor A. D'Amato, PE

Supervisor, Viable Utilities Unit, Division of Water Infrastructure, North Carolina Department of Environmental Quality

This interactive workshop will focus on the policy, regulatory, funding, and implementation barriers affecting wastewater systems in coastal and rural North Carolina.

- Failing septic and on-site wastewater systems
- Centralized and decentralized treatment options
- Regional and countywide infrastructure planning
- Utility capacity and viable-utility requirements
- Technical assistance and project readiness
- State and federal funding eligibility
- Climate resilience and long-term system performance
- Policy changes needed to support local implementation

Participants will identify priority policy recommendations, information gaps, implementation needs, and opportunities for continued coordination.

2:25-2:40 p.m.

Symposium Closing and Next Steps

Summary of major research, policy, and partnership priorities identified across both days. Coastal Carolina Riverwatch will outline planned follow-up, opportunities for continued collaboration, and ways participants can remain involved in the Water Quality for Fisheries initiative.

2:40-4:00 p.m.

Optional Field Tour and Practitioner Briefing

Oyster Highway and Urban Stormwater Implementation Tour

Pat Donovan-Brandenburg

Stormwater Manager, City of Jacksonville

New River Oyster Highway: Restoration, Stormwater and City Partnerships (10 minutes)

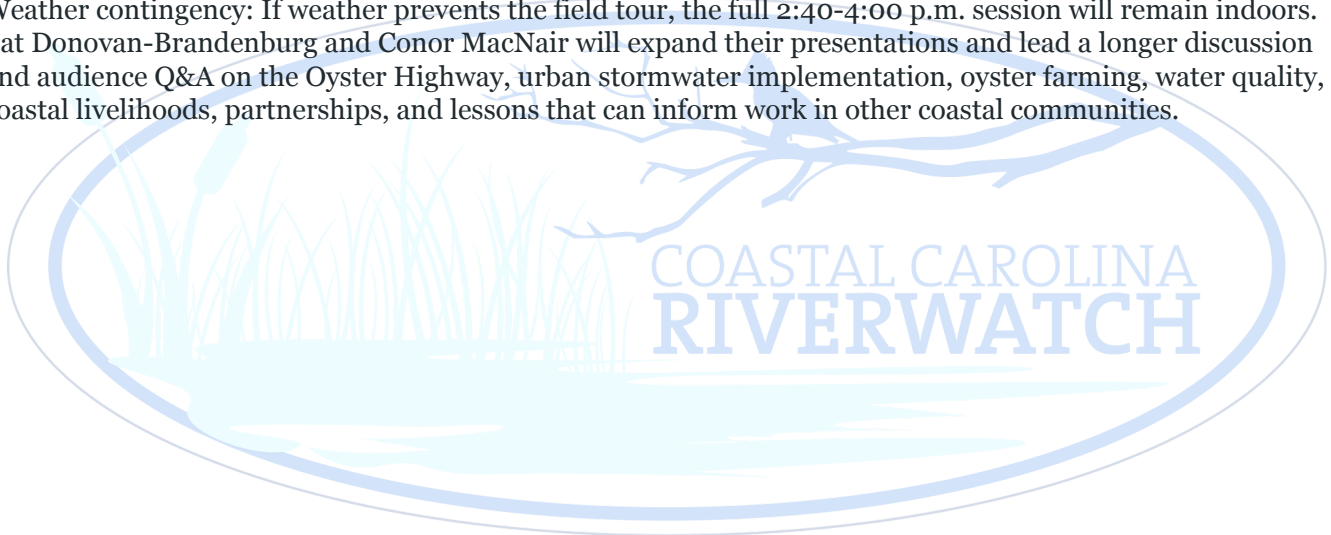
Conor MacNair

Founder and Oyster Farmer, N Sea Oyster Co.

Oyster Farming, Water Quality and Coastal Livelihoods: A Grower's Perspective (10 minutes)

Pat Donovan-Brandenburg and Conor MacNair will each provide a 10-minute presentation before participants depart for the field tour. The field portion will depart at approximately 3:00 p.m. and conclude by 4:00 p.m. Participants will visit Jacksonville's Oyster Highway and related urban stormwater projects, connecting municipal restoration and stormwater implementation with oyster habitat, oyster farming and working-waterfront perspectives, project partnerships, maintenance, and water-quality benefits.

Weather contingency: If weather prevents the field tour, the full 2:40-4:00 p.m. session will remain indoors. Pat Donovan-Brandenburg and Conor MacNair will expand their presentations and lead a longer discussion and audience Q&A on the Oyster Highway, urban stormwater implementation, oyster farming, water quality, coastal livelihoods, partnerships, and lessons that can inform work in other coastal communities.



SPONSORS AND COMMUNITY PARTNERS

Thank you to the organizations supporting the 2027 Water Quality for Fisheries Symposium

Sturgeon City Environmental Education Center

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Roaring Brook Family Foundation

Onslow County Government

Additional sponsors and partners will be added as confirmed.



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