SYMPOSIUM PROGRAM

BAYS & BAYOUS SYMPOSIUM

FINDING BALANCE

ECOLOGY, ECONOMY, AND COMMUNITY

JANUARY 24-25, 2023

ARTHUR R. OUTLAW MOBILE CONVENTION CENTER

-BAYS & BAYOUS SYMPOSIUM 2023-

Preface and Acknowledgments

We are pleased to welcome you to the **2023 Bays and Bayous Symposium: Finding Balance: Ecology, Economy, and Community**! Over the next two days you will experience what has become a tradition across the northern Gulf Coast: a mix of scientists, students, resource managers, representatives from the private sector, non-governmental organizations, and citizens—learning from each other, networking, and being inspired by the diversity of discovery, restoration, and policy development happening across Alabama, Mississippi, and beyond. The theme of this year's symposium is about balance. As such, presentations will feature expert analysis about what we can do as scientists, resource managers, and citizens, to ensure not only environmental conservation, but also economic growth and community development. Discussion will be grounded in the recognition all actions have unintended consequences and will focus on how we can accelerate the speed with which data from science is available to inform environmental management decisions.

This two-day event will include six concurrent sessions delivering information about the latest in science and resource management best practices through around 170 presentations and 64 posters. We hope you find great inspiration from keynote speakers **Dr. Tyrone Hayes** and **Aimeé Christensen** who will both share their perspectives on the twists and turns associated with pursuing scientific discovery and effective public policy and using both to affect meaningful change in how we manage our natural resources now and into the future for the benefit for all.

The 2023 Alabama-Mississippi Bays and Bayous Symposium would not be possible without the hard work and dedication of many individuals, organizations, and local leaders. We greatly appreciate all the researchers, industry representatives, community organizations, and others who submitted high-quality abstracts to the Symposium for oral and poster presentations. We are confident the sound science and practical knowledge shared will be valuable to the many diverse groups working for a healthier and more sustainable Gulf Coast. And most importantly, we are grateful to the many people who dedicated their time, talents, and thoughtful input in the planning and organization of this symposium through their participation on the Symposium's Steering and Program Committees. We cannot thank them enough. Those individuals include:

Steering Committee
Becky Allee, NOAA Coastal Services Center
Laura Bowie, Gulf of Mexico Alliance
Just Cebrian, Northern Gulf Institute
Jennifer Denson, Partners for Environmental Progress
Jim Franks, University of Southern Mississippi, Center for Fisheries Research & Development
Ayesha Gray, Grand Bay National Estuarine Research Reserve
Judy Haner, The Nature Conservancy
Marian Hanisko , NOAA
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Julian Lartigue, NOAA RESTORE Science Program
Tina Miller-Way, Dauphin Island Sea Lab-Discovery Hall
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Alison Robertson, Gulf of Mexico Alliance
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Angela Underwood, Weeks Bay National Estuarine Research Reserve
Caitlin Young, NOAA RESTORE Science Program

Marketing Committee
Shemika Brown, Mobile Bay National Estuary Program
Angela Levins, Dauphin Island Sea Lab
Marti Messick, Mobile Bay National Estuary Program
Melissa Schneider, Mississippi-Alabama Sea Grant Consortium

Many thanks to the following Mobile Bay National Estuary Program staff, who worked tirelessly to make this event a success: Shemika Brown, Tiffany England, Herndon Graddick, Bethany Hudson, Jason Kudulis, Marti Messick, Christian Miller, Blair Morrison, Melissa Partyka, Henry Perkins, and Michael Roberts. Finally, much appreciation and thanks go out to Melissa Mills and her staff at the Dauphin Island Sea Lab for their expertise and efforts to take care of all things IT- the backbone to a successful event!

We hope you are inspired, enriched, and engaged on many levels over the course of this symposium. Through our collective efforts, we will continue to ensure a healthy and resilient northern Gulf Coast, where ecology, economies, and communities are all balanced in sustaining our unparalleled quality of life.

Sincerely,

Roberta Swann, Director
Mobile Bay National Estuary Program

The Symposium theme is illustrated on the front cover utilizing nature's design: the Fibonacci Spiral. It is a representation of our pursuit of Finding Balance: Ecology, Economy, and Community. Graphic by Michael Swiger.

Day One Agenda Tuesday, Jan. 24

7:00 – 8:00 a.m. **Registration/Breakfast**

8:00 – 8:20 a.m. **Welcome**
Roberta Swann, Mobile Bay National Estuary Program
Sandy Stimpson, Mayor of Mobile

8:20 – 9:15 a.m. **Breakfast and Keynote Speaker Dr. Tyrone Hayes**

9:15 – 9:30 a.m. Break

9:30 – 10:35 a.m. **Concurrent Sessions**
- Understanding Coastal Ecosystems – Room 201D
- Improving Coastal Management – Room 201C
- Strengthening Coastal Landscapes – Room 201B
- Sharing Coastal Knowledge – Room 201A
- Emerging Coastal Issues – Room 202B
- Dedicated Sessions – Room 202A

10:35 – 10:50 a.m. Break

10:50 – 11:50 a.m. **Concurrent Sessions**

11:50 – 12:00 noon Break

12:00 – 1:20 p.m. **Lunch Panel: Workforce Development**
Finding Your Path

1:40 – 2:55 p.m. **Concurrent Sessions**

2:55 – 3:10 p.m. Break

3:10 – 4:40 p.m. **Concurrent Sessions**

4:40 – 5:00 p.m. Break

5:00 – 7:00 p.m. **Poster Presentation and Reception**

Day Two Agenda Wednesday, Jan. 25

7:30 – 8:00 a.m. **Breakfast**

8:00 – 8:30 a.m. **Welcome Back**
Service Recognition/Mike deGruy Student Awards

8:30 – 9:15 a.m. **Breakfast and Keynote Speaker Aimée Christensen**

9:15 – 9:30 a.m. Break

9:30 – 10:35 a.m. **Concurrent Sessions**

- Understanding Coastal Ecosystems – Room 201D
- Improving Coastal Management – Room 201C
- Strengthening Coastal Landscapes – Room 201B
- Sharing Coastal Knowledge – Room 201A
- Emerging Coastal Issues – Room 202B
- Dedicated Sessions – Room 202A

10:35 – 10:50 a.m. Break

10:50 – 11:50 a.m. **Concurrent Sessions**

11:50 – 12:00 noon Break

12:00 – 1:20 p.m. **Lunch and 20 Questions**

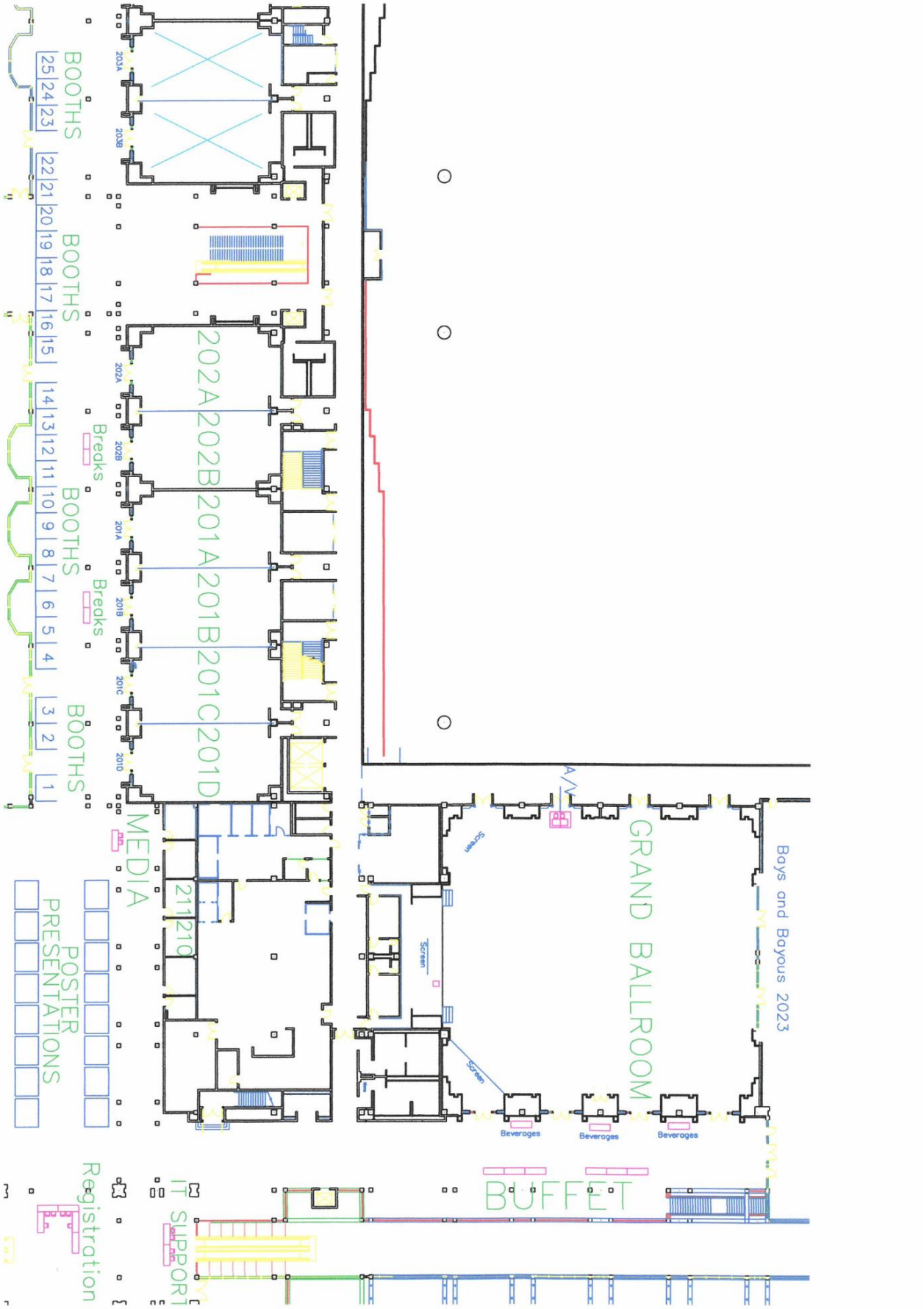
1:20 – 1:40 p.m. Break

1:40 – 2:40 p.m. **Concurrent Sessions**

2:40 p.m. Adjourn

Notes

Symposium Floor Plan



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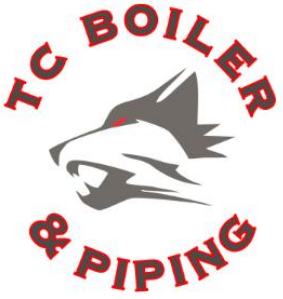


VOLKERT

Thank You to Our Sponsors!

Keynote Speaker Aimée Christensen

Aimée Christensen is CEO of Christensen Global where she advises clients ranging from climate innovators to global businesses, from multilateral institutions to investors, including Aleph Farms, Duke Energy, Ford Motor Company, Microsoft, Sustainable Energy for All, and Virgin Group.

Over her 30-year career, she has worked as a policymaker at the White House and U.S. Department of Energy as a carbon, climate and clean energy lawyer at the World Bank and Baker & McKenzie, and as Climate Maven at Google. She negotiated the first climate change agreements (U.S.-Costa Rica 1994, et al), successfully advocated for the adoption of the first climate investment responsibility policy which was adopted by the Stanford University Board of Trustees in 1999, guided Google's 2007 commitment to carbon neutrality, and lobbied on their behalf for the California Global Warming Solutions Act (AB 32). She served as Senior Advisor to the United Nations Secretary General's High-level Group on Sustainable Energy for All (2012) and founded and led the Sun Valley Institute for Resilience (2015-2020) and Sun Valley Forum (2015-present).

She is an Aspen Institute Catto Fellow (2010), a Hillary Institute Leadership Laureate (2011), and an Idaho Business Review Woman of the Year (2020). She has a JD from Stanford Law School and a BA from Smith College.

Keynote Speaker Dr. Tyrone B. Hayes

Tyrone B. Hayes was born and raised in Columbia, South Carolina where he developed his love for biology. He received his Bachelor's degree from Harvard University in 1989 and his PhD from the Department of Integrative Biology at the University of California, Berkeley in 1993.

After completing his PhD, he began post-doctoral training at the National Institute of Child Health and Human Development, National Institutes of Health, and the Cancer Research Laboratories at UC Berkeley (funded by the National Science Foundation), but this training was truncated when he was hired as an Assistant Professor at UC Berkeley in 1994. He was promoted to Associate Professor with tenure in 2000 and to full Professor in 2003.

Hayes' research focuses on developmental endocrinology with an emphasis on evolution and environmental regulation of growth and development. For the last twenty years, the role of endocrine disrupting contaminants, particularly pesticides, has been a major focus. Hayes is interested in the impact of chemical contaminants on environmental health and public health with a specific interest in the role of pesticides in global amphibian declines, and environmental justice concerns associated with targeted exposure of racial and ethnic minorities to endocrine disruptors and the role that exposure plays in health care disparities.

Panelists: The Road Less Traveled

The Road Less Traveled *Panel provides students and other attendees of Bays and Bayous with information about available career paths for young people hoping to have a career in science, with a special focus non-traditional non-academic pathways which students and other attendees may not be as aware. Needs in workforce development will be discussed to better equip students to enter the job market with the knowledge, skills, and abilities in demand in the modern economy.*

Calressia Clark

Calressia Clark is the Director of Field Operations and Logistics at Mobile Area Water & Sewer System and has been employed there for 16 years. During this time, she has continuously worked to upgrade the water distribution and sewer collection systems infrastructure with in-house staffing, engineering consultants, and contractors. The highlight of her career has been working with people to improve the utility and enhance the community.

Troy Ephriam

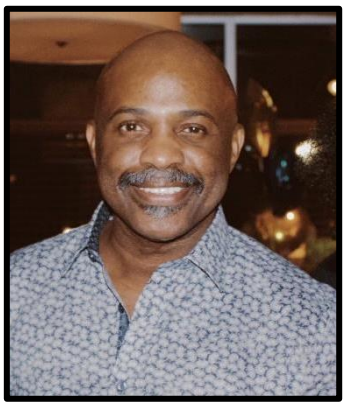
Mayor Emeritus of the City of Prichard, Alabama, Troy has more than 20 years of scientific and field experience in environmental regulations, consulting, and construction site management planning. He owns and manages Ephriam & Associates Environmental, a small business based in Whistler, Alabama that specializes in professional, scientific, technical, and ecological site assessments pursuant to provisions of the National Environmental Policy Act (NEPA), Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

Chris Head

Chris Head is the Environmental Protection Manager for the Poarch Band of Creek Indians, and an Owner of Admiral Shellfish Co. in Ft Morgan, AL. Chris holds a Bachelor of Science degree in Natural Science from the University of West Florida, an unmanned aircraft license, and a 50-ton Master Captain's license. At the Tribe, he performs NEPAs, oversees the 319, 106, and WPDG grants, assists with apiary, and special projects. Chris spends his weekends working at the oyster farm or captaining private vessels.

Panelists: The Road Less Traveled

Dr. Kirk Rodgers



Kirk is a hydrologist and project manager in the Little Rock office of the Lower Mississippi-Gulf Water Science Center. He has worked with the National Water Quality Field Assessment as field lead for the Ozark Principal Aquifer Survey and with the Reservoir Fisheries Habitat Partnership, compiling a reservoir morphology database for the lower 48 states.

Spanning a 12-year career with the USGS, Kirk has worked with the Arkansas Natural Resource Commission and the Arkansas Geological Survey analyzing and interpreting potentiometric surfaces of major aquifers in the state and is currently the project manager for RESTORE, a $5.5 million dollar Gulf Coast Ecosystem Restoration Council funded "Baseline Flow, Gage Analysis & On-Line Tool to Support Restoration in Gulf States" project. Most recently, Kirk was awarded a $3.4 million dollar grant to continue work focusing on the Mobile and Perdido River Basins in Alabama.

Kirk is a graduate of the University of Arkansas at Little Rock and is a member of the Dean's Advisory Council of the Donaghey College of Science, Technology, Engineering, and Mathematics. He also serves on the USGS Eastern Region Diversity, Equity, and Inclusion Council.

Dr. Joshua Duplantis – Moderator

An innovator and change agent in education, workforce and economic development, Dr. Josh Duplantis is a proven leader with experiences in K-12, 2-year, and 4-year colleges, with a focus on department and divisional turnarounds. Dr. Dupantis' university courses include personal finance, non-profit management, and an award-winning course in Servant Leadership. As Dean of Workforce and Economic Development, Dr. Duplantis leads a division that focuses on economic prosperity through job training. Coastal Alabama Community College's Apprenticeship program is the largest and most diverse in the state and winner of the AL Governors Award for Best Practice in Work-Based Learning two years in a row most recently for its Registered Nurse Apprenticeship now being emulated around the state and country. Outside of work, he likes to hang out with his family, loves the outdoors, and gets way too emotional coaching his son's 3rd grade basketball team.

Concurrent Sessions Tuesday Morning

8:00-8:20	**Welcome**		
8:20-9:15	**Breakfast and Keynote Speaker Dr. Tyrone Hayes**		
	UNDERSTANDING (201D)	**IMPROVING (201C)**	**STRENGTHENING (201B)**
9:30-9:35	**Moderator Instructions**		
9:35-9:50	**Sensitivity Analysis of Wave Modeling During Hurricane Ida in the Gulf of Mexico** - Hafeez Oladejo (S), University of Southern Mississippi	**Benefit-Cost Analysis of Oyster Reef Restoration in Alabama and Mississippi** - Barbara Okai (S), Mississippi State University	**Avian Use of Marsh Terraces in Coastal Louisiana** – J. Brian Davis, Mississippi State University
9:50-10:05	**Influence of Biogenic Processes on Seabed Properties in the York River Estuary, Chesapeake Bay** - Chesna Cox (S), University of South Alabama/Dauphin Island Sea Lab	**Valuation of Oyster Reef Restoration Along the Gulf Coast** - Freedom Enyetornye (S), Mississippi State University	**Comparing Finfish and Crustacean Assemblages Among Established Marsh Terraces, New Marsh Terraces, and Open Water in a Restored Brackish Marsh** - Shasta Kamara (S), Nicholls State University
10:05-10:20	**Influence of Marine Phytoplankton in Surface Water Cr Cycling** - Debbrota Mallick (S), University of South Alabama/Dauphin Island Sea Lab	**Induced Defenses as a Management Tool: Shaping Individuals to Their Environment** - Lee Smee, Dauphin Island Sea Lab/University of South Alabama	**Integration of Aquaculture Techniques in Oyster Reef Restoration: The Little Dauphin Bay Oyster Restoration Project** - Christina LoBuglio and Caroline Golightly, Auburn University Shellfish Lab
10:20-10:35	**Measuring the Refractive Index of Marine Microbes using a 3D Holo-Tomographic Microscope** - Michael Kamowski (S), University of Southern Mississippi		**Pedigree Reconstruction and Estimates of Genetic Parameters for Growth Traits in Gulf of Mexico Eastern Oyster Families Reared Communally** - Heather King (S), Auburn University Shellfish Lab
10:35-10:50	**Break**		
10:50-11:05	**Source Contributions to Nekton in an Oligohaline Ecosystem** - Keith Chenier (S), Mississippi State University/Coastal Research and Extension Center	**Recovery of Nitrogen Removal Capacity in Restored Tidal Marshes of the Mississippi-Alabama Gulf Coast** - Taylor Ledford (S), University of Alabama	**Influences of Future Changes in Watershed on Estuarine Hydrography: A Case Study of Wolf-Perdido Bay** - Zhilong Liu, University of South Alabama/Dauphin Island Sea Lab
11:05-11:20	**Drivers of Long-Term Spatiotemporal Shifts in Nekton Communities in Coastal Alabama: 1981 - 2018** - Hannah Ehrmann (S), University of South Alabama/Dauphin Island Sea Lab	**Baseline Flow, Gage Analysis, and Online Tool Development Supporting Bay and Estuary Restoration in Gulf States** - Kirk Rodgers, US Geological Survey	**Seasonal Salinity Trends in the Central and Southern Biscayne Bay, Florida** - Meena Raju, Auburn University
11:20-11:35	**Shallow Seagrass Versus Fringing Marsh Habitat Use by Juvenile Recruits of Fish and Macroinvertebrates in the Northern Gulf of Mexico** - Just Cebrian, Northern Gulf Institute	**Regional Economic Impacts of Harmful Algal Blooms and Enterococcus in Florida and Mississippi** - Jessica Browne (S), Mississippi State University	**Modeling Oyster Larval Development and Success to Metamorphosis in the Mississippi Sound** - James Klein (S), University of Southern Mississippi/Gulf Coast Research Lab
11:35-11:50	**Nekton and Submerged Aquatic Vegetation Abundance and Distribution Across the Vegetation Growing Season in the Atchafalaya Basin** - Shannan McAskill, University of Southern Mississippi	**The Distribution and Direct Economic Impacts of Marine Debris on the Commercial Shrimping Industry** - Alyssa Rodolfich (S), Mississippi State University/Coastal Research and Extension Center	**Optical Characterization of Water Column Constituents in Support of Oyster Larval Development Investigations** - Tom Wissing (S), University of Southern Mississippi/U.S. Naval Oceanographic Office

Concurrent Sessions Tuesday Morning

8:00-8:20	**Welcome**		
8:20-9:15	**Breakfast and Keynote Speaker Dr. Tyrone Hayes**		
	SHARING (201A)	**EMERGING (202B)**	**DEDICATED SESSIONS (202A)**
9:30-9:35	**Moderator Instructions**		
9:35-9:50	**Engaging Underserved Communities in Coastal Resilience: A Case Study in East Biloxi** - Qiyamah Williams, Mississippi State University/Mississippi-Alabama Sea Grant Consortium	**Marsh Vertical Profiling on Belowground Biomass, Salinity, and Elevation: Enhancing Predictive Modeling on Sea Level Rise and Vertical Accretion Rates** - Makenzie Holifield (S), University of Southern Mississippi	**Restoring Three Mile Creek One Neighborhood at a Time** - Christian Miller, Mobile Bay National Estuary Program **Twelve Mile Creek Headwater Stream Restoration** - Ryan Stokes, Stantec **Three Mile Creek: Restoring a Community Amenity for the City of Mobile** - Lance Slater, City of Mobile **Restoration Monitoring in the Three Mile Creek Watershed** - Alex Beebe, University of South Alabama **Control of Invasive Island Apple Snails (*P. maculata*) in the Three Mile Creek Watershed** - Cassie Elderage, Osprey Initiative
9:50-10:05	**Africatown Connections Blueway - Reconnecting to Water with Stories and Traditions** - Liz Smith-Incer, National Park Service, Rivers, Trails, and Conservation Assistance Program	**The Impact of Inundation and Nitrogen on Common Saltmarsh Species Using Marsh Organ Experiments** - Kelly San Antonio (S), University of Southern Mississippi	
10:05-10:20	**Recruit and Support Sustainably: Early Successes Through the Ocean Exploration Club at Tuskegee University** - Rae Quadara, University of Southern Mississippi	**Tidal Creek Ecosystem Structure and Function Changes Associated with Coastal Watershed Development** - Samuel Bickley, Auburn University	
10:20-10:35	**Mitigating Flood Risks on the Mississippi Gulf Coast Using Equity-based and Stakeholder-informed Multi-scale Nature-based Solutions** - Wei Wu, University of Southern Mississippi	**PFAS Bioaccumulation, Depuration, and Energetic Cost in the Eastern Oyster, *Crassostrea virginica*** - Kayla Boyd (S), Auburn University Shellfish Lab	
10:35-10:50	**Break**		
10:50-11:05	**Artistic Pathways to Scientific Understanding** - Ayesha Gray, Grand Bay National Estuarine Research Reserve	**Disturbance in the Delta: Examining Plant Community Response to Physical Disturbance in the Mobile-Tensaw Delta** - Thelma Hammer (S), University of South Alabama	**Help Us Help You: Working with Communication Professionals to Share Your Science** - Christina Mohrman and Amanda Nalley, Gulf of Mexico Alliance **Science for the Community One Step at a Time** - Jessie Kastler, University of Southern Mississippi Marine Education Center **Connecting with Media as Research Progresses -** Angela Levins, Dauphin Island Sea Lab
11:05-11:20	**Engaging Audiences - Interactive Websites for a Common Project Narrative** - Justin Quinley, Anchor QEA	**Implementing a Mobile-Tensaw Delta Network of Eddy Covariance Flux Towers** - Gabriel de Oliveira, University of South Alabama	
11:20-11:35	**GenSea: Bringing Gen Z to the Sea-Blue Economy Career Pathways in Coastal Mississippi** - Patrick Kirby (S), University of Southern Mississippi	**Assessing Recovery of Ecosystem Structure and Function in Restored Tidal Marshes of the MS-AL Gulf Coast: A Closer Look at Carbon Storage** - Julia Cherry, University of Alabama	
11:35-11:50	**Supporting Local Businesses Through an Enhanced Gulf Coast Outpost Program** - Alena Anderson (S), Mississippi State University	**Quantitative Assessment of Natural Capital for Restoration Projects** - Don Blancher, Moffatt & Nichol	

Concurrent Sessions Tuesday Afternoon

12:00-1:20	**Lunch Panel: The Road Less Traveled**		
	UNDERSTANDING (201D)	**IMPROVING (201C)**	**STRENGTHENING (201B)**
1:40-1:55	**The Greater Amberjack Count: An Overview** - Mark Albins, Dauphin Island Sea Lab/University of South Alabama	**Eastern Shore Watershed Management Plan** - Suzanne Sweetser, Thompson Engineering	**Breakwaters and Benthos: Impacts of Shoreline Restoration on Infaunal Communities** - Aaron Bland (S), University of South Alabama/Dauphin Island Sea Lab
1:55-2:10	**Estimation of Mortality Rates for the Gulf Menhaden Stock** - Catherine Wilhelm (S), University of Southern Mississippi/Gulf Coast Research Lab	**D'Olive Bay Watershed Monitoring Study and Development of a Watershed Condition Framework** - Tim Thibaut, Barry A. Vittor & Associates, Inc.	**Developing and Testing a Metric-Based Indicator of Functional Recovery for Tidal Marshes** - Jacob Dybiec (S), University of Alabama
2:10-2:25	**Depredation on Descender Devices: A Gulf-Wide Investigation** - Danielle McAree (S), Mississippi State University	**Watershed Management Plan Implementation in the Fowl River Watershed in Mobile County, Alabama** - Jason Kudulis, Mobile Bay National Estuary Program	**Evaluating the Effectiveness of Restoration Approaches for Nearshore Habitat** - Matthew Virden (S), Mississippi State University/Coastal Research and Extension Center
2:25-2:40	**Investigating Salinity and Temperature Tolerances of Grass Shrimp** - Adam Murray (S), University of Southern Mississippi/Gulf Coast Research Lab	**Foley's Forward Planning and Actions for Resilience** - Leslie Gahagan, City of Foley	**Using Fish Community Metrics as Indicators of Habitat Enhancement in Restoration Projects: a Case Study in Coastal Alabama** - Matheus De Barros (S), University of South Alabama/ Dauphin Island Sea Lab
2:40-2:55	**The Influence of Changing Environmental and Management Conditions on Past and Present Mississippi Oyster Reefs** - Jessica Pruett, University of Mississippi	**Resilience Readiness: A Community-Based Participatory Assessment in the City of Pensacola, Florida -** Molly McDaniel, Pensacola and Perdido Bays Estuary Program	**Supporting Scientific Discovery and Science-Based Guidance for Restoration and Management through the Mississippi Based RESTORE Act Center of Excellence (MBRACE) -** Erin Oliver, Mississippi RESTORE Act Center of Excellence

Concurrent Sessions Tuesday Afternoon

12:00-1:20	Lunch Panel: The Road Less Traveled		
	SHARING (201A)	**EMERGING (202B)**	**DEDICATED SESSIONS (202A)**
1:40-1:55	**Community's Rise: A multi-pronged approach to fostering community participation in sea-level rise resilience** - Rene Collini, Alison Rellinger, Andrew Medhurst, PLACE:SLR Community's Rise is an inclusive SLR education and outreach program that spans ages, locations, and demographics to generate better prepared coastal constituencies. In this dedicated session you will learn about the program, see aspects of the program demonstrated, and have an opportunity to engage with the program leads.	**Educating and Engaging Communities on Water Quality and Flood Resilience with the Watershed Game** - Karen Bareford, Tina Miller-Way, Brenna Sweetman This session will include an introduction to the Watershed Game, information on how the Game can be used to foster connections within local communities and educate students about water quality, land use, and resilience issues, and the opportunity to play the Coast Model with fellow attendees.	**Alabama Center of Excellence: Science-driven Solutions for a Changing Climate** - John Valentine, Dauphin Island Sea Lab
1:55-2:10			**Sustainability of Current and Future Shoreline Solutions Under Rising Sea Level Scenarios** - Eric Sparks, Mississippi State University
2:10-2:25	**Comprehensive Sea-Level Rise Outreach and Program Evaluation** - Renee Collini, PLACE:SLR **Helping Educators and Students Foster Sea-Level Rise Resilience** - Alison Rellinger, PLACE:SLR **Connecting Engaged Residents and Municipal Officials in Productive and Educational Dialogue** - Andrew Medhurst, PLACE:SLR **Bringing sea-level resilience education to the community in unexpected places** - Alison Rellinger, PLACE:SLR		**Assessing the Function and Vulnerability of Forested Wetlands in the Mobile-Tensaw-Apalachee River Delta** - Christopher Anderson, Auburn University
2:25-2:40			**Abundance and Habitat Selection of the West Indian Manatee at the Northern Periphery of Their Expanding Range** - Carl Cloyed, Dauphin Island Sea Lab
2:40-2:55			**Understanding the Interactive Effects of Predation and Ocean Acidification on Economically Important Oyster Variants in the Northern Gulf of Mexico** - Randi Cannon (S), University of South Alabama/Dauphin Island Sea Lab

Concurrent Sessions Tuesday Evening

	UNDERSTANDING (201D)	IMPROVING (201C)	STRENGTHENING (201B)
3:10-3:25	**Seasonal Patterns of Fish Habitat Use in the Grand Bay National Estuarine Research Reserve from 2005 - 2014** - Jonathan Pitchford, Grand Bay National Estuarine Research Reserve	**2019 Bonnet Carré Spillway Openings: Impacts of the Fisheries Disaster Declaration** - Dave Storment (S), Louisiana Sea Grant	**Western Shore of Mobile Bay: Restoration, Conservation, and Park Initiatives** - Meg Goecker, Moffat & Nichol
3:25-3:40	**The Response of Bats and Their Insect Prey to Different Coastal Upland Habitat Management Techniques** - Mandy Sartain (S), Mississippi State University/Mississippi-Alabama Sea Grant Consortium	**Development of a Daily Operational Model for the Mississippi Sound and Bight** - Brandy Armstrong (S), University of Southern Mississippi	**Relax, Reconnect, Restore: City of Mobile Park Improvements and Access Enhancements along Mobile Bay** - Jennifer Greene, City of Mobile
3:40-3:55	**Fine-scale Tracking of Sportfish Habitat Selection and Behavior Along Restored Shorelines** - Sarah Ramsden (S), University of South Alabama/Dauphin Island Sea Lab	**Utilizing Water Isotopes to Differentiate Mississippi River, Local Rivers, and Groundwater Sources to the Mississippi Sound and Lake Pontchartrain Area** - Melissa Gilbert, University of Southern Mississippi	**Deer River Coastal Marsh Restoration** - Mark Saunders, Thompson Engineering
3:55-4:10	**Evaluating Habitat Use by Nekton in Widgeon Grass, Shoal Grass, and Unvegetated Bottom Habitats in the Grand Bay National Estuarine Research Reserve** - Jessica Woodall (S), University of Southern Mississippi, Gulf Coast Research Lab	**Simulating How the Bonnet Carré Spillway Impacts Salinity in the Mississippi Sound** - Anna Linhoss, Auburn University	**Characterizing Wave Climate to Inform Shoreline Protection Design** - Peyton Posey, Moffatt & Nichol
4:10-4:25	**Characterizing the Distribution of *Phragmites australis* using Precise Measurements of Elevation, Topography, and Surface Water Salinity** - Margaret Waldron (S), University of Southern Mississippi/Gulf Coast Geospatial Center	**Validation of a Modeling System for Freshwater Diversion Events: A Case Study for 2019 Bonnet Carré Spillway Opening** - Kemal Cambazoglu, University of Southern Mississippi	**Engineering with Nature to Restore Marsh Habitat on Fowl River** - Eric Schneider, Environmental Science Associates
4:25-4:40	**Tidal Marsh Bird Population Monitoring and Conservation Applications for the Gulf of Mexico** - Rachel Anderson (S), Mississippi State University	**Mississippi River Reintroduction into Maurepas Swamp** - Ranjit Jadhav, FTN Associates, Ltd.	**Restoring and Enhancing Habitat and Access along the Dauphin Island Causeway** - Matthew Jones, Mobile County Environmental Services
5:00-7:00	**Reception and Poster Session**		

Concurrent Sessions Tuesday Evening

	SHARING (201A)	EMERGING (202B)	DEDICATED SESSIONS (202A)
3:10-3:25	**Enhancing Community Resilience to Coastal Inundation Events -** Marian Hanisko, Brenna Sweetman, Becky Allee, Renee Collini, Karen Bareford, Chris Ellis, Andrew Medhurst Participants in this panel-driven session will get to hear about key messages included in the Interagency 2022 Sea Level Rise Report, explore new products and visualization tools for communicating impacts of inundation, and get a sneak peek at plans for a new Community of Practice, all while sharing local needs for information, products, tools, and services to address your needs.	**Lateral Dynamics in an Estuary with a Narrow, Deep Ship Channel and Wide, Shallow Shoals: Mobile Bay, Alabama** - Harikrishnan Sreeshylam (S), University of South Alabama/Dauphin Island Sea Lab	**Alabama Center of Excellence: (continued)** **Using Optical and Metabolomic Approaches to Predict the Nutritional Quality of Plankton Communities for Shellfish Consumption Under Multi-Stressor Climate Conditions** Alison Siersma (S), University of South Alabama/Dauphin Island Sea Lab
3:25-3:40		**Developing Modeling Capacity to Reveal How Expanding Freshwater Inputs to Mississippi Sound Impact Environmental Conditions** - Jerry Wiggert, University of Southern Mississippi	**Meiofaunal Diversity as a Tool for Understanding and Monitoring Northern Gulf of Mexico Environments** - William Ballentine (S), University of South Alabama/Dauphin Island Sea Lab
3:40-3:55		**Interactions Between Sediment Stability and Infaunal Community Structure Following a Hurricane Disturbance** - William Clemo (S), University of South Alabama/Dauphin Island Sea Lab	**Characterizing Hypoxia on the Alabama Shelf During Unprecedented 2019 Opening of the Bonnet Carré Spillway** - Brian Dzwonkowski, University of South Alabama/Dauphin Island Sea Lab
3:55-4:10		**Do Tropical Cyclones Short-Circuit Sedimentary Elemental Sequestration in the Northern Gulf of Mexico?** - Jeffrey Krause, Dauphin Island Sea Lab/University of South Alabama	**The Spatiotemporal Patterns of Community Vulnerability in Mobile Bay from 2000-2020** Hemal Dey, University of Alabama
4:10-4:25		**Modeling the Impacts of Coastal Flooding on Gulf Coast Tourism Resilience** - Christopher Gerber (S), Auburn University	**Is Your Water Well? Stressors on Groundwater Quality for Private Well Users in the Alabama Gulf Coast** - Ann Ojeda, Auburn University
4:25-4:40		**Building a Comprehensive Archive and Open Access Data Portal for Monitoring Marine Microplastics - the NOAA NCEI Global Marine Microplastics Database and Web Map** - Jennifer Webster, NOAA/NESDIS/NCEI	**Sustainability and Vulnerability of Southern Alabama Groundwater Under a Changing Climate** - Yong Zhang, University of Alabama
5:00-7:00	**Reception and Poster Session**		

Concurrent Sessions Wed. Morning

8:00-8:05	**Welcome Back**		
8:05-8:30	**Mike deGruy Student Awards**		
8:30-9:15	**Keynote Speaker Aimée Christensen**		
	UNDERSTANDING (201D)	**IMPROVING (201C)**	**STRENGTHENING (201B)**
9:35-9:50	**Coastal Attribute Data Analysis Based on Living Shoreline Suitability Models for Selected Water Bodies and Coastal Metropolitan Areas in the Gulf of Mexico** - Chris Boyd, Troy University	**Examining Movement Dynamics of the Gulf Menhaden Fishery to Evaluate the Impacts of Spatial Closures** - Robert Leaf, University of Southern Mississippi	**Marlow Spring Branch Restoration** - Nicholas Combs, Thompson Engineering
9:50-10:05	**Assessing the Effectiveness of Living Shorelines at Preventing Coastal Erosion and Maintaining Healthy Habitats** – Patrick Biber, University of Southern Mississippi	**Changes in the Fish Community Following Artificial Reef Installation in a Northern Gulf of Mexico Estuary** - Michael Archer, Grand Bay National Estuarine Research Reserve	**Forest Restoration and Management Can Maintain or Enhance Water Resources in the Gulf of Mexico** - Peter Caldwell, USDA Forest Service Southern Research Station
10:05-10:20	**NOAA Firebird: Fire Effects in Gulf of Mexico Marshes on Mottled Ducks, Black and Yellow Rails** - Mark Woodrey, Mississippi State University	**Co-Producing a Shared Characterization of Depredation in the Gulf of Mexico Reef Fish Fishery** - Ana Osowski, Mississippi State University/Mississippi-Alabama Sea Grant Consortium	**Exploring Innovative Nature-Based Approaches to Regional Stormwater Management in Ocean Springs, MS** - Nina Woodard, PLACE:SLR
10:20-10:35	**Reproductive Success of Shorebirds in Alabama** - Olivia Morpeth, Alabama Audubon	**Using Computer Vision Toward Automation of Fish Ageing** - Ralf Riedel, University of Southern Mississippi	
10:35-10:50	Break		
10:50-11:05	**Monitoring Wetland Vegetation in Response to Climate Changes with NDVI** - Sadia Alam Shammi, Mississippi State University	**The Impact of Soil Porewater Salinity and Fire Management on the Salt Marsh, Ecotone, and Forest Habitats** - Wei Wu, University of Southern Mississippi	**Bucktown Living Shoreline: Benefits of Public-facing Habitat Restoration** - Mindy Joiner, Moffat & Nichol
11:05-11:20	**Where Are You From? Sorting Out Sediment Provenance Deposited on a Transgressive Marsh** - Christopher Smith, US Geological Survey	**Impacts of Wildfires and Prescribed Fires on the Presence of Invasive Plants in Coastal Mississippi** - Robert Grala, Mississippi State University	**Design, Construction, and Monitoring of a Living Shoreline Project** - Wendell Mears, Anchor QEA LLC
11:20-11:35	**Using Unoccupied Aircraft Systems to Monitor Restored Wetland Vegetation Communities** - Alexandra Rodriguez, Dauphin Island Sea Lab	**Graham Creek Nature Preserve: Balancing Conservation, Education and Recreation** - Leslie Gahagan, City of Foley	**Living Shorelines: Management Hurdles in Regulatory Requirements** - Tom Hutchings & Lee Yokel, EcoSolutions
11:35-11:50	**Not All Marsh Edge is Equally Valuable Fish Habitat: Variation in Fish Community Structure Across Mississippi Sound, Alabama** - Ronald Baker, Dauphin Island Sea Lab/University of South Alabama		**Living Shorelines: Large-Scale Impacts from Small-Scale Decisions** - Sara Martin, Mississippi State University

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8:30-9:15	**Keynote Speaker Aimée Christensen**		
	SHARING (201A)	**EMERGING (202B)**	**DEDICATED SESSIONS (202A)**
9:35-9:50	**Oyster Gardening: An Implement for Extension Programming** - Emily McCay, Auburn University Marine Extension and Research Center/Mississippi-Alabama Sea Grant Consortium	**Loss of Mississippi Diamondback Terrapin (*Malaclemys terrapin pileata*) Nesting Habitat and Implications for Restoration** - Andrew Heaton, Grand Bay National Estuarine Research Reserve	**Dauphin Island: Managing Rising Tides and Shifting Sands to Maintain Balance Between Nature, Culture, and Economy** - Chris Warn, ESA **Dauphin Island Watershed Management Plan: Building on the Past to Plan for a Sustainable and Resilient Future** - Chris Warn, ESA **Leveraging Adaptation Pathways to Identify Vulnerabilities and Opportunities for Resilience in Dauphin Island, AL** -Stephanie Patch, University of South Alabama **Strategic Habitat Acquisition on Dauphin Island** - Meg Goecker, Moffat & Nichol **Restoring Little Dauphin Island through Collaborative Partnerships** - Justin McDonald, U.S. Army Corps of Engineers **Creating Place in Paradise** - Brandon Bias, Goodwyn Mills & Cawood, Inc.
9:50-10:05	**Empowering Oyster Growers While Growing Capacity: Research, Testing and Training to Address Microbiological Impediments on Shellfish Aquaculture** - Ronald Bond, University of California, Davis	**Florida Panhandle Terrapin Project** - Rick O'Connor, Florida Sea Grant/UF IFAS Extension	
10:05-10:20	**Oyster Farming Resilience Index** - Rusty Grice, Mississippi-Alabama Sea Grant Consortium	**Heatwave Duration Correlates with the Poor Recruitment of Oysters in Alabama Coastal Waters** - Jeffrey Plumlee, University of South Alabama/Dauphin Island Sea Lab	
10:20-10:35	**Extending Our Reach: A Multi-State Collaborative Approach to Reef Fisheries Extension** - Marcus Drymon, Mississippi-Alabama Sea Grant Consortium	**Impacts of Disaster Events on the Gulf of Mexico Region and States Commercial Landings and Dockside Values** - Benedict Posadas, Mississippi State University/Mississippi-Alabama Sea Grant Consortium	
10:35-10:50	Break		
10:50-11:05	**An Overview of the Dauphin Island Sea Lab's K-12 Marine Science Education Program** - Virginia Driskell, Dauphin Island Sea Lab	**Water Quality is Changing in Mobile Bay and Mississippi Sound - What Are the Mechanisms and What Are Our Options?** - John Lehrter, University of South Alabama	**Maximizing Back-Barrier Island Marsh Habitat Through Innovative Solutions** - Peyton Posey, Moffatt & Nichol **Little Billy Goat Hole and East End Improvements** - Amanda Tinsley, Moffatt & Nichol **Dauphin Island East End Beach & Dune Restoration** - Thomas Buhring, South Coast Engineers **Dauphin Island, AL Living Shoreline Designs in Aloe Bay** - Kate Dawson, Moffat & Nichol **Shorebird Conservation and Habitat Management on Dauphin Island's West End** - Lianne Koczur, Alabama Audubon and Nicole Love, Thompson Engineering
11:05-11:20	**Plastic Pollution Awareness in Educators** – Tracy Jay, Environmental Studies Center	**Delineation of Groundwater Recharge Areas in Baldwin County, Alabama for Water Management and Water Policy Development** - Greg Guthrie, Geological Survey of Alabama	
11:20-11:35	**CHANGES: A High School Education Program for Coastal Restoration, Management, and Monitoring** - Sandra Bilbo, Grand Bay National Estuarine Research Reserve	**We Can All Do More to Help With Sustainability! So What is Manufacturing Doing to Help the Local Environment?** - Steven Stewart, SCS Engineers	
11:35-11:50	**Impacts of Decade-old MASGC-supported Internship Program in Environmental Education for Underrepresented Students** – JoAnn Moody, Dauphin Island Sea Lab		

Concurrent Sessions Wed. Afternoon

12:00 - 1:20	**Lunch and 20 Questions**		
	UNDERSTANDING (201D)	**IMPROVING (201C)**	**STRENGTHENING (201B)**
1:40-1:55	**Distribution, Abundance, and Reproductive Output of Spawning Female Blue Crabs in the Vicinity of the Mississippi Barrier Islands** - Zachary Darnell, University of Southern Mississippi	**The Development and Application of a Geospatial Coastal Vulnerability Grid** - Claire Babineaux, Mississippi State University Extension/Northern Gulf Institute	**The Aristotelian Philosophy of Oyster Management: Good Habit[at]s Formed at Youth Make All the Difference** - Scott Milroy, University of Southern Mississippi
1:55-2:10	**Marine Connectivity in the Mississippi Bight: Whose Larval Fish and Crabs Are They?** - Donald Johnson, University of Southern Mississippi	**Geospatial Technologies for Climate-Related Infrastructure Assessments and Adaptive Management** - Katarzyna Grala, Mississippi State University Extension/Northern Gulf Institute	**Validation of Field-Applicable Detection Kits for Total and Pathogenic *Vibrio parahaemolyticus* in Oysters** – Andy DePaola, Angelo DePaola Consulting, LLC
2:10-2:25	**Responses of Juvenile Spotted Seatrout *Cynoscion nebulosus* to Experimental Acute and Chronic Low Salinity Exposure** - Ronald Baker, Dauphin Island Sea Lab/University of South Alabama	**Hindsight is 20/20: Re-envisioning an Environmental Monitoring Network** – Patrick Goff, Dauphin Island Sea Lab	**Distribution and Condition of Seagrasses in the North Central Gulf of Mexico** - Kelly Darnell, University of Southern Mississippi
2:25-2:40	**Dietary Evidence of Facultative Cleaning by Juvenile Leatherjackets from Coastal Alabama** - Kelsey Hofheinz, Dauphin Island Sea Lab	**Taking Coastal Monitoring to New Heights: UAS Use for Streamlined Restoration Monitoring** - Megan Laufer, Dauphin Island Sea Lab	**Incorporating a Tiered Monitoring Design into the State of Alabama's SAV Mapping Program** - Dottie Byron, Dauphin Island Sea Lab
	Adjourn		

Concurrent Sessions Wed. Afternoon

12:00 - 1:20	**Lunch and 20 Questions**	
	SHARING (201A)	**DEDICATED SESSION (202A)**
1:40-1:55	**A Classroom Course in Community Resilience: A Climate Change Curriculum that Prepares for the Future** - Samantha Capers, University of Southern Mississippi Marine Education Center	**Gulf of Mexico Alliance Cafe: Building Partnerships for a Healthier Gulf -**Laura Bowie, Becky Ginn, Christina Mohrman, Amanda Nalley, Dave Reed, and Ali Robertson In this session, GOMA staff will facilitate conversations in an open "café" where symposium participants can learn more about Alliance resources based on their individual interest.
1:55-2:10	**Fostering a Culture of Intentional Resilience Through Building Codes and Sustainable Construction Standards** - Stephen Deal, Mississippi-Alabama Sea Grant Consortium	
2:10-2:25	**Neighbors Helping Neighbors: Community Centered Severe Weather Preparedness and Resilience** - Tracie Sempier, Mississippi-Alabama Sea Grant Consortium	
2:25-2:40	**An Introduction to the Alabama Forestry Commission's Coastal Program** - Ryan Peek, Alabama Forestry Commission	
	Adjourn	

Notes

Notes

Poster Presentation Layout

Note: Posters 1-40 are student posters (indicated by (S) in presentation list).

Poster Presentations

1. **Nurdle Patrol at Saint Stanislaus** - Avery Matheson (S), St. Stanislaus Catholic High School
2. **Oyster Gardening Program at Saint Stanislaus** - Hill Gainey (S), St. Stanislaus Catholic High School
3. **Vadose Zone Fate and Mobility of Phosphorus in the Little Lagoon Watershed** - Adele Magaud (S), University of South Alabama
4. **Viability of Native Vegetation and Locally Sourced Substrate Mix in Green Roof Modules Under South Louisiana's Subtropical Climate** - Clara Jimenez (S), Louisiana State University
5. **Developmental Trajectories of Sedimentation in Restored and Created Coastal Wetlands Along the Mississippi-Alabama Gulf Coast** - Morgan Sharbaugh (S), The University of Alabama
6. **Identifying Potential Drivers of Fish Community Composition on Restored Oyster Reefs in East Bay, Pensacola** - Christopher Grant (S), Dauphin Island Sea Lab
7. **Evapotranspiration Over Different Terrestrial Ecosystems in the Lower Mobile-Tensaw Delta Using Remote Sensing Data** - Skye Hellenkamp (S), University of South Alabama
8. **Expanding Understanding of a Critically Imperiled Ecological Indicator - the Florida Pondweed (*Potamogeton floridanus*)** - Kaitlyn Sampson (S), University of South Alabama
9. **High Resolution Photo-Optical Study Reveals Unique Changes in Photo-Acclimation and Productivity Within Two Closely Related Green Algal Species (*Micromonas* sp.) Under Nitrogen Replete and Limited Conditions** - Shannon Dalessandri (S), Dauphin Island Sea Lab
10. **Monitoring the Success of Planted Oysters in Mobile Bay** - Bekah Farmer (S), University of South Alabama/The Nature Conservancy
11. **Patterns and Trends in Chlorophyll a Concentrations Across the Mobile Bay Salinity Gradient** - Alyssa Bourne (S), Dauphin Island Sea Lab/University of South Alabama
12. **Examination of the Water Exchange Process Using the Dye Technique in Multiple Inlets of Mobile Bay, Alabama** - Ardian Rizal (S), University of Southern Mississippi
13. **Abrupt Chlorophyll Increase Driven by Phosphorus Threshold in Weeks Bay, Alabama** - Mai Fung (S), University of South Alabama/Dauphin Island Sea Lab
14. **The Influence of River and Bonnet Carré Freshwater Discharge on the Exchange Mechanism in Cat Island Channel** - Hameed Ajibade (S), The University of Southern Mississippi
15. **Hydraulic Impact on Fish Migration in Sariakandhi Fish Pass of Bangladesh** - Bijoy Ghosh (S), Bangladesh Technical Education Board Ministry of Education
16. **An Exploration of Heavy Metal Contamination and Salinity Synergies on Mobile Delta Submerged Grasses** - Christopher Mikolaitis (S), Dauphin Island Sea Lab/University of South Alabama

Poster Presentations

17. **Development of DNA Barcodes for *Lepidophthalmus louisianensis* and Their Use in Developing Blocker Primers for Fecal DNA Metabarcoding** - Julian Venable (S), Jackson State University

18. **Using Environmental DNA to Detect Hypoxia in Marine Waters** - Reneisha Sweet (S), Jackson State University

19. **Relationships Between Freshwater Discharge and Organic Matter Movement Through the Mobile Bay Estuary** - Akela Yuhl (S), University of South Alabama/Dauphin Island Sea Lab

20. **Generation of DNA Barcode Data for *Callichirus islagrande*, a Beach Ghost Shrimp, and Generation of Blocker Primers for Fecal DNA Metabarcoding** - Kambrial Love (S), Jackson State University

21. **Differences in Responses to Thermal Stress Between Predator and Prey: *Crassostrea virginica* (Eastern Oyster) and *Stramonita haemastroma floridana* (Southern Oyster Drill)** - Kayla Boyd (S), Auburn University Shellfish Laboratory

22. **Generation of DNA Barcodes for the Atlantic Mole Crab, *Emerita talpoida*, and the Development of Blocker Primers for Fecal DNA Metabarcoding Analysis** - Dwan Jackson (S), Jackson State University

23. **Gaping Behavior in Triploid and Diploid Eastern Oysters Before and After Desiccation** - William Kleist (S), Auburn University

24. **Gulf Coast Dune Mycorrhizae Improve Salinity Tolerance of a Common Coastal Dune Grass** - Emily Newman (S), University of South Alabama

25. **Comparing the Impact of Curricular and Extracurricular Environmental Education Programs on the Environmental Literacy of High School Students** - Jessie Howington (S), Mississippi State University/Coastal Research and Extension Center

26. **Plastic Potential Degradation and Fragmentation Through a Sequence of Terrestrial and Aquatic Environments** - Anthony Vedral (S), Mississippi State University/Coastal Research and Extension Center

27. **Protecting the 5 Most Critical Wetland Areas in the Lower Galveston Bay Watershed Through Mapping and Community Engagement** - Mashal Awais (S), Bayou City Waterkeeper

28. **Preliminary Winter Bird Community Data for Tracking Pine Savanna Restoration in the Mississippi Gulf Coast** - Sofia Campuzano (S), Mississippi State University/Coastal Research and Extension Center

29. **Per- And Poly- Fluoroalkyl Substances (PFAS) Body Burden and Exposure-Induced Stress Responses of Eastern Oysters in the Mobile Bay Region** - Ayesha Alam (S), Auburn University

30. **Incorporating In Situ Wave Energy Measurements into a Living Shoreline Suitability Model** - Ashleigh Dunaway (S), Mississippi State University/Coastal Research and Extension Center

31. **Effects of Structural Design on Oyster Survival in Artificial Reefs** - Jaden Akers (S), Mississippi State University/Coastal Research and Extension Center

32. **The Forgotten Forest: Habitat Assessment of Eroded Forest, Marsh, and Beach Shorelines** - Cynthia Lupton (S), Mississippi State University/Coastal Research and Extension Center

33. **Advanced Microbial Source Tracking for Source-Specific Management of Water Quality** - Penny Demetriades (S), University of South Alabama/Dauphin Island Sea Lab

34. **Development of Automated, In-Situ, Aquatic Environmental DNA Sampler** - Kamal Ali (S), Jackson State University

35. **Rapid Changes in Tropical Cyclone Intensities over the Coastal Oceans: A Global Perspective** - Devanarayana Rao Mohan Rao (S), University of South Alabama/Dauphin Island Sea Lab

36. **G.R.I.T.S: Fostering Green and Resilient Infrastructure Technical Skills in High School Aged Youth** - Allie Koehn (S), Mississippi State University/Coastal Research and Extension Center

37. **Plan-It Dunes: Fostering Dune Restoration and Conservation in Mississippi High Schools** - Nora Skinner (S), Mississippi State University/Coastal Research and Extension Center

38. **Effect of Training Level and Demographics on Quality of Citizen Science Collected Litter Data** - Jessi James (S), Mississippi Inland Cleanup Program

39. **Identifying Fecal Contamination Sources in the Grand Bay National Estuarine Research Reserve** - Amanda Free (S), Mississippi State University/Coastal Research and Extension Center

40. **Evaluating the Efficacy of Recycled Glass Sand as a Soil Substrate for Gulf Coast Marsh and Dune Plants in Restoration Projects** - Ansley Levine (S), Mississippi State University/Coastal Research and Extension Center

41. **Successful Strategies in Planning and Design of Critical Assets and Infrastructure in Three Communities Along the East Coast in the United States** - Hannah Hart, Dewberry Engineers, Inc.

42. **Patterns and Trends in Nutrient Concentrations Across Mobile Bay Salinity Gradient** - Nick LaBon, Dauphin Island Sea Lab

43. **Lillian Park Beach Habitat and Shoreline Protection Project** - Glenn Ledet, Neel-Schaffer, Inc.

44. **Eyes on Seagrass for Pensacola Bay** - Rick O'Connor, Florida Sea Grant / University of Florida IFAS Extension

45. **Pilot Project for Multi-Species Farming in Coastal Alabama Waters: Initial Developments and Early Engagement Activities** - Stephen Sempier, Mississippi-Alabama Sea Grant Consortium

46. **Impacts of Disturbance and Resource Availability on Coastal Dune Ecosystems** - Jeremiah Henning, University of South Alabama

47. **Preliminary Study of Recruitment Patterns of *Crassostrea virginica* in the Mississippi Sound** - Katherine Glover, Mississippi Department of Marine Resources

48. **Results of the Remote Oyster Setting 2022 Medium Scale Production Season in the Mississippi Sound** - Ellen Coffin, Mississippi Department of Marine Resources

Poster Presentations

49. **A Preliminary Assessment of Marsh Bird Nesting Ecology Response to Tidal Marsh Restoration** - Matt Sukiennik, Mississippi State University, Coastal Research and Extension Center

50. **Avenues to Science: Internships at the Marine Education Center** - Laura Blackmon, University of Southern Mississippi/ Gulf Coast Research Lab's Marine Education Center

51. **Manual and Chemical Removal of Invasive Apple Snails in Mobile, Alabama** - Susanna Robinson, Osprey Initiative

52. **Sea Grant Offers Fellowship Opportunities for Grad Students** - Loretta Leist, Mississippi-Alabama Sea Grant Consortium

53. **Trends of *Karenia brevis* Blooms in the Northcentral Gulf of Mexico** - Jonathan Jackson, NOAA NCEI / Mississippi State University, Northern Gulf Institute

54. **Does Sediment and Microplastic Type Affect the Adsorption of Heavy Metals in Marine Systems?** - Allison Fletcher, Dauphin Island Sea Lab

55. **Dissolved Rhenium Reveals Freshwater Sources to Mississippi Sound -** Amy Moody, University of Southern Mississippi

56. **Early Recruitment Limitation Impedes the Recovery of the Eastern Oyster (*Crassostrea virginica*) in Mississippi Sound** - Chet Rakocinski, University of Southern Mississippi/Gulf Coast Research Lab

57. **The Misunderstood Groin: Structure and Sand Movement in Living Shorelines** - Lee Yokel and Tom Hutchings, EcoSolutions, Inc.

58. **Identification of Research Needs, Environmental Concerns, and Logistical Considerations for Using Livestock for Coastal Upland Habitat Management** - Kristie Gill, Plastic Free Gulf Coast/Mississippi State University CREC

59. **Planning for Balance: Sea Grant Looks Ahead to 2024-2027** - Kelly Samek, National Oceanic and Atmospheric Administration

60. **Recovery of Planktonic Invertebrate Communities in Restored and Created Tidal Marshes Along the Mississippi-Alabama Gulf Coast** - Shelby Rinehart, University of Alabama

61. **Dog River Watershed Map and Join DRCR Poster** - Morgan Counts, Dog River Clearwater Revival (DRCR)

62. **Sediment Characterization and Geochemistry Distribution Within Mobile Bay and Mississippi Sound, Baldwin and Mobile Counties, Alabama: An Overview** - Mac McKinney, Geological Survey of Alabama

63. **Biodiversity, Relationships, and Aquatic Chemistry Knowledge in Saline Habitats (BRACKISH)** - Brianna Andrews, Grand Bay National Estuarine Research Reserve

64. **The Long-Term Evolution of Riverine Nitrogen Export to the Mobile Bay Under the Influences of Climate Change and Anthropogenic Activities** - Shufen Pan, Auburn University

Notes