



SOUTHEAST & CARIBBEAN
DISASTER RESILIENCE
PARTNERSHIP



[*Moving the Needle*]
[*Toward Equitable*]
[*Community Resilience*]
[*to Natural Hazards*]



Savannah, Georgia
January 22-24

2024

Welcome to the SCDRP 8th Annual Meeting!

SCDRP 2023 Advisory Board

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Lindy Betzhold, *NOAA Office of Coastal Management*

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U.S. Virgin Islands Seat

Hilary Lohmann, *USVI Division of Coastal Zone Management*

Non-Profit Organization Seats

Ashley Ward, *Duke University Nicholas Institute for Energy, Environment & Sustainability*

Academic Institution Seats

Rick DeVoe, *College of Charleston*

Jeremy Stalker, *Jacksonville University*

Local Government Seats

Jim Murley, *Miami-Dade County*

Randall Mathews, *Chatham Emergency Management Agency*

Federal Government Seat

Kyla Breland, *NOAA Disaster Preparedness Program*

Thank you for joining us in Historic Downtown Savannah, Georgia! It is fantastic to see so many returning attendees coming back to share progress made over the last year and to forge new partnerships and collaborations that will advance us through 2024. This year, you will notice that we are honored to share the room with a number of new faces including community residents and leaders that work on the frontlines of environmental justice and climate adaptation efforts in their local neighborhoods. We welcome the chance to share new stories, perspectives, and experiences with everyone here.

As you look around the room, you will see and feel how SCDRP earns its multi-sectoral and regional status. Let's talk about who's here! The sector with the greatest representation at the SCDRP 8th Annual Meeting is the Academic sector. A little over 1 in 4 of us works or studies at a college or university. This year, we have more representatives from the Non-profit sector than ever before! Look to your left. Look to your right -- 1 in 4 of us are from a Non-profit organization. Further, 1 in 5 of us works in the Private sector for a company, business, or industry. The last group, a little over 1 in 4 of us, works for government. Most of these public sector professionals work for their State or Territory Government, while Federal and Local Government employees comprise the smallest groups here.

Geographically, the profile of this year's meeting attendees represents the entire footprint of the SCDRP region. One in 2 of us is from Georgia, while about 1 in 5 of us are from South Carolina, Florida, and North Carolina. A smaller number of you have traveled from Washington DC, Virginia, Texas, Kansas, Ohio, Maine, and from our Caribbean island territories of Puerto Rico and U.S. Virgin Islands. We welcome all of you!

The theme of the SCDRP 8th Annual Meeting is "Moving the Needle Toward Equitable Community Resilience to Natural Hazards." Throughout the two days of sessions, we will talk about how we can partner across sectors and work across political and geographic boundaries within our region. We will hear speakers and panelists highlight case studies and successful climate resilience initiatives, innovative public-private partnerships, strategies to address inequities, and the application of cutting-edge data tools and technologies. We will use this time together to make strides towards our vision that communities across the U.S. Southeast and Caribbean will be significantly more resilient to episodic and chronic impacts due to climate change, natural hazards, and disasters. Let's move the needle together!

Thank so much,



Heather Picot McCarthy
Executive Director,
Southeast & Caribbean Disaster Resilience Partnership

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WALL OF WIND



The **NHERI Wall of Wind (WOW) Experimental Facility (EF)** at **Florida International University (FIU)** was funded by NSF to be a **national facility that enables researchers to better understand wind effects on civil infrastructure systems and to prevent wind hazards from becoming community disasters.** *NSF AWARD NUMBER 2037899*

The NHERI WOW EF is powered by a combined 12-fan system capable of repeatable testing in up to 157 mph wind speeds through its flow management system. **The unique advantage of the NHERI WOW EF is multi-scale (full-scale to 1:400) and high Reynolds number simulation of the effects of wind and wind-driven rain.** This is accomplished using the twelve fans and a water spray system. In addition, the 16,000 sqft. fenced-off secure area enables researchers to plan and perform destructive tests for up to Category 5 Hurricane wind speeds. The NHERI WOW EF uses a wide range of equipment, instrumentation, and experimental simulation protocols, as well as a distinguished group of faculty, staff, and a well-trained team comprised of technical and operations personnel that allow for the delivery of world-class research. **WOW NHERI EF provides access to its experimental resources, user services, and data management infrastructure for NSF-supported research and education awards.**

Resources

- 16,000 sqft. fenced-off secure area for wind testing
- WOW apparatus (with 14 ft. high x 20 ft. wide test section), rain generation system, flow conditioning spires and roughness for atmospheric boundary layer (ABL) simulation, two Variable Frequency Drives (VFDs) to control 12 WOW fans, 16 ft. diameter turntable, data acquisition (DAQ) system, video capture and surveillance system (all housed in a 8,000 sqft. WOW building)
- 3,000 sqft. pre-test specimen staging/construction/instrumentation (SCI) building with a fabrication shop and a small-scale boundary layer wind tunnel
- 1,344 sqft. air conditioned Operations and Control Center (OCC) for controlling, monitoring, viewing the tests, and providing telepresence
- Downburst Simulator
- PIV System



DR. ARINDAM GAN CHOWDHURY
CHOWDHUR@FIU.EDU



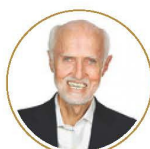
DR. IOANNIS ZISIS
IZISIS@FIU.EDU



DR. AMAL ELAWADY
AELAWADY@FIU.EDU



DR. SEUNG JAE LEE
SJLEE@FIU.EDU



DR. PETER IRWIN
PEAIRWI@FIU.EDU

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An Institute programmatically built around an equation.

Flood, Pakistan 2014. Photo by IFRC

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ZULU

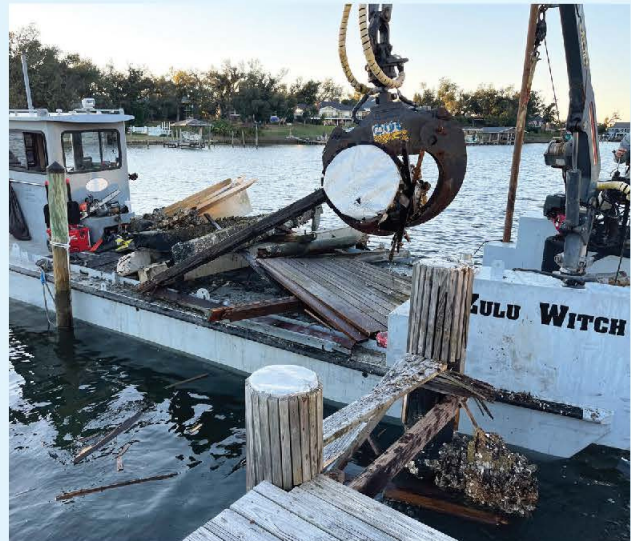
AIR — LAND — MARINE

Zulu Marine Services is proud to provide disaster response solutions, from our cutting edge mapping and assessment technologies on through the clean-up process, utilizing our unique debris clearing equipment and nature-based resiliency options.

WATERWAY DEBRIS CLEARING

Zulu has been clearing waterway debris for nearly 20 years. We provide debris assessment, clearing and snagging of woody and vegetative debris above and below the waterline and stream banks, bank stabilization, storm debris clearing, sediment removal, and general streamflow restoration.

- Adhere to US Army Corp of Engineers Best Management Practices, as well as local agency requirements
- Specialize in sensitive environments such as wetlands, wildlife habitats and more
- Utilize purpose-built equipment and environmentally friendly maintenance materials
- All field crews are HAZWOPER certified



NATURE-BASED SHORELINE SOLUTIONS

Nature-based Shoreline Advantages:

- Halts erosion and prevents future erosion.
- Restores freshwater banks to natural state, increasing biodiversity for fish and wildlife.
- More aesthetically pleasing than rip rap or bulkheads and can enhance property value.
- Nature-based solutions are more stable over time than other hardened methods because they are able to adapt to ever-changing environmental conditions.
- Improves water quality by filtering pollutants and sediment and reducing upland run-off.
- Stores carbon, helping to mitigate climate change..
- Can be adapted to a variety of erosion prevention needs.



ABANDONED AND DERELICT VESSEL REMOVAL

Zulu utilizes a range of equipment and strategies to remove abandoned and derelict vessels (ADV), regardless of their condition, while leaving little to no evidence of their presence.

- Vessels of any size, upland or submerged
- All vessels are assessed to determine safest removal tactics (in situ demolition or haul out)
- Includes safe removal of hazardous materials
- Sensitive environments such as wetlands and wildlife habitat are our specialty
- Divers inspect waterbottom upon completion of demolition



DISASTER MAPPING AND ASSESSMENT

In the wake of a devastating event, immediate aerial views are critical. Once the immediate danger has passed and the threat to human life is gone, the time comes to begin sorting through the wreckage. Zulu disaster mapping teams supply crucial data in the most critical times, providing quantitative assessments and geo-referenced mapping of affected areas for stakeholders.

- Safely assist and accelerate risk assessment
- Map areas of damage
- Assess debris fields for scope and volume
- Video footage and still images are provided
- Volumetric assessments
- Debris and damage location maps
- Geospatial data
- Written summary reports



Please stop by our booth to learn more!

(855) 400-9858
zuludiscovery.com

ZULU
AIR — LAND — MARINE



Leading with Science®

Tetra Tech’s innovative, technology-enabled solutions help our clients address their water, environment, sustainable infrastructure, renewable energy, and international development challenges.

We are proud to be home to leading technical experts in every sector and to use that expertise throughout the project life cycle. Our commitment to safety is ingrained in our culture and at the forefront of every project.

Climate Change and Coastal Community Resilience

We realize the importance of building resilience to the impacts of climate change, which requires awareness of potential impacts and creative solutions at both national and local levels. Tetra Tech works with clients to develop site-specific analyses and strategic recommendations to improve the resiliency of communities and programs. Services include:

- Nature-based climate resilience guidance
- Model-based living shoreline designs
- Marsh, submerged aquatic vegetation, and benthic habitat surveys and restoration
- Stream and wetland restoration
- Blue carbon sequestration analysis
- Monitoring and data collection
- Community engagement and outreach

Low Impact Development and Green Infrastructure for Improved Stormwater Management

As the focus of stormwater management has evolved and moved toward distributed solutions of low impact development and green infrastructure, Tetra Tech has partnered with clients to assess, plan, design, and implement those practices. Services include:

- Watershed runoff and pollution modeling
- Hydrology and hydraulic modeling
- Creek-to-coast hydrodynamic modeling
- Stormwater best management practice design and implementation
- Total maximum daily load development
- Flood control and mitigation design and implementation
- Coastal protection infrastructure design and implementation

Disaster Protection Planning and Recovery Response

Tetra Tech provides support for both pre- and post-disaster recovery. Dedicated to helping state and local governments plan for and recover from natural and human-caused disasters, Tetra Tech offers field-tested and proven methodology for emergency readiness, continuity planning, and innovative ways to plan and design resilient, reliable, acceptable, and sustainable solutions to manage potentially devastating events. Services include:

- Online dashboard development
- GIS and data-driven resource management
- Disaster response planning
- Real-time disaster response management and logistics support

Vamsi Krishna Sridharan, PhD, M.ASCE
Senior Environmental Scientist
Water Resources Innovation Manager

10306 Eaton Place, Suite 340, Fairfax, VA 22030
+1 (650) 862-2658
vamsi.sridharan@tetrattech.com



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h&h modeling

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quality analyses

GIS applications

flood reduction
studies

Coastal wave height
analyses

Stormwater management

The Science of Water

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Promoting disaster resilience through research, education, and outreach.



FLORIDA • NORTH CAROLINA
SOUTH CAROLINA • GEORGIA

Proud supporters of the Southeast & Caribbean Disaster Resilience Partnership

REGIONAL PROGRAMS

NORTH CAROLINA

- NC SET Community of Practice, go.ncsu.edu/ncsetmap
- Coastal Resilience Team Competition, go.ncsu.edu/coastal-resilience-team
- Affordable Housing Designs for Hurricane Florence Recovery, go.ncsu.edu/affordable-housing-designs

SOUTH CAROLINA

- Resilience Planning Archive, scseagrant.org/resilience-planning
- Water Level Monitoring Initiative, scseagrant.org/south-carolinas-new-water-level-monitoring-initiative
- Beaufort County Adapts, scseagrant.org/studying-how-things-fall-apart

GEORGIA

- Coastal Resilience Program, gacoast.uga.edu/outreach/programs/coastal-hazards
- Southeast and Caribbean Climate Alliance, gacoast.uga.edu/southeast-caribbean-climate-alliance
- Improving Military Community Resilience, gacoast.uga.edu/coastal-resilience-dod-liason-program

FLORIDA

- Program for Local Adaptation to Climate Effects: Sea Level Rise (PLACE:SLR), placeslr.org
- Workforce Training Programs and Initiatives, www.flseagrant.org/workforce-training/#link2
- Artificial Reef Deployment and Monitoring, www.flseagrant.org/fisheries/artificial-reef-deployment-and-monitoring



Partnering
with purpose
to advance a more
just, resilient &
sustainable
world.



nicholasinstitute.duke.edu



The Nicholas Institute for Energy, Environment & Sustainability at Duke University is home to the **Heat Policy Innovation Hub**.

The hub brings together experts and communities to develop and deploy policy solutions that reduce the impacts of extreme heat on human health and well-being. It taps into Duke's globally recognized expertise in medicine, health, policy, engineering, the environment, and ministry. The hub is the first program in the United States dedicated to cross-disciplinary innovation on extreme heat policy and practice.



Learn about the
Heat Policy Innovation Hub



Sign up for email updates
from the Nicholas Institute



SCDRP 8th ANNUAL MEETING SAVANNAH, GEORGIA AGENDA



[Moving the Needle
Toward Equitable
Community Resilience
to Natural Hazards]

Pre-meeting Events Monday, January 22, 2024

1:00 - 5:00 PM **Pre-Meeting Tybee Island Resilience Tour**
Tour Guide: Alan Robertson, AWR Strategic Consulting

Tybee is a small community of 3,000 residents that saw 6.5 million visitors last year, with as many as 60,000 people on a holiday weekend in the summer. It is a coastal barrier island about a 20-minute drive from Savannah, within Chatham County, both of which expect to see 20% population growth by 2030. Tybee is bordered on the east by the Atlantic Ocean and to the north by the Savannah River Channel which serves the Port of Savannah, the third largest port in the U.S., and to the west by a tidal salt marsh that extends the length of Georgia's 100 miles of coastline.

The beach, dunes, and marsh are critical habitats for nesting sea turtles, several endangered bird species, fish, wildlife, and hundreds of thousands of migrating shorebirds each year. Surrounded by water on all sides, with a high elevation of only 14 feet and a water table at only 2-3 feet below ground, a growing tourism economy fueled by population growth, and a critical habitat, Tybee is experiencing first-hand many of the various resilience issues communities face by rising sea levels and climate adaptation.

Tybee's resilience initiatives have been recognized nationally as award-winning and innovative. The Resilience Tour will give you a hands-on look at what Tybee is doing, its resiliency enhancements, and the challenges that remain. The tour takes about 2 hours, covers the entirety of the island, and stops at several spots for guests to get out into the field to examine the initiatives up close and learn how everything is connected.

Complimentary transportation on the Old Savannah Trolleys climate-controlled mini-bus is provided courtesy of AWR Strategic Consulting. Boarding the mini-bus will begin out front of The DeSoto hotel at 1:00 PM. Our tour guide, Alan Robertson, will provide an overview of Tybee Island during the 45-minute drive to the island. We will return to The DeSoto hotel at 5:00 PM.

This tour is limited to meeting attendees only, and all participants must RSVP for an "Add On" ticket through the [Eventbrite registration page](#) (the mini-bus only seats 32 people total).

Join our Channel



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We will be using
→ Slack for
conference
communications



Download the **Slack** app from the **App Store** then scan our **QR** code to join the Slack workspace for the 8th Annual Meeting.



SOUTHEAST & CARIBBEAN DISASTER RESILIENCE PARTNERSHIP

6:00 - 8:00 PM

Monday Night Rendezvous at the [Starland Yard Food Truck Park](#)

Location: Starland Yard Food Truck Park, 2411 Desoto Ave, Savannah, GA 31401.

Utilize the **SCDRP 8th Annual Slack Group app** to connect with folks heading to the Starland Yard. Check your email for an invitation to join the SCDRP Transportation, dinner, and drinks are on your own and at your leisure. Transportation options include shuttle bus, city bus, Uber/Lyft, and walking:

Free City Shuttle Bus from The DeSoto to Starland Yard: 7F Dot Forsyth to Victory Shuttle is Free.

However, it stops service at 7:00 PM. You will need to use other transportation for the way back to The DeSoto after 7:00 PM:

- Walk from The DeSoto to Liberty & Whitaker bus stop to catch a shuttle – 0.1 mile.
- Stop at Whitaker & 40th and walk 60 feet to Starland Yard.

City Bus from Starland Yard to The DeSoto: Route 14 Abercorn Bus (Abercorn and 39th Street) every 30-35 minutes with last stop around 9:45 PM. Cost \$1.50 one-way or \$3.00 all-day pass. Get a pass on the bus.

- Walk from Starland Yard to Abercorn and 39th Street bus stop – 0.3 mile.
- Stop at Abercorn and Liberty St. and walk one block to The DeSoto.

Rideshare an Uber/Lyft: Estimated cost is between \$8.00 - \$16.00.

Walk together: 1.6-mile walk from The DeSoto to Starland Yard (3.2-mile roundtrip).

Day 1: SCDRP 8th Annual Meeting Tuesday, January 23, 2024

Location: Madison Ballroom, [The DeSoto Savannah Hotel](#), 15 East Liberty Street, Savannah, GA 31401

The meeting space is the Madison Ballroom located on the first floor of the hotel. Sponsor table displays are located around the perimeter of the Madison Ballroom. **Sponsor Set-up begins at 7:00 am.**

Beverages (coffee, decaf, tea, sodas, water), Lunch, and Snack Breaks are included with your registration and will be served along buffet tables located in the Madison Ballroom. Please note that additional on-site food and drinks can be purchased individually at five different locations within The DeSoto hotel. Details and menus can be found at <https://thedesotosavannah.com/authentic-southern-dining/>.

8:00 am – 8:30 am

Morning Snack: The Busy Bee

Enjoy networking, beverages (coffee, decaf, teas, soda, water), and light bites (Honeycomb & Fresh Fruit Display of Artisanal Cheeses with Muffins & Crackers Honey Candies, Unsweetened Peach & Regular Tea) in the Madison Ballroom.



SOUTHEAST & CARIBBEAN DISASTER RESILIENCE PARTNERSHIP

8:00 am - 9:00 am **Registration Table Open**

Location: *Pre-Function Space outside of the Madison Ballroom. Speakers, Panelists, Sponsors, Exhibitors, and Attendees, please check-in at the Registration Table to receive your name tag and meeting materials.*

9:00 am - 9:45 am **Welcome and Keynote Address**

Heather McCarthy, Executive Director, SCDRP

Mayor Van Johnson, City of Savannah, Georgia

Reverend Dr. Gerald Durley, Waterkeeper Alliance, Interfaith Power & Light

9:45 am – 10:00 am **Quick Beverage Break**

Enjoy all-day beverages (coffee, decaf, tea, water) in the Madison Ballroom.

10:00 am - 11:15 am **Session 1: RESILIENCE UPDATES FROM THE STATES AND TERRITORIES**

Moderator: Lindy Betzhold, NOAA Office of Coastal Management

Brian Byfield, North Carolina DPS Office of Recovery and Resiliency

Alex Butler, South Carolina Office of Resilience

Jennifer Kline, Georgia DNR Coastal Resources Division

Dr. Duane De Freese, Indian River Lagoon Council and National Estuary Program

Dr. Yasmin Detres, CARICOOS, Puerto Rico

Hilary Lohmann, U.S. Virgin Islands DPNR Division of Coastal Zone Management

11:15 am – 11:30 am **Quick Beverage Break**

Enjoy all-day beverages (coffee, decaf, tea, water) in the Madison Ballroom.

11:30 am - 12:30 pm **Session 2: REGIONAL RESILIENCE**

Moderator: Jon Philipsborn, Atlanta Regional Commission

Kimberly Brown, Miami-Dade County

Katherine Zitsch, Atlanta Regional Commission

Dr. David Iwaniec, Georgia State University

12:30 pm - 1:30 pm **Express Lunch**

Location: Lunch will be served from buffet tables in the Madison Ballroom.

*Choose 1 Sandwich: **Veggie Wrap** (Avocado, Cucumber, Tomato, Crumbled Goat Cheese, Roasted Red Pepper, Spring Mix & Green Goddess Dressing Served on a Spinach Tortilla) or **Carved Turkey Club** (Oven-Roasted Turkey Breast, Pecan-Smoked Bacon & Cheddar Cheese Served on Whole Wheat Bread)*



SOUTHEAST & CARIBBEAN DISASTER RESILIENCE PARTNERSHIP

Session 3: INSIGHTS FROM COMMUNITY PARTNER AND PRACTITIONER PAIRS

Sponsor: Florida International University Institute of the Environment and Florida International University Institute of Extreme Events

- 1:30 pm - 2:10 pm** **Part 1. EFFECTIVE COMMUNITY ENGAGEMENT & EQUITABLE ACCESS TO RESOURCES & FUNDING**
Moderator: Courtney Reich, Georgia Conservancy
Kait Morano, Coastal Equity and Resilience Hub, Georgia Tech
Jazz Watts, One Hundred Miles and Vulnerable Communities Initiative
Nick Deffley, Southeast Sustainability Directors Network
Dawud Shabaka, Harambee House: Citizens for Environmental Justice
- 2:10 pm - 2:50 pm** **Part 2. EQUITABLE ACCESS TO DATA & TECHNICAL ASSISTANCE AND CAPACITY-BUILDING PROGRAMS**
Moderator: Henry Saxon, Center for Sustainable Communities
Keisha Long, South Carolina Department of Health and Environmental Control
Robert Reese, Lower Richland Community, South Carolina
Dr. Daniel Kilpatrick, Arnold School of Public Health, University of South Carolina
Skip Mikell, Rosemont Neighborhood Council, South Carolina
- 2:50 pm - 3:20 pm** **SUPER COLLIDER: MOVING THE NEEDLE ON EQUITABLE RESILIENCE IN OUR COMMUNITIES**
Afternoon Snack: The Energizer
Enjoy networking, beverages (coffee, decaf, teas, soda, water), and light bites (Trail Mix & Dried Fruit, Granola & Protein Bars, Assorted Body Armor Beverages) in the Madison Ballroom.
- 3:20 pm - 4:00 pm** **Session 4. FINDING SOLUTIONS TOGETHER: EQUITABLE RESILIENCE IN OUR COMMUNITIES**
Moderator: Rev. Dr. Gerald Durley, Waterkeeper Alliance, Interfaith Power & Light
Facilitator: Garry Harris, Sustainability Solutions Group and Institute
Kait Morano, Coastal Equity and Resilience Hub, Georgia Tech
Jazz Watts, One Hundred Miles and Vulnerable Communities Initiative
Nick Deffley, Southeast Sustainability Directors Network
Dawud Shabaka, Harambee House: Citizens for Environmental Justice
Keisha Long, South Carolina Department of Health and Environmental Control
Robert Reese, Lower Richland Community, South Carolina
Dr. Daniel Kilpatrick, Arnold School of Public Health, University of South Carolina
Skip Mikell, Rosemont Neighborhood Council, South Carolina
- 4:00 pm - 5:00 pm** **SCDRP FULL PARTNERSHIP BUSINESS MEETING**
Heather McCarthy, Executive Director, SCDRP
Tina Jackson, Program Coordinator, SCDRP

Ricardo Mercado, Assistant Program Coordinator, SCDRP

This is a planning and discussion meeting with the SCDRP Staff, Advisory Board Members, and all SCDRP Members in Good Standing.

6:00 PM – 8:00 PM **Tuesday Night Rendezvous at the Plant Riverside District Resilient Sites Scavenger Hunt**

Location: *Martin Luther King Jr Park, Plant Riverside District, 400 W River St, Savannah, GA 31401*

*Meet in The DeSoto Hotel lobby at 6:00 PM and join fellow attendees to embark on the Resilient Sites Scavenger Hunt! During the 1.7-mile scavenger hunt walk from The DeSoto hotel to the Plant Riverside District, you will learn about historic sites and resilience efforts around the City of Savannah. The Resilient Sites Scavenger Hunt ends at Martin Luther King Jr Park in the Plant Riverside District, where you can meet other SCDRP partners and explore the evening options. **Winners of the Resilient Sites Scavenger Hunt** will be announced Wednesday morning! Up to five winners will receive surprise prize bags courtesy of the Sapelo Island National Estuarine Research Reserve and your SCDRP Staff! Good luck mingling and meandering!*

*Utilize the **SCDRP 8th Annual Meeting Slack Group app** to connect with others who are interested in the same dining options and activities as you. Transportation, dinner, and evening activities are on your own and at your leisure. Restaurants and local points of interest are described on The DeSoto website here:*

<https://thedesotosavannah.com/savannah/>

Transportation options include Uber/Lyft and walking. The Resilient Sites Scavenger Hunt is 1.7 miles one-way, and a straight walk from The DeSoto hotel to the Plant Riverside District is 0.9 miles one-way.



JOIN OUR SCAVENGER HUNT!
Learn more about Savannah & resilience efforts in our area!

Learn more about resilience efforts in our area while visiting historic site across Savannah

Download the **ACTIONBOUND** APP in Google PlayStore or Apple Store on your cell

Select the 'Scan Bound' button the day of the event to begin!

SCAN ME!

Day 2: SCDRP 8th Annual Meeting Wednesday, January 24, 2024

Location: *Madison Ballroom, The DeSoto Savannah Hotel, 15 East Liberty Street, Savannah, GA 31401*

*The meeting space is the Madison Ballroom located on the first floor of the hotel. All Exhibitor tables are located around the perimeter of the Madison Ballroom. **Exhibitor Set-up begins at 7:00 am.***

Beverages (coffee, decaf, tea, sodas, water), Lunch, and Snack Breaks are included with your registration and will be served along tables located in the Madison Ballroom. Please note that additional on-site food and drinks can be purchased individually at five different locations within The DeSoto hotel. Details and menus can be found at <https://thedesotosavannah.com/authentic-southern-dining/>.



8:00 am – 8:30 am Morning Snack: The Bakery

Enjoy networking, beverages (coffee, decaf, teas, soda, water), and light bites (Scones & Cinnamon Rolls Chocolate Filled Croissants Individual Iced Coffee, Coffee, Decaffeinated Coffee & Assorted Hot Teas) in the Madison Ballroom.

8:00 am - 10:00 am BLENDED EVENTS: DATA TOOLS AND TECHNOLOGY EXHIBITION AND WALKING TOUR OF CHATHAM EMERGENCY OPERATIONS CENTER

8:00 am - 8:05 am Welcome Back

Heather McCarthy, Executive Director, SCDRP

8:05 am - 8:20 am DATA TOOLS AND TECHNOLOGY EXHIBITION

Part 1. LIGHTNING ROUND: Overview of Exhibits

Megan Shaw, Office and Events Manager, SECOORA

Attendees will enjoy an introductory look at the cutting-edge data tools and technologies that they will encounter at each of the Exhibitor's tables during Part 2. Each tool or technology showcased is useful in resilience and climate-adaptation efforts and decision-making. Exhibitors will be presenting data tools and technology developed and/or made available by groups in the following categories:

- 1. Public Agency/Open Source (no additional training required, no costs to users)*
- 2. Academic/Research-oriented (additional training/credential may be required)*
- 3. Corporate/Private (generally proprietary and often fee-based)*
- 4. Nonprofits (no additional training required, generally no costs to users)*

8:20 am - 10:00 am Part 2. TURBO TABLE HOPPING: Attendees Visit Tables

Exhibitors include the following:

- Table 1: **Zulu Marine and Aerial** (Rusty Batey, Jamie King, Zulu)
- Table 2: **KnowYourRiver.com** and **HowsMyWaterway.com** (Tonya Bonitatibus, Savannah Riverkeeper)
- Table 3: **NOAA Digital Coast** and **NOAA CCAP (Coastal Change Analysis Program)** (Matt Pendleton, NOAA)
- Table 4: **MapSpot** community engagement tool (Kait Morano, GA Tech Coastal Equity and Resilience Hub)
- Table 5: **Tetra Tech** Tools (Dr. Vamsi Sridharan, Tetra Tech)
- Table 6: **Table of Low-cost Tools Useful to Communities** (Dr. Russell Clark, GA Tech CEAR Hub)
- Table 7: **Real Time Hurricane Decision Support** (Dr. Jason Fleming, Seahorse Coastal Consulting)
- Table 8: **Designing for Sea Level Change: Simple Adaptation Techniques for Communicating Uncertainty** (Chris Mack, Moffatt & Nichol)
- Table 9: **Climate Mapping for Resilience & Adaptation tool** (Dr. Lydia Olander, Nicholas Institute for Energy, Environmental and Sustainability, Duke University)
- Table 10. **USGS Coastal Change Hazards Tools** (Dr. Donya Frank-Gilchrist, USGS)



SOUTHEAST & CARIBBEAN DISASTER RESILIENCE PARTNERSHIP

This exhibition is limited to meeting attendees only, and all participants must RSVP for an “Add On” ticket through the [Eventbrite registration page](#).

9:00 am - 9:30 am **GROUP A: WALKING TOUR OF CHATHAM EMERGENCY OPERATIONS CENTER**
9:30 am - 10:00 am **GROUP B: WALKING TOUR OF CHATHAM EMERGENCY OPERATIONS CENTER**
Tour Guide: Randall Mathews, Deputy Director, Chatham Emergency Management
Departing from The DeSoto Lobby.
Each group is limited to 15 people each.

Attendees will have the opportunity to get a behind-the-scenes look at how large-scale emergency responses can be coordinated in the Chatham County Emergency Operations Center. Located in the Old Courthouse in historic Downtown Savannah, you will see how partner organizations work together to coordinate responses for a multitude of different events such as natural disasters, public health crises, and other critical incidents. The tour will highlight how agencies and organizations work together to develop a common operating picture, allocate resources, and support the overall response and recovery of an incident.

This tour is limited to meeting attendees only, and all participants must RSVP for an “Add On” ticket through the [Eventbrite registration page](#).

10:00 am – 10:10 am **Reconvene in Madison Ballroom**

Enjoy all-day beverages (coffee, decaf, tea, water) in the Madison Ballroom.

10:10 am - 11:15 am **Session 5: NATURE-BASED SOLUTIONS: EVALUATION OF SUCCESS**

Sponsor: Zulu Marine and Aerial

Moderator: Dr. Michelle Covi, Georgia Sea Grant Marine Extension & Georgia Sea Grant

Dr. Lydia Olander, Nicholas Institute for Energy, Environment and Sustainability, Duke University

Dr. Mariko Polk, North Carolina Sea Grant

Dr. Brian Haus, University of Miami

Joy Brown, The Nature Conservancy

11:15 am - 12:15 pm **Session 6: INITIATIVES THAT SUPPORT COMMUNITY RESILIENCE**

Moderator: Aranzazu Lascurain, NOAA Office for Coastal Management

Dr. Kim Waddell, University of the Virgin Islands

Damon Mullis, Ogeechee Riverkeeper

Andrea Young Jones, Georgia WAND

Alicia Brown, City of Savannah, Georgia

Christian Kamrath, Miami-Dade County, Florida

12:15 pm - 1:15 pm **Express Lunch**

Location: Lunch will be served from buffet tables in the Madison Ballroom.

*Choose 1 Sandwich: **Veggie Wrap** (Avocado, Cucumber, Tomato, Crumbled Goat*

*Cheese, Roasted Red Pepper, Spring Mix & Green Goddess Dressing Served on a Spinach Tortilla) or **Grilled Chicken** (Grilled Chicken, Pesto, Provolone, Spinach, Served on Ciabatta Bread)*

1:15 pm - 2:15 pm **Session 7: FINANCING AND FUNDING FOR RESILIENCE**
Moderator: David Johnston, Hamilton Advisors
Pamela Williams, FEMA
Alan Robertson, AWR Strategic Consulting
Tonya Bonitatibus, Savannah Riverkeeper and Waterkeeper Alliance
Patrick Howell, Institute for Building Technology & Safety (IBTS)
Mary Boyer, The World Bank

2:15 pm - 2:45 pm **SUPER COLLIDER: MOVING THE NEEDLE ON RESILIENCE FINANCING, FUNDING, AND INSURANCE**
Afternoon Snack: The Ballpark
Enjoy networking, beverages (coffee, decaf, teas, soda, water), and light bites (Warm Soft Pretzels with Beer Cheese, Popcorn, Pigs in a Blanket, Assorted Soda) In the Madison Ballroom.

2:45 pm - 4:00 pm **Session 8: RESILIENCY IN A CHANGING RISK LANDSCAPE**
Moderator: David Johnston, Hamilton Advisors
Pamela Williams, FEMA
Ray Farmer, former Director of South Carolina Department of Insurance
Raghuvver Vinukollu, Munich RE
Jonathan Gonzalez, Raincoat Insurance Inc.

4:00 pm - 4:30 pm **Wrap-Up and Closing Remarks**
Heather McCarthy, SCDRP Executive Director

4:30 pm – 5:00 pm **Feedback Surveys & Casual Socializing until 5:00 PM**
Enjoy all-day beverages (coffee, decaf, tea, water) in the Madison Ballroom.

Take our survey



Please help us understand how to improve your experience next year



Before you leave today, please scan the QR code on the left to be taken to our End of Meeting Survey. The survey should take less than 5 minutes. We appreciate your time!

2024 Annual Meeting Speakers

Opening Remarks



Heather Picot McCarthy, M.E.M.

Executive Director, Southeast and Caribbean Disaster Resilience Partnership (SCDRP)

Heather McCarthy took the helm at SCDRP as part-time Executive Director in August 2022 and was promoted to full-time Executive Director in June 2023. Under Heather's leadership, SCDRP has tripled its membership, adopted formal Policies & Procedures, held its first official election of new Advisory Board Members, and updated its Strategic Plan with a revised vision, mission, set of core values, and three-year strategic goals. Heather managed the organization and execution of the SCDRP 2023 Annual Meeting in Miami, Florida (the Partnership's largest meeting to date), which was highlighted by esteemed Caribbean guests, political and military dignitaries, and keynote

speaker Assistant Secretary-General of the United Nations. Heather finds great purpose and motivation through the daily interactions with the inspiring and passionate professionals from the various sectors and geographies within SCDRP. Heather is particularly skilled at (and actually enjoys!) public speaking, organizing and facilitating meetings, building consensus among diverse stakeholders, and balancing a multitude of perspectives and inputs to achieve a common goal.

Heather is drawn to nature writing, birdwatching, and wildlife photography, which culminated in the publication of the book *Sandhills, Swamps & Sea Islands: Environmental Guidebook to Northeast Florida* (276 pp) published through the University of North Florida. Heather has formal training in environmental management with concentrations on marine conservation biology and coastal zone management. Heather earned her Bachelor of Science degree *summa cum laude* from the University of Central Florida (1995), and her Master of Environmental Management degree from Duke University Nicholas School of the Environment (1998). Prior to joining SCDRP, Heather was an environmental educator for the Florida Department of Environmental Protection and served Jacksonville University in several capacities including Research Associate, Biology Lab Manager, and Adjunct Professor of Biology.

Heather currently lives full-time onboard s/v Sun Seeker, a 1976 Morgan Out Island 41' sailboat, with her husband, three daughters, and Schooner, the coolest boat dog ever. Heather is emerging from an 8-year career of boat/homeschooling her daughters. They float the most in Jacksonville, Florida, and sail off the grid whenever they can throughout the eastern U.S. and Caribbean.



Mayor Van R. Johnson II
City of Savannah, Georgia

Mayor Van R. Johnson II serves as the official head of the City of Savannah. He presides at all meetings of the Mayor and Aldermen and performs all other duties of the office of the Mayor. As Executive Officer, the Mayor signs all motions, resolutions, and ordinances passed by the Savannah City Council and votes in all meetings of the Mayor and Aldermen. In times of danger or emergency, the Mayor may, with the consent of the Mayor and Aldermen, take command of the police and govern the city by proclamation, maintaining order and enforcing laws.

Purpose, Passion, and People are the core principles that guide and drive the life of the Honorable Van R. Johnson, II, the 67th Mayor of the City of Savannah, GA.

Born and raised in Brooklyn, NY, but with strong Savannah roots, Mayor Johnson is a New York City Public School System graduate who has earned undergraduate and graduate degrees from Savannah State University and Georgia Southern University.

As a former radio talk show host, political commentator, and former author of local weekly columns, Mayor Johnson has distinguished himself as an independent, thoughtful, and passionate voice on current events.

As a nationally certified professional in Human Resources and a Georgia-certified Law Enforcement professional, Mayor Johnson has utilized his unique skill set as a sought-after trainer, speaker, and consultant in these areas. He is a graduate of Leadership Savannah and Leadership Georgia.

In 2004, Mayor Johnson was elected First District Alderman for the City of Savannah. He was re-elected to 3 subsequent terms by the citizens of the District, averaging more than 75 percent of the total vote. During his tenure as an Alderman, Mayor Johnson served as Mayor Pro Tem and Vice Chairman of the Council. He consistently used this sacred platform to advocate for the least, the last, and the lost; and promote inclusion and equity for all of Savannah's citizens.

Mayor Johnson also demonstrated leadership nationally as a Board member of the National League of Cities, the United States Conference of Mayors, and the African American Mayors Association.

Mayor Johnson is nationally recognized as an innovator and thought leader in youth development and engagement through his service of over 27 years as the Director of the Chatham County Youth Commission. Since then, he has assisted cities and counties nationwide in developing governmental youth leadership programs, including co-founding the Savannah Youth Council in 2004.

Mayor Johnson's dedication to children, youth, and families is evident in our local community. He has served as the President of the Board of Directors of the Wesley Community Centers of Savannah, past Board Chair of the Chatham County Department of Family and Children Services, and numerous local non-profit organizations. He is a life member of Alpha Phi Alpha Fraternity, Inc. and the International Fraternity of Delta Sigma Pi, along with countless other social and civic organizations.

Mayor Johnson's leadership and humanitarian efforts have been recognized with numerous awards, honors, and distinctions, including a Doctor of Humane Letters Degree from Savannah State University and recognition as one of Georgia Trend Magazine's 100 Most Influential Georgians for the past three consecutive years.

Reverend Dr. Gerald Durley

Waterkeeper Alliance, Interfaith Power & Light



The Rev. Dr. Gerald L. Durley was born in Wichita, Kansas; grew up in California, and graduated from high school in Denver. He was recruited to play basketball for Tennessee State University, where he became a student leader in the Civil Rights Movement of the 1960s. Upon earning a degree in psychology, Dr. Durle became one of the first U.S. Peace Corp volunteers to serve in Nigeria. Upon leaving Nigeria he relocated to Switzerland and played basketball for a National Swiss team while completing post graduate studies. After arriving back in America, he entered Northern Illinois University where he completed the Master of Science degree in Community Mental Health/Psychology. After graduation he became the founder and administrator, of a program that recruited and educated African Americans about their heritage. He entered the University of Massachusetts and completed the doctorate degree in Urban Education and Psychology.

Dr. Durley became a program manager in the U.S. Department of Education. He created and wrote programs for interdisciplinary studies for Historically Black Colleges and Universities (HBCU's) with the Institute for Services to Education, Inc.

Being a dedicated educator, and an effective psychologist, a nationally and internationally sought after inspirational and motivational speaker, Dr. Durley was gravely disturbed by the decaying moral, social, cultural, and family value systems throughout the nation. This concern compelled him to enroll at the Howard University School of Divinity and to earn the Master of Divinity.

He became Dean at Clark College, and a program administrator at Morehouse School of Medicine; both in Atlanta, Georgia. He directed major health, social, and civic programs across the state of Georgia.

Rev. Dr. Durley was a pulpit associate at Mt. Olive Baptist Church in Washington, D.C.; and at the historic Ebenezer Baptist Church in Atlanta. After 25 years of service, he retired as the pastor of Providence Missionary Baptist Church and is currently the Pastor Emeritus.

While serving as pastor, he became intensely involved in the climate change and environmental justice movement. Rev. Dr. Durley now combines the disciplines of faith and science with the lessons learned as a civil/human rights advocate from the 1960s. He believes that God created a perfect ecologically balanced world for humans to care for, but we are destroying it at an alarming rate. He asserts that for the environment to be saved, the educational, scientific, business, political, and faith communities must seek common solutions.

Dr. Durley has served as past president of the Concerned Black Clergy of Atlanta; co-chair of the Regional Council of Churches of Metropolitan Atlanta; and Head Start Executive Director. He serves on the boards of the March of Dimes, Civil and Human Rights Global Advisory, Communities in Schools of Atlanta, Georgia Power Diversity Council, Georgia Interfaith Corrections, Interfaith Power & Light, the National Association for the Advancement of Colored People (NAACP) of Atlanta.

A few notable awards and recognitions include the White House Champion of Change Award, Citizen of Georgia Award, Citizen of Atlanta Award, Phoenix Awards, Who's Who in Black America, Who's Who in Christian Leadership, Influential People in Atlanta, Morehouse College Institute of Preachers, Friends of Arava Institute Environmental Award; Trail Blazer Green Church Award, Morehouse College Presidential Award of Distinction, W.E.B. DuBois NAACP Award of Distinction, Atlanta Urban League Jessie O. Davis Award, Islamic Speakers Bureau Award, National Action Network Award, Imam W. Deen Muhammed Distinguished Service Award; Tuskegee Religious Leadership Award, Coca Cola Diversity Award, and a number of other awards, certificates of recognition, and certificates of appreciation.

Dr. Durley has appeared on a variety of radio and television programs; and quoted in newspapers, and magazines around the world. Breaking down barriers between Muslims, Jews, and Christians; Rev. Durley has traveled to Jerusalem, Turkey, Morocco, Spain, Africa, Brazil, France, Switzerland, Canada, Mexico, Italy, Iceland, Germany and other destinations.

He and his wife of over 50 years, Muriel are blessed to have two children and four grandchildren. His autobiography, *I Am Amazed*, is available at Amazon.

Session 1: RESILIENCE UPDATES FROM THE STATES AND TERRITORIES



Moderator: Lindy Betzhold

NOAA Office of Coastal Management

Lindy serves as the National Coastal Resilience Fund Program lead for NOAA's Office for Coastal Management. She has supported OCM for over 18 years in roles that encompass managing national and regional resilience grant programs, serving as the NOAA liaison to coastal management programs in the southeast, leading development of geospatial tools, designing and facilitating meetings, developing strategic plans, and supporting national and regional resilience efforts. She has been involved in SCDRP since 2016, and currently serves as the Chair of the Advisory Board.



Brian Byfield

North Carolina DPS Office of Recovery and Resiliency

Urban and Regional Planner with more than 28 years of experience across sustainability/resiliency planning, transportation infrastructure development, and land use optimization. Brian has worked in national government bodies, state agencies, nonprofit organizations and consulting firms. Clients have included municipalities, regional development organizations and State Departments of Transportation across nine States but primarily in North Carolina.

Currently, the Resilient Communities Program Manager for the North Carolina Office of Recovery & Resiliency (NCORR). He believes that the typically underrepresented and often deliberately ignored need an effective seat at the table before discussions begin.

He completed his Masters in City and Regional Planning at UNC-Chapel Hill. His Bachelors in Environmental Resource Development & Regional Planning is from the University of Technology in Jamaica. He and his wife are now empty nesters residing in Durham NC. Brian ardently supports Arsenal FC.



Alex Butler

South Carolina Office of Resilience

Alex Butler is the Resilience Planning Director for the South Carolina Office of Resilience where he oversaw the development of the state's first Statewide Risk Reduction and Resilience Plan. Alex has a B.S.in Geology from Clemson University and a M.S. Geography from University of South Carolina where his studies focused on the interaction of people, land use and climate on the hydrological cycle of South Carolina. Prior to his current role, Alex managed the Water Quantity Permitting Section at the Department of Health and Environmental Control (DHEC) and worked as a Hydrologist for both DHEC and the Department of Natural Resources. In his spare time Alex connects people to watersheds as a whitewater kayak instructor.



Jennifer Kline

Georgia DNR Coastal Resources Division

Jennifer Kline is a Coastal Hazards Specialist for the Georgia Department of Natural Resources Coastal Resources Division where she has worked for the last 23 years. Ms. Kline graduated from Valdosta State University with degrees in Environmental Geography and Geology. She is a Specialist for the Georgia Coastal Management Program, which represents 11 coastal counties. Some recent projects include serving as the Co-Chair for the Coastal States Organization's Coastal Hazards Planning and Adaptation Workgroup, Implementation Team for National Coastal Inundation Community of Practice, and project lead on the Building Resiliency with Nature Based Infrastructure Project as well as the Tybee Island Comprehensive Resiliency Plan. Ms. Kline works closely with local governments in relaying information from federal and other state agencies regarding coastal hazards planning. She is a resident of Camden County Georgia and is married to Todd Kline. They have a 10yr old son Kannon and a German Shepherd Kane.



Dr. Duane De Freese

Indian River Lagoon Council and National Estuary Program

Duane De Freese earned his MS and PhD in marine biology from Florida Institute of Technology and did post-doctoral research with University of Florida working in the Indian River Lagoon. During his career he has held leadership-level positions in academia, non-profit organizations, and industry. Since 2015, Duane has served as Executive Director of the IRL Council, an independent special district of the State of Florida and host agency for the Indian River Lagoon National Estuary Program. Duane currently serves as a volunteer advisory board member on the Florida Harmful Algal Bloom Task Force, Association of National Estuary Programs, Southeast Coastal Ocean Observing Regional Association, Southeast and Caribbean Disaster Resilience Partnership, Florida Ocean Alliance, and Legacy Campaign Cabinet Member for the Brevard Zoo Aquarium Project. Duane has received numerous awards of recognition for his leadership and published numerous scientific articles. He is an avid surfer and waterman.



Dr. Yasmin Detres

CARICOOS, Puerto Rico

Dr. Yasmin Detrés holds a BS in Biology, and MS and PhD in Marine Sciences from the University of Puerto Rico at Mayagüez specialized in biological and bio-optical oceanography. For 20 years worked as a researcher in the NOAA Center for Atmospheric Sciences at the UPR Marine Sciences Department. Currently appointed Associate Scientist at the Caribbean Coastal Ocean Observing System (CARICOOS) and Coordinator of the Caribbean Regional Ocean Partnership data sharing initiative to increase access to federal and non-federal data and products to support regional coastal management priorities. She is currently working in the development of Centers for Coastal and Aquatic Hazards Education (CERCA) to engage underserved communities to learn and develop awareness of coastal hazards through public schools in PR. Detrés has been active collaborator of the Puerto Rico Climate Change Council since 2010 and involved in strategic planning during the last 5 years.



Hilary Lohmann

U.S. Virgin Islands DPNR Division of Coastal Zone Management

Hilary Lohmann has worked in small island climate resilience around the Caribbean for almost ten years, including work in the Dominican Republic, Barbados, Belize and now the US Virgin Islands. She studied Animal Behavior and Spanish at Bucknell University and received a Masters in Marine Affairs from the University of Rhode Island. Hilary has been working in the USVI since 2016 and has been the Territory's Coastal Resilience Coordinator since 2019. Hilary works on a variety of projects that plan for and respond to impacts of climate change and environmental degradation, practicing a watershed-scale approach to resource management and hazard mitigation. Current projects include the Territory's Comprehensive Land & Water Use Plan, the implementation of watershed management plans to mitigate flooding and improve water storage, and the development of coastal erosion mitigation and monitoring methods.

Session 2: REGIONAL RESILIENCE



Moderator: Jon Philipsborn

Atlanta Regional Commission

Mr. Philipsborn currently serves as the Climate and Resilience Manager for the Atlanta Regional Commission (ARC). In this role, he coordinates ARC's efforts to take action on climate change – through climate mitigation, decarbonization, and climate resilience initiatives. Mr Philipsborn advises on the strategic and holistic integration of climate change consideration into planning, project development, and management decisions. Throughout his career, Mr. Philipsborn has communicated technical information to decision makers, and worked on innovative projects that produce climate, conservation, and community benefits.

He has gained valuable experience working across geographies for government, non-profits, and the private sector. Mr. Philipsborn has collaborated with the United Nations Office for Disaster Risk Reduction (UNDRR) on the Disaster Resilience Scorecard for Cities, and co-authored the Scorecard's Public Health Addendum. He currently serves on the Advisory Board of the Southeast and Caribbean Disaster Resilience Partnership (SCDRP), and on the Board of Directors for the Georgia Audubon.



Kimberly Brown

Miami-Dade County

Kimberly Brown serves as Director of Resilience Planning and Implementation in the Miami-Dade County Office of Resilience. Her experience has spanned both private and public sector work including over fourteen years with Miami-Dade County. During that time, she has worked on a variety of land use and environmental efforts including facilitation of the seven-year review and update of the County's Comprehensive Plan. Currently, her work focuses on advancement of resilience initiatives that allow the County to adapt and thrive in the face of climate-related threats. Ms. Brown also serves as Miami-Dade County's representative on the Southeast Florida Regional Climate Change Compact Leadership Committee. She holds a Master of Arts degree in Urban and Regional Planning from the University of Florida and professional certification by the American Institute of Certified Planners (AICP).



Katherine Zitsch
Atlanta Regional Commission

Katherine Zitsch serves as the Deputy Chief Operating Officer and Senior Water Policy Advisor at the Atlanta Regional Commission (ARC). As Deputy COO, she is responsible for coordinating special initiatives that span multiple departments including climate and resilience programming, water resources, transportation, community development, aging & independence services, workforce development, mobility services, data & analytics, and homeland security. Prior to her role as Deputy COO, Katherine was Managing Director of Natural Resources at ARC. In that role, she was responsible for overseeing the work of the Metropolitan North Georgia Water Planning District, the 15-county water planning agency for metropolitan Atlanta (www.northgeorgiawater.org).

Katherine holds a Bachelor of Science degree in Civil Engineering and a Master of Science degree in Environmental Systems Engineering, both from Clemson University (Go Tigers!). She is a registered Professional Engineer in Georgia and well as a Board Certified Environmental Engineer through the American Academy of Environmental Engineers.



Dr. David Iwaniec
Georgia State University

David M. Iwaniec is an Associate Professor of Sustainable Futures at the Urban Studies Institute, Andrew Young School of Policy Studies, and Director of the Center for Urban Transformations at Georgia State University. He is a sustainability scientist researching anticipatory and systems approaches to advance urban sustainability, resilience, and justice. He conducts research to learn from and improve the governance of urban systems, including the co-development of sustainability solutions and transition pathways for positive futures of urban transformation.

Session 3: Part 1. EFFECTIVE COMMUNITY ENGAGEMENT & EQUITABLE ACCESS TO RESOURCES & FUNDING



Moderator: Courtney Reich
Georgia Conservancy

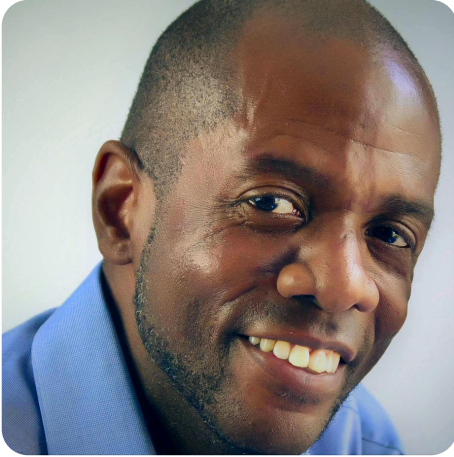
Courtney Reich has been the Coastal Director for the Georgia Conservancy since October 2022. Before joining the Georgia Conservancy, Reich most recently led the Savannah office of Goodwyn, Mills and Cawood, Inc., a leader in architecture, engineering, stormwater planning and environmental services. She previously served as the Owner and Principal Planner of Savannah-based Ecological Planning Group as well as a Water Resources Planner with the Chatham County - Savannah Metropolitan Planning Commission. Courtney currently serves as a Board Member for the Chatham County Board of Health.

Since 1967, the Georgia Conservancy is committed to protecting the integrity of Georgia’s coastal resources for the long-term benefit of people and natural systems. From its coastal office in historic Savannah, the Conservancy is focused on forwarding a healthy, resilient and diverse coastal ecosystem that can endure natural and human disturbances, a coastal economy that offers diverse options including healthy, sustainable nature-based businesses such as commercial fishing and recreation-based tourism, and responsible planning for growth and conservation of sensitive coastal lands.



Kait Morano,
Coastal Equity and Resilience Hub, Georgia Tech

Kait Morano is the Resilience Planning Director at the Coastal Equity and Resilience Hub and a Research Scientist II at the Georgia Institute of Technology. She also serves on the SCDRP Advisory Board in the State of Georgia seat. Her work focuses on designing innovative, equitable, and data-driven strategies to build community resilience to extreme weather events and climate change. Morano holds a bachelor’s in Geography from Virginia Tech and a master’s of City and Regional Planning from Georgia Tech, where she specialized in GIS. Prior to joining Georgia Tech, Kait worked as a senior urban planner for the Chatham County-Savannah Metropolitan Planning Commission, as a research assistant at the Center for Spatial Planning Analytics and Visualization at Georgia Tech, and as an ORISE Fellow at the Centers for Disease Control and Prevention.



Jazz Watts

One Hundred Miles and Vulnerable Communities Initiative

Josiah ‘Jazz’ Watts has worked as an Equal Justice Works Georgia Housing Corps Urban Community Advocate under a fellowship through the Georgia Bar Foundation with the Georgia Heirs Property Law Center in Atlanta, Ga. He spearheaded conducting the first ever Wills clinic with Georgia Heirs Property Law Center in his historic Gullah Geechee community of Hogg Hummock on Sapelo Island, from which he is a direct descendant. He is an Environmental Justice Strategist with the coastal nonprofit One Hundred Miles. He also serves as a facilitator for organizations the Nobis Project and Both And Partners.

Jazz holds a Bachelor of Arts in Speech Communication and Theater from the University of Georgia and a Master of Arts in Mass Communication from the University of Florida. He currently serves on the Boards of the Nobis Project and the Hogg Hummock Public Library on Sapelo Island and is a board member of the Butler Island Coalition in Darien, Ga. He is a Gullah Geechee Cultural Heritage Corridor Commissioner, a Board Member and Land Retention Advisor to the Sapelo Island Cultural & Revitalization Society, and a Board Member of Coastal Community Health.

He is a co-founder of the I Run With Maud Movement and 2:23 Foundation; an organization that was founded in the wake of the brutal lynching of Ahmaud Arbery in Brunswick, Ga. Jazz is also a Certified Mediator with the Georgia Office of Dispute Resolution.

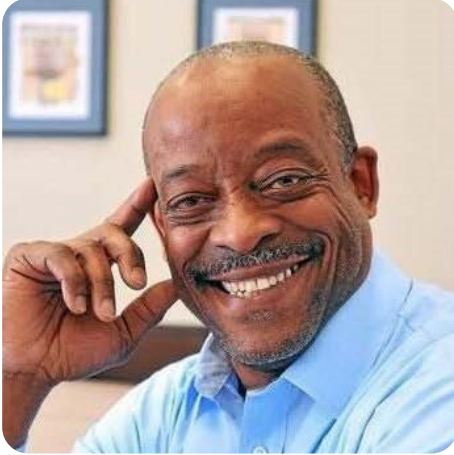


Nick Deffley

Southeast Sustainability Directors Network

Nick Deffley leads the Southeast Sustainability Directors Network’s (SSDN) Local Infrastructure Hub program. He is passionate about supporting the development of equitable, resilient and thriving communities. He helps bridge gaps and make linkages across disciplines and sectors to create innovative, equitable solutions to our stickiest challenges.

Nick has extensive experience in community sustainability and resilience, serving for nine years as the sustainability director for the City of Savannah, Georgia. In that role, he partnered with regional, municipal and community representatives to address topics of environmental justice, racial equity, economic development, social determinants of health, energy burden, clean energy, environmental contamination, and coastal climate resilience. He has experience developing green workforce training, sustainable building standards, and programs to lift participation and capacity of DBE businesses.



Dawud Shabaka

Harambee House: Citizens for Environmental Justice

Born and raised in New Haven, CT, Dawud Shabaka graduated from Georgia State University in Atlanta, GA with a BS in Psychology and started a 30-year career in IT specializing in network administration of Microsoft Server technologies. The proud father of three amazing young adults, the Dawud lived in Atlanta for 30 years and the United Kingdom for five years before moving to Savannah, GA. Having volunteered and contracted with the Harambee House, Inc. / Citizens for Environmental Justice since its founding in 1990, he joined their staff in 2017. Dawud is Associate Director for training and outreach for their Environmental Careers Worker Training Program (ECWTP), Hazardous Waste Workers Training Program (HWWTP),

Environmental Health and Safety Training (EHST) program, the Black Youth Leadership Development Institute (BYLDI), Community Emergency Response Team (CERT), and various projects and initiatives focused on community-based environmental health, social, racial, and economic inequities. Dawud holds certifications in HazWoper-40, asbestos, and lead awareness, Hazardous Communications/GHS, OSHA-10, construction, weatherization, emergency response and disaster preparedness, and infectious disease awareness and prevention.

Session 3: Part 2. EQUITABLE ACCESS TO DATA & TECHNICAL ASSISTANCE AND CAPACITY-BUILDING PROGRAMS



Moderator: Henry Sakon

Center for Sustainable Communities

Lead Strategist, Center for Sustainable Community Henry Saxon is the Strategic & Implementation consultant at the Center for Sustainable Communities. Henry's role in the organization is leading the development and formation of CSC's re-structuring and strategic priorities. The objective is to up level the organization's vision and goals for long-term successful sustainability and growth. With more than 3 decades as non-profit leader, Henry is widely recognized for his exceptional ability to analyze complex business problems, identify growth opportunities and formulate innovative strategies to achieve business objectives.

Before forming Saxon Advisors LLC, Henry retired from a 32-year career at Boys & Girls Clubs in April 2023. He was the Director for Major Metro Services for Boys & Girls Clubs of America. Major Metros are the most prominent Boys & Girls Club corporations that reside in the top 30 DMA markets in the US. His portfolio included \$80M in revenues for 11 Boys & Girls Clubs Corporations encompassing 110 Boys & Girls Clubs serving 70K+ members across the Mid-Atlantic and Southeastern part of the country. He worked in partnership with professional and board leaders delivering professional services that assess, analyze, and provide a customized, solution-driven consultation to enhance organizational capacity around boards, operations, program impact, resource development, average daily attendance, and branding.

He joined Boys & Girls Clubs of America as Regional Service Director for Virginia in October 2006.

Before joining Boys & Girls Clubs of America, Henry worked for 16 years with B&GC of Metro Atlanta. His last appointment was Regional Vice-President, directing eight clubs serving 4,000 members in 5 metro Atlanta area counties. Henry was explicitly responsible for working with the corporate and regional boards and staff in setting the strategic direction and securing the organization's resource development commitments with a budget of \$17M. Henry also has extensive and demonstrated experience in operations, program outcomes, and staff development, all within a large non-profit organizational structure.



Keisha Long

South Carolina Department of Health and Environmental Control
Community Partner, EJ (Environmental Justice) Strong

Keisha Long is the Environmental Justice Coordinator for DHEC. She is an advocate for vulnerable communities and is responsible for helping communities with environmental justice concerns build capacity, identify resources, and establish collaborative partnerships. Keisha is the project manager for EJ Strong: Strengthening Communities for Disaster Risk Reduction, Response & Recovery in South Carolina.

Keisha has been with DHEC for 25 years. Previously, Keisha worked as a Project Manager in the Superfund program and the Resource Conservation and Recovery Act program (RCRA). Keisha holds a Bachelor of Science in Civil Engineering from Clemson University, is an active Toastmaster, loves music, and is a former co-Chair on the advisory board of the ITRC (Interstate Technology & Regulatory Council).



Robert Reese

Lower Richland South Carolina Community

Robert Reese serves as Executive Director for the South Carolina Interfaith Power and Light and Regional Director for the Irlly Bird Kids (IBK) Company. Additionally, he works with the Lower Richland High School Alumni Foundation and the Blow Foundation which support programs and services that benefit the Lower Richland community – the neighborhood in which he grew up and currently lives. His other work, with IBK, focuses on improving early childhood literacy for pre- school to fifth grade students...simultaneously using STEM as a social justice initiative, exposing the youngest students to Science, Technology, Engineering, and Math vocabulary, concepts, and careers. Also, Robert served as a grant writer for the Town of Eastover, SC – a rural, majority- minority community, from which both his parents hail.

Previously, Robert served as Director of Diversity and Inclusion at the University of Minnesota - Rochester (UMR). During a 20-year career in higher education, Reese directed programs that promoted the retention and graduation of targeted groups, including first-generation, low-income, veterans, and African American male students.

His other professional experiences included: Associate Dean at Minneapolis Community and Technical College; Director of the Student Support Services Program at Georgia State University, Atlanta, Ga.; Assistant Director and Curriculum Specialist for the Upward Bound Program at Atlanta Metropolitan College, Atlanta, Ga.; Director of the Upward Bound Program at the University of Georgia, Athens, Ga and at the University of South Carolina (USC).

Reese earned an MBA degree in Management from the University of South Carolina, Columbia; and a Bachelor of Arts in Business Administration from Morehouse College in Atlanta, Georgia.



Dr. Daniel Kilpatrick

Arnold School of Public Health, University of South Carolina

Dr. Daniel Kilpatrick has a variety of academic and practice experience in Public Health and Emergency Management. Currently, he is a clinical faculty member at the Arnold School of Public Health at the University of South Carolina. He has experience teaching public health and disaster-related courses at the graduate, undergraduate, and community levels. He is currently leading efforts to develop and implement disaster risk reduction trainings for environmental justice communities in South Carolina through an EPA-funded initiative titled, EJ Strong. Prior to USC, he served as an epidemiologist for 10 years with South Carolina's state health department.

He has served in disaster response and recovery capacities including working with the Corps of Engineer's Blue Roof Project during Katrina and as senior associate with Pearce Global Partners where he responded to major disasters such as the Christchurch earthquake, the tsunami-Fukushima meltdown, and the 2011 Joplin F5 tornado. Currently, he is serving as project lead for the development of a graduate certificate in emergency preparedness and response for the Arnold School of Public Health at USC.



Skip Mikell

Rosemont South Carolina Neighborhood Council

Skip Mikell is a father of four and a grandfather of nine with deep ties to North Charleston, SC. He is passionate about Mentoring in Business Development, Funeral Service Education and Scouting, Environmental Justice, and Urban Renewal.

Skip Mikell is involved in numerous community activities including the Chair of the Community First Land Trust, President of the Union Heights Community Council, Chairman of the Charleston Community Research to Action Board, Member of the Community Advisory Board of the Lowcountry Alliance of Model Communities (LAMC), Member of the Board of Directors of

the Coastal Carolina Council Boy Scouts of America, Chairman of the Friends of Scouting for the Twin Rivers District of the Boy Scouts of America, Sponsor / Liaison Gethsemane Community Center Troop 559 and Pack 559 Boy Scouts of America (North Charleston, SC), and a Mentor in the North Charleston Public Schools. Previously, Skip has served his community as a member of the Senior Warden Saint Stephen's Reformed Episcopal Church (Summerville, SC), Member of the Weed and Seed Committee (City of North Charleston, SC), Member of the Board of Managers of the W.H.S. Jerdan Conference Center, Diocese of the Southeast, Reformed Episcopal Church USA, and Chairman of the Twin Rivers District of the Boy Scouts of America.

Some of Skip Mikell's career highlights include serving as the SCMA State Coordinator for Continuing Education for seven years and the SCMA Vice President and President. In the Rubber Chemical Division of Bayer Corp, Skip developed and implemented programs which achieved ISO 9000 Certification and QS 9000 Certification and developed the program and led the transition from traditional management to Self-directed Work Teams. Skip led the project to relocate Suburban Funeral Home, Inc. which included construction of new facility 10% under budget. He also led the initiative to establish the National Funeral Directors and Morticians Association Political Action Committee. During his career, Skip Mikell also developed the program and delivered training for Certified Funeral Service Preceptors for the Funeral Service Program at Piedmont Technical College in Greenwood, SC.

Session 4. FINDING SOLUTIONS TOGETHER: EQUITABLE RESILIENCE IN OUR COMMUNITIES



Facilitator: Garry Harris,
Sustainability Solutions Group and Institute

Garry A. Harris is the President of Sustainability Solutions Group and Institute (SSG&I), an advisory and consulting firm that provides diverse sustainability, energy engineering, and community development services. The SSI consists of two organizations: the Center for Sustainable Communities, a nonprofit dedicated to making communities cleaner, greener, healthier, safer and more climate-resilient, and HTS Enterprise, which focuses on energy engineering, policy, research, and education. Mr. Harris has worked for more than three decades in the energy and environmental field including clean energy, transportation, resilience, sustainable cities, environmental and climate justice, affordable housing, community revitalization, economic and workforce development.

Moderator: Rev. Dr. Gerald Durley, Waterkeeper Alliance, Interfaith Power & Light

Kait Morano, Coastal Equity and Resilience Hub, Georgia Tech

Jazz Watts, One Hundred Miles, and Vulnerable Communities Initiative

Nick Deffley, Southeast Sustainability Directors Network

Dawud Shabaka, Harambee House: Citizens for Environmental Justice

Keisha Long, South Carolina Department of Health and Environmental Control Community Partner, EJ
(Environmental Justice) Strong

Robert Reese, Lower Richland Community, South Carolina

Dr. Daniel Kilpatrick, University of South Carolina

Skip Mikel, Rosemont Neighborhood Council, South Carolina

Note: Please take a look at Session 3: Part 1 & 2 sections for speaker bios, since it is a combination of both panels.

WALKING TOUR OF CHATHAM EMERGENCY OPERATIONS CENTER



Tour Guide: Randall Mathews

Deputy Director, Chatham Emergency Management

Randall Mathews, Deputy Director, has more than 15 years of combined experience in emergency management and military operations. During his tenure at Chatham Emergency Management Agency (CEMA), Randall has assumed multiple responsibilities to include overseeing all planning, hazard mitigation and operational functions for CEMA as well as the Chatham County Emergency Operations Center (EOC).

During EOC activations, Randall serves as the EOC Manager and ensures that all EOC coordination and operational functions are carried out timely and competently. Activation of the EOC for multiple hurricanes and tropical storms, tornadoes and other events of critical significance, including the 2018 C-130 plane crash allow Randall to execute his leadership experience he has garnered from his prior military and emergency management background.

Randall also holds a Bachelor's Degree in Homeland Security and Emergency Management, and a Master's of Public Administration Degree.

Data Tools & Tech Exhibition



Jason Fleming

Jason Fleming holds a PhD in Mechanical and Aerospace Engineering from North Carolina State University. He specializes in producing real time model guidance for hurricane decision support for coastal storm surge using ADCIRC+SWAN. This guidance is generated as a storm is bearing down and has been used by official decision makers including FEMA, the US Coast Guard, the Louisiana Coastal Protection and Restoration Authority (and many others) during Hurricanes Gustav/Ike (2008), Irene (2011), Isaac/Sandy (2012), Harvey/Irma/Maria (2017), Ida (2021), Ian (2022), and Idalia/Ophelia (2023). More information is available at <https://www.stormsurge.live> or by emailing info@stormsurge.live.



Dr. Russell Clark

Georgia Institute of Technology

Dr. Russell Clark is a Senior Research Scientist at the Georgia Institute of Technology. He is based out of the GT Savannah campus where he leads the environmental monitoring activities of the Coastal Equity and Resilience (CEAR) Hub. He holds a joint appointment with Georgia Tech's Institute for People and Technology and the School of Computer Science. He received a bachelors degree from Vanderbilt University and masters and doctorate degrees from Georgia Tech. As a long time coastal resident, he has a lifetime of experiencing with the realities of climate change for our communities.



Lydia Olander

Nicholas Institute for Energy Environment & Sustainability at Duke University

Lydia Olander is a Program Director at the Nicholas Institute for Energy Environment & Sustainability at Duke University and adjunct professor at the Nicholas School of the Environment. She works on improving policy and accelerating evidence based implementation of climate resilience, nature-based solutions, natural capital accounting, and environmental markets. She leads the National Ecosystem Services Partnership and sits on the Universities Climate Commitment action team. She recently spent two years with the Biden Administration at the Council on Environmental Quality as Director of Nature based Resilience and before that spent five years on the Environmental Advisory Board for the US Army Corps of Engineers. She is a fellow of the American Association for the Advancement of Science.



Tonya Bonitatibus

Savannah Riverkeeper

As Executive Director and Riverkeeper for Savannah Riverkeeper, Tonya watches over the health and vibrancy of the Savannah River. She has served in that role for over 15 years, helping successfully guide the organization through threats to water quality and grow general awareness among the community for the need to protect our water sources. She is the founder of Veterans for Clean Water. She serves on the Executive Committee for the Waterkeeper Alliance's Board of Directors, and serves as Chairman of the International Waterkeeper Council, serves on the Leadership Committees for Georgia Water Coalition, SC Basin Advisory Council, SC Savannah River Water Council, is a board member of Veteran K9 Solutions, the Charlie Wharton Center, and the Vice President of the Augusta Women's Club. She is a tireless advocate dedicated to protecting, restoring, and improving the Savannah River basin and helping resolve water crisis issues throughout the globe.



Dr. Vamsi Krishna Sridharan

Tetra Tech

Dr. Vamsi Krishna Sridharan, PhD, M.ASCE is a senior environmental scientist at Tetra Tech with 19 years of experience building computer models for bridging science and management of water systems. Vamsi is leading multiple EPA-, state-, and local government-, and private sector-supported projects to improve coastal resilience to climate change. These projects range from eutrophication management in Buzzards Bay, to developing guidance on applying nature-based shoreline protection in Chesapeake Bay and Southeast Florida. While in California, Vamsi led an interdisciplinary team comprised of academics, federal and state agency experts, and private sector consultants in building the National Marine Fisheries Services flagship

juvenile salmonid migration model, which is being used in the biological assessment of water operations and restoration actions in California. Vamsi serves on the American Society of Civil Engineers' task committee on watershed management and has authored a manual of practice on water quality modeling and numerous peer-reviewed papers on the role of remote sensing and stakeholder engagement for better watershed management. Vamsi has a PhD in environmental fluid mechanics from Stanford University, where he was supported in part by the prestigious Shah- Leawell fellowship for the sustainable built environment.



Megan Shaw

Southeast Coastal Ocean Observing Regional Association (SECOORA)

Megan Shaw has been with Southeast Coastal Ocean Observing Regional Association (SECOORA) since January 2023 as their Office and Events Manager. She has a diverse background in accounting, real estate, and management. In addition to managing and organizing business logistics within SECOORA, Megan helps SECOORA and their affiliated organizations (e.g. SCDRP) host successful meetings and workshops. Throughout her career, she has found her passion is working with people to help them achieve their goals.

**Chris Mack**

Chris has 33 years of professional engineering, management, and leadership experience, including 13 years with the U.S. Army Corps of Engineers and 20 years in private sectors. He offers clients a broad perspective of public and private sector expertise in hydrology, hydraulics, coastal engineering, resiliency, nature-based solutions, GIS, flood plain management, risk analysis, numerical modeling, software engineering, construction, design-bid-build, and program/project management. Chris has managed multiple coastal engineering departments and teams for several mid to large size firms plus several JV project teams for large-scale multistate projects. Chris

received his BS in Civil Engineering (Water Resources Engineering) and MS in Civil Engineering (Coastal Engineering) from North Carolina State University. He went on to earn a MS in Computer Science from the College of Charleston and The Citadel, followed by an MBA from The Citadel. He is a licensed professional engineer in South Carolina, North Carolina, Florida, Alabama, Louisiana, and Texas.

**Dr. Matthew Pendleton**

Southeast and Caribbean Regional Geospatial Coordinator

Matt is the Southeast and Caribbean Regional Geospatial Coordinator and GIS trainer with the NOAA Office for Coastal Management in Charleston, South Carolina. Matt provides technical assistance and helps coordinate geospatial activities for governmental and coastal management organizations by connecting organizations with the appropriate NOAA staff and the relevant data, tools, and training for the task at hand. His role is also to cultivate and maintain long-term relationships with primary users and partners, state GIS coordinating bodies, and others in the region, evaluate their current use of OCM tools and data, and identify their needs for technical support.

**Dr. Donya Frank-Gilchrist**

U.S. Geological Survey St Petersburg Coastal and Marine Science Center

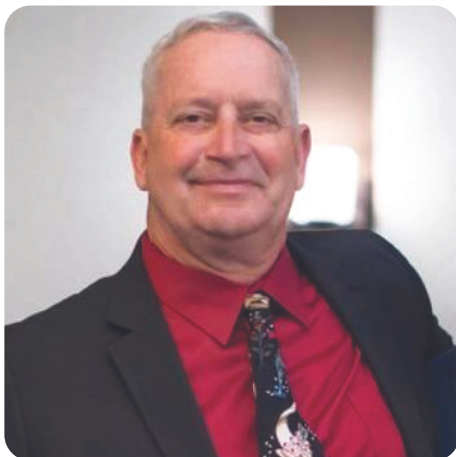
Dr. Donya Frank-Gilchrist is a Research Oceanographer at the U.S. Geological Survey St Petersburg Coastal and Marine Science Center. She works with the Coastal Change Hazards team to assess the impacts of storms on coastal infrastructure, shorelines, and coastal communities. Her research focuses on improving the predictions of hydrodynamics and sediment transport in coastal regions to better inform policy and decision-making. In addition, she leads the “Stakeholder Engagement for Natural Hazards Investigations in the Caribbean” project, aimed at connecting with local natural hazards experts in the US territories and international Caribbean to learn about their hazards of primary concern, current resources, and mitigation measures. The team is exploring the potential for collaboration on regional-scale hazards in an effort to reduce disaster risk to coastal hazards and improve resilience across the region.



Jamie King

Jamie has a B.A. in biogeography and has worked in environmental sciences for 30 years. He joined Zulu as our environmental projects manager in 2020. In his three years with Zulu Marine, he has spearheaded our living shoreline and nature-based solutions programs, as well as leading/advising on other environmental projects. Jamie was a key contributor in the Golden Ray car-carrier disaster response project in St. Simons Sound. He is currently working closely with the Georgia Department of Natural Resources in developing the standards and methodologies of living shoreline construction for the Georgia coast.

Prior to working with Zulu he was a wildlife biologist with the Alaska Department of Fish and Game, and later with the Georgia Department of Natural Resources where he managed wetlands research and salt marsh surveys.



Shannon Marina

Since joining Zulu in 2015, Shannon has developed and directed the first aerial assessment program to be utilized by Tetra Tech in a FEMA hurricane disaster zone for the purpose of debris location & volumetric assessment. He also developed and directed the first Beta test program for the purpose of utilizing Unmanned Aerial Systems (UAS) to conduct tower condition assessments for Crown Castle & PCRG, and has collected and processed storm debris data in seven major hurricane disaster zones. He is highly experienced in multiple mapping software platforms and in all aspects of waterway debris assessment and removal.

Prior to coming to Zulu, Shannon owned Aerial Survey Group. This was one of the first 100 companies in America to be granted an FAA section 333 waiver, and were among the first entities in the U.S. to legally operate Unmanned Aerial Systems (UAS) commercially.

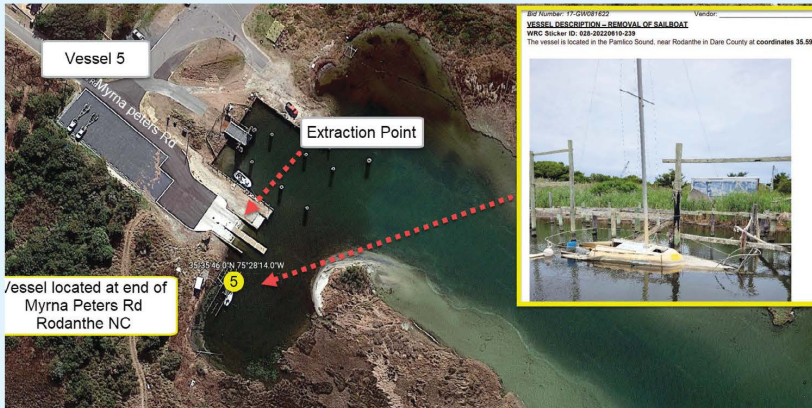


Rusty Batey

Rusty formed Zulu Marine Services with his father in 2006 to provide marine transport and sonar services. In the years following, the family business grew into a full-scale marine services company providing marine debris mapping and clean-up, hazardous material remediation, disaster response, ROV services, marine platforms, marine excavation, dredging and small marine construction projects.

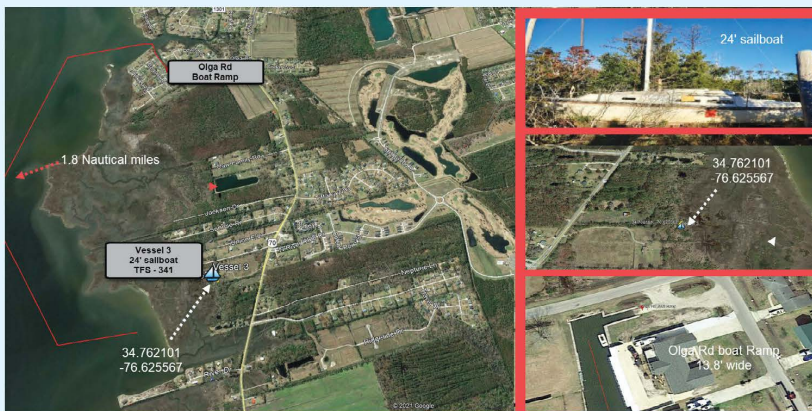
Rusty has provided project management and oversight on multiple large projects, including: Deepwater Horizon (BP Oil Spill), Hurricane Sandy, Hurricane Matthew (for Beaufort County, SC, and the State of Georgia), Hurricane Irma for the State of Georgia, and the Golden Ray wreck in St. Simons Sound, among others. Rusty's role in the company now is to spearhead business development and profitability goals, and to ensure quality of service to the many high-profile customers Zulu serves. Prior to forming Zulu, Rusty was a successful technology entrepreneur.

Zulu uses advanced mapping and assessment technologies to aid faster recovery.



In the wake of a devastating event, immediate aerial views are critical. Once the immediate danger has passed and the threat to human life is gone, the time comes to begin sorting through the wreckage.

Zulu disaster mapping teams supply crucial data in the most critical times, providing quantitative assessments and geo-referenced mapping of affected areas for stakeholders.



- Safely assist and accelerate risk assessment
- Map areas of damage
- Assess debris fields for scope and volume
- Video footage and still images are provided
- Volumetric assessments
- Debris and damage location maps
- Geospatial data
- Written summary reports



(855) 400-9858
 zuluscovery.com





DATA DEMOCRATIZATION TOOL



Accessible Data is usable Data. What's in your water?

ACCESS

For the average public, accessing scientific and recreational surface water details is usually restricted. KYR consolidates this information in one place, offering custom mapping and selectable layers.

LOCATIONS

Know Your River merges over 300,000 data points from federal, state, and local authorities, incorporating credible NGO information and contributions from trained citizen scientists.

CONNECTION

Technology and complex data libraries often restrict easy data access. Know Your River overcomes this challenge with a user-friendly web-based platform that is simple to navigate and use.

KNOWYOURRIVER.COM

FOR SCIENCE - FOR PUBLIC - FOR GOVERNMENT

Live now in a growing number of Southeastern United States River systems.

FREE data access for all. Scalable worldwide.



The Tools & Method | Know Your River



SURVEY 123

Analytical field data gathered on a daily/weekly basis by citizen scientist and Riverkeepers uploaded via mobile device or desktop



PYTHON

Database management of live and static data from Riverkeepers, Federal & State Agencies, Municipalities, and other organizations. Data is automatically standardized, updated, and pushed to Dashboard and Hub hourly.



DASHBOARDS

Dynamic dashboard allows user to explore recreational, analytical, and point of interest data. Analytical data can be explored spatially and temporally while distances and directions to recreational and POI data can be obtained in app.



HUBS

All original and managed datasets are provided for users to download and utilize in their own research (Rest API, JSON, CSV, Shapefile).





IMPROVING OUR COASTS WITH HIGH-RESOLUTION LAND COVER DATA

Land cover is a foundational data set that provides valuable information for a range of applications. By comparing one year to another, people can also document how ground cover changes over time.

NOAA, in conjunction with several partners, is moving from a 30-meter resolution to 1-meter product, which is 900 times more detailed. All of the coastal and Great Lakes states are being mapped, as well as the territories, and, for the first time, Alaska. The higher resolution means many new data uses, particularly on a site and local level. Here are some examples.

Flood Inundation Modeling and Risk Assessment

High-resolution land cover data helps modelers more accurately simulate how water will flow across the landscape, find areas that are flood-prone, and identify at-risk features, including buildings, roads, and bridges.

- **Improved Storm Surge Modeling.** Land cover data is a key input for the National Weather Service's Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model, which estimates storm surge heights. The higher the resolution of the input data, the more accurate the model, which is particularly important in smaller island geographies. Puerto Rico and the U.S. Virgin Islands, for instance, are benefiting greatly from the inclusion of high-resolution data.
- **Identifying Flood Risks to Transportation Infrastructure.** In Texas, high-resolution land cover data was integrated with flood modeling layers. This effort made it possible to analyze bridges under a variety of flood scenarios, with several bridges identified as potentially at risk from future flooding.
- **Lowering Community Flood Insurance Costs.** The Town of Pawleys Island, South Carolina, used high-resolution land cover data to map open space in the floodplain and calculate the amount of credits the community could earn through the open space preservation activity in the Federal Emergency Management Agency's Community Rating System program. That work helped the town advance to the next level (class) in the program, which gave home and business owners in the community a 25 percent discount on flood insurance premiums.

Stormwater Management and Water Quality Protection

High-resolution land cover data improves a community's ability to identify sources of pollution and estimate pollutant amounts, including erosion sediments. Officials also use this information to better understand where pollutants and sediments might end up and how this issue could impact drinking water and coastal habitats.

- **Stormwater Utility Fees.** The City of Jacksonville, Florida, is using high-resolution land cover data to map more than 350,000 parcels in Duval County. The map is helping the Department of Public Works more accurately assess pervious and impervious space on private properties, and use this information to determine landowner obligations under the city's impervious area charge program.
- **Assessing a Stream's Environmental Health; Stormwater Runoff Modeling.** High-resolution land cover was used in Snohomish County, Washington, to determine land cover types within stream buffers and sub-basins. The information is used to develop stream health reports, which the county uses to focus the resources needed to protect healthy waters and improve impaired bodies of water. The data is also used to develop stormwater runoff models.
- **Identify Drinking Water Sources and Water Health.** In Connecticut, high-resolution land cover was used, statewide, to identify, prioritize, and protect drinking water sources. Land cover data was used to identify parcels with high amounts of impervious surface and turf (which can degrade water quality) and undeveloped parcels (which can help ensure water quality). The analysis would have been impossible without this detailed information resource.
- **Balance Development and Environmental Protection.** The Guam Coastal Management Program uses high-resolution land cover data to recommend ways in which development might lessen watershed stressors that various projects may cause.

Heat Risk, Urban Forestry, and Tree Equity

High-resolution land cover data can be used to identify spaces within urban areas that are particularly hot, such as asphalt parking lots, buildings with dark roofs or facades, and areas with sparse vegetation. The data can also be used to identify areas that have tree canopy and areas where tree planting could help mitigate heat impacts.

- **Mitigating Urban Heat Risks and Promoting Tree Equity.** As part of a NOAA heat study grant, Charleston, South Carolina, officials used high-resolution data to determine which subdivisions were experiencing unusually high impacts from heat. They then analyzed areas available for tree plantings in public housing properties. Tree cover will help mitigate heat risk and improve green space within these neighborhoods.

Wetland Monitoring, Conservation, and Restoration Planning

High-resolution land cover can capture landscape conditions, including wetlands. The level of detail available from this data can improve monitoring efforts, increase one's understanding of how the landscape can impact wetlands and other important features, be used to analyze carbon stocks, and help evaluate the best places for management actions, including adaptation measures taken to address future sea level rise.

- **Marsh Resilience and Comprehensive Management.** High-resolution wetland mapping in New Hampshire was used to evaluate current conditions and the future resilience of salt marshes. This information was used to pinpoint, marsh-by-marsh, where restoration, experimental science, land conservation, and land use planning could be most effective.
- **Documenting Air Pollution Impacts.** Using high-resolution land cover and land cover change data, scientists were able to document higher carbon dioxide and methane emissions in soils and waters near mangrove forests that were near densely urbanized areas. This information is being used to determine the effects of urbanization on mangrove systems and their ability to sequester carbon.

Additional Examples

- **Discovering Gaps in Broadband Access.** Alaska used high-resolution land cover to map buildings and internet coverage. This documentation is boosting the likelihood that government funding can be used to help provide services to those areas currently without broadband access.
- **Assessing Equitable Water Use.** California's urban residential landscape was mapped, and the data was combined with a software system that enables water suppliers to identify and target inefficient water users. This information is strengthening state enforcement of water-efficiency laws, aiding local drought resilience and drought planning, and documenting agricultural water-use efficiency.

To Learn More:

- Visit the C-CAP high-resolution land cover page: coast.noaa.gov/digitalcoast/data/ccaphighres
- Communicate with a land cover specialist: coastal.info@noaa.gov.



Coastal Equity and Resilience Hub



Map Spot

The Coastal Equity and Resilience (CEAR) Hub uses this creative and accessible map-making tool for community engagement, asset mapping, and resilience planning, as well as in K-12 educational programs.

Map Spot is a hybrid, versatile map-making tool that aims to empower people to tell their own stories about the places they live. Developed by the Local Data Design Lab at Georgia Tech and inspired by the St. Louis Map Room, it facilitates innovative discussions about community resilience and helps connect highly technical datasets, such as sea level trends, to the daily lived experience of residents.

Map Spot is also used in **Youth Advocacy for Resilience to Disasters (YARDs)**, a curriculum that helps middle school students map the effects of intersecting disasters in their communities and identify infrastructural improvement projects to address them.



Leading with Science®

Tetra Tech’s innovative, technology-enabled solutions help our clients address their water, environment, sustainable infrastructure, renewable energy, and international development challenges.

We are proud to be home to leading technical experts in every sector and to use that expertise throughout the project life cycle. Our commitment to safety is ingrained in our culture and at the forefront of every project.

Climate Change and Coastal Community Resilience

We realize the importance of building resilience to the impacts of climate change, which requires awareness of potential impacts and creative solutions at both national and local levels. Tetra Tech works with clients to develop site-specific analyses and strategic recommendations to improve the resiliency of communities and programs. Services include:

- Nature-based climate resilience guidance
- Model-based living shoreline designs
- Marsh, submerged aquatic vegetation, and benthic habitat surveys and restoration
- Stream and wetland restoration
- Blue carbon sequestration analysis
- Monitoring and data collection
- Community engagement and outreach

Low Impact Development and Green Infrastructure for Improved Stormwater Management

As the focus of stormwater management has evolved and moved toward distributed solutions of low impact development and green infrastructure, Tetra Tech has partnered with clients to assess, plan, design, and implement those practices. Services include:

- Watershed runoff and pollution modeling
- Hydrology and hydraulic modeling
- Creek-to-coast hydrodynamic modeling
- Stormwater best management practice design and implementation
- Total maximum daily load development
- Flood control and mitigation design and implementation
- Coastal protection infrastructure design and implementation

Disaster Protection Planning and Recovery Response

Tetra Tech provides support for both pre- and post-disaster recovery. Dedicated to helping state and local governments plan for and recover from natural and human-caused disasters, Tetra Tech offers field-tested and proven methodology for emergency readiness, continuity planning, and innovative ways to plan and design resilient, reliable, acceptable, and sustainable solutions to manage potentially devastating events. Services include:

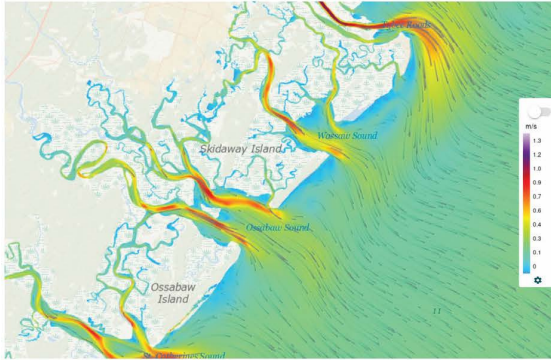
- Online dashboard development
- GIS and data-driven resource management
- Disaster response planning
- Real-time disaster response management and logistics support

Vamsi Krishna Sridharan, PhD, M.ASCE
Senior Environmental Scientist
Water Resources Innovation Manager

10306 Eaton Place, Suite 340, Fairfax, VA 22030
+1 (650) 862-2658
vamsi.sridharan@tetrattech.com



Coastal Equity and Resilience Hub



Smart Sea Level Sensors

The Coastal Equity and Resilience (CEAR) Hub has deployed a network of low-cost, internet-enabled water level sensors on docks and bridges throughout coastal Georgia to monitor water levels in real-time.

The hyper-local data from these sensors help support emergency planning and response during flood events and provide important information to aid scientists, engineers, and regional planners in quantifying the short- and long-term risks associated with continued sea level rise.

Developed at Georgia Tech using inexpensive, off-the-shelf parts, the sensors combine ultrasonic technology with a communications board that sends water level and air temperature observations over a LoRaWAN network every 5 minutes. These observations feed into a regional high-resolution coastal-ocean model that provides inundation estimates as well as near-term water level forecasts, all of which are then visualized on a custom web portal.

WHEN EVERY MINUTE COUNTS

Flood Decision Support in Real Time



During a hurricane or tropical storm, one of the biggest threats to communities is compound flooding from storm surge and precipitation. Forecasting such flooding in real time, however, is incredibly challenging --- especially with complex coastlines and networks of bayous, canals, flood gates, pump stations, and levees.

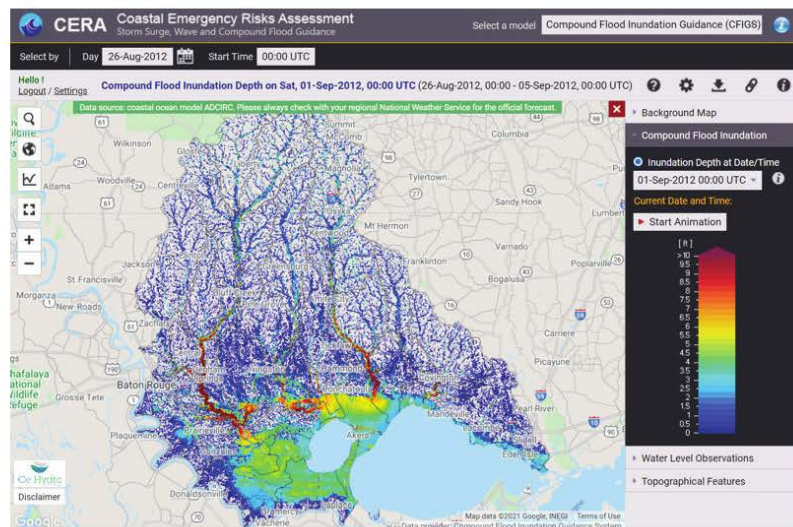
Our multidisciplinary team is addressing this challenge by providing decision-makers with flood guidance in real time. With a **15-year track record of proven success**, our team deploys supercomputer-powered models to inform critical decisions at a large scale.

Whether it's before, during, or after a storm event, emergency management personnel can access our guidance through the Coastal Emergency Risks Assessment (CERA) web mapping application to **understand the timing and extent of flooding**.

Our intuitive Google Maps interface displays **critical factors in real time**, such as water elevations, flood depth, wave heights, and arrival time of tropical-storm-force winds.

Because our system is based on **the distinctive aspects of each storm while it is forming**, it provides more accurate forecasts than probabilities based on previous storms.

Additionally, it can inform decision makers about "what-if" scenarios, showing what would happen if a storm were to change course or increase in intensity.

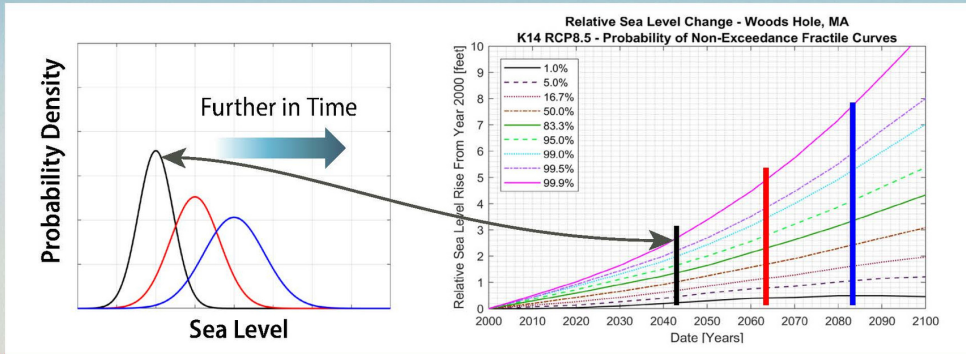


When decisions about life and property are at stake, it's critical that the technology is based on up-to-date data. We work closely with State governments and Federal agencies to assimilate ground truth data and continuously refine the model, making the results more accurate for decision makers.

Our Team	Storm Surge Live	Coastal Emergency Risks Assessment
	Louisiana State University	Seahorse Coastal Consulting
	Texas Advanced Computing Center	CE Hydro
Contact	<i>info@stormsurge.live</i>	

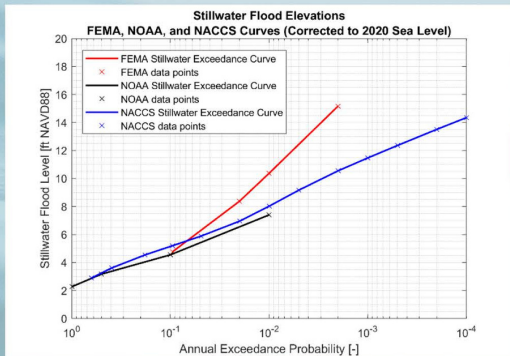
DESIGNING FOR SEA LEVEL CHANGE: SIMPLE ADAPTATION TECHNIQUES FOR COMMUNICATING UNCERTAINTY

Understanding and Embracing the Uncertainty in Sea Level Change



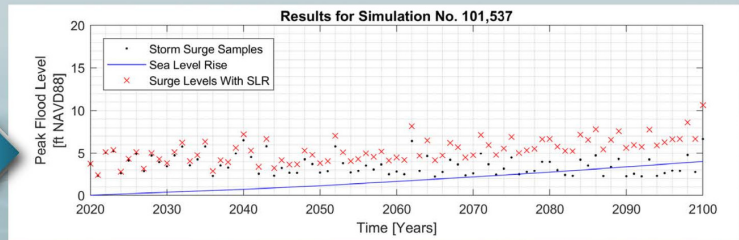
Sea Level Change represents an evolving risk throughout the life of a project. Understanding the uncertainty in this risk is key to good planning, i.e., not just planning for the worst case, but understanding what is most likely and what is less likely.

Make Use of Publicly Available Data for Tidal/Surge Flooding



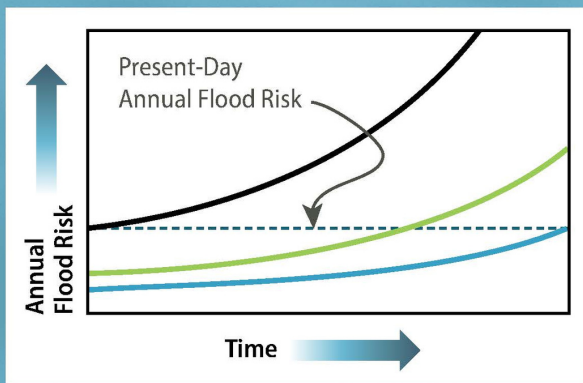
In most cases, the present-day flood risk due to storm surge can be obtained from public sources.

Monte Carlo Simulations to Evaluate Combined Effects



Monte Carlo Simulations may sound like a complicated or overly technical analysis. However, the method proposed here is simple and does not include any complicated hydrodynamic modeling. Statistical samples are taken from possible future sea level rise (SLR) scenarios and possible future storm scenarios, and the results are combined to see possible flooding outcomes. Statistics based on this data give an unbiased estimate of future flood risk, including both SLR and storms.

Incorporating SLR Information In Design -> "Design Allowances"



Allowance = Vertical Offset to Maintain Acceptable Flood Risk

Design Life Allowance
(average annual risk = present annual risk)

Instantaneous Design Allowance
(annual risk <= present annual risk)

Since flood risk evolves over the lifetime of a project. The planning in design, including vertical offsets should consider the likely changes to the risk profile. Sometimes planning for an acceptable average risk over the life of the project is more reasonable.



For details contact
Developer, Jeff Oskamp

Climate Mapping for Resilience & Adaptation (CMRA)

Climate Mapping for Resilience and Adaptation (CMRA) helps people assess their local exposure to climate-related hazards. Understanding exposure is the first step in determining which people, property, and infrastructure could be injured or damaged by climate-related hazards, and what options might be available to protect these assets.

CMRA is designed to work with the U.S. Climate Resilience Toolkit. It **integrates decision-relevant information from across the U.S. Federal government, including:**

- **Climate maps and data** — both historical observations and future projections;
- **Non-climate data** — including building codes and economic justice and social vulnerability information; and
- **Federal grant funding opportunities**

CMRA includes data to assess exposure to numerous climate hazards including: **extreme heat, drought, wildfire, flooding, and coastal inundation**



CMRA [links](#) to other relevant federal resilience resources related to nature-based solutions, climate adaptation plans, sea level rise, flood risk management, and building codes

Explore CMRA at:
resilience.climate.gov



CMRA

Additional federal resources on nature-based solutions will also be shared.



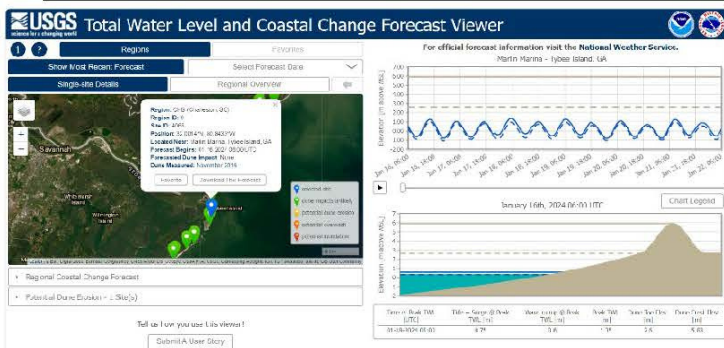
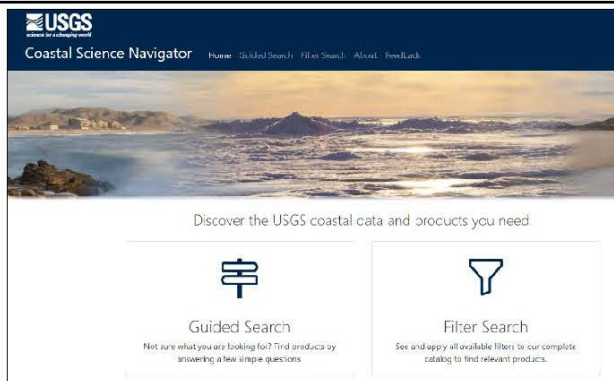


Coastal Change Hazards Tools

Coastal Science Navigator

The Coastal Science Navigator helps users discover USGS Coastal Change Hazards information, products, and tools relevant to their scientific or decision-making needs. The Guided Search helps viewers find products by answering simple questions. The Filter Search allows the viewer to see and apply all available filters for the complete catalog to find relevant products.

To learn more, visit:
<https://www.usgs.gov/apps/coastalsciencenavigator/>



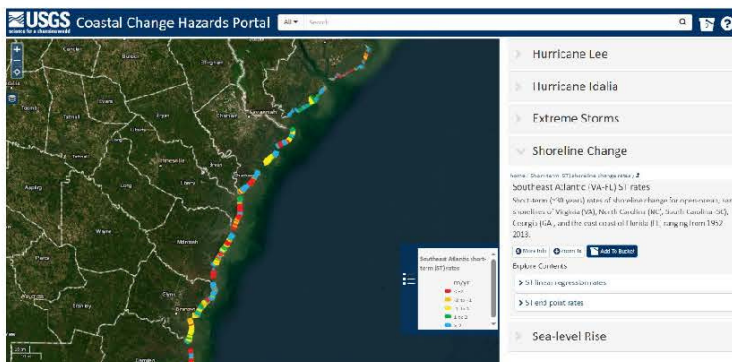
Total Water Level Viewer

Total water level at the shoreline is the combination of tides, surge, and wave runup. The USGS collaborates with the National Oceanic and Atmospheric Administration /National Weather Service and the National Centers for Environmental Prediction to make total water level and coastal change forecasts. This operational model combines NOAA wave and water level predictions and a USGS wave runup model with beach slope observations to provide regional weather offices with detailed forecasts of total water levels. The USGS compares these total water levels to

the dunes along sandy coastlines to forecast the probability of coastal change.
<https://coastal.er.usgs.gov/hurricanes/research/twviewer/>

Coastal Change Hazards Portal

The Coastal Change Hazards (CCH) Portal is an interactive map with downloadable datasets and layers that displays extreme storms, shoreline change, and sea level rise. As climate change continues, the coastline will experience many changes in sea level, shorelines, and extreme weather events. The CCH Portal displays datasets for all of these in an interactive map. With future forecasts of short-term (event-scale) and mid-term projections (up to a few decades) as well as historical data, CCH provides beginner-level tool users a low-effort tool to explore coastal changes in their area(s) of interest. No data input is needed. <https://marine.usgs.gov/coastalchangehazardsportal/>



Session 5: NATURE-BASED SOLUTIONS: EVALUATION OF SUCCESS



Moderator: Dr. Michelle Covi

Georgia Sea Grant Marine Extension & Georgia Sea Grant

Michelle Covi is the Coastal Resilience DoD Liaison with University of Georgia Marine Extension and Georgia Sea Grant. She works to connect NOAA and Sea Grant resources with defense community coastal resilience planning and projects through a partnership with SERPPAS (Southeast Regional Partnership for Planning and Sustainability) and with the Department of Defense REPI (Readiness and Environmental Protection Integration) program. She leads the SERPPAS Coastal Resilience and Regional Adaptation Work Group and is on the steering committee for the Southeast Salt Marsh Initiative. Previously, she led research and outreach programs as a Virginia Sea Grant extension partner with Old Dominion University in Norfolk.

She completed her PhD in Coastal Resources Management at East Carolina University. She also has a Master's degree in Zoology (Marine Science) from University of Georgia.



Dr. Lydia Olander

Nicholas Institute for Energy, Environment and Sustainability, Duke University

Lydia Olander is a Program Director at the Nicholas Institute for Energy Environment & Sustainability at Duke University and adjunct professor at the Nicholas School of the Environment. She works on improving policy and accelerating evidence based implementation of climate resilience, nature-based solutions, natural capital accounting, and environmental markets. She leads the National Ecosystem Services Partnership and sits on the Universities Climate Commitment action team. She recently spent two years with the Biden Administration at the Council on Environmental Quality as Director of Nature based Resilience and before that spent five years on the Environmental Advisory Board for the US Army Corps of Engineers. She is a fellow of the American Association for the Advancement of Science.



Dr. Mariko Polk

North Carolina Sea Grant

Dr. Mariko Polk is the Coastal Processes Specialist for NC Sea Grant. NC Sea Grant prioritizes research, education, and outreach to build more resilient communities, economies, and healthy coastal ecosystems. In her position, she serves as a resource for coastal processes and hazards including hurricanes, sea level rise, and climate change. Dr. Mariko Polk has a Ph.D. in Marine Biology from UNC Wilmington, specializing in ecosystem ecology, in other words how physical and biological components interact in coastal wetlands. Her research focuses on estuarine ecology, coastal wetlands, and the implications of nature-based management on human and ecological dimensions. Her research uses geospatial technology like high resolution RTK-GPS, lidar, aerial drone technology, and multispectral data to study macro-scale and ecosystem-level topics. Dr. Polk is a dog person.



Dr. Brian Haus
University of Miami

Brian K. Haus is Professor in the Ocean Sciences Department at the University of Miami's RSMAES school where he also serves as the Associate Dean for Infrastructure. He has authored over 95 peer-reviewed publications in the field of coastal hydrodynamics, air-sea interactions and wave dynamics. His current research focus is on experimental studies of coastal winds, air-sea interactions in high winds, improving coastal community resilience through hybrid structures and improved understanding of the impacts of landfalling hurricanes. He has planned and executed numerous field and laboratory experimental programs including the largest ever Lagrangian drifter study of submesoscale structures in the Gulf of Mexico.

He is the founding Director of the world-leading SUSTAIN wind-wave facility at the University of Miami. Ongoing research projects include studies sponsored by the National Science Foundation, the Office of Naval Research, the Defense Advanced Projects Research Agency and the National Institute for Standards and Technology.



Joy Brown
The Nature Conservancy

Joy Brown is the Resilient Communities Program Director for the South Carolina Chapter of The Nature Conservancy. She joined the SC team in 2008 when she created the marine program and started TNC's oyster reef restoration projects. That restoration work quickly evolved to focus on using nature for marsh shoreline stabilization projects which also provides habitat for over 100 marine species like crabs, shrimp and fish. Since 2015 she has also been working with coastal communities to mitigate flooding impacts using nature.

Session 6: INITIATIVES THAT SUPPORT COMMUNITY RESILIENCE



Moderator: Aranzazu Lascurain
NOAA Office for Coastal Management

Aranzazu arrived at NOAA's Office for Coastal Management in October of 2022. She carries out partnerships and regional coordination and implementation for NOAA's Office of Coastal Management as the Southeast and Caribbean Regional Lead. This also includes identification of challenges, prioritization of strategies, and developing engagement opportunities. She formerly worked at the Southeast Climate Adaptation Science Center for 10 years out of NC State University where she focused on mentorship of the Global Change Fellows and devoted her time to partnership building and tribal engagement. She believes that listening to and elevating community voices is one of the best chances we have for successful climate adaptation.

She has a B.A in Geography and Anthropology from the University of California, Berkeley and an M.S. in Environmental Studies from University of Oregon. She is originally from central Mexico and is a native Spanish speaker. Her coasts include the Salish Sea, the Gulf of Mexico (near where she was born), the South Atlantic and the Rappahannock Estuary where she raises the eastern oyster for personal consumption and water quality benefits.

She is based out of the NOAA CAP program office in Raleigh, NC.



Dr. Kim Waddell
University of the Virgin Islands

Kim Waddell is the project lead for the next US Virgin Islands Hazard Mitigation and Resilience Plan Update with support from FEMA and the Virgin Islands Emergency Management Agency (VITEMA). He is also the Principal Investigator and Project Director for the Virgin Islands Established Program for Stimulating Competitive Research (VI-EPSCoR)—a National Science Foundation-supported research capacity building program based at the University of the Virgin Islands that focuses on land-based impacts on marine ecosystem health and function in a time of Climate Change, as well as STEM education research and opportunities for underrepresented students from K-12 through MS degrees.

Prior to that, Kim was a Senior Program Officer with the National Academies of Sciences, Engineering, and Medicine. Dr. Waddell served as a study director for over a dozen National Academies reports on agriculture, fisheries and other natural resource management topics. Kim received his Ph.D. in Biological Sciences from the University of South Carolina and his B.A. in Environmental Studies from the University of California, Santa Cruz.



Damon Mullis
Ogeechee Riverkeeper

Damon grew up in rural south Georgia where he spent his free time outdoors fishing and exploring local rivers and streams. His time in the great outdoors led to an appreciation of the natural world and a passion for understanding how it works, a quest that led him to Georgia Southern University where he earned bachelor's and master's of science degrees in biology.

His research has focused on how physical and chemical changes in freshwater ecosystems affect their biological communities with projects, including studies on the connectivity between rivers and floodplains, the effects of beaver dams on freshwater invertebrate communities, secondary production of macroinvertebrates, nutrient monitoring, and water quality monitoring in rivers and streams.

Damon has served as the Riverkeeper and Executive Director at Ogeechee Riverkeeper since 2018. Ogeechee Riverkeeper's mission is to protect, preserve, and restore the water quality of the Ogeechee River basin.



Andrea Young Jones
Georgia WAND

Andrea Young Jones serves as the Government Relations and Public Policy Director for Georgia WAND. Andrea has a Master of Public Administration degree with an emphasis in public policy. She has served in Senior roles overseeing successful public policy and social justice campaigns promoting economic and environmental justice programs and anti discrimination legislation. Andrea has served as an executive in local government, overseeing the regulatory enforcement of the fair housing law and as Regional Director for a nonprofit advocating for free and fair elections. She is passionate about improving the quality of life for all Georgia residents and is advocating for Environmental Justice legislation that considers the cumulative impact of environmental hazards on overburdened communities in the permitting and approval of industrial facilities in Georgia's frontline communities.

**Alicia Brown**

City of Savannah, Georgia

Alicia Brown is the Acting Director of Sustainability for the City of Savannah. Since joining the City in August of 2021, Alicia has been responsible for the development and implementation of the 100% Savannah Plan, the City's roadmap for a just and equitable transition to 100% renewable electricity community-wide by 2035. Some of her proudest accomplishments in this role include leading five local governments to intervene in Georgia Power's 2022 IRP and Rate Case and overseeing the City's first solar install, which is creating workforce training opportunities for unemployed, underemployed, and returning Savannahians.

For this work, she was honored with Georgia Solar Energy Association's 2022 Woman in Solar award. Previously, Alicia worked for the Mississippi Public Service Commission as a DOE Solar Energy Innovation Fellow, where she played a leading role in the creation of a solar rebate program for low- and moderate-income customers and oversaw the first U.S. deployment of Allume Energy's SolShare product in an affordable multi-family housing development. Alicia has a bachelor's degree in chemical engineering from Mississippi State University.

**Christian Kamrath**

Resilience Program Manager, Office of Resilience, Miami-Dade County, Florida

Christian Kamrath serves as the resilience program manager for the Adaptation Team for Miami-Dade County's Office of Resilience, where he leads interdisciplinary work on sea level rise and flooding policy, risk assessments and community-based adaptation planning. Through collaboration across county departments, municipal, state, and federal agencies along with community-based organizations, colleges and universities, and other stakeholders, he is responsible for the implementation of the county's first Sea Level Rise Strategy (2021).

Prior to working for the county, he supported various coastal zone management, climate adaptation and long-term disaster recovery programs at the local, state, and federal level. Christian is a certified floodplain manager and holds a Bachelor of Science in Geography from the University of Florida and a Master's degree in City and Regional Planning from the University of North Carolina at Chapel Hill.

Session 7: FINANCING AND FUNDING FOR RESILIENCE



Moderator: David Johnston

Hamilton Advisors

David Johnston is a lawyer, advisor, and businessman, with over thirty-five years of experience working with a broad range of private sector, non-profit, and government organizations. David is the Founder and CEO of Hamilton Advisors, LLC, a South Carolina-based company that advises organizations and their leadership on challenges and solutions involving community resilience, risk mitigation and adaptation, and innovative funding and financing related to climate change and extreme weather events. Drawing on David's extensive experience as a business lawyer, and his expertise in complex corporate, securities, finance, and governance matters, Hamilton collaborates with numerous organizations to develop, finance, and implement creative solutions by leveraging its experience, expertise and relationships to solve complex climate-related challenges.

David Johnston is a lawyer, advisor, and businessman, with over thirty-five years of experience working with a broad range of private sector, non-profit, and government organizations. David is the Founder and CEO of Hamilton Advisors, LLC, a South Carolina-based company that advises organizations and their leadership on challenges and solutions involving community resilience, risk mitigation and adaptation, and innovative funding and financing related to climate change and extreme weather events. Drawing on David's extensive experience as a business lawyer, and his expertise in complex corporate, securities, finance, and governance matters, Hamilton collaborates with numerous organizations to develop, finance, and implement creative solutions by leveraging its experience, expertise and relationships to solve complex climate-related challenges.

David is a Senior Advisor with P3 Collaborative (Washington DC), the Institute for Social and Environmental Transitions-International (Boulder, Colorado), and the North Carolina Clean Energy Fund (Raleigh, NC). He is an Affiliated Expert with Adaptation Leader (Washington, DC). David has served as Senior Advisor to the American Red Cross Office of Disaster Cycle Services (Washington DC). David is a leader in the creation and operation of public/private partnerships, collaborative networks, and networks of networks. He has served as Chairman of the Transition Board and a member of the Executive Committee of the Charleston Resilience Network (Charleston, South Carolina).

Mr. Johnston works with and advises a broad range of funding and financing organizations, including financial institutions, public private partnerships, government agencies, and green banks. He works closely with PNC Bank, assisting PNC to identify opportunities and structure partnerships with the following PNC teams: Public Finance—including its Resiliency Funding Team; Sustainable Finance; and Community Development Banking. David works with a number of federal and state agencies, including FEMA. David works with FEMA's leadership and program officials engaged in program and policy developments and implementation of FEMA's resilience, adaptation, and mitigation programs. He works with communities to navigate FEMA's programs, funding opportunities and collaborative possibilities.

Over the course of his career, David has served on, and advised, boards of directors and advisory boards of numerous private sector and non-profit organizations, including the South Carolina Aquarium and the Palmetto South Carolina Region of the American Red Cross; the Dutch Dialogues Charleston, SC; SC Medical District Resilience and Finance Working Group, and The Charleston, SC Medical District Heat Watch Initiative. He currently serves on the Advisory Board of the Citadel Near Center for Climate Studies (Chairman of the Strategic and Corporate Governance Committee) and Medical University of South Carolina Neurosciences Advisory Board. He has also served as a voting delegate of The Ocean Exchange.

David is a frequent speaker and moderator at major conferences involving climate change, community resilience, finance, and risk mitigation, including: Sea Level Rise & Security in South Carolina: implications for Military and Civilian Communities. The Center for Climate and Security / Jackson Foundation (August 7, 2018); Securing Prosperity in the Coastal Zone. Virginia Academy of Science, Engineering and Medicine (November 7, 2018); Resiliency Funding Forum: A Discussion of Innovative Options for Coastal Localities. William & Mary Law School / Virginia Coastal Policy Center (May 3, 2019); The Three P's of Resilience: Planning, Partnership, and Paying For It All. William & Mary Law School / Virginia Coastal Policy Center (November 15, 2019); The Challenge of Financing Resiliency. College of Charleston / Riley Center for Livable Communities and William & Mary Law School / Virginia Coastal Policy Center (September 16, 2020); Georgia Climate Conference: Minimizing Georgia's Risk, Maximizing Georgia's Future (August 12-13, 2021); Southeast and Caribbean Disaster Resilience Partnership Annual Meeting: Unique Communities, Shared Problems: Addressing Resilience, Equitably (January 26-27, 2022); and the Southeast & Caribbean Disaster Resilience Partnership 2023 and 2024 Annual Meeting Steering Committee (January 24-25, 2023).

David is a member of the North Carolina State Bar and the American Bar Association. He is a member of numerous professional and civic organizations, including ARISE-US, the American Society of Adaptation Professionals (member of Funding and Finance Leadership Team) and the Regional Policy Committee of Charleston Metro Chamber of Commerce. David is a graduate of Kenyon College (1971, cum laude, English) and the Indiana University Maurer School of Law-Bloomington (1974).



Pamela Williams
FEMA

Pamela Williams was appointed by President Biden in 2022 to serve as the Assistant Administrator for the Federal Emergency Management Agency (FEMA) Grant Programs Directorate (GPD). GPD's mission is to deliver and support grant programs that help the Nation before, during, and after disasters in order to make the country more resilient. In this role, Ms. Williams is responsible for agency-wide grants management policy and the \$500 million Grants Management Modernization initiative to modernize grants-related business processes to improve the administration and oversight of the billions of grant dollars the Directorate awards annually.

During her tenure with GPD, she has overseen transformative changes in policies, procedures and outcomes as Congress has expanded the directorate's portfolio with the creation of three new grants: the State and Local Cybersecurity Grant Program, the Tribal Cybersecurity Grant Program, and the Shelter and Services Program.

During this time, Ms. Williams also oversaw the first major overhaul of the Terrorism Risk Methodology used in preparedness grant programs; led the implementation of the inaugural Community Disaster Resilience Zones; oversaw FEMA's first Comprehensive Grants Review; and revitalized stakeholder engagement with more than 300 outreach events with 25,000 participants.

Before rejoining FEMA, Ms. Williams spent three years in the private sector working with a wide range of stakeholders to build partnerships and resources focused on building disaster resilience across America's communities as the Director of Mitigation and Resilience for IEM and as the Executive Director of the BuildStrong Coalition. From 2014 to 2019, she served as Counsel for the U.S. House Transportation and Infrastructure Subcommittee on Economic Development, Public Buildings and Emergency Management, where she advised the Committee and Congressional leadership on Emergency Management, FEMA, the Stafford Act, and disaster-related matters. Most notably, she was the principal drafter and successfully led negotiations with multiple committees, House leadership, the Senate, and the Administration, culminating in enactment of the most transformational piece of legislation since Hurricane Katrina, the Disaster Recovery Reform Act, P.L. 115-254.

During her previous tenure at FEMA, Ms. Williams served as the Deputy Director of Congressional Affairs, responsible for directing and executing the Agency's legislative program, and as the Associate Chief Counsel for Legislation and Policy for FEMA, serving as an Advisor to FEMA, DHS leadership, and the Administration on congressional actions and managing the Agency's response to congressional, White House and departmental investigations.



Alan Robertson

AWR Strategic Consulting

Alan is Principal, AWR Strategic Consulting (AWR), a management consulting firm working with clients across the country on projects from planning through execution.

As Project Manager for the City of Tybee Island Georgia, AWR has planned and executed several resiliency projects, among them a \$15 million project for Tybee's beach and dune nourishment, a \$300,000 project to assess flood mitigation options, and a \$250,000 stormwater management plan. He is the City's principal liaison with the Georgia Department of Natural Resources and the US Army Corps of Engineers.

AWR has raised more than \$10 million in Federal and State grants to support Tybee's initiatives, including Federal Emergency Management Agency .

(FEMA), National Fish and Wildlife Foundation (NFWF), National Oceanographic and Atmospheric Administration (NOAA), Georgia Department of Natural Resources (GADNR), and Congressional earmarks. Alan was formerly Executive Vice President and Global Head of Sales, Service, and Marketing for Northern Trust Asset Management, where his responsibilities included a \$110-billion mutual fund complex and managing a global staff of 230 people



Tonya Bonitatibus

Savannah Riverkeeper and Waterkeeper Alliance

As Executive Director and Riverkeeper for Savannah Riverkeeper, Tonya watches over the health and vibrancy of the Savannah River. She has served in that role for over 15 years, helping successfully guide the organization through threats to water quality and grow general awareness among the community for the need to protect our water sources. She is the founder of Veterans for Clean Water. She serves on the Executive Committee for the Waterkeeper Alliance's Board of Directors, and serves as Chairman of the International Waterkeeper Council, serves on the Leadership Committees for Georgia Water Coalition, SC Basin Advisory Council, SC Savannah River Water Council, is a board member of Veteran K9 Solutions, the Charlie Wharton Center, and the Vice President of the Augusta Women's Club. She is a tireless advocate dedicated to protecting, restoring, and improving the Savannah River basin and helping resolve water crisis issues throughout the globe.

**Patrick Howell**

Institute for Building Technology & Safety (IBTS)

Patrick Howell is a program manager for the Institute for Building Technology and Safety (IBTS), where he leads efforts to develop and implement state and local strategies for resilience to natural and man-made hazards. Working with the IBTS board of directors, represented by the National League of Cities, International City/County Management Association, and National Governors Association, Howell troubleshoots resilience concerns raised by communities across the United States. He is the leader of IBTS' Community Resilience Assessment Framework and Tools, working with pre-and post-disaster communities to determine both their biggest risks and their most significant opportunities. Currently, this work is most robust in Puerto Rico, where IBTS has a significant role in island-wide post-disaster recovery efforts.

Howell has 15+ years of experience spanning the public, private, and nonprofit sectors, with expertise in local government, humanitarian assistance, and disaster recovery. He is co-founder and president of Hispanola Health Partners, Inc., a Haitian-based, nonprofit health services organization, designed to reduce the impacts of extreme poverty and improve quality of life through comprehensive, integrated primary health care. Howell holds a bachelor's degree in international affairs from the University of Colorado Boulder and a master's degree in international relations from American University.

**Mary Boyer**

The World Bank

Mary Boyer is a Disaster Risk Management Specialist who started working with the Bank as a consultant in 2015, then joined the LAC DRM team in 2018. She has worked primarily in the Caribbean and Mexico on development of Cat DDOs and implementation of disaster vulnerability reduction projects, as well as a Disaster Risk Financing Technical Assistance for Caribbean countries that focuses on building capacity within Ministries of Finance towards DRF strategy development. Prior to the Bank, she supported the development of the inaugural risk pool of African Risk Capacity, a parametric drought risk insurance product developed by a Specialized Agency of the African Union.

She has also managed community-driven disaster risk management projects through counterinsurgency and stabilization programming in Afghanistan with USAID. Mary has a BA in anthropology and peace studies from the University of Notre Dame, and a masters in international economics from the Johns Hopkins School of Advanced International Studies. She has two kids under five and loves teaching them how to garden and identify bugs.

Session 8: RESILIENCY IN A CHANGING RISK LANDSCAPE

Moderator: David Johnston, Hamilton Advisors

Pamela Williams, FEMA

Note: Please refer to the speaker bios in the Session 7 section.



Ray Farmer

Former Director of South Carolina Department of Insurance

Ray Farmer's involvement in the insurance industry has spanned over fifty years.

After a 33 year career with the American Insurance Association, Ray was asked by then South Carolina Governor Nikki Haley to serve as the Director of the South Carolina Department of Insurance.

During his 9 years at the Department of Insurance, he also served as the 2020 President of the National Association of Insurance Commissioners (NAIC).

In 2021, to honor Ray's years of service and exemplary leadership in the insurance sector Ray was presented with the NAIC President's Award for Distinguished NAIC Leadership. The award has now been renamed in his honor as the Raymond G. Farmer Award for Exceptional Leadership.

He continues to stay involved in the insurance industry as he serves on the Board of the Georgia Underwriting Association, and as one of three directors on the NAIC educational foundation to provide scholarships to students from diverse backgrounds seeking to pursue careers in the regulation and business of insurance.



Raghuv​eer Vinukollu
Munich RE

Raghuv​eer Vinukollu is the Head of Climate Insights and Advisory at Munich Reinsurance America, Inc. based in Princeton, New Jersey. He is a member of the Strategic Products team and also a core member of the Nat Cat Solutions group focusing on development of innovative products designed to cover various natural catastrophe and climate exposures.

Raghuv​eer has a PhD in land surface hydrology from Princeton University. He has often expressed his thoughts on the impact of flooding and the changing risk landscape on personal property, local businesses and communities. He is a passionate advocate for climate adaptation and resiliency with emphasis on the role of insurance and public private partnerships in building resilient communities.

Raghuv​eer’s expertise in Climate Resilience is reflected in the recent studies titled “Re | imagining resilience in a post pandemic world” and “Nature’s remedy: Improving flood resilience through community insurance and nature-based mitigation”, in which he was the main contributor.

Raghuv​eer is also one of the members of the State of California Climate Insurance Working Group and a board member of Helvetas USA (non-profit). He is also a member of the Corporate Advisory Board for the Mississippi River Cities and Towns Initiative (MRCTI) and an Editorial Board member of the Nature Journal on Climate Action.



Jonathan Gonzalez
Raincoat Insurance Inc.

Jonathan Gonzalez is the CEO and co-founder of Raincoat Insurance Inc., a platform to support insurers in the development and distribution of parametric insurance solutions for consumers in at-risk countries and regions. Since January 2020, Raincoat Insurance Inc. has been striving to democratize access to financial resilience in the face of natural disasters.

Jonathan received his Bachelor of Science (B.Sc.) degree in Computer Engineering and a Minor in Economics from the University of Puerto Rico-Mayaguez (2012). During this time, Jonathan was one of 81 rising seniors selected nationwide for an intense one-week Summer Venture in Management Program training program at Harvard Business School.

Jonathan is passionate about startups and user experience. Prior to founding Raincoat, Jonathan worked for 10 years in the tech industry helping and supporting tech founders grow from Puerto Rico. Jonathan has a rich background as a freelance full stack developer and UX designer for a variety of organizations and Fortune 500 companies.

SCDRP Staff



Tina Jackson

SCDRP Program Coordinator

Tina is a Florida native and a Certified Wildlife Biologist, interested in technology, coastal resiliency, and collaborative partnerships. She has a B.S. in Biology and Marine Science, an M.S. in Forest Resources and Conservation and graduate certificates in Natural Resource Policy & Administration and Environmental Education & Communication. Her research has used spatial technology and social science methods to investigate impacts and perceptions related to climate change. Over her 20-year career, she has worked in various capacities within the medical and environmental fields. In that time, she served with AmeriCorps under the Naval Facilities Engineering Command (NAVFAC), Southeast, at Naval Air Station Jacksonville.

While there, she gained experience with environmental medias such as Hazardous Waste, Stormwater, NEPA, Installation Restoration, Tank & Spill, Air, EMS and Forestry. In 2022, she founded Fauna Conservation and Analytics, LLC., a firm focused on providing natural resources consulting and nature-based resilience solutions for the DOD and other entities.



Ricardo A. Mercado Arroyo

Assistant Program Coordinator - SCDRP

Ricardo has recently joined SCDRP's team as an Assistant Program Coordinator to support the team in preparation for our 8th Annual Meeting in January, 2024. He is also serving as a Field Technician with the Puerto Rico-based nonprofit The Center for Habitat Reconstruction, where he works as part of a team conducting a survey of abandoned and derelict buildings that pose risks to neighboring communities in order to increase accessible housing stock in the archipelago. He graduated with a bachelor's degree in Political Science with minors in Economics and Sociology from Texas A&M University in 2019, where he was also an active participant in student activism and worked to bring the local Puerto Rican community together.

Ricardo's professional experiences have been cultivated in the private, public and non-profit sectors, researching policy, engaging communities, managing programs, organizing events, developing communiques and social media content, and providing Spanish translations and interpretation. His passion for coffee and music are only matched by his desire to give back to his community and work towards Puerto Rico's independence and resilience in the face of any disaster.

Become a SCDRP Member!

Membership is crucial to supporting a diverse network of professionals who share resources and best practices about resilience and climate adaptation in the U.S. Southeast and Caribbean. The Southeast & Caribbean Disaster Resilience Partnership (SCDRP) is a diverse and multi-disciplinary affiliation of public, private, and non-profit organizations that strengthens the ability of the region's coastal communities, economies, and environment to recover from the next coastal storm. The Partnership connects disaster recovery practitioners from public, private, and non-profit backgrounds and provides a platform for training, resources, and relationships that coastal communities need to bounce back. In line with our mission, SCDRP participation is freely available to anyone with an interest in learning and sharing about resilience and climate adaptation. It is critical that all voices, regardless of ability to pay, can join this dialogue.

Our listserv has grown to 550+ participants from all resilience sectors and interests to share information and resources such as:

- webinars and online events
- important policy or legislation updates
- regional updates, newsletters, important announcements
- calls for serving on committees
- job opportunities in resilience-related fields
- calls for proposals and funding announcements
- calls for input on tools and products from members

Become a SCDRP Member today at scdrp.secoora.org/membership!

SCDRP Monthly Partnership Meeting

The Southeast & Caribbean Disaster Resilience Partnership hosts virtual Monthly Partnership Meetings to foster knowledge-sharing and help build regional capacity for resilience and recovery planning.

Watch our past meetings on the SCDRP Youtube channel: tinyurl.com/scdrpyoutube.

Please join us on Thursday, February 22, 2024, from 10:00 – 11:00 am EST for our February SCDRP Monthly Partnership Meeting. Our guest speaker is Dr. Andrew Fox from North Carolina State University. All are welcome to attend! Become a member, or email scdrp@secoora.org for the meeting link.

**Thank you to the SCDRP 8th ANNUAL MEETING
STEERING COMMITTEE!**

Kathie Dello , NOAA Carolinas Climate Adaptation Partnership and North Carolina State Climate Office (Raleigh, NC)

Kasen Wally, NC Division of Coastal Management (Morehead City, NC)

Jason Fleming , Seahorse Consulting (Morehead City, NC)

Megan Shaw , SECOORA (Charleston, SC, via Ohio)

Vamsi Krishna Sridharan, Tetra Tech (Fairfax, VA, via New Jersey)

Kyla Breland , NOAA DPP (Charleston, SC)

Lindy Betzhold , NOAA OCM (Charleston, SC)

Alex Butler, South Carolina Office of Resilience (Columbia, SC)

David Johnston , Hamilton Consulting LLC (Charleston, SC)

Jennifer Kline, Georgia Dept of Natural Resources (Brunswick, GA)

Michelle Covi , Georgia Extension and Georgia Sea Grant (Athens, GA)

Jon Philipsborn , Atlanta Regional Commission (Atlanta, GA)

Garry Harris, Center for Sustainable Communities (Atlanta, GA)

Randall Mathews , Chatham Emergency, Management (Savannah, GA)

Kait Morano, Georgia Tech CEAR Hub (Savannah, GA)

Brittany Dodge, Sapelo Island Natl Estuarine Research Reserve, (Sapelo Island, GA)

Tonya Bonitatibus , Savannah Riverkeeper (Savannah, GA)

Jenifer Hilburn , One Hundred Miles (Savannah, GA)

Jeff Morris, Moffatt & Nichol (Savannah, GA)

Tiffany Troxler, Florida International University (Miami, FL)

Naomi Braff, Nassau County, Florida (Yulee, FL)

Donya Frank-Gilchrist , USGS, St Petersburg Coastal and Marine Science Center (St. Petersburg, FL)

Ivan Baez Santiago, Genera PR (San Juan, Puerto Rico)

Yasmín Detrés, ROP Data Sharing Initiative, CARICOOS (Puerto Rico)

A special and sincere thank-you to SCAD grad Shreyas Athreya

for volunteering his time and talent

in the assembly and layout of this year's Meeting Program.

Thank you!

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[#SCDRP2024](https://twitter.com/SCDRP_RESILIENT)



Contact us: scdrp@secoora.org

SCDRP is an affiliate program under the Southeast Coastal Ocean Observing Regional Association (SECOORA) located at P.O. Box 13856, Charleston, South Carolina 29422. SECOORA is a registered 501(c)(3) non-profit organization and serves as the fiscal and administrative home of SCDRP.