



Coastal and Estuarine Research Federation


Susan Park (she/her)

Executive Director

NASEM Ocean Studies Board Meeting

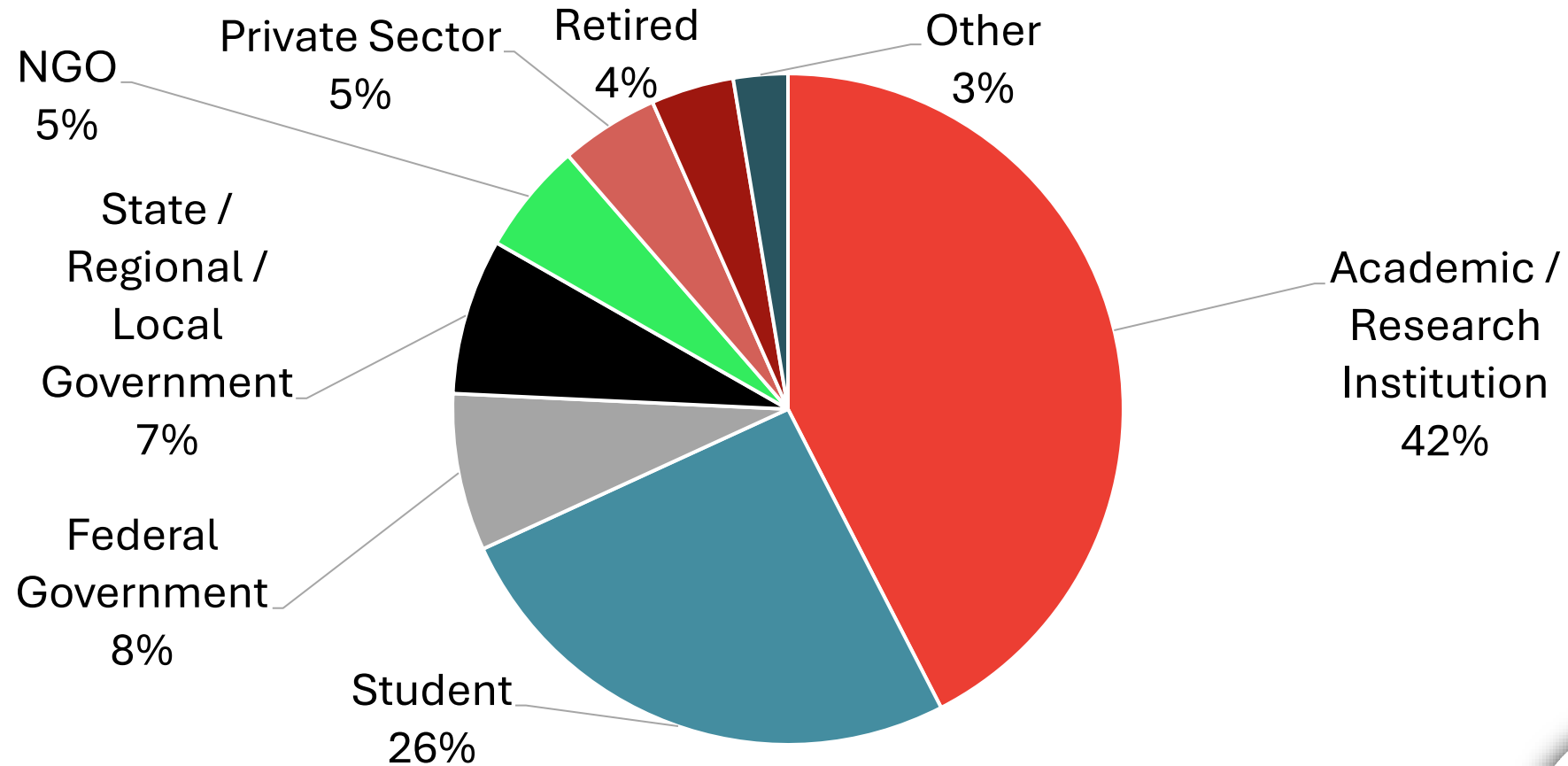
2 May 2025



 Malibu Lagoon in southern California, USA, at high water levels. Credit: Christine Whitcraft



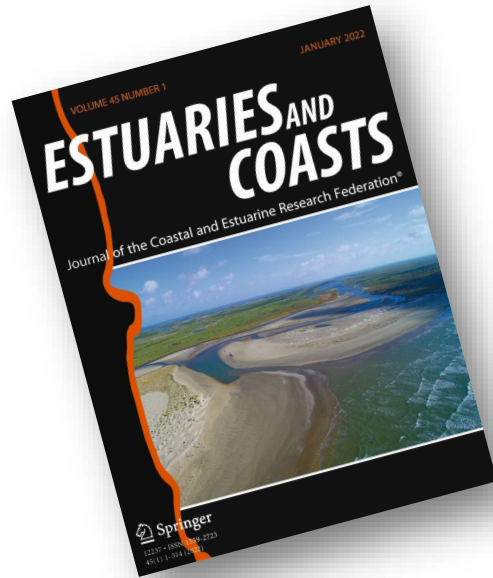
Who we are



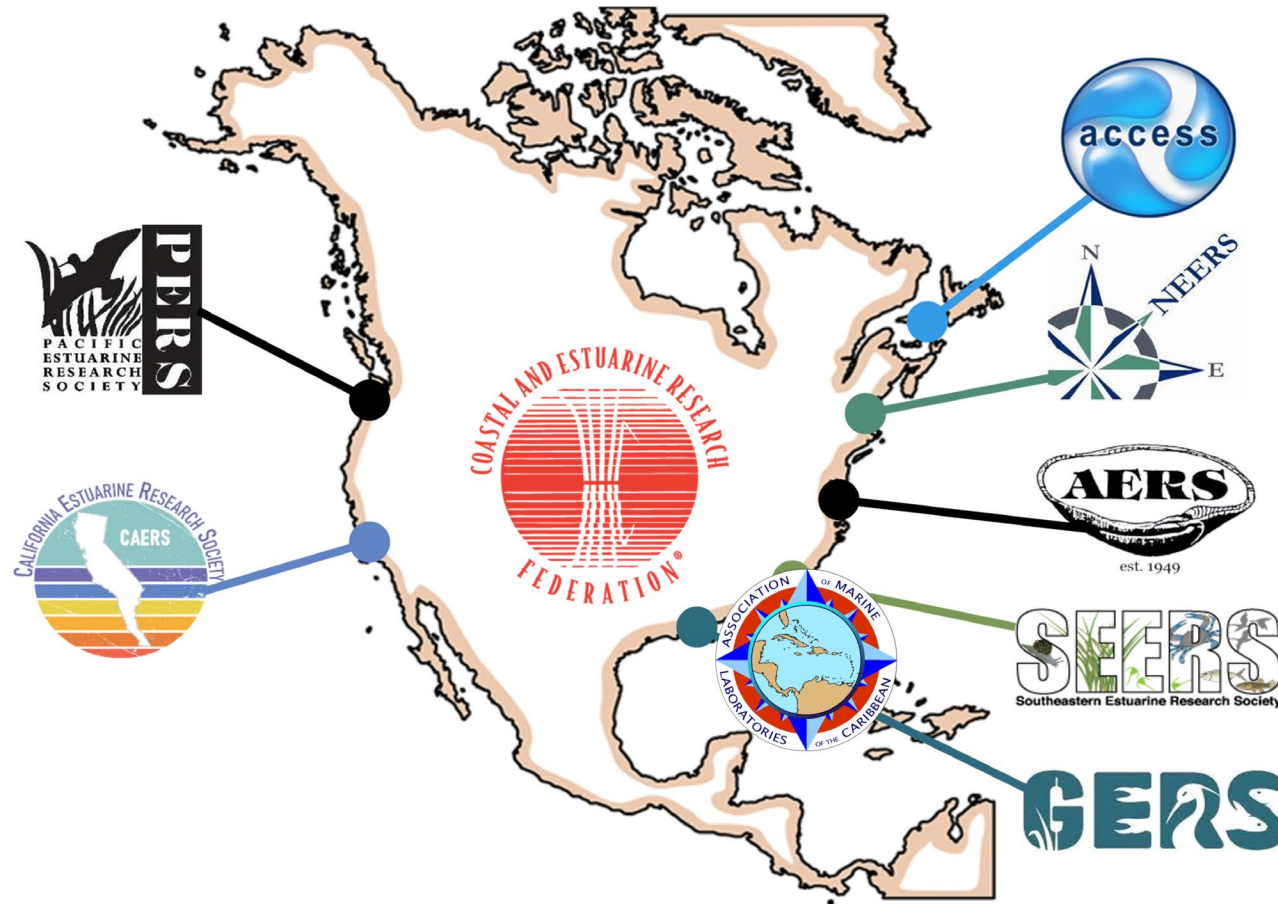
Core CERF Activities

Mission:

To advance the **understanding** and **wise stewardship** of coastal and estuarine ecosystems worldwide



Affiliate Societies



A wooden boardwalk made of light-colored planks winds through a coastal dune landscape. The path curves from the bottom left towards the center of the frame. The surrounding area is covered in tall, green grasses and low-lying vegetation. In the background, there are rolling dunes with patches of sand and sparse trees under a cloudy sky.

Visions V: 2023-2026 CERF Strategic Plan

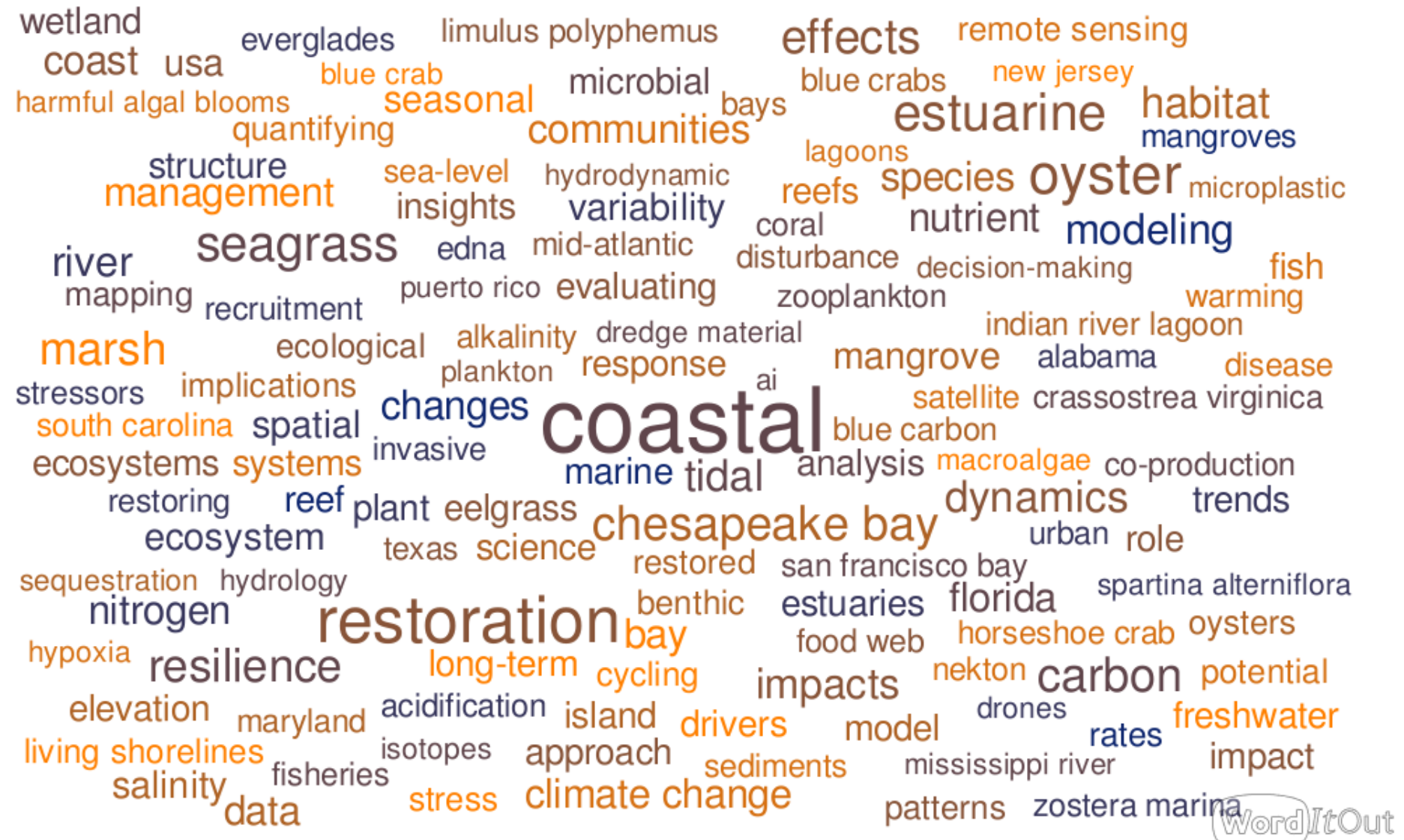
Goals:

1. Advocate for Estuaries and Coasts
2. Enhance Member Value
3. Promote and Support Equity and Justice



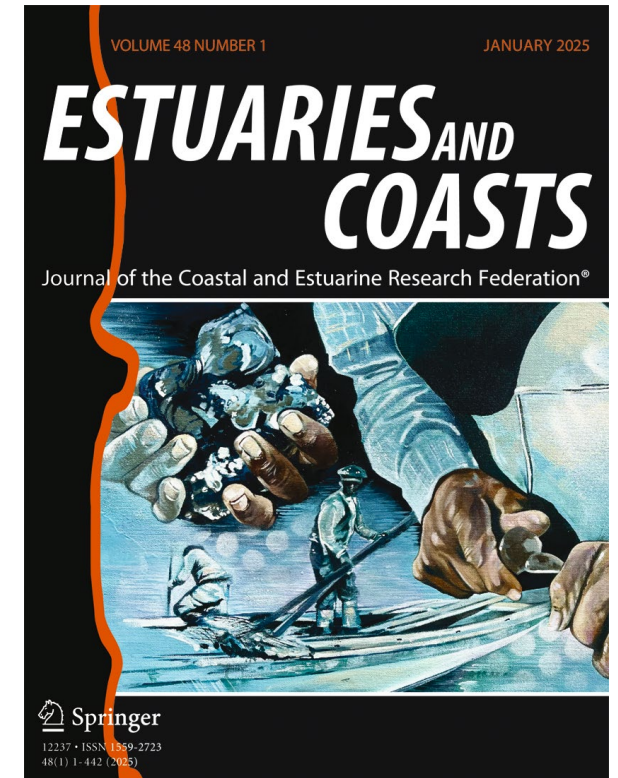
Our Priorities

1. Connecting science and management
2. Workforce development
3. Creating an inclusive culture



Estuaries and Coasts

- Management Applications: demonstrate application of research results to address contemporary estuarine and coastal management, socioeconomic, and policy issues
- Estuary and Coast Signatures: describe estuaries and coasts that are currently underrepresented or poorly characterized in the literature worldwide





Coastal and Estuarine Science News

- Highlights the latest research in *Estuaries and Coasts* that is relevant to environmental managers
- Free e-newsletter delivered to subscribers every two months
- Available in English and Spanish
- Links to read-only full text of original articles

2025 Issue 1

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[Invasion of the Blue Crabs](#)



Can Living Shorelines Be Used to Retrofit Armored Structures?

Enhancing shore protection and providing habitat in Florida

Living shorelines can help protect coasts while enhancing ecological value, and many communities are turning to them as an alternative to bulkheads and seawalls. But can living shorelines also be used as a way to retrofit failing armored infrastructures?





Communities of Practice



Facilitate information exchange by connecting experts and practitioners across the world



Promote coordination of activities



Encourage use of most appropriate methods and technologies



Share lessons-learned and advice



Serve as a repository for articles, manuals, reports, grey literature, and other resources





■ SAV Monitoring/Mapping CoP ▶

■ Mapping ▶

tags ▶

Latest

Top

Topic

📌 About the Mapping category

The Mapping category is a place for SAV mapping practitioners to talk. Here we focus on remote sensing methods, tools, data and best practices (Tier I*). * Neckles et al 2012
Please use the Monitoring in the Field cate... read more

Recent summary papers on SAV monitoring and mapping?

Remote Sensing Toolkit

Aerial firms we've used

aerial

Transitioning from visual image interpretation to semi-automated segmentation methods for seagrass mapping

Writing a request for services for seagrass mapping

satellite, aerial

Advice Please: Timing of concurrent remote sensing surveys

SAV Mapping and Monitoring Community of Practice



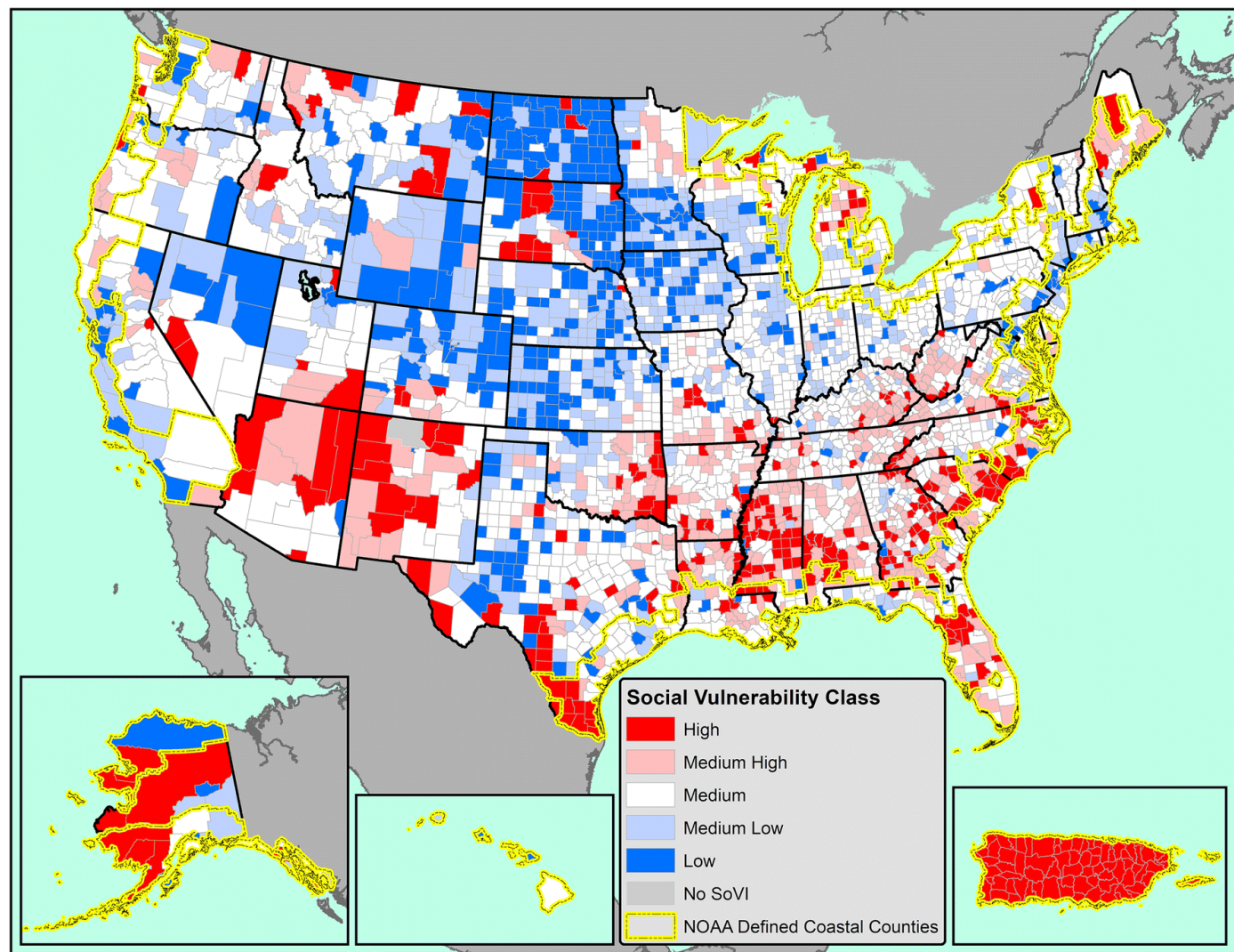
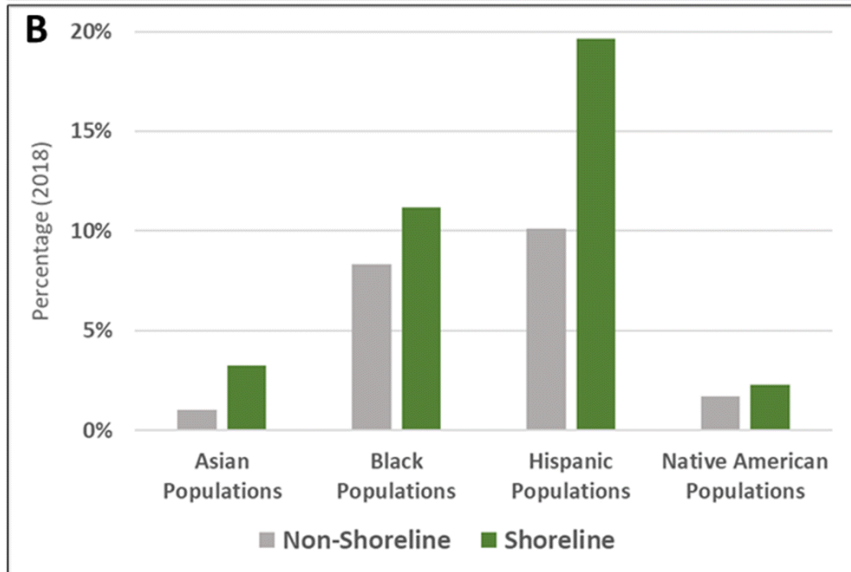
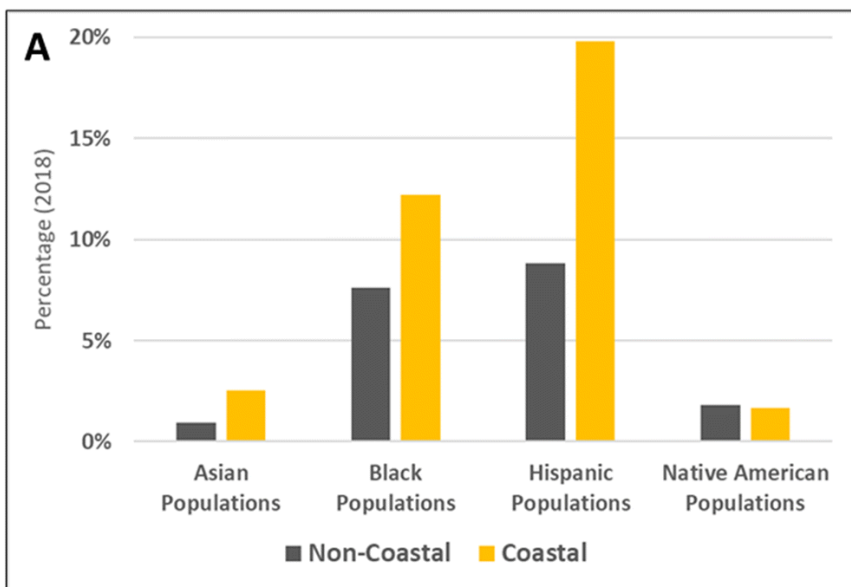
Commitment to Inclusion



Promote and Support Equity & Justice:

Foster greater diversity, equity, inclusion, justice, and accessibility (DEIJA) in the coastal and estuarine research, management, and policy communities and ensure that DEIJA is considered in all the work of CERF





From: Harris et al. 2022. A Socio-ecological Imperative for Broadening Participation in Coastal and Estuarine Research and Management

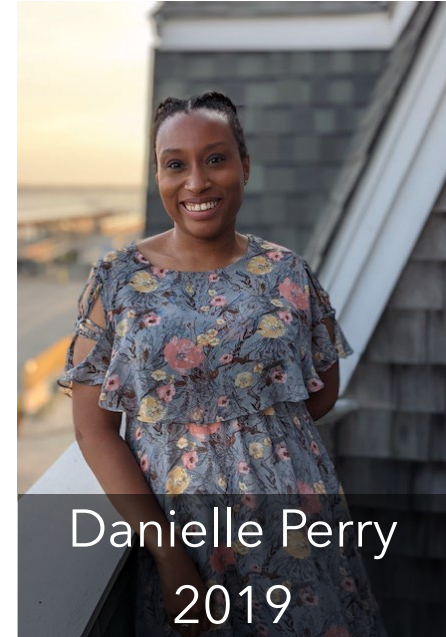
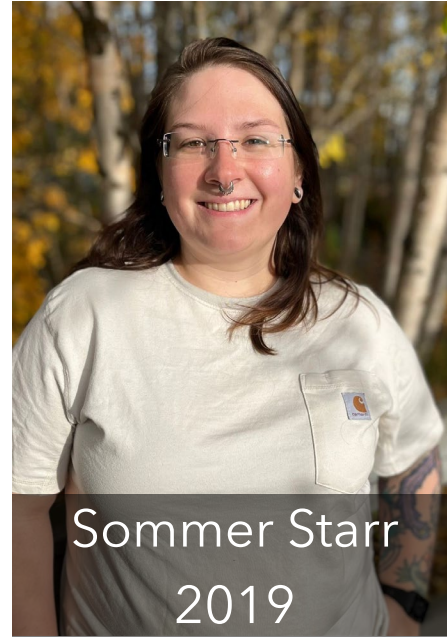
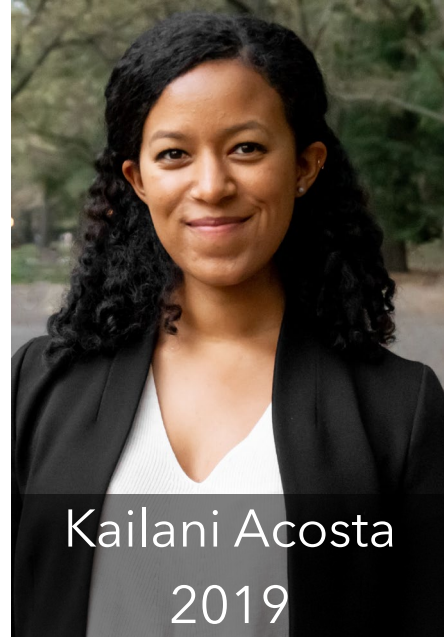
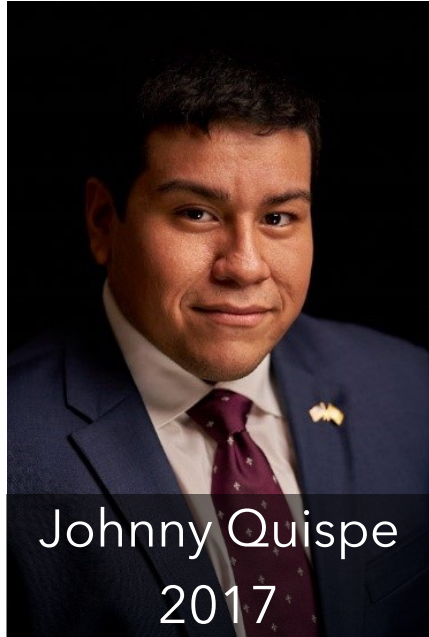


The 12-month program provides:

- Funding, including an annual stipend, to attend:
 - CERF Conference
 - Affiliate Society meeting
 - Restore America's Estuaries Summit
- Professional and near-peer mentors
- Professional development
- CERF membership

Supports students from groups underrepresented in our disciplines to pursue careers in coastal and estuarine science and management





Next Generation CERF Leaders



Brings together a diverse cohort of coastal and estuarine professionals at all career stages to be more inclusive leaders and affect culture change in the field



The 12-month program provides funding, including an annual stipend, to attend:

- three in-person events, including the CERF conference and two retreats
- monthly virtual workshops, coaching sessions, and group discussions

Knowledge areas

- DEIJA foundations
- Leadership skills
- Capacity to drive change



Coastal Design Competition

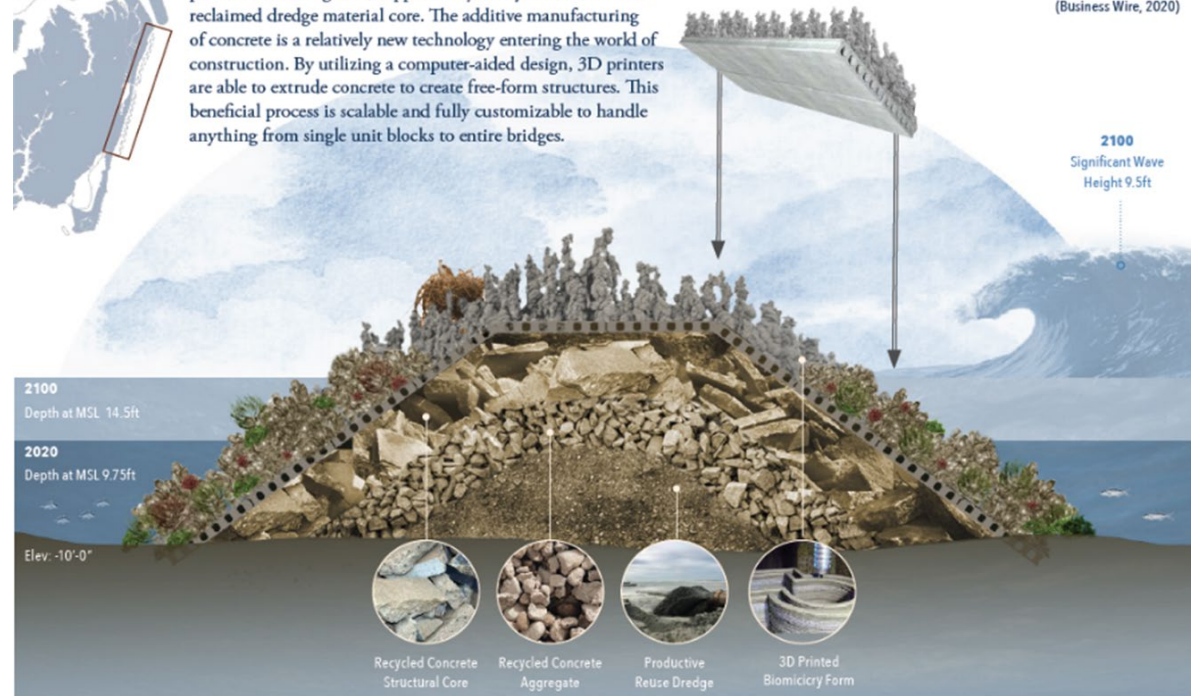
Buckroe Breakwater

Historic Tradition, Modern Technology



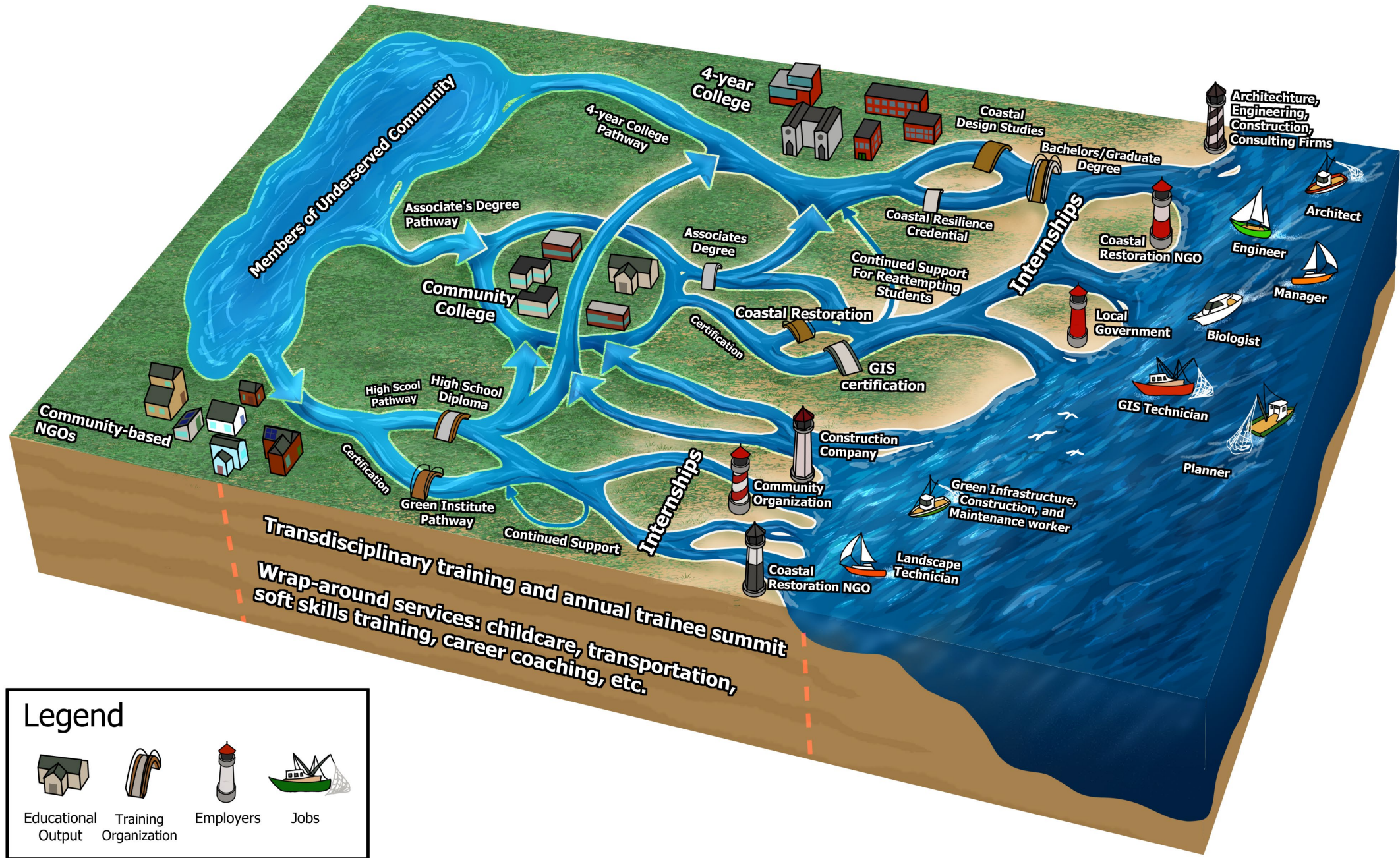
The breakwaters are assembled with 3D printed formless concrete plates that lock together, supported by a recycled concrete and reclaimed dredge material core. The additive manufacturing of concrete is a relatively new technology entering the world of construction. By utilizing a computer-aided design, 3D printers are able to extrude concrete to create free-form structures. This beneficial process is scalable and fully customizable to handle anything from single unit blocks to entire bridges.

With a projected market size of \$40.6 billion by 2027, this quickly evolving 3D printed concrete market and reduced carbon emission technology could prove to be an important resource for making gray infrastructure greener (Business Wire, 2020)



- Student/faculty teams propose research, design solutions, and innovative strategies to make coastal environments more resilient
- Students receive transdisciplinary training
- Vulnerable, underserved communities receive actionable designs





Adapted from Batchelor, et al. 2021. Reimagining STEM Workforce Development as a Braided River

Collaboration



Consortium of
Aquatic Science Societies



National Estuarine
Research Reserve System
Science Collaborative



National Estuarine
Research Reserve
ASSOCIATION



RESTORE
AMERICA'S
ESTUARIES





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Sunset over Shad Creek off Rowley River, Plum Island Sound, Massachusetts, USA. Credit: Jane Tucker

