CERF 2017

COASTAL SCIENCE INFLECTION POINT:
CELEBRATING SUCCESSES,
LEARNING FROM CHALLENGES

24th BIENNIAL CONFERENCE
November 5-9, 2017 • Providence, RI
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Welcome to Providence and CERF 2017

Welcome to CERF 2017, a gathering of professionals that celebrates our resolve as a science society to promote the understanding and wise stewardship of estuarine and coastal ecosystems worldwide! It is extremely timely that we have this opportunity here in Providence to engage with colleagues to discuss how CERF can address the challenges facing both the natural and social capital of coastal systems as they adapt to a changing environment. Hurricanes Harvey, Irma, and Maria, and other cyclonic activities in Pacific and Indian oceans, are very recent reminders that land-use decisions amplify climate change impacts in the coastal zone.

To help focus our discussions, the CERF Governing Board is very pleased to announce the release of our VISIONS IV strategic plan, designed to help CERF map our role as a science society to promote research, education, professional development, and science communication. I hope you will reach out to me and other Governing Board members, both newly elected and those completing recent terms, to discuss how the ambitious goals outlined in VISIONS IV can become a reality.

The conference organizers have done a tremendous job of focusing on our long-standing CERF tradition of a friendly and collegial conference environment, with activities designed to express our support of early career scientists. I hope you’ll take the time to learn about the innovative discoveries of the nearly 600 students and early career scientists attending and presenting at CERF from all over the world. Encourage them to provide leadership as the future of CERF, as well as the future direction of coastal and estuarine science.

I want to thank the CERF Governing Board, and our Executive Director Susan Park, for promoting such a rewarding and productive two-year term of governance. It has been an extremely gratifying experience as President, and I have such an admiration and appreciation for all the volunteer effort it takes to build an accomplished science society. And I also want to thank the staff for their continued support of CERF operations. And finally, thanks again to all the volunteers for making CERF 2017 such a great program! Enjoy the conference, Providence, and step up to make a difference.

Robert Twilley, CERF President, 2015-2017
Welcome from the CERF Conference Committee

We are especially excited for CERF 2017! This year our conference is focused on celebrating successes and learning from challenges. In this year’s program you’ll find sessions that cover a breadth of the work we do, whether it’s developing models on coastal acidification and hypoxia to better inform management, exploring the ecosystem benefits of aquaculture, learning lessons on coastal ecosystem resilience after Hurricane Sandy, or quantifying nutrient loading restoration impacts on urban coastal ecosystems – to name just a few – we hope there is something (or several things) for all of you.

The best word to describe this conference is ‘bustling.’ With twelve concurrent breakout sessions, the incorporation of Ignite-style talks into the program, two full poster sessions, and eight workshops, a lot of exciting research will be presented over the next few days. For the first time, we will be hosting a live joint session on harmful algal blooms with our colleagues in Cali, Colombia (check it out Tuesday). Plus, there are Monday and Wednesday’s topical lunches, Tuesday’s Inclusion Lunch, and the new CERF Ambassador Program. Between what are sure to be busy days and evening social events, which you won’t want to miss (we hear that the CERF Tones, who will be playing at Club CERF, are exceptional this year), the challenge will be to pace yourself and make it to the Coastal Cabaret on Thursday evening. Of course, if you need a break from all these activities, take advantage of the morning meditations to re-center.

CERF 2017 would not be possible were it not for the efforts of our amazing team of volunteers. The Scientific Program Committee is composed of seven sub-committees and has been fearlessly led by Chair Jamie Vaudrey and Co-Chairs Jonathan Grabowski and Mike Piehler. The Attendee Experience Committee has eighteen sub-committees led by Co-Chairs Veronica Berounsky and Walter Berry. We are honored and thankful that such an incredibly accomplished group of scientists have been willing to dedicate a great deal of their precious and limited time to develop the CERF 2017 meeting content. It is because of the efforts of our volunteers and the CERF Headquarters Team, led by Conference Director Terry Onustack and Executive Director Susan Park, that we have such a full and exciting meeting planned.

When you see members of the CERF 2017 Committee, please join us in thanking them for their time and efforts. These volunteers have committed themselves to meeting planning, all the while juggling the often overwhelming commitments of academic and personal life. In the two years that we have been working on this meeting, our committee members have also been applying for research grants, for tenure, and for jobs. They have been adding to their families (at last count we have five CERF 2017 babies), conducting research, and submitting manuscripts. We have a renewed appreciation for those who have fulfilled these roles in the past and gratitude for those who are filling them at present.

Thanks so much and we hope that you enjoy the meeting.

Wally and Autumn, CERF 2017 Co-Chairs
CERF 2017 CONFERENCE COMMITTEES

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Robinson W. "Wally" Fulweiler, Boston University
Autumn Oczkowski, Environmental Protection Agency

Scientific Program Committee
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Co-Chairs
Jonathan Grabowski, Northeastern University
Michael Piehler, University of North Carolina – Chapel Hill

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Lauri Green, Bloombury University

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Lisa Ayers Lawrence, Virginia Institute of Marine Science
Beth Darrow, University of North Carolina Wilmington

First Nations / Native American Program Leads
Catherine Corbett, Lower Columbia Estuary Partnership
Gary Williams, G.L. Williams & Associates Ltd.

Oral Session Leads
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Joanna York, University of Delaware

Plenary Session Leads
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Anne Giblin, Marine Biological Laboratory

Poster Session Leads
Cheryl Brown, Environmental Protection Agency
Courtney Schmidt, Narragansett Bay Estuary Program

Workshop Leads
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Jim Hagy, Environmental Protection Agency

At-Large Committee Members
Ruth Carmichael, Dauphin Island Sea Lab
Giancarlo Cicchetti, Environmental Protection Agency
Sara Grady, North & South Rivers Watershed Association
Leila Hamdan, University of Southern Mississippi
Walt Nelson, Environmental Protection Agency
Ron Thom, Pacific Northwest National Lab
Cathy Wigand, Environmental Protection Agency

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Co-Chairs
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Walter Berry, Environmental Protection Agency
Attendee Experience Advisor
Joy Bartholomew, CERF Emeritus Executive Director

CERF Ambassador Program Leads
Kristy Lewis, St. Mary’s College of Maryland
Christine Whitcraft, California State University—Long Beach

CERF Inclusion Luncheon Leads
Cristina Bourassa, University of New Hampshire
Sabah Ul-Hasan, University of California—Merced

CERF Unplugged
Sara Grady, North & South Rivers Watershed Association

Club CERF Social Event
Veronica Beroumsky, University of Rhode Island
Walter Berry, Environmental Protection Agency

Conference Art Leads
Jason Great, Environmental Protection Agency
Austin Humphries, University of Rhode Island
Susan Adamowicz, US Fish and Wildlife Service

Family Friendliness Coordinator
Sara Grady, North & South Rivers Watershed Association

Field Trip Leads
Amanda Babson, National Park Service
Kathryn Ford, Massachusetts Office of Energy and Environmental Affairs

Mentoring Program Leads
Linda Blum, University of Virginia
Janet Nestlerode, Environmental Protection Agency

Reunion Coordination
Veronica Beroumsky, University of Rhode Island
Walter Berry, Environmental Protection Agency

Silent Auction Leads
Betty Neikirk, Virginia Institute of Marine Science
Patricia Reilly, The Reilly Group
Nick Lowell, Lowell Instruments, LLC

Social Media Leads
Jeff Clements, University of New Brunswick
Julian Damashek, University of Georgia
Mary Grace Lemon, Louisiana State University

Student Career Networking Dinner Leads
Liz Brannon, University of Rhode Island
Ashley Bulseco-McKim, Northeastern University
Geno Olmi, NOAA

Student Judging Leads
Amber Hardison, University of Texas
Jessie Jarvis, University of North Carolina Wilmington

Student Pub Night Leads
Joanna Carey, Marine Biological Laboratory
Rose Martin, Environmental Protection Agency

Student Travel Leads
Sam Lake, Virginia Sea Grant
Sara Blachman, Virginia Marine Resources Commission

Topical Brown-bag Lunches
Helen Cheng, New York Sea Grant
Judith Weis, Rutgers University

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Carol Dole, Event Staff
Amaira Gallagher, Event Coordinator
Michelle Geller, Event Finance
Alope Pardee, Event Registration
Krystina Toscas, Event Staff

CERF Abstract Manager
Todd Fake

CERF Exhibition and Sponsorship Sales
Lucia Regan
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**Member-at-Large 2013-2017**  
Elizabeth Canuel, Virginia Institute of Marine Science

#### Members-at-Large 2015-2019

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- Ruth Carmichael, Dauphin Island Sea Lab
- Mary Grace Lemon, Louisiana State University

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**Secretary**  
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Christine Whitcraft, California State University Long Beach (CSULB)

**Student Member-at-Large 2017-2015**  
Ashley Bulseco-McKim, Northeastern University

---

### 2015 – 2017 Affiliate Society Representatives

**ACCESS**  
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**AERS**  
Danielle Kreeger, Partnership for the Delaware Estuary

**CAERS**  
Christine Whitcraft, CSU Long Beach

**GERS**  
Anna Armitage, Texas A&M University–Galveston Campus

**NEERS**  
Sara Grady, Massachusetts Bays Program/NSRWA

**PERS**  
Jude Apple, Padilla Bay NERR

**SEERS**  
Erik Smith, University of South Carolina

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### 2017 – 2019 Affiliate Society Representatives

**ACCESS**  
Bruce Hatcher, Bras d’Or Institute/Cape Breton University

**AERS**  
Joe Luczkovich, East Carolina University

**CAERS**  
Theresa Talley, University of California—San Diego

**GERS**  
Anna Armitage, Texas A&M University–Galveston Campus

**NEERS**  
Sue Adamowitz, US Fish & Wildlife Service

**PERS**  
Jason Stutes, GeoEngineers, Inc.

**SEERS**  
Cassondra Thomas, South Florida Water Management District

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Charles (Si) Simenstad, University of Washington

**Managing Editor**  
Taylor Bowen

**Reviews Editor**  
Iris C. Anderson, Virginia Institute of Marine Science

**CESN Managing Editor**  
Merryl Alber, University of Georgia

**CESN Science Writer/Coordinating Editor**  
Rebecca Heisman

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Susan Park

**CERF Chief Operating Officer**  
Louise Miller

**CERF Conference Director**  
Terry Onustack

**CERF Administrative Team**  
SBI Association Management

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Martha Sutula

**Membership**  
Hilary Neckles

**International**  
Sharon Herzka

**Publications**  
Ruth Carmichael

**Career Development and Education**  
Mary Grace Lemon and Elizabeth Canuel

**Policy**  
Robert Twilley

**Affiliate Society Presidents**  
Mark Brush

**Conference Strategy**  
Sara Grady

**Strategic Planning 2017-2022**  
Robert Twilley

**Elections**  
Ken Heck

**Awards**  
Walter Boynton and Janet Nestlerode

**CERF 2017 Conference Planning Committee**  
Wally Fulweiler and Autumn Oczkowski
## CERF 2017 CONFERENCE SCHEDULE-AT-A-GLANCE

### Pre-Conference | Sunday, November 5

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various times</td>
<td>Field Trips</td>
<td>Various</td>
</tr>
<tr>
<td>Various times</td>
<td>Workshops</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>7:30AM–6:00PM</td>
<td>Registration Open</td>
<td>3rd Floor Concourse</td>
</tr>
<tr>
<td>11:00AM–12:00PM</td>
<td>Student Worker Orientation and Training</td>
<td>Room 557</td>
</tr>
<tr>
<td>4:30–5:45PM</td>
<td>CERF 2017 VIP Reception <em>(By Invitation)</em></td>
<td>Rotunda – Level 5</td>
</tr>
<tr>
<td>5:00–5:45PM</td>
<td>First-time Attendee Orientation</td>
<td>Room 551 AB</td>
</tr>
<tr>
<td>6:00–8:00PM</td>
<td>Keynote Address &amp; Scientific Awards</td>
<td>Ballroom A – Level 5</td>
</tr>
<tr>
<td>8:00–10:00PM</td>
<td>Silent Auction Open</td>
<td>Exhibition Hall BC</td>
</tr>
<tr>
<td>8:00–10:00PM</td>
<td>Presidents’ Welcome Reception with Exhibitors</td>
<td>Exhibition Hall BC</td>
</tr>
</tbody>
</table>

### Day 1 | Monday, November 6

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00–7:45AM</td>
<td>Meditation</td>
<td>Omni-Blackstone</td>
</tr>
<tr>
<td>7:00AM–7:00PM</td>
<td>Registration Open</td>
<td>3rd Floor Concourse</td>
</tr>
<tr>
<td>7:00–8:00AM</td>
<td>Mentorship Program Breakfast <em>(By invitation)</em></td>
<td>Omni-Narragansett AB</td>
</tr>
<tr>
<td>8:00–9:30AM</td>
<td>Early Morning Sessions (Session 1)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>9:30–10:00AM</td>
<td>Break with Exhibitors</td>
<td>Exhibition Hall BC</td>
</tr>
<tr>
<td>10:00–11:30AM</td>
<td>Late Morning Sessions (Session 2)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>11:30AM–1:00PM</td>
<td>Lunch Break</td>
<td>RICC/on your own</td>
</tr>
<tr>
<td></td>
<td>Topical Brown-bag Luncheon</td>
<td>Exhibition Hall D</td>
</tr>
<tr>
<td></td>
<td>NEERS Affiliate Luncheon <em>(By RSVP)</em></td>
<td>Rotunda</td>
</tr>
<tr>
<td></td>
<td>PERS Affiliate Luncheon <em>(By RSVP)</em></td>
<td>Omni-Kent</td>
</tr>
<tr>
<td></td>
<td>Ocean Frontiers III Film Viewing <em>(11:50AM)</em></td>
<td>Ballroom B</td>
</tr>
<tr>
<td>12:00–1:00PM</td>
<td>CERF 2017 Special Town Hall Meeting on Hurricanes</td>
<td>Omni–Waterplace 1</td>
</tr>
<tr>
<td>1:00–2:30PM</td>
<td>Early Afternoon Sessions (Session 3)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>2:30–3:00PM</td>
<td>Break with Exhibitors</td>
<td>Exhibition Hall BC</td>
</tr>
<tr>
<td>3:00–4:30PM</td>
<td>Plenary Session: Science and Decision Making to Improve Coastal Resilience</td>
<td>Ballroom A – Level 5</td>
</tr>
<tr>
<td>4:30–7:00PM</td>
<td>Poster Sessions/Happy Hour</td>
<td>Exhibition Hall BC</td>
</tr>
<tr>
<td>7:00–9:00PM</td>
<td>Student &amp; Early Career Networking Dinner</td>
<td>Omni–Narragansett AB</td>
</tr>
<tr>
<td>9:00PM–MIDNIGHT</td>
<td>Student &amp; Early Career Pub Night</td>
<td>Trinity Brewhouse–186 Fountain St.</td>
</tr>
</tbody>
</table>
**CERF 2017 CONFERENCE SCHEDULE-AT-A-GLANCE**

**Day 2 | Tuesday, November 7**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>7:00 – 7:45 AM</td>
<td>Meditation</td>
<td>Omni-Blackstone</td>
</tr>
<tr>
<td>7:00 – 8:00 AM</td>
<td>Past Presidents’ Breakfast <em>(By Invitation)</em></td>
<td>Omni-Waterplace 2-3</td>
</tr>
<tr>
<td>7:30 AM – 6:00 PM</td>
<td>Registration Open</td>
<td>3rd Floor Concourse</td>
</tr>
<tr>
<td>8:00 – 9:30 AM</td>
<td>Early Morning Sessions (Session 4)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>9:30 – 10:00 AM</td>
<td>Break with Exhibitors</td>
<td>Exhibition Hall BC</td>
</tr>
<tr>
<td>10:00 – 11:30 AM</td>
<td>Late Morning Sessions (Session 5)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Lunch Break</td>
<td>3rd Floor Concourse</td>
</tr>
<tr>
<td>12:00 – 12:30 PM</td>
<td>YSI Presentation – New Instruments Streamline Monitoring</td>
<td>RICC/on your own</td>
</tr>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>CERF Inclusion Luncheon <em>(Ticketed)</em></td>
<td>Omni – Narragansett AB</td>
</tr>
<tr>
<td>1:00 – 2:30 PM</td>
<td>Early Afternoon Sessions (Session 6)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>2:30 – 3:00 PM</td>
<td>Break with Exhibitors</td>
<td>Exhibition Hall BC</td>
</tr>
<tr>
<td>3:00 – 4:30 PM</td>
<td>Plenary Session: Food Webs and Fisheries</td>
<td>Ballroom A – Level 5</td>
</tr>
<tr>
<td>4:30 – 5:30 PM</td>
<td>CERF Annual Membership and Business Meeting</td>
<td>Ballroom A – Level 5</td>
</tr>
<tr>
<td>5:30 – 6:30 PM</td>
<td>Affiliate Society Meetings (AERS, CAERS, GERS, SEERS)</td>
<td>see page 26</td>
</tr>
<tr>
<td>7:00 – 10:00 PM</td>
<td>Club CERF Social Event/Open Mic Challenge <em>(Ticketed)</em></td>
<td>Snookers Bar &amp; Grill – 53 Ashburton St.</td>
</tr>
</tbody>
</table>

**Day 3 | Wednesday, November 8**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>7:00 – 7:45 AM</td>
<td>Meditation</td>
<td>Omni-Blackstone</td>
</tr>
<tr>
<td>7:00 – 8:00 AM</td>
<td>CESN Team Meeting/Breakfast <em>(By Invitation)</em></td>
<td>Omni-Waterplace 2-3</td>
</tr>
<tr>
<td>7:30 AM – 6:00 PM</td>
<td>Registration Open</td>
<td>3rd Floor Concourse</td>
</tr>
<tr>
<td>8:00 – 9:30 AM</td>
<td>Early Morning Sessions (Session 7)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>9:30 – 10:00 AM</td>
<td>Break with Exhibitors</td>
<td>Exhibition Hall BC</td>
</tr>
<tr>
<td>10:00 – 11:30 AM</td>
<td>Late Morning Sessions (Session 8)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>11:30 AM – 1:00 AM</td>
<td>Lunch Break</td>
<td>RICC/on your own</td>
</tr>
<tr>
<td>12:00 – 12:30 PM</td>
<td>YSI Presentation – New Instruments Streamline Monitoring</td>
<td>Rotunda</td>
</tr>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Editorial Board Meeting/Lunch <em>(By Invitation)</em></td>
<td>Omni-Waterplace 2-3</td>
</tr>
<tr>
<td>1:00 – 2:30 PM</td>
<td>Early Afternoon Sessions (Session 9)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>2:30 – 3:00 PM</td>
<td>Break with Exhibitors</td>
<td>Exhibition Hall BC</td>
</tr>
<tr>
<td>3:00 – 4:30 PM</td>
<td>Late Afternoon Sessions (Session 10)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>4:30 – 7:00 PM</td>
<td>Poster Sessions/Happy Hour</td>
<td>Exhibition Hall BC</td>
</tr>
<tr>
<td>5:00 – 7:00 PM</td>
<td>Future Earth Coasts Town Hall</td>
<td>Rotunda</td>
</tr>
<tr>
<td>6:00 PM</td>
<td>Close of Silent Auction</td>
<td>Exhibition Hall BC</td>
</tr>
</tbody>
</table>
## CERF 2017 CONFERENCE SCHEDULE-AT-A-GLANCE

### Day 4 | Thursday, November 9

<table>
<thead>
<tr>
<th>Time</th>
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<th>Location</th>
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<tbody>
<tr>
<td>7:00 – 7:45 AM</td>
<td>Meditation</td>
<td>Omni-Blackstone</td>
</tr>
<tr>
<td>7:00 – 8:00 AM</td>
<td>CERF 2019 Committee Breakfast <em>(By Invitation)</em></td>
<td>Omni-Waterplace 2-3</td>
</tr>
<tr>
<td>7:30 AM – 5:00 PM</td>
<td>Registration Open</td>
<td>3rd Floor Concourse</td>
</tr>
<tr>
<td>8:00 – 9:30 AM</td>
<td>Early Morning Sessions (Session 11)</td>
<td>Meeting Rooms – Level 5</td>
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<tr>
<td>9:30 – 10:00 AM</td>
<td>Break</td>
<td>5th Floor Concourse</td>
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<tr>
<td>10:00 – 11:30 AM</td>
<td>Late Morning Sessions (Session 12)</td>
<td>Meeting Rooms – Level 5</td>
</tr>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Lunch Break</td>
<td>RICC/on your own</td>
</tr>
<tr>
<td>1:00 – 2:30 PM</td>
<td>ACCESS Affiliate Luncheon <em>(By RSVP)</em></td>
<td>Rotunda</td>
</tr>
<tr>
<td>2:30 – 3:00 PM</td>
<td>Early Afternoon Sessions (Session 13)</td>
<td>Meeting Rooms – Level 5</td>
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<tr>
<td>3:00 – 4:30 PM</td>
<td>Break</td>
<td>5th Floor Concourse</td>
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<tr>
<td>4:30 – 5:30 PM</td>
<td>Late Afternoon Sessions (Session 14)</td>
<td>Meeting Rooms – Level 5</td>
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<tr>
<td>5:30 – 5:30 PM</td>
<td>CERF 2017 Committee Reception <em>(By Invitation)</em></td>
<td>Omni-Waterplace 1</td>
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<tr>
<td>5:30 – 8:30 PM</td>
<td>Close Out Party and Student Awards Presentation</td>
<td>Ballroom ABC</td>
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<td>Coastal Cabaret <em>(immediately following the conclusion of the Awards presentation)</em></td>
<td>Ballroom D</td>
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The National Estuarine Research Reserve System’s Science Collaborative supports collaborative research that addresses estuarine and coastal management problems important to the reserves through an agreement with, and funds from, NOAA.

Learn more at [https://coast.noaa.gov/nerrs](https://coast.noaa.gov/nerrs) or [www.graham.umich.edu/water/nerrs](http://www.graham.umich.edu/water/nerrs)
**WORKSHOPS**

The Scientific Program Committee scheduled a series of pre-conference workshops on Sunday, November 5 covering a wide array of topics. Limited tickets for some of the workshops may still be available at the registration desk on Sunday morning.

- Building and Embracing CERF Diversity
- Business Basics for Scientists
- How Collaborative Learning Can be Used to Bridge Science, Management and Policy to Improve Outcomes
- Introduction to R for Analysis of Coastal and Estuarine Data
- Landing that Job!
- Mapping Estuarine/Near-Coastal SAV: Sharing Best Practices
- Navigating the Science-Policy Nexus
- Writing and Publishing a Scientific Paper

**FIELD TRIPS**

CERF is proud to sponsor a series of pre-conference field trips on Sunday, November 5 appealing to a wide variety of interests. Limited tickets for some of the excursions may still be available at the registration desk on Sunday morning.

- Aquaculture Farm Tour: From the Water to the Table
- Estuarine Research on Narragansett Bay
- Field’s Point Wastewater Treatment Facility Tour
- Narrow River Ecology and Restoration Kayak Tour
- Rhode Island Marine Science Tour: Cutting Edge Oceanography Now and in the Past
- Metro Providence Brewery Tour

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**Louisiana Sea Grant**

a proud sponsor of the 24th Biennial CERF Conference

Research  
Outreach  
Education  
Law & Policy
## EXHIBITORS & SPONSORS

### CERF AFFILIATE SOCIETIES—LEVEL 5

<table>
<thead>
<tr>
<th>AFFILIATE SOCIETIES</th>
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<tr>
<td>Atlantic Canada Coastal and Estuarine Science Society (ACCESS)</td>
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<tr>
<td>Atlantic Estuarine Research Society (AERS)</td>
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<tr>
<td>California Estuarine Research Society (CAERS)</td>
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<td>Gulf Estuarine Research Society (GERS)</td>
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<tr>
<td>New England Estuarine Research Society (NEERS)</td>
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<td>Pacific Estuarine Research Society (PERS)</td>
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<tr>
<td>Southeastern Estuarine Research Society (SEERS)</td>
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Affiliate Society tables will be located on 5th floor in the East Prefunction area, near the Rotunda.

### MEET OUR SPONSORS & EXHIBITORS

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<tr>
<th>SPONSORS &amp; EXHIBITORS</th>
<th>BOOTH NUMBER</th>
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<tr>
<td>Aquatic Informatics</td>
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<td>Boston University</td>
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<td>C-2 Innovations, Inc</td>
<td>Career Booth—Now Hiring! 40</td>
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<td>California Sea Grant</td>
<td>Supporter Sponsor 23</td>
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<td>Campbell Scientific</td>
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<td>CERF</td>
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<td>Commercial Fisheries Research Foundation</td>
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<td>Consortium of Aquatic Science Societies (CASS)</td>
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<td>Dalio Ocean Initiative / Alucia Productions</td>
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<td>Fuss &amp; O’Neill, Inc.</td>
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<td>Graduate School of Oceanography, University of Rhode Island</td>
<td>Student Champion Sponsor 21</td>
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<td>Green Eyes</td>
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<td>Lotek</td>
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<td>Louisiana State University (LSU)</td>
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<td>Lowell Instruments LLC</td>
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<td>Maine Sea Grant</td>
<td>Supporter Sponsor 22</td>
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<td>McLane Research Labs</td>
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<td>NERACOOS</td>
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<td>New England Interstate Water Pollution Control Commission</td>
<td>Career Booth—Now Hiring! 38</td>
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<td>OGI Inc.</td>
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SPONSORS & EXHIBITORS

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<td>Pro-Oceanus Systems</td>
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<td>RBR Ltd.</td>
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<td>School of Marine Sciences, Sun Yat-sen University, China</td>
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<td>Scientists and Environmentalists for Population Stabilization</td>
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<td>SpringerNature</td>
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<td>Turner Designs</td>
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<td>UL Lafayette, Institute for Coastal and Water Research</td>
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<td>Unisense A/S</td>
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<td>University of Maryland Center for Environmental Science</td>
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<td>University of Massachusetts Dartmouth School for Marine Science &amp; Technology</td>
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<td>University of Rhode Island Coastal Institute</td>
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<td>USDA NRCS</td>
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<td>Visit Mobile</td>
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<td>Woods Hole Oceanographic Institution</td>
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<td>YSI, a Xylem Brand</td>
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Restore America's Estuaries is dedicated to the protection and restoration of bays and estuaries as essential resources for our nation.

We look forward to seeing you next year at the 9th National Summit on Coastal and Estuarine Restoration and Management, December 8-13, 2018 at the Long Beach Convention Center in Long Beach, California!
GENERAL INFORMATION

REGISTRATION
Conference check-in for pre-registered attendees and registration of on-site attendees will take place in the Exhibition Hall Foyer (3rd Level). The registration desk will be open during the following hours:

- Sunday, 5 November ............................... 7:00 AM – 7:00 PM
- Monday, 6 November ............................. 7:00 AM – 7:00 PM
- Tuesday, 7 November ............................. 7:00 AM – 7:00 PM
- Wednesday, 8 November......................... 7:00 AM – 7:00 PM
- Thursday, 9 November ......................... 7:00 AM – 7:00 PM

The Speaker Presentation Room will be located in Room 550 AB and will be open during the following hours for on-site submission, review and editing of PowerPoint presentations:

- Sunday, 5 November ............................... 12:00 – 5:00 PM
- Monday, 6 November ............................. 7:00 AM – 5:00 PM
- Tuesday, 7 November ............................. 7:00 AM – 5:00 PM
- Wednesday, 8 November......................... 7:00 AM – 5:00 PM
- Thursday, 9 November ......................... 7:00 AM – 3:00 PM

Free WiFi is available to conference attendees in all convention center meeting rooms and the exhibit hall via the CERF2017WiFi network. The password is: CERF2017

CONFERENCE APP
Use CERF 2017’s mobile web app to access the most up-to-date information about the conference. Abstracts for oral presentations and posters are available and you can create your own, personalized schedule. Just visit the website on your desktop, laptop or other mobile device.

www.erf.org/conference-app

Upon arrival at the mobile web app site, you will create a personal log-in and then will be on your way. Once in the app, you can search for abstracts by author name, day of presentation, or title. You will also find information about sponsors and exhibitors, conference events and the schedule.

CERF AMBASSADOR PROGRAM
The new CERF Ambassadors Program is designed to enhance and enrich the conference for all attendees by enlisting a group of selected CERF members at all career stages to chat informally, provide guidance, suggestions, and help increase engagement among attendees. The CERF Ambassador can assist by introducing you to other attendees, helping you prioritize your schedule, answering your question or finding information that will help you enjoy and get more from the conference. CERF Ambassadors will be wearing a distinctive Ambassador button. Whenever they are wearing their buttons, they welcome you to approach them and ask for advice or assistance. The Ambassador is willing to help or find others who can assist.

SELFIES: With the goal to increase engagement among members and conference attendees, we want to know that you’re interacting with out Ambassadors. Please take a SELFIE and share your “CERF Ambassador moment” on social media using the hashtag #CERFAmbassador!

INVITED ARTIST EXHIBIT AT CERF 2017
Location: Exhibit Hall BC
With the 2017 conference in Providence, a location known for its arts community, we feel this is an ideal time to initiate a “conversation” among the coastal scientists and managers who attend the CERF conference and local artists, believing that each community enriches the way we see and interact with our planet. Thus, the goal of the Invited Artist Exhibit at CERF 2017 is to show works that capture ideas about coastal New England, or are inspired by artist roots in New England. The exhibited work will include photography, sculpture, printmaking, and textiles.

FAMILY FRIENDLINESS/MOTHERS’ LOUNGE
CERF 2017 has taken aim to be the most family-friendly CERF conference yet.

Nursing mothers can visit the Mothers’ Lounge, located in the West Wing of the 5th floor of the Rhode Island Convention Center, near Room 557. The room has special amenities and supplies to help make navigating the conference an easier experience (such as refrigeration to store pumped milk).

In addition, check out the “Work/Life Balance” informal discussion during Wednesday’s Topical Brown-bag Luncheon, where you can have an opportunity to talk with your fellow parents about the unique challenges of raising a family while managing your career.

NURSE’S STATION
A nurse’s station is located on Level 1 (ground floor) of the Rhode Island Convention Center in the West Lobby area. A nurse will be on duty during main conference hours throughout the event. Attendees needing minor medical advice or basic first aid can visit the nurse’s station for assistance.

EMERGENCIES
In the case of an emergency, please dial 6023 on any RICC house phone (or dial 401-458-6023 from a cell phone) to contact the Security Command Center.
MORNING MEDITATION
Time: Monday – Thursday, 7:00 – 7:45 AM
Location: Omni Hotel – Blackstone Room
Would you like to start your day with a little mindful movement and meditation? Each morning before the conference begins we will meet to share some gentle yoga, breathing exercises, and silent meditation. The exercises are suitable for any fitness level and will be conducted seated or standing so no mats or props are necessary. We won’t be working up a sweat so you can come in your conference clothes. Classes are offered free of charge and beginners are welcome. If you have questions, please contact Bryan Milstead at willbmisled@gmail.com.

SOCIAL MEDIA
Regular updates and reminders about conference activities will be posted to the CERF Facebook pages and Twitter account.

CERF on Facebook (facebok/CERF.Studies.Casts)
CERF Students on Facebook (facebook/CERFSStudents)
@CERFScience on Twitter
Participants are encouraged to tag their posts, photos and tweets with the following tags:
#CERF2017 if you are planning to post about your general CERF 2017 experience;
#CERFSStudets if you are a student or recent graduate interested in connecting with your cohort or learning more about student and recent graduate opportunities through CERF;
#CERF2017Live if you want to follow live tweets from the keynote address and plenary speaker presentations
CERF will also be hosting a CERF 2017 Selfie Contest. Interested attendees are encouraged to capture and share their best moments at the conference for a chance to win prizes. Entries must be posted to Facebook or Instagram and tagged with #iloveCERF by November 9, 2017 to be eligible to win. Maximum 4 photo entries per person.

Did you know that we have our own CERF 2017 geofilter on Snapchat? Geofilters are overlays that capture where you are when you Snap! If you’re in the convention center, you can find the CERF 2017 geofilter by swiping on a Snap preview screen. Keep snapping, CERFers! Thank you to Lauren Huey, the winner of our Snapchat Geofilter contest, for the design.

SOCIAL MEDIA POLICY
Please Read Before You Tweet (or Facebook, blog, Instagram, Pinterest, Google+, LinkedIn, etc.)
To balance the needs and expectations of conference presenters with the benefits of open sharing and discussion, we have prepared a best practice guideline for using social media during the conference.

• We encourage all conference attendees to openly discuss our conference on social media. You can live Tweet, post to Facebook, or even blog about the presentations. Please use the meeting hashtag #CERF[year] (e.g. #CERF2017) to increase engagement. We also encourage our attendees to follow and tag us on Twitter (@CERFScience) and Facebook (@CERF.Estuaries.Casts), and to use these outlets to send us questions, ideas, or general thoughts—we’ll follow you back!

• Photography, video, and audio recording of scientific content from oral and poster sessions, plenaries, and keynotes are not allowed unless you receive permission from the authors/presenters. Some authors/presenters wish to withhold audio/visual material from being recorded and/or posted on social media.

• We encourage the use of photos and video, but please restrict it to non-scientific content such as social events, in the Exhibit Hall, and in public spaces throughout the meeting.

• Please follow our overall meeting code of conduct and be considerate and respectful of all meeting attendees. Online harassment, intimidation, or discrimination in any form will not be tolerated.

RECORDING POLICY
No workshop, presentation, event, or exhibit at CERF 2017 shall be photographed, videotaped, broadcast or recorded for personal or commercial use, sale or distribution of any kind without the express written consent of CERF headquarters.

Photography, video and audio recording of scientific content from oral and poster sessions, plenaries, and keynotes are not allowed unless you receive permission from the authors/presenters. Some authors/presenters wish to withhold audio/visual material from being recorded and/or posted on social media.

PARKING
Attendees who wish to park at the Rhode Island Convention Center may park in the RICC Parking Garage. The daily event rate is $15 (enter after 7 am and exit by midnight) and the overnight rate is $20. Otherwise, hourly rates apply. These rates do not include in-and-out-privileges.

RESTAURANTS & CONCESSIONS
The CERF conference offers daily coffee and snack breaks, as well as appetizers and cash bars at evening receptions. There are several activities scheduled during lunch periods where attendees can bring take-out or “brown bag” options. The Rhode Island Convention Center offers on-site concessions for coffee, snacks and lunch at the Metro Café (3rd Level near the sky bridge to the Omni). In addition, local food trucks have been informed about the CERF conference and may be parked nearby. There are also many establishments in the nearby hotels and neighborhood including:

• Café Nordstrom
  (Providence Place Mall)
• Centro
  (Omni Hotel)
• Charley’s Grilled Subs
  (Providence Place Mall)
• Dave & Busters
  (Providence Place Mall)
• Greenapple Mediterranean Grill
  (168 Atwells Avenue)
• Luxe Burger Bar
  (5 Memorial Blvd.)
• McCormick & Schmicks
  (Biltmore Hotel)
• Mokban Korean Bistro
  (217 Westminster St.)
• Murphy’s Pub
  (100 Fountain St.)
• P.F. Changs
  (Providence Place Mall)
• Panera Bread
  (Providence Place Mall)
• Ruby Thai Kitchen
  (Providence Place Mall)
• Subway
  (2 Kennedy Plaza)
• Taco Bell
  (Providence Place Mall)
• The Vig Providence
  (Hilton Hotel)
• Union Station Brewery
  (36 Exchange Terrace)
• Uno Pizzeria & Grill
  (Providence Place Mall)
• Viva Mexico Cantina Grill
  (129 Washington St.)
• Wise Guys Deli
  (133 Atwells Avenue)
OVERVIEW OF OPENING SESSION | SUNDAY, NOVEMBER 5

WELCOME, INTRODUCTIONS & PRESIDENT’S ADDRESS
Robert R. Twilley, CERF President 2015-2017

CONFERENCE CHAIRS’ ADDRESS
Wally Fulweiler, Boston University
Autumn Oczkowski, Environmental Protection Agency

CERF SCIENTIFIC AWARDS

- Odum Award for Lifetime Achievement
  Dr. James E. Cloern, Physical Scientist
  USGS Menlo Park, CA

- Cronin Award for Early Achievement
  Dr. Damien Maher, ARC DECRA Research Fellow, Senior Lecturer
  Southern Cross University, Australia

- William A. Niering for Outstanding Educator
  Dr. Drew Talley, Associate Professor
  University of San Diego

- Donald W. Pritchard Award—Physical Oceanography Paper
  David K. Ralston, Michael L. Brosnahan, Sophia E. Fox, Krista D. Lee, and Donald M. Anderson.

- Margaret A. Davidson Award for Stewardship
  Dr. William Dennison, Vice President for Science Application
  University of Maryland Center for Environmental Science

- Coastal Stewardship Award for Stewardship (Organization)
  Tampa Bay Nitrogen Management Consortium of Tampa Bay NEP – Tampa Bay Estuary Program

- Distinguished Service Award
  Dr. Veronica Berounsky, Graduate School of Oceanography
  University of Rhode Island

- 2019 CONFERENCE ANNOUNCEMENT
  Leila Hamdan, University of Southern Mississippi
  David Yoskowitz, Texas A&M University Corpus Christi
  Jerry Bousard, Visit Mobile

- KEYNOTE ADDRESS
  Dr. Nancy Knowlton, Sant Chair in Marine Science, Smithsonian’s National Museum of Natural History, Washington DC; Senior Scientist Emeritus, Smithsonian Tropical Research Institute, Panama

- CLOSING REMARKS
  Hilary Neckles, CERF President 2017-2019
  All attendees are invited to attend the Presidents’ Welcome Reception from 8:00 PM–10:00 PM
ABOUT THE AWARD WINNERS

Odum Award for Lifetime Achievement

Dr. James E. Cloern, Physical Scientist, USGS Menlo Park, CA

Dr. James E. Cloern is an exceptionally well-rounded scientist and is known for his “tenacious” stewardship of a long-term monitoring program in San Francisco Bay, a program he leveraged into groundbreaking research and synthesis with global datasets. Work such as his 2001 re-evaluation of coastal eutrophication, or his more recent 2012 synthesis examining phenology of phytoplankton biomass, have had tremendous impact on our understanding of coastal and estuarine dynamics. His intellectual creativity has benefited so many of us; examples abound in the letters supporting his nomination of ways that his ideas have “revolutionized our conceptual models,” and many of us carry these ideas into our own research. The impact of his achievements on the direction and shape of estuarine and coastal ecosystem research has had an “unmistakable influence” that we feel is especially deserving of recognition with the Odum Award.

Dr. Cloern is also widely recognized for his service in terms of both application of his scientific findings and intellectual leadership, as with his editorial work with both Estuaries & Coasts and Limnology & Oceanography. Whether he is testifying to Congress on the importance of long-term monitoring, or authoring journal articles, Dr. Cloern brings his commitment and enjoyment of estuarine and coastal science forward with enthusiasm. We have all benefited from this work, through the increased impact factor of Estuaries & Coasts and broader support for the work we engage in the coastal realm.

In addition to Dr. Cloern’s many conceptual and technical contributions, he has tirelessly served the CERF and broader academic community as a mentor of undergraduates, graduate students, and post-docs. He has consistently devoted his time and talent in overseeing and advising students and young researchers in his laboratory’s monitoring, research, and outreach activities. His efforts are truly unique in this regard, because he is based in a government laboratory, where he is not expected to teach, supervise, and guide students as a committee member. Throughout his career, he has devoted a very significant amount of his time to partnering with academics in US and international institutions to foster and help guide students and post-docs, thereby strengthening CERF and other scientific associations (ASLO, AGU, SCOR, and IOC) missions of ensuring excellence in future generations of researchers and teachers in the aquatic sciences.

Cronin Award for Early Achievement

Dr. Damien Maher, ARC DECRA Research Fellow, Senior Lecturer Southern Cross University, Australia

Dr. Damien Maher is a Research Fellow and Senior Lecturer at Southern Cross University in Lismore, Australia. He is a biogeochemist, whose passion for science and conducting interdisciplinary work is reflected in his superb publication record and enthusiastic support from students whom work with him.

Dr. Maher’s research has predominantly focused on carbon cycling in the coastal zone with an emphasis on diffusive transport across the sediment water interface and the advective movement of carbon in porewater and groundwater. His extensive skills with carbon cycle research and cutting edge instrumentation, including the novel use of cavity ring down spectrometry to measure carbon dioxide and methane concentrations, has placed him at the forefront of this field. Consequently, Dr. Maher has an extensive network of collaborators, with his most recent work involving colleagues from the University of Hawaii and NASA to study carbon cycling in coastal wetlands.

Dr. Maher is a highly productive, creative, and energetic scientist whom is well regarded by his students, colleagues, and the carbon cycle community in Australia and elsewhere. He is generous and shares his best ideas with his students, encouraging and mentoring them to publish research. Several of his Honors students have first-authored papers in top scientific journals on hypotheses that were originally conceived by Damien. One student writes how Dr. Maher’s “passion for the environmental sciences” and “his fervor for teaching and science was refreshing and motivating,” compelled him as an undergraduate to continue his education and complete his Ph.D. under “Damo the Gun,” as Dr. Maher is known to his peers and students.

Dr. Maher’s work has profound societal effects and is a significant contribution to major public debates in Australia which resulted in a community engagement award. His collaborative research not only empowered regional communities to protect some of their vital water resources but his work has been featured on mainstream national media and labelled “highly significant” by the mainstream Australian media. His research accomplishments, passion for science, and ability to engage students and peers collaboratively from across disciplines in estuarine science, make him an ideal choice for the 2017 Cronin Award.
Dr. Drew Talley is an Associate Professor in the Department of Environmental and Ocean Sciences at the University of San Diego (USD), where he has been on the faculty since 2008. Dr. Talley's nomination packet included letters from colleagues at USD, past students at the graduate, undergraduate, and high school levels, and colleagues at The Ocean Discovery Institute, a non-profit that provides STEM education for the most socio-economically disadvantaged youth in the San Diego area, where he serves as a Science Director. A theme that ran across all of these letters depicted a truly exceptional educator/mentor who has changed countless lives. While student populations in this socio-economic position traditionally hold a one in ten chance of graduating college, those associated with Dr. Talley boast an eight in ten chance for this metric, setting them up for long-term success in life. Additionally, seven of ten mentees have entered careers in STEM fields. At USD, Dr. Talley works with the national McNair Scholars program to guide under-represented undergraduate students to receive PhD degrees; he started and continues to run a chapter of SACNAS (Society for Advancing Chicanos/Hispanics and Native Americans in Science); he started and continues to run a chapter of SACNAS (Society for Advancing Chicanos/Hispanics and Native Americans in Science); he is on multiple Technical Advisory Boards for regional coastal activities from the United States to Australia, from seagrass ecophysiology to science communication, and from elementary school students to graduate students and the public. His background is replete with work across disciplines and with multiple institutions. His ability to explain science to novices and experts, and to nurture talent along the way, is renowned. For those reasons and more, Bill was the unanimous selection of the review committee for this award.

Dr. Drew Talley, Associate Professor
University of San Diego

Dr. William Dennison is Vice President for Science Application and Professor at the University of Maryland’s Center for Environmental Science. In his 33+ year career, he has led dozens of scientific and technical activities from the United States to Australia, from seagrass ecophysiology to science communication, and from elementary school students to graduate students and the public. His background is replete with work across disciplines and with multiple institutions. His ability to explain science to novices and experts, and to nurture talent along the way, is renowned. For those reasons and more, Bill was the unanimous selection of the review committee for this award.

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William A. Niering for Outstanding Educator
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Donald W. Pritchard Award – Physical Oceanography Paper
David K. Ralston, Michael L. Brosnahan, Sophia E. Fox, Krista D. Lee, and Donald M. Anderson.

The paper “Temperature and Residence Time Controls on an Estuarine Harmful Algal Bloom: Modeling Hydrodynamics and Alexandrium fundyense in Nauset Estuary” by Ralston, D.K., M. L. Brosnahan, S.E. Fox, K.D. Lee, and D.M. Anderson represents a significant step forward in the understanding of linkages between hydrodynamics and ecological processes, specifically harmful algal blooms in an estuarine environment. The authors developed a highly resolved, three-dimensional hydrodynamic and biological model of Alexandrium fundyense to investigate the physical and biological controls on a recurrent harmful algal bloom. They quantified the dominant factors controlling the A. fundyense bloom, which included environmental conditions such as water temperature, hydrodynamic constraints including bathymetry and stratification, and biological behavior such as diel vertical migration. This study is notable for its robust treatment of both the hydrodynamic and biological processes in a numerical model, as well as the extensive use of observational data to both understand the processes and assess the model. The authors demonstrated a skillful application and clear presentation of numerical modeling to quantify previously under-constrained processes and advance our understanding of the connections between hydrodynamics, ecological processes, and environmental health.

Margaret A. Davidson Award for Stewardship
Dr. William Dennison, Vice President for Science Application, University of Maryland Center for Environmental Science

Dr. William Dennison is Vice President for Science Application and Professor at the University of Maryland’s Center for Environmental Science. In his 33+ year career, he has led dozens of scientific and technical activities from the United States to Australia, from seagrass ecophysiology to science communication, and from elementary school students to graduate students and the public. His background is replete with work across disciplines and with multiple institutions. His ability to explain science to novices and experts, and to nurture talent along the way, is renowned. For those reasons and more, Bill was the unanimous selection of the review committee for this award.

Dr. Don Boesch, Dr. Dennison’s supervisor at the University of Maryland, stated, “Bill Dennison has exhibited a deep commitment and extraordinary leadership in the application of science to policies and management concerning coastal and estuarine ecosystems. I think it is safe to say that few have had as much influence on effective management and no one has had a greater geographic scope of impact on coastal stewardship.” Dr. Tim Carruthers, Director of Coastal Ecology at The Water Institute of the Gulf in Baton Rouge, Louisiana, wrote, “Bill is an inspirational leader, encouraging
researchers, managers, and community members by his complete conviction that improving the condition and management of our coastal and estuarine systems is essential and critically important.” Tim Carruthers continues, “Being truly innovative requires pushing the boundaries of comfort and conservative or traditional approaches, this is essential for creating change and transferring science into effective management and policy…” As his nominator, Dr. Bob Orth concluded, “Bill is one of those very rare individuals who have this uncanny ability to convey important scientific principles in terms easily understood by resource managers, politicians, and NGO’s. I can think of no one who is more deserving of the Margaret A. Davidson Award for Stewardship.”

**Coastal Stewardship Award for Stewardship (Organization)**

**Tampa Bay Nitrogen Management Consortium of Tampa Bay NEP – Tampa Bay Estuary Program**

The Tampa Bay Nitrogen Management Consortium of the Tampa Bay Estuary Program (TBEP) demonstrated impressive achievements in all the key criteria considered important in the mission of CERF to promote the wise use of science and management toward the stewardship of estuaries and coasts around the world. The Nitrogen Management Consortium represents more than 55 public and private entities from throughout the Tampa Bay watershed committed to the goal of collaborating to maintain water quality adequate to continue the recovery of Tampa Bay’s ecosystem. This partnership developed very specific goals and performance measures to monitor progress, demonstrating exemplary stewardship activities. The consortium started with a very modest effort in 1996, that over the last several decades, has constructed nearly 500 projects, and reduced nitrogen inputs on their way to surpassing their goal of restoring seagrass to 1950 levels. In 2016, the bay had 41,655 acres of seagrasses, a recovery of almost 16,000 acres since 1992, and more than 1200 acres above 1950s levels. During this period, the Tampa Bay metropolitan population grew by more than 1M, to a total of 3M in 2016. This nationally-recognized achievement would not have been possible without the collaborative efforts and strong public-private support from such a very diverse and distinguished group of stakeholders. As described by a county commissioner involved in the partnership, “…I have grown up on the bay and have watched the cycles of change and I know that TBEP has been a key part of its continued improvement. Hillsborough County is proud to have such an excellent program as TBEP contributing to the health and ongoing rehabilitation of the bay.” And from a management consortium working on similar goals in another key estuary in the United States, the letter of support had this to say about the engagement process of the Nitrogen Management Consortium: “We watched and learned from their extraordinary efforts to reach out and directly engage all the source sectors, local governments, businesses, and advocacy groups, and make them part of the shared decision-making process. They effectively blurred the lines between public and private, turning us and them into we.” Congratulations to all those involved in Tampa Bay Nitrogen Management Consortium as the inaugural awardees of the CERF Coastal Stewardship Award.

**Distinguished Service Award**

**Dr. Veronica Berounsky, Graduate School of Oceanography, University of Rhode Island**

Dr. Veronica Berounsky is a Senior Fellow in the Coastal Institute of the University of Rhode Island (URI); she has spent her career studying what goes on in the diverse ecosystems of the coastal zone including Narragansett Bay, Narrow (Pettaquamscutt) River Estuary, and New England coastal ponds. Dr. Berounsky distinguished service to CERF spans over three decades of critical roles within CERF and the New England Estuarine Research Society (NEERS), particularly within conference planning and governing board service. CERF 2017 represents the third time that Veronica has served in a leadership role in organizing a CERF biennial conference: she has served as co-chair of the Conference Committee for ERF 1997, Social Events chair for CERF 2007, and Attendee Experience Committee co-chair in CERF 2017. During her more than thirty years as a member of NEERS, she has co-hosted nine NEERS meetings spanning from 1981 to 2017. Within NEERS, Dr. Berounsky has been a steady leader, serving as President when she was still a graduate student at URI, thus representing the first student to officially serve on an ERF governing board as NEERS representative in 1991-1993. She has also served as Program Chair, Secretary/Treasurer, and Member-at-Large of NEERS, and served on the CERF Governing Board as Secretary in 1995–1997. Dr. Berounsky love and passion for CERF epitomizes her own commitment to research, education, and outreach on and about estuaries. She has translated that passion to distinguished service from her graduate student days in 1981 at the Graduate School of Oceanography under the mentoring of Dr. Scott Nixon, to this CERF Conference in 2017 in Providence, RI. Veronica is what CERF is all about.
PLENARY SESSIONS

SCIENCE AND DECISION MAKING TO IMPROVE COASTAL RESILIENCE

Date & Time: Monday, 6 November | 3:00–4:30 PM
Location: Ballroom A
Sponsor:

The economic, human, and environmental health and safety of our coastal landscapes and communities is threatened by natural and man-made disasters and persistent coastal change. Extreme events such as Hurricanes Katrina and Sandy have had extraordinary and sustained economic, environmental and social impacts. While these catastrophic events have focused attention on specific coastal settings, the coastal inundation and land loss hazards associated with changing sea levels are of increasing concern throughout the nation. As our population and infrastructure along the coast increases, and as sea-level and storm patterns change, we are at ever greater risk. From major urban centers such as Miami and San Francisco, to wild coastal landscapes, to remote island communities, the costs and consequences of changing coastal change hazards are becoming ever more apparent. In response to these threats, the scientific and management communities are focused on developing policy and practices to enhance coastal resilience. Research to improve understanding is intimately linked to decision-making to manage, and mitigate coastal landscape change and resource impacts that are required to protect lives, infrastructure, and livelihoods. Healthy, safe and sustainable coastal communities depend on the continued provision of the diverse benefits of healthy coastal ecosystems— including protection from coastal change hazards. This plenary session will provide an overview of coastal change hazards, projections of future sea-level change and flooding, and adaptation and mitigation efforts at federal, state and local levels.

PLENARY SPEAKERS:

**Rob Thieler, Center Director of the U.S. Geological Survey's Woods Hole Coastal and Marine Science Center**

Dr. Thieler received his B.A. in political science from Dickinson College, and his M.S. degree in environmental science and Ph.D. in geology from Duke University. Rob conducts marine geologic research on the geologic framework and evolution of the coastal zone. This includes understanding relationships between geology, sediment transport, climate and sea-level change, and coastal erosion. Rob has conducted assessments of sea-level rise vulnerability for the U.S. and locations worldwide. He served as a Lead Author of a U.S. Global Change Research Program report on potential impacts of sea-level rise, and works with many federal and state agencies to develop science and policy plans for addressing coastal change hazards. Rob also studies habitat use and availability for beach-nesting and migratory shorebirds. Rob developed the widely-used DSAS software package for measuring coastal erosion and accretion and has recently developed smartphone applications for coastal science.

**Carling Hay, Assistant Professor, Department of Earth & Environmental Sciences, Boston College**

Dr. Hay received her B.S. in physics from McGill University and her Ph.D. in physics from the University of Toronto. Throughout her graduate work, her research interests have varied from atmospheric physics to geophysics, with topics ranging from severe weather in the Arctic to 20th century sea-level change. Since earning her Ph.D., Dr. Hay's research has focused on using statistical techniques to better understand global mean sea level during current and past warm periods, and to develop the tools necessary to extract source information from historical sea-level records. The underlying motivation of her work is based on the belief that understanding how past sea level has changed in response to rising surface temperatures is a critical step in our ability to predict sea-level rise into the next century and beyond. Dr. Hay recently served as a member of the Boston Research Advisory Group, which was tasked with developing an updated climate census report for the city of Boston. As a member of the sea-level team, her role was to help understand the city's future risk to long-term sea-level rise.

**Kate White, Lead, US Army Corps of Engineers (USACE) Climate Preparedness and Resilience Community of Practice, Institute for Water Resources**

Dr. White holds a B.S. and M.S. degrees in Civil Engineering and a Ph.D. in Civil and Environmental Engineering, is a registered professional engineer, and has almost 30 years of experience in the USACE. Dr. White's work includes development of policy, technical guidance, methods, and tools to support climate preparedness and resilience, with an emphasis on water resources management issues involving extreme events and natural hazards. She received a 2013 GreenGov Presidential Award: Climate Champion for her role in the interagency team that developed the Sea Level Rise Tool for Sandy Recovery. She was selected as the USACE 2014 Elvin R. "Vald" Heiberg III "Engineer of the Year," and was a 2015 Top Ten Federal Engineer of the Year by the National Society of Professional Engineers.

FOOD WEBS AND FISHERIES

Date & Time: Tuesday, 7 November | 3:00–4:30 PM
Location: Ballroom A

Fisheries provide nutritional, recreational, economic, and cultural value. Food webs greatly influence fish population and community dynamics, and, in turn, the structure and productivity of the food webs are affected by the fish. Coastal and marine food webs are notoriously dynamic, and are influenced by many physical and ecological processes and anthropogenic factors. Our understanding of food web dynamics is evolving with regards to temporal and
Heather Leslie, Center and Libra Associate Professor of Marine Sciences

Heather Leslie has completed his graduate degrees in fisheries from the University of Washington. He received his B.S. degree in biology and mathematics from the University at Albany, and he has published papers involving more than 400 different co-authors but has never collected any data himself. He received his B.S. degree in biology and mathematics from the University at Albany, and his graduate degrees in fisheries and marine sciences.

Leslie's work has appeared in the Proceedings of the National Academy of Sciences, Ecology, Conservation Biology, and Frontiers in Ecology and the Environment. A member of the University of Maine faculty since August 2015, Heather Leslie received an A.B. in Biology from Harvard University, a Ph.D. in Zoology from Oregon State University, and conducted postdoctoral research at Princeton University. Before arriving at UMaine, she was on the faculty at Brown University, as the inaugural Peggy and Henry D. Sharpe Assistant Professor. She is a Leopold Leadership Fellow.

PLENARY SPEAKERS:

Kenny Rose, Horn Point Laboratory, University of Maryland Center for Environmental Science

Dr. Rose’s research centers on using mathematical and computer simulation modeling to predict and better understand fish population and food web dynamics in estuaries, lakes, reservoirs, and oceans. Dr. Rose is presently the France-Merrick Professor in Sustained Ecosystem Restoration at Horn Point Laboratory. Prior to that, he was as a Professor in the Department of Oceanography and Coastal Sciences, and Associate Dean in the College of the Coast and Environment, at Louisiana State University. He started his career as a consultant in Washington, D.C. and then as a research staff member at Oak Ridge National Laboratory prior to going to Louisiana State University. Dr. Rose has published more than 175 papers on topics related to ecological and fisheries modeling and analysis, and has served on multiple editorial boards. He was recently awarded the Award of Excellence (for lifetime achievement) from the American Fisheries Society. He has been a member of multiple steering and advisory committees providing scientific guidance and oversight, including several National Academy of Sciences’ committees, the US GLOBEC program, and the US Army Corps of Engineers. Dr. Rose has been involved with a wide range of fisheries management issues and contentious environmental issues that often involve fish; these highlight the sometimes tricky arena for scientists where science meets policy and decision-making. Much of his work is collaborative and he has published papers involving more than 400 different co-authors but has never collected any data himself. He received his B.S. degree in biology and mathematics from the University at Albany, and his graduate degrees in fisheries from the University of Washington.

Eric Quaempts, Director for the Confederated Tribes of the Umatilla Indian Reservation’s, Department of Natural Resources

Eric Quaempts implemented the First Foods management approach at the Confederated Tribes of the Umatilla Indian Reservation’s Department of Natural Resources. Previously, Eric spent eight years as a Wildlife Biologist in the CTUIR DNR’s Wildlife Program, and 8 years for the Umatilla National Forest, where his career development included inter-disciplinary rotations in forestry, wildlife, range, reforestation, fisheries, and fire management programs in the Walla Walla Ranger District. Eric’s primary professional interest is in relating the culture of the CTUIR to the ecology of the Columbia Basin landscape, and in so doing promote understanding of the Tribe’s culture, natural resource restoration goals and treaty rights. To facilitate this, Eric draws on his personal, community and cultural experiences, and professional background. Eric has presented the CTUIR’s First Foods management approach in a variety of forums, including state and national American Fisheries Society annual meetings, Society for Ecological Restoration and Ecological Society of America meetings, Society for Applied Anthropology National Conference, the National Water Quality Conference, at the American Planning Association meetings, and others. Eric has served on the Oregon Watershed Enhancement Board since 2009 and currently serves as co-chair. In 2011, he was awarded the Billy Frank Jr. Natural Resource Protection Award by the Potlatch Fund, and in 2014 was nominated for the EcoTrust Indigenous Leadership Award by the CTUIR’s Board-of-Trustees. Eric earned his Bachelor’s in Wildlife Science from Oregon State University, and also completed graduate-level course work at Colorado State University in fire and land management as part of his professional development at the US Forest Service. An enrolled member of the Yakama Indian Nation, Eric has spent most of his life living on the Umatilla Indian Reservation, and his professional career has been focused in working on the reservation and in the Ceded Lands of the CTUIR. Eric’s personal interests include fly-fishing, photography, traveling, cooking, reading, and dining, fine or otherwise.

Heather Leslie, Director of the University of Maine Darling Marine Center and Libra Associate Professor of Marine Sciences

An international leader in marine conservation science, Dr. Leslie conducts research on the ecology, policy, and management of coastal marine ecosystems. She studies the drivers of ecological and social processes in marine systems, and how to more effectively connect science to policy and management. Specific research areas include coastal marine ecology; human-environment linkages, particularly those related to coastal areas; and the design and evaluation of marine management strategies. Leslie’s work has appeared in the Proceedings of the National Academy of Sciences, Ecology, Conservation Biology, and Frontiers in Ecology and the Environment. A member of the University of Maine faculty since August 2015, Heather Leslie received an A.B. in Biology from Harvard University, a Ph.D. in Zoology from Oregon State University, and conducted postdoctoral research at Princeton University. Before arriving at UMaine, she was on the faculty at Brown University, as the inaugural Peggy and Henry D. Sharpe Assistant Professor. She is a Leopold Leadership Fellow.
DAILY EVENTS

Sunday, 5 November

CERF 2017 VIP Reception (By Invitation)
Time: 4:30 – 5:45 PM
Location: Rotunda
CERF will honor and thank its Sustaining Members and Angel supporters, along with 2017 conference keynote and plenary speakers. The Federation will also congratulate its scientific award winners.

Orientation for First-Time CERF Conference Attendees
Time: 5:00 – 5:45 PM
Location: Room 551 AB
New to the CERF conference? From navigating to networking - this orientation will help you make the most of your first conference experience.

Opening Session: Keynote Address & Scientific Awards
Time: 6:00 – 8:00 PM
Location: Ballroom A
Join Robert Twilley, CERF President 2015-2017, and Autumn Oczkowski and Wally Fulweiler, CERF 2017 Conference Co-Chairs, for the keynote address and presentation of the 2017 Distinguished Service Award and Scientific Awards.

In addition, learn about our 2019 conference location and theme, followed by our keynote address, “#OceanOptimism: Success Stories in Ocean Conservation,” by Dr. Nancy Knowlton, Sant Chair in Marine Science, Smithsonian’s National Museum of Natural History and Senior Scientist Emeritus, Smithsonian Tropical Research Institute.

Presidents’ Welcome Reception with Exhibitors
Time: 8:00 – 10:00 PM
Location: Exhibit Hall BC
On behalf of the Federation Presidents’, we invite you to attend the Presidents’ Reception to greet old friends and new and celebrate our 24th biennial conference. Plan to kick-off what promises to be the biggest and best CERF conference ever. Sponsored by Louisiana Sea Grant.

Monday, 6 November

Mentorship Program Breakfast (By Invitation)
Time: 7:00 – 8:00 AM
Location: Omni – Narragansett AB
Participants in the CERF 2017 Meeting Mentoring Program are invited to connect with their mentor/mentee to kick-off the week.

NEERS Affiliate Society Luncheon (By RSVP)
Time: 11:30 AM – 1:00 PM
Location: Rotunda
New England Estuarine Research Society members will meet to network and discuss coastal and estuarine efforts and society activities in the New England region.

PERS Affiliate Society Luncheon (By RSVP)
Time: 11:30 AM – 1:00 PM
Location: Omni – Kent
Pacific Estuarine Research Society members will meet to network and discuss coastal and estuarine efforts and society activities in the North Pacific.

Topical Brown-Bag Luncheon
Time: 11:30 AM – 1:00 PM
Location: Exhibit Hall D
Grab a lunch and join our volunteer table leaders as they lead informal discussions on various topics of interest to CERF attendees. This is a great opportunity to meet other coastal and estuarine scientists with similar interests! Monday’s topics include:
- Nitrogen vs Phosphorus as Limiting Factors (James Ammeman)
- Art and Science (Linda Blum)
- Alternative Careers (Nicole Maher)
- Science and Policy (Judith Weis)

Ocean Frontiers III Film Viewing (Brown-bag lunch)
Time: 11:50 AM – 12:50 PM
Location: Ballroom A
Ocean Frontiers III: Leaders in Ocean Stewardship & the New Blue Economy: Ocean use is growing rapidly, with massive new ships, soaring demand for offshore sand mining, and proposed wind energy development offshore. Our busy waters are also home to endangered whales and sea turtles, and support thriving fishing and recreation industries, so it’s more important than ever that we plan ahead for responsible ocean growth. This hopeful film explores the challenges at the heart of ocean conservation and development, presenting solutions from a range of people who are leading the way to a healthy and sustainable ocean future. Please bring your own lunch.
heavy toll not only on human and ecological systems, but also on coastal and estuarine research programs that are based in areas devastated by these storms.

This special town hall session will bring together those impacted by the 2017 storms as well as those that weathered previous major storm events to discuss research, recovery and discovery concerning both natural and social systems affected by these cyclonic events, including how we may prepare for and respond to 2017 and future events. We will also discuss what we have learned from past events about rebuilding coastal programs and institutions after storm damage to be more resilient and responsive to future storms, particularly in the face of climate change and increasing development pressure in the coastal zone. We welcome conference participants to attend and discuss how CERF, as a science society, can provide support to the coastal and estuarine research communities affected by the 2017 hurricanes.

The Town Hall will feature speakers who live and work in areas affected by the 2017 storms, as well as those that have recovered from past devastating storms. There will be time for community discussion about how CERF, our members, and our attendees, might best support efforts to study the effects of and rebuild after the 2017 hurricane season. Please bring your brown-bag lunch and join the conversation.

Poster Sessions & Happy Hour with Exhibitors
Time: 4:30 – 7:00 PM
Location: Exhibit Hall BC
Enjoy light snacks and a cash bar while viewing posters and speaking with presenters. See page 60 for a list of scheduled poster sessions and presenters for Monday evening.

Student + Early Career Networking Dinner
Time: 7:00 – 9:00 PM
Location: Omni – Narragansett AB
Join us for this popular networking event. Rub elbows with faculty, professionals, post-docs, and other students while enjoying complimentary pizza and beverages! Get valuable information on various career options, including alternatives to academia, and make professional connections that may lead to job opportunities and future collaborations. Formatted in a “speed-dating” style, participants will be able to sit down and chat with a number of coastal and estuarine science and management professionals.

Student + Early Career Pub Night
Time: 9:00 PM – Midnight
Location: Trinity Brewhouse, 186 Fountain St.
Join fellow CERF students and early career professionals for a fun night out! Grab drinks, chow down on snacks, listen to some tunes, and best of all, get to know other students and professionals in your field in a relaxed and casual, no-host atmosphere. As always, this event is open and anyone is welcome to join!

Tuesday, 7 November

Past Presidents’ Breakfast (By Invitation)
Time: 7:00 – 8:00 AM
Location: Omni – Waterplace 2/3
CERF welcomes its past presidents to gather together to reminisce and share their insights with current Federation leadership.

CERF Inclusion Lunch (Ticketed Event)
Time: 12:00 – 1:30 PM
Location: Omni – Narragansett AB
A limited number of tickets may still be available at registration. ▶ Regular: $40; Student: $20
Generously sponsored by Woods Hole Oceanographic Institution, the CERF Inclusion Lunch is a venue for the CERF community to address challenges faced by underrepresented people in the sciences, provide an environment supportive of triumphs, and develop personal and professional networks.

2017 Theme – Identifying Your Inner Mentor: Shattering Ceilings by Opening Doors
Traditionally applied to women and underrepresented minorities, the term “glass ceiling” refers to the invisible obstacles limiting professional advancement. With the contributions of two specialized speakers and peer-to-peer examples, the CERF Inclusion Lunch is an opportunity to gain strategies for shattering these ceilings, encouraging all CERF scientists to support one another and work together in overcoming these barriers. As research shows, innovation and advancement are intrinsically connected to diversity. Working as a collective coastal and estuarine science cohort with the CERF Inclusion Lunch as a platform promotes our success.

Moderated by Catalina Martinez, NOAA Regional Program Manager and Certified Diversity Professional, the CERF Inclusion Lunch will host a presentation, a facilitated audience discussion, and productive small group expressions. Ample time for personal and professional networking will be available at the end of the formal program.

SPEAKERS:

Treda Smith Grayson
Environmental Protection Specialist on the Tribal Capacity Development Team in the American Indian Environmental Office, U.S. Environmental Protection Agency Headquarters

Employed by the U.S. Environmental Protection Agency Headquarters for 18 years, Treda’s primary duty is to support tribes in developing environmental capacity through the administration of the Indian Environmental General Assistance (GAP). Treda formerly led the National Coastal Condition Assessment, a national coastal monitoring program, as well as provided technical support to develop and adopt biological, nutrient and aquatic life criteria for water quality standards development, in the Office of Water. Other assignments included providing monitoring and data analysis assistance in response to the 2010 Deepwater Horizon oil spill in the Gulf of Mexico, as well as the Fukushima Daiichi nuclear disaster in Japan. She is currently a Ph.D.
candidate in Environmental Science and Public Policy at George Mason University, researching the effects of multiple stressors on estuarine benthic communities. Treda has held several leadership positions in CERF including President, Treasurer, and Membership Chair for the Atlantic Estuarine Research Society (AERS).

Judith Swift
Director of the Coastal Institute, University of Rhode Island
Professor, Department of Communication Studies and Department of Theatre

As director of the CI, Judith blends traditional science communication strategies with innovative interdisciplinary approaches that engage the audience through right- and left-brain to create a more impactful message through sensory as well as analytical pathways. She is the regional director of the North Atlantic Coast Cooperative Ecosystem Studies Unit, a consortium of 26 universities/NGOs and 9 federal partners to address complex coastal ecosystem management. She has more than 25 years of experience on conflict resolution and has received training through the Lily Foundation and Harvard University. Judith also served as the vice provost for academic affairs at the University of Rhode Island and was URI Foundation Scholarly Excellence Award in 2002.

Affiliate Society Meetings
Time: 5:30–6:30PM
Connect with colleagues and learn more about coastal and estuarine activities in your area to one of the regional Affiliate Society Meetings. The following Affiliates will hold meetings on Tuesday evening as noted below:
- Atlantic Estuarine Research Society (AERS): Room 553 AB
- California Estuarine Research Society (CAERS): Room 554 AB
- Gulf Estuarine Research Society (GERS): Room 557
- Southeastern Estuarine Research Society (SEERS): Ballroom E

The New England Estuarine Research Society (NEERS), the Pacific Estuarine Research Society (PERS) and the Atlantic Canada Coastal and Estuarine Science Society (ACCESS) are holding luncheon events with their members as noted in this program.

Club CERF Social Event/Open Mic Challenge (Ticketed Event)
Time: 7:00–10:00PM
Cost: Regular $45 | Student $25
*Price includes round trip transportation, entertainment, food, one drink ticket, and free parking for local attendees

PURCHASE YOUR TICKET AT REGISTRATION!
Location: Snookers Bar & Grill, 53 Ashburton St.

CERF is taking over Snookers Bar and Grill on Tuesday night and transforming it to Club CERF, a lively venue where CERF delegates are in for a treat. Browse through the rooms of this nightclub to mingle with friends and colleagues and to meet new ones!

“Snooker” is a 19th-century cue sport that was popularized in India. In reverence to the game, Snookers sports 15 billiard tables where we may just organize a pool tournament or two. Not into pool? Well back by popular demand is the Providence-based CERF Tones – talented musicians, all with day jobs in science – who will play two sets starting at 8 pm. Want to share a little of your talent? Check out CERF’s Open Mic Challenge, which will take stage between sets. A party spread of pizza, wings, spinach artichoke dip, cheese, crackers, crudité, a taco bar and desserts will satisfy your palate as you enjoy one complimentary glass of beer or wine. A cash bar remains open for the rest of the evening.

Meet up at Snookers, or catch one of the CERF shuttle buses that will run throughout the evening between the Convention Center and the nightclub.
Wednesday, 8 November

**CESN Team Meeting/Breakfast** *(By Invitation)*
*Time*: 7:00–8:00AM  
*Location*: Omni – Waterplace 2/3

**Topical Brown – Bag Luncheon**
*Time*: 11:30AM–1:00PM  
*Location*: Exhibit Hall D

Grab a lunch and join our volunteer table leaders as they lead informal discussions on various topics of interest to CERF attendees. This is a great opportunity to meet other coastal and estuarine scientists with similar interests! Wednesday's topics include:

- Dealing with Journalists (Sunshine Menezes)
- Work/Life Balance (Sara Grady)
- Social Media (Jeffrey Clements)
- Science and Policy (Judith Weis)

**Estuaries & Coasts Editorial Board Lunch** *(By Invitation)*
*Time*: 11:30AM–1:00PM  
*Location*: Rotunda

**Sponsor Presentation:**
YSI – New Instruments Streamline Monitoring  
*Time*: Tuesday & Wednesday, 12:00–12:30PM  
*Location*: Rotunda

**Poster Sessions & Happy Hour with Exhibitors**
*Time*: 4:30–7:00PM  
*Location*: Exhibit Hall BC

Enjoy light snacks and a cash bar while viewing posters and speaking with presenters. See page 66 for a list of scheduled poster sessions and presenters for Wednesday evening.

**Future Earth Coasts Town Hall**
*Time*: 5:00–7:00PM  
*Location*: Rotunda

The Land-Ocean Interactions in the Coastal Zone (LOICZ) project developed tools to facilitate analysis of coastal data to develop coastal classifications and typology. LOICZ has now evolved into the Future Earth Coasts (FEC) project and the need to integrate data from different sources and disciplines to understand the interactions between natural and social systems at the World's coast remains an imperative. FEC has recently released a beta-test version of DISCO2, a web-based data analysis and visualization tool built on the R language that will allow users to upload data to a central site, execute data exploration and analysis tools, and execute a variety of visualizations, including histograms and scatter plots, and obtain summary statistics about their data. As the tool is built on the R language, adding new analysis techniques already written in R is possible and, once integrated into the system, can be executed by all users on their own data. During this Town Hall meeting, there will be a short introduction to the history and development of LOICZ typology approaches including the application of the LOICZ budget methodology in coastal management, followed by a demonstration of the software and discussion on how users want the tool developed. All CERF attendees are invited to participate in this dialogue.

**Reunions**
Various university groups will hold reunions on Wednesday evening as noted below. Check with your institution for details:

- Louisiana State University: Omni—Waterplace 1 (6:30–8:00PM)
- University of Maryland Center for Environmental Science (UMCES): Omni – Waterplace 2/3 (7:00–9:00PM)
- Graduate School of Oceanography—URI: Ballroom 5th floor Pre-function Area (7:00–9:00PM)
- Virginia Institute of Marine Sciences (VIMS): Omni—Fleming’s Restaurant (7:00–8:30PM)

**Horseshoe Crab Special Session Reception** *(By Invitation)*
*Time*: 7:00–9:00PM  
*Location*: Omni – Kent

**Thursday, 9 November**

**CERF 2019 Committee Breakfast** *(By Invitation)*
*Time*: 7:00–8:00AM  
*Location*: Omni – Waterplace 2/3

**ACCESS Affiliate Society Luncheon** *(By RSVP)*
*Time*: 11:30AM–1:00PM  
*Location*: Rotunda

Atlantic Canada Coastal and Estuarine Science Society members will meet to network and discuss coastal and estuarine efforts and society activities along the Atlantic Coast of Canada.

**CERF 2017 Committee Reception** *(By Invitation)*
*Time*: 4:30–5:30PM  
*Location*: Omni – Waterplace 1

**Close-Out Party & Student Awards Presentation**
*Time*: 5:30–8:30PM  
*Location*: Ballroom ABC

Volunteer judges will be evaluating student oral and poster presentations throughout the conference. At the Close-Out Party, the highest ranking students will receive recognition and a monetary reward for their exceptional work. Come support the students and celebrate another successful CERF conference. A special entertainment option will be available. Don’t miss out!

**Coastal Cabaret**
*Time*: Immediately following the conclusion of the Awards presentation  
*Location*: Ballroom D

*It’s a Shore Thing: A Coastal Cabaret* is a compilation of original cabaret-style songs focused on environmental change in coastal zones. It was created and directed by Judith Swift, a URI Professor of Theatre and the Director of URI’s Coastal Institute, and Charles Cofone, a professional sound and musical director, with the support of the URI Foundation. The cabaret has been performed at more than 40 national and regional conferences. Anyone who attended the Cabaret the last time CERF was in Providence can tell you that this will be one of the high points of the conference.
CERF 2017 Silent Auction

Bidding Opens: Sunday, 5 November 8:00PM
Bidding Closes: Wednesday, 8 November 6:00PM
Payment Due By: Thursday, 9 November 1:00PM
Location: Exhibit Hall BC

OVERVIEW:
Bring your bids for the fantastic silent auction offerings! Participants will use bid sheets to attempt to win the auction item(s) that they desire. Don’t forget to keep checking back, because you never know who may sneak in and try to outbid you. We will accept cash, check, or credit card donations as payment. Winners are responsible for the collection and transport of their item(s). Remember that every bid you make will increase the funds going to support CERF students.

HOW IT WORKS:
Bidding: Items available for the silent auction will have an associated bid sheet. On the bid sheet for the item, the bid increments will be specified, and there will be spaces for your bids. To bid, write your name, email or cell, and bid amount in the appropriate columns. Check back often to see if you’ve been outbid and raise the stakes. Once you bid on an item, you’ll only need to add your name to subsequent bids as you compete to win the item. Remember—this is about philanthropy. Your generous contributions will do SO much for students!

AUCTION CLOSE OUT:
The last bids allowed will be at 6:00pm Wednesday, November 8, during the poster session and happy hour. The person who has bid the highest amount will be declared the winner of the item. Winning bidders will be listed on a board in the auction area and will be notified via email/text/phone provided on the bid sheet. Some items will be available for pick up and payment at the end of the poster session, and the remainder through the morning break and lunch on Thursday. Winners will have until the end of lunch at 1:00pm on Thursday, November 9 to pick up and pay for the item(s). If you’ve won, go to the registration desk to make your payment and pick up the bid sheet. Take the bid sheet to the auction area and pick up your item(s). Some items like gift cards and scientific equipment may be waiting for you at registration. Auction assistants will be available to help facilitate this process. If the winner fails to pick up their items before the deadline the item will be awarded to the next highest bidder.
The coastal ocean

Although the oceans cover most of the Earth, the tiny sliver of coastal ocean greatly influences, and is influenced by, human activity. At WHOI, we study these interactions every day, across the globe.
## ORAL SESSIONS  Monday 6 November | Session 1  8:00AM – 9:30AM

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<td>Three ways of extrapolating oyster reef associated denitrification rates and nutrient fluxes.&lt;br&gt;Melanie Jackson, Michael Owens, M. Lisa Kellogg and Jeffrey Cornell</td>
<td>Natural Solutions for Resilient Maryland Communities&lt;br&gt;Michelle Canic, Ariana Sutton-Grier and Nicole Carlazo</td>
<td>A physical-biogeochemical model the California Current Ecosystem. James McWilliams and Curtis Deutsch</td>
<td>Analytic Structures to Support Opportunities for Adaptive Restoration and Management.&lt;br&gt;Greg Steyer, Michelle Meyers, Ann Hjelte and Stephanie Romanach</td>
<td>A resilience framework for chronic exposures: water quality and ecosystem services in coastal social-ecological systems.&lt;br&gt;Nathaniel Merrill, Kate Mulvaney, David Martin, Mamta Chintala, Walter Berry, Timothy Gilrson, Steven Balog and Austin Humphries</td>
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<td>Ecosystem services provided by tributary-scale oyster reef restoration in Chesapeake Bay&lt;br&gt;M. Lisa Kellogg, Jeffrey Cornell, Michael Owens, Parag Ross, Ken Paynet, Mark Luckenbach, Jennifer Dreyer, Mansiata Paint, Cate Turner, Alan Birch and Edward Smith</td>
<td>Using a social-ecological framework to investigate connections between shoreline hardening and perceptions of hurricane risk.&lt;br&gt;Carter Smith and Charles Peterson</td>
<td>Role of submesoscale processes on the biogeochemistry of the California Current Ecosystem.&lt;br&gt;Daniele Bianchi, James McWilliams, Faycal Kessourt, Curtis Deutsch, Lionel Renault, Hartmut Frenzel and Martha Sulata</td>
<td>Assessing natural and nature-based features of coastal the land margin with transdisciplinary research outcomes.&lt;br&gt;Scott Hagen, Denise Delorme, Matthew Blevins, Renee Collins, Stephen Mederos, James Morris and David Yoskowitz</td>
<td>Designing Solutions for Clean Water on Cape Cod.&lt;br&gt;Paul Niedzwiecki, Krity Sanamian, Erin Perry, Patricia Daeley, Heather McIntyre, Thomas Cambareri and Scott Horley</td>
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<td>A High-Resolution Model of Particle Removal and Nutrient Dynamics on a Restored Oyster Reef.&lt;br&gt;Kevin Kahover, Lora Harris, Jeremy Testa, Melinda Foryth, Lawrence Sanford and Elizabeth North</td>
<td>Limitations of wave attenuation by simple living shorelines: Restoring multiple habitats types increases benefits.&lt;br&gt;Jennifer Mattei, Christian Hauser, Jo-Maine Kasinak and Lálina Steele</td>
<td>Interactive effects of temperature and acidification on oysters in the Southern California Current Ecosystem. Nina Bednarsek, Brendan Carter, Ryan McCabe, Richard Feely and Martha Sulata</td>
<td>Using multiple models to inform Pacific herring management: the Ocean Modeling Forum.&lt;br&gt;Tessa Francis and Phillip Levin</td>
<td>Groundwater elevations, lake stages and relationships with sea level rise at Cape Cod National Seashore.&lt;br&gt;Stephen Smith and Kelly Medeiros</td>
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<td>Potential water quality benefits from investments in freshwater mussel beds in the tidal Delaware River.&lt;br&gt;Danielle Kreeger, Kurt Cheng, Joshua Moody, Angela Padelleri, Roger Thomas and Spencer Roberts</td>
<td>Measuring Nature Based Solutions for Risk Reduction to Demonstrate Multiple Benefits for Fish and People.&lt;br&gt;Akison Bowden, Tara Meberg and Steve Kirk</td>
<td>Habitat compression from hypoxia and acidification in the California Current System.&lt;br&gt;Curtis Deutsch, James McWilliams, Evan Howard, Faycal Kessourt, Hartmut Frenzel, Daniele Bianchi and Martha Sulata</td>
<td>Assessing vulnerability of New England coastal habitats to climate change and implications for management.&lt;br&gt;Robin Weber, James Rasmussen, Martin Smith and Rachel Stevens</td>
<td>Salt Marsh Restoration Through Living Shoreline.&lt;br&gt;David Grunden</td>
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<td>Ribbed mussel restoration investments for water quality uplift along Delaware Estuary salt marshes.&lt;br&gt;Joshua Moody, Danielle Kreeger, Kurt Cheng and Angela Padelleri</td>
<td>Salinity governs long-term sustainability of nature-based coastal defense using marshes.&lt;br&gt;Zhenchang Zhu, Jim van Belzen, Johan van de Koppel and Tjerd Bouma</td>
<td>Biogeographical measurements characterizing the influence of anthropogenic nutrients in the Southern California Bight.&lt;br&gt;Karen McLaughlin, Meredith Howard, Nikolay Nezlin and Martha Sulata</td>
<td>Building resilience: the need to address human dimensions of socio-ecological systems.&lt;br&gt;Katarzyna Wowk and David Yoskowitz</td>
<td>Living Shorelines in New England Monitoring March Stabilization, Restoration Benefits, and Nitrogen Removal.&lt;br&gt;Mary Schoell, Anna Gerber-Williams, Suzanne Ayvazan, Mamta Chintala, David Grunden, Donald Cobb, Charles Strobel and Kenneth Rocha</td>
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<td>Shellfish Restoration in Buzzards Bay, MA.&lt;br&gt;Steve Kirk</td>
<td>Beneficial reuse of dredge material to build a nearshore reef for shoreline protection.&lt;br&gt;Kathryn Ford, Mark Roussea, Jonathan Grabowski, Randall Hughes and Mark Patterson</td>
<td>Modeling the impact of anthropogenic emissions on the California Current Ecosystem.&lt;br&gt;Faycal Kessourt, James McWilliams, Martha Sulata, Daniele Bianchi, Curtis Deutsch, Hartmut Frenzel, Lionel Renault, Karen McLaughlin, Simone Alin and Richard Feely</td>
<td>Should I use that model? Assessing the transferability of ecological models to new settings.&lt;br&gt;Theodore DeVitt, Lauren Green, Jessica Moon, Melissa Emrond and Randall Brains</td>
<td>Identifying social factors that undermine support for nature-based coastal management.&lt;br&gt;Lauren Josephs, Suzan Belluccia, David Grunden and Austin Humphries</td>
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<td>Mud, Macrofauna and Microbes: An ode to multiscale benthic interactions&lt;br&gt;Lesia Hamdan, Janet Nestlerode, Maria Guarnello and Samuel Stoddard</td>
<td>What can worms tell us about global change?&lt;br&gt;Manisha Pant and David Johnson</td>
<td>Hypoxia at the sediment-water interface: drivers and implications.&lt;br&gt;Carmela Cuomo, Robert Cemato and Alexandra Rhoads</td>
<td>High spatial variability in biogeochemical rates and microbial communities across Louisiana salt marsh landscapes.&lt;br&gt;Brian Roberts, Anelia Chelicky, Anne Bernhard and Anne Glibin</td>
<td>Primary production, nutrient fluxes and rates of succession in the Northeast Gulf of Mexico.&lt;br&gt;Kendra Brooks, Florian Lesbon, William Patterson and Jane Gaffney</td>
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| Relationships between benthofa and food source properties in self-bottom coastal habitats.<br>Luuk van der Heijden, Jadwiga Paznik-Orngarc, Rajhild Asmus, Martin Grave, Nathalie Niquel, Quentin Berner, Dies Fichet, Lauren Beaugrand, Martine Breet, Petta Kadel, Harald Asmus and Benoit Lebenten | www.erf.org
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<td>Lauren Freeman, Guangming Zheng and Steve Ackleson</td>
<td>Maria Hermann, Michael Kemp and Raymond Najjar</td>
<td>Fredrika Moser, Carlos Olivo-Delgado, Lauren Green and Trena Grayson</td>
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<td>Nelle D’aversa and Tracey Dalton</td>
<td>David Nicholson, Anna Michel, Scott Warkel and Rebecca Sguege</td>
<td>Corey Garza, Bridgette Clarkston and Megan Bassett</td>
<td>Matthew Kirwan, Nathalie Schieder, David Walters, William Ray and Joel Carr</td>
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<td>Impacts of Land-Use Change on Sedimentation in Tidal Creeks of North Carolina</td>
<td>Gulf of Mexico Estuarine Blue Carbon Stock, Extent and Flux: Mangroves, Marshes, and Seagrasses</td>
<td>Estuarine lagoonal, North Carolina (USA) Watershed-scale drivers of organic nitrogen: An important driver of estuarine ecosystems</td>
<td>Sea-level rise and storm surge structures coastal forests into persistence and regeneration niches</td>
<td>Just how useful are national-scale surveys of coastal water quality?</td>
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<td>D. Reide Corbett, J Walsh and Yifei Zhao</td>
<td>Anita Thorhaug, Helen Poulos, Jorge Lopez Portillos, Jordan Barr, Tim Ku, Maria Hermann, Raymond Najjar and Graeme Befly</td>
<td>TBD</td>
<td>William Kearney and Sergio Fagherazzi</td>
<td>John Kiddon, Linda Harwell, Betty Kraake, Walt Nelson and Hugh Sullivan</td>
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<td>Nexus between land use and water quality: when does population growth alter ecosystem health?</td>
<td>Alkalinity export from intertidal salt marshes: evaluating the contribution and composition of organic alkalinity</td>
<td>Successful undergraduate mentoring of diverse students includes hands-on research and near-peer mentoring</td>
<td>Tipping point in ecosystem state change of a salt marsh?</td>
<td>Assessing the use of high frequency spatial water quality datasets to target future monitoring efforts.</td>
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<td>Antonietta Quigg, Alicia Williams, Rachel Windham and Jamie Stitchen</td>
<td>Shuzhen Song and Zhouchi Wang</td>
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<td>Michael Lee</td>
<td>Peter Raymond, Jake Hissen and Matthew Stultz</td>
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<td>Anthropogenic sources of organic nitrogen: An important driver of estuarine eutrophication and impairment.</td>
<td>Inorganic carbon and oxygen dynamics in a marsh-dominated estuary.</td>
<td>Collaboration and Creativity: Increasing Underrepresented Student Participation in Marine Science Research</td>
<td>The ectomycorrhizal plant communities of migrating marshes.</td>
<td>Managing and reporting coastal data from nation-scale surveys.</td>
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<td>Alexandra Hounshell, Benjamin Peters, Hans Paerl and Christopher Osburn</td>
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<td>Kate Mulvaney and Nathaniel Merrill</td>
<td>The Scientist’s verses: How shipwrecks influence benthic microbial biogeography.</td>
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<td>Robert Jones</td>
<td>Samantha Siedlecki, Simone Alin, Albert Hermann, Samantha Siedlecki, Richard Feely and Burke Hales</td>
<td>Roger Bowgen, Suzanne Bricker, Julie Rose</td>
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<td>Abigail Archer, Diane Murphy, Joshua Reitsma and Hedi Clark</td>
<td>Melissa Partyka, Ronald Bond, Jennifer Chafe and E. Atwill</td>
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<td>Sustainable oyster aquaculture, water quality improvement and nutrient trading in Maryland, Chesapeake Bay</td>
<td>Assessing salt marsh stability for flood risk reduction: characterizing salt-marsh mudflat transitions</td>
<td>Response of Salish Sea Circulation and Water Quality to Climate Change and Sea Level Rise.</td>
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<td>Hyper-local ecosystem services: nutrient removal and increased water clarity provided by shellfish to a municipality</td>
<td>Zhihong Liu and Kimberly Hugumard</td>
<td>Xinpeng Hu and Nancy Balabas</td>
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<td>Operationalizing 2017 Louisiana Master Plan Sea Level Rise Scenarios into Project Feasibility and Design Guidelines.</td>
<td>Marisa Guarinello and Samuel Sturdivant</td>
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<td>Julie Rose, Mark Oxiam, John Bohorezq, Roger Bowgen, Suzanne Bricker, Gary Widden and Anthony Dvarkas</td>
<td>Evaluating the effects of cultured bivalves on eelgrass productivity in temperate estuaries of Atlantic Canada.</td>
<td>Marjorie Friedrichs</td>
<td>James Pahl</td>
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<td>Monique Niles, Thomas Guyondet, Canada.</td>
<td>Vincent Vuik and Sebastiaan Jonkman</td>
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<td>Evaluating confidence in the impact of regulatory nutrient reduction on Chesapeake Bay hypoxia.</td>
<td>Maximizing impacts of 21st century megamounds on marsh creation costs in the Mississippi delta.</td>
<td>Application of a structured decision making process for nitrogen pollution management on Cape Cod.</td>
<td>Impacts of oyster aquaculture: one small step for soil, one giant leap for benthic fauna?</td>
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<td>David Martin, Amy Rickson, Marita Christa, Timmy Glacon and Walter Berry</td>
<td>Chelsea Duball, Lauren Salisbury, Joe Amador and Mark Stolt</td>
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<td>At what cost? Ecosystem services of shellfish cultivation in an estuarine reserve.</td>
<td>Building vegetative foreshores in front of dikes: coping with uncertainties and implementation.</td>
<td>Configuration and validation of a real-time hypoxia forecast system for the Chesapeake Bay.</td>
<td>Development of a Decadal-Scale Morphodynamic Model in Support of Barrier Island Restoration.</td>
<td>Response to and recovery from the Deepwater Horizon Incident: A worm’s eye view.</td>
<td>Samuel Sturdivant, Marisa Guarinello, Drew Cary and Joe Germano</td>
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<td>Elizabeth Darrow, Niki Alphn, Suzanne Brande, Brandon Buckett, Madison Lilley, Kelley Bilet and Martin Poyen</td>
<td>Bas Borsje</td>
<td>Aaron Bever, Marjorie Friedrichs, David Forest, Ralph Hood and Carl Friedrichs</td>
<td>Soupy Dalyander, Rungley Mickey, Joseph Long, David Thompson, Rob Jenkins, Daxina Passeni and Nathaniel Plant</td>
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<td>Nektan use of oyster related seascapes in two coastal ponds in Rhode Island.</td>
<td>When living shoreline design manuals do not tell the whole story.</td>
<td>Interactions of nutrient supply, oxygen depletion and pH depression in a mesotrophic embayment</td>
<td>Food web modeling in support of the 2017 Louisiana Coastal Master Plan.</td>
<td>Triple-value simulation modeling cases tackle nutrient and watershed management from a social-ecological systems perspective.</td>
<td>Using sediment profile imagery to quantify water quality and benthic condition relationships in Pensacola Bay.</td>
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### ORAL SESSIONS  
**Monday 6 November | Session 2  ➤  10:00AM – 11:30AM**

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Fredrika Moser, Carlos Olivo-Delgado, Lauren Green and Tresa Grayson | Sea level rise and transgression of coastal ecosystems  
Matthew Xinian and Keryn Gorton | CMECS: A “Common Language” for Application to Coastal Habitat Mapping  
Monique LaFrance Bartley, Mark Finkbeiner and John King | Lessons learned in estuarine management and restoration  
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| **Urbanisation supplements ecosystem functioning in disturbed estuaries**  
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Pierre St. Laurent, Marjorie Friedrichs, Elizabeth Shadwick, Fei Da, Raymond Najjar and Hanqin Tian | Lessons learned from building, developing, and running a hybrid RELI program in Puerto Rico  
James Priester, Lora Harris, Pedro Maldonado-Rivera, Ruby Montoya Ospina, Jeffrey Connell, Jenna Clark and Fredrika Moser | Large-scale surveys highlight the potential for ecological and social impediments to marsh migration  
Christopher Field, Ashley Dayer and Chris Elphick | Using CMECS to inventory and assess some of the world’s most remote estuaries  
Kimberly Peyton and Tony Sakihara | Two decades of oyster restoration in New York City: What’s next?  
Michael McCann, Peter Malinowski and Katie Mosher Smith |
| **Recurrent harmful algal blooms and the causative role of catchment agricultural practices**  
Daniel Lemley and Janine Adams | Vascular plant CO2 fluxes across a latitudinal gradient along the US Atlantic coast  
Inke Forbrich, Rafaal Nahrawal, Monique LeCerrct, Jessica O’Connell, Deepak Mishra, Anne Gabin, Merryl Alber, Alma Vazquez-Lule, Rodrigo Yargas, Michelle Fogarty and James Edson | First year of following GEOPATHS in Puerto Rico – integrating research into the curriculum  
Maria Barberena-Arias, Carlos Olivo-Delgado, Pedro Maldonado-Rivera, Lora Harris, James Priester and Fredrika Moser | Establishment of Kosteletzkya pentacarpos in abandoned agricultural fields facilitate upland transition to salt marsh  
E. Victoria Long and Linda Blum | Using CMECS to Meet Subtidal Goals in San Francisco Bay  
Mark Finkbeiner | Optimization of a monitoring program to evaluate oyster restoration success  
H. Ward Slacum, Danielle Zaveta, Emily French and Ken Paynter |
| **Combined effects of warming and pollutants on temperature-dependent sex determination, survival, and development across generations**  
Bethany DeCourten and Susanne Brandt | Global controls of carbon storage in mangrove soils  
Andre Rovai, Robert Axley, Edward Castaneda-Moya, Pablo Rul, Miguel Cifuentes-Java, Marilyn Narrows-Willaidobos, Pablo Horta, Jose Simonazzi, Aleksandra Fonseca and Paulo Pagliosa | A summer Research Experience Program for freshmen and sophomores in Marine Science  
Paulinus Chigbna and Margaret Sexton | The impact of persistent seagrass beds on long-term wetland shoreline erosion in a Mid-Atlantic estuary  
Kathryn Smith and Nathaniel Plant | Ecological classification of a shallow coastal environment using CMECS  
Fire Island National Seashore, New York  
Monique LaFrance Bartley, John King, Brian Daley and Mark Finkbeiner | Seagrass diversity improves seagrass transplant survival and expansion  
Susan Williams, Rohani Ambo-Rappe, Christine Sur, Steven Limbong and Jessica Abbott |
| **Tracking wastewater influence on oysters (Crassostrea virginica) in a freshwater dominated urbanized estuary**  
Haley Nicholson, Ruth Carmichael, Kean Cai and William Burkhardt III | Beyond blue carbon: broadening the context for carbon studies in seagrass ecosystems  
Robert Howarth, Roxanne Marino and Melanie Hay | Using socio-environmental synthesis case studies to engage students across disciplines  
Lindsey Williams, Amanda Wincell and Joanna Tavares | Ghosts of Marco Island  
Hydrological isolation, blocked transgression, and mangrove mortality in SW Florida  
Ken Krauss, Amanda Demopoulos, Nicole Cormier, Robin Lewis, Andrew From, Jennifer McClain-Couts, Rebecca Howard and Elsia Penerve-Reed | Leveraging CMECS for assessment of hard bottom habitats on the Block Island Wind Farm  
Marissa Guatinello, Drew Carey and Lorraine Read | The unanticipated impact of seagrass wrack on a tidal wetland restoration project in Atlantic Canada  
Tony Bowron, Jennifer Graham, Danska van Pinnxdl and Bob Petr |
| **Where are the spat? Relating Severn River oyster reproduction to high-frequency water quality data**  
Cecily Steppe, Louise Wallendar, Andrew Krippe1, Luis Rodriguez and Grace Prount | Effect of phosphorus availability and hurricane disturbance interactions on the elemental stoichiometry of mangrove litterfall  
Victor Rivera-Monroy, Tens Danielson, Edward Castaneda-Moya, Megan Kehal, Evelyn Gaier, Rafael Triviso, Xianchen Zhao and John Koromiski | The Natural Classroom: Increasing environmental stewardship and STEM learning through strategic partnerships  
Andrea Jerabek, Melissa Basakian, Letand Moss, Tim Carruthen and Joshua Darcy | Sea level rise drives changes in carbon storage in coastal wetlands of the Florida Everglades  
Sean Charles, John Kominski, Shelby Serviss, Michael Ross, Benjamin Wilson, Tiffany Trnecer, David Rudnick, Fred Sklar and Stephen Davis | Submerged marine habitat mapping at Cape Cod National Seashore  
A post-hurricane Sandy study  
Agnes Mittermayr, Mark Borrell, Emily Shumichena and Sophina Fox | Restoring Bayside Beaches Adjacent to a Marina Bulkhead  
Karl Nordstrom and Nancy Jackson |
| **Anthropo-proxy data in bivalves from midddens to modern embayments and tropical to temperate systems**  
Ruth Carmichael, Elizabeth Darrow, Anika Knight, Camlyn Kovacs, Theresa Hutterman, Jessica Kinsella and D Joseph Dairymple | Allometric scaling of estuarine ecosystem metabolism  
Nick Niidzieko | Group Discussion — Research access for underrepresented students | Nature-based coastal defense enabling landward marsh expansion along strongly managed shoreline  
Stijn Temmerman, Lotte Oosterling, Tom Marks, Wouter VanDenbroeke and Patrick More | Subtidal benthic habitat mapping with CMECS in mid-coast Maine  
Ivy Ozmon, Kirby Dobbs, Claire Entrelina, Stephen Dickson and Matthew Nixen | Implementing new shoreline rules: Geomorphic considerations for reducing unnecessary shoreline armor on Puget Sound  
Matthew Gerlach, Hugh Shipman and Tim Gates |
### ORAL SESSIONS  Monday 6 November | Session 3  1:00PM – 2:30PM

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<tr>
<td>Ecosystem services provided by shellfish resources</td>
<td>From the ground up: stakeholder-driven processes for estuary management</td>
<td>Managing acidification in estuaries: What drives aragonite saturation state variability</td>
<td>Adaptive Management and Integration of Data and Modelling into Decision-Making</td>
<td>Lessons Learned from Modeling Louisiana's 2017 Coastal Master Plan</td>
<td>After Deepwater Horizon Spill: Hydrologic Restoration of Gulf Estuarine Habitats</td>
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<td>Robert Jones, Suzanne Bricker and Julie Rose</td>
<td>Matthew Liebman and Courtney Schmidt</td>
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<td>Soupy Dyalander, Michelle Meyers, Enka Lentz and Elise Irwin</td>
<td>Mandy Green and Alaina Grace</td>
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<tr>
<td>Development of a transferable valuation tool for ecosystem services associated with freshwater inflow in Texas. Lauren Hutchison and David Toskowetz</td>
<td>Caught in the middle with us: the New Hampshire/Maine &quot;high stakes&quot; transdisciplinary research case study. Rachel Rouillard and Kalle Metsa</td>
<td>Warming and acidification-mediated resilience to bacterial infection determine European flat oyster larval mortality. Nuno Caioia, Patricia Pardo, Carles Atzar and Carles Banez</td>
<td>The New Zealand Estuary Trophic Index (ETI) Tools. David Plew, John Zelid, Amy Whitehead, Richard Storey, Olivia Barge, Anna Madanaz-Smit, Megan Oliver, Leigh Stevans and Barry Robertson</td>
<td>Key insights and lessons learned from the 2017 Coastal Master Plan process. Mandy Green, Zachary Cobell, Kim de Muurster, Scott Balle-Sylvester, Jordan Fischbach, Alex McCampandale, Ebah Messelhe, Michael Poel, Denise Reed, Hugh Roberts, Jennie Visser and Eric White</td>
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<td>Efficacies of Urban and Agricultural BMPs for Reducing Pollutant Loads</td>
<td>Michael Williams, Ken Staver and Solange Filoso</td>
<td>From objectives to actions: technical support for ecosystem management planning</td>
<td>Tessa Francis and Aimee Kinney</td>
<td>Casting the Net Widely: Broader Impacts Practitioners Share Lessons Learned</td>
<td>Lisa Lawrence and Sarah Nuss</td>
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<td>Building tidal marshes in the Anthropocene: maximizing resilience</td>
<td>Lone Staver and Court Stevenson</td>
<td>Nutrition Dynamics in Streams Restored to Reduce Nitrogen and Sediment Export to the Chesapeake Bay</td>
<td>Sweeney and Joel Blomquist</td>
<td>Nutrient Drainage (RSC) Structures.</td>
<td>Michael Williams and Solange Filoso</td>
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<td>marshal water best management practice, detection of the effects of stormwater</td>
<td>Ken Staver</td>
<td>Wetland monitoring, restoration planning, and living shoreline implementation coordinated by National Estuary Programs and partners</td>
<td>Angela Padaletti, Danielle Kreger, Martha Maxwell-Doyle, Dave Bushuk, Elizabeth Watson, Tracy Quirk, Leilani Haaf, Kip Raper and Joshua Moody</td>
<td>Marsh inundation methodology and guidance for the design of marsh creation projects in coastal Louisiana</td>
<td>Stuart Brown</td>
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<td>Stream restoration enhanced uptake of nitrogen, phosphorus, suspended solids, and dissolved oxygen.</td>
<td>Thomas Jordan, Joshua Thompson, William Brogan III and Carey Pelc</td>
<td>The integration of scientific and technical information into ecosystem management.</td>
<td>C. Andrew James, Aimee Kinney, Tessa Francis and Nick Georgiadis</td>
<td>Estuarine report cards as an outreach tool: broad net or strategy</td>
<td>Nick Georgiadis, Tessa Francis and Nick Georgiadis</td>
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<td>Detection of the effects of stormwater best management practice, natural variability and power analysis.</td>
<td>Dong Liang, Vysheleva, Lutia Harris and Jeremy Tosta</td>
<td>Efforts to Reduce Land-Based Sources of Marine Debris in the U.S. Virginia Islands</td>
<td>Kristin Wilson Grimes, Carrie Jo Bucko, Jannai Habib, Howard Forbes, Jr., Marca Taylor and Caitlin Goodwin</td>
<td>The retention and germination mechanism of therophyte seeds under tides in a coastal salt marsh</td>
<td>Dongdong Qiu, Baoshan Cui and Dongdong Qiu</td>
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<tr>
<td>Spatial and Temporal Patterns of Best Management Practice Implementation in the Chesapeake Bay Watershed.</td>
<td>Andrew Sekellick, Olivia Druever, Jen Keislan, Jeff Sweeney and Joel Blomquist</td>
<td>Sustaining tidal marshes in the face of rising seas: case study of science-management knowledge sharing</td>
<td>Peter Taylor</td>
<td>Restoration of a San Francisco Bay salt marsh restoration site through planting of Spartina foliosa.</td>
<td>Marigot Buchbinder and Katherine Boyer</td>
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<td>Assessing the stormwater retention and water quality benefits of urban</td>
<td>Tuana Phillips, Mitchell Paxoo-Zuckerman, Neely Law, Nancy Sont, Reid Christianon and Bryan Sepp</td>
<td>Young Scientist Academy: Inspiring Young Scientists as Future Stewards of Climate Change and Ocean Health</td>
<td>Robert Condon</td>
<td>Reservoir scour as a major source of bioavailable phosphorus to a coastal gulf estuary.</td>
<td>Zoe Volpargoulis, Jeffrey Cornell and Michael Owens</td>
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<tr>
<td>Building wetland restoration to estuarine management.</td>
<td>Leska Fore</td>
<td>Community collaboration to develop locally-driven approaches to estuarine management.</td>
<td>Leanna Fein</td>
<td>Managing ambiguity problems in stakeholder dialogue processes: a case of the Guam Reef Estuary, Korea Hosahing Rwem, Changhee Lee and Young Ho Shin</td>
<td>Group Discussion – Lessons Learned</td>
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| 1:00 pm | Winter cover crops as a wildfire against climate change effects on agricultural nutrient loads. | Ken Staver | Navigating a rabbit hole: developing a recovery strategy for Puget Sound | Nick Georgiadis | | }

**Ballroom C – Room 557**

- **Performance of Headwater Regenerative Stream and Stormwater Conveyance (RSC) Structures.** Michael Williams and Solange Filoso
- **Nutrient Dynamics in Streams Restored to Reduce Nitrogen and Sediment Export to the Chesapeake Bay.** Solange Filoso and Michael Williams
- **Stream restoration enhanced uptake of nitrogen, phosphorus, suspended solids, and dissolved oxygen.** Thomas Jordan, Joshua Thompson, William Brogan III and Carey Pelc
- **Detection of the effects of stormwater best management practice, natural variability and power analysis.** Dong Liang, Vysheleva, Lutia Harris and Jeremy Tosta
- **Spatial and Temporal Patterns of Best Management Practice Implementation in the Chesapeake Bay Watershed.** Andrew Sekellick, Olivia Druever, Jen Keislan, Jeff Sweeney and Joel Blomquist
- **Assessing the stormwater retention and water quality benefits of urban tree canopy.** Tuana Phillips, Mitchell Paxoo-Zuckerman, Neely Law, Nancy Sont, Reid Christianon and Bryan Sepp
- **What’s Working to Restore Puget Sound? Making Decisions Based on Outcomes.** Leska Fore
- **Making science relevant: instituting proactive and transformational change through outreach and engagement.** Leanna Fein

**Ballroom D – Room 1155**

- **Building tidal marshes in the Anthropocene: maximizing resilience.** Lone Staver and Court Stevenson
- **Nutrient Drainage (RSC) Structures.** Michael Williams and Solange Filoso
- **Estuarine report cards as an outreach tool: broad net or strategy full of holes.** Jason Krumboltz, E. Caroline Donovan, Tracy Brown and Jamie Vaudrey
- **The retention and germination mechanism of therophyte seeds under tides in a coastal salt marsh.** Dongdong Qiu, Baoshan Cui and Dongdong Qiu
- **Sustaining tidal marshes in the face of rising seas: case study of science-management knowledge sharing.** Peter Taylor
- **Young Scientist Academy: Inspiring Young Scientists as Future Stewards of Climate Change and Ocean Health.** Robert Condon
- **Community collaboration to develop locally-driven approaches to estuarine management.** Jenni Schmitt and Juli Ralfe
- **Making science relevant: instituting proactive and transformational change through outreach and engagement.** Leanna Fein
- **40+ years of wetland restoration in San Francisco Bay: lessons learned and emerging trends.** Michelle Orr, Steve Crock, Ann Bonnasson and Mark Lindley
- **Modeling sediment-water fluxes in the Conowingo Pond and Chesapeake Bay. Implications for estuarine nutrient cycling.** Jeremy Testa, Casey Hodgkinson, Jeffrey Cornell and Michael Kemp
- **Building wetland restoration to estuarine management.** Leska Fore

**Ballroom E – Room 2155**

- **Performance of Headwater Regenerative Stream and Stormwater Conveyance (RSC) Structures.** Michael Williams and Solange Filoso
- **Nutrient Dynamics in Streams Restored to Reduce Nitrogen and Sediment Export to the Chesapeake Bay.** Solange Filoso and Michael Williams
- **Stream restoration enhanced uptake of nitrogen, phosphorus, suspended solids, and dissolved oxygen.** Thomas Jordan, Joshua Thompson, William Brogan III and Carey Pelc
- **Detection of the effects of stormwater best management practice, natural variability and power analysis.** Dong Liang, Vysheleva, Lutia Harris and Jeremy Tosta
- **Spatial and Temporal Patterns of Best Management Practice Implementation in the Chesapeake Bay Watershed.** Andrew Sekellick, Olivia Druever, Jen Keislan, Jeff Sweeney and Joel Blomquist
- **Assessing the stormwater retention and water quality benefits of urban tree canopy.** Tuana Phillips, Mitchell Paxoo-Zuckerman, Neely Law, Nancy Sont, Reid Christianon and Bryan Sepp
- **What’s Working to Restore Puget Sound? Making Decisions Based on Outcomes.** Leska Fore
- **Making science relevant: instituting proactive and transformational change through outreach and engagement.** Leanna Fein
- **40+ years of wetland restoration in San Francisco Bay: lessons learned and emerging trends.** Michelle Orr, Steve Crock, Ann Bonnasson and Mark Lindley
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- **Building wetland restoration to estuarine management.** Leska Fore
## ORAL SESSIONS  Tuesday 7 November | Session 4  8:00AM – 9:30AM

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<tr>
<td>8:00am</td>
<td>551 AB</td>
<td>Natural and anthropogenic drivers of food web structure and productivity</td>
<td>Ryan Woodland, Sharon Henzka and Joel Hoffman</td>
<td>From marshes to management: feedbacks between restoration science and management</td>
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<tr>
<td>8:00am</td>
<td>552 AB</td>
<td>Anomalously high recruitment of Gulf Menhaden indicates indirect effects of DWH blowout in Gulf. Christine Voss, Jeffrey Short, Harold Gericke, Christopher Haney, Mano Vezco, Vincent Girou and Charles Peterson</td>
<td>Simulating Ecological Responses to Large Coastal Restoration on the Lower Mississippi River. Melissa Baustian, Hominh Jang, Kazu Sadid, Francesca Messina, Ehab Meneitse, Scott Duke-Sylvester, Jenneke Visser and Elizabeth Jarrell</td>
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<td>8:00am</td>
<td>553 AB</td>
<td>Are all nursery areas created equal? Determining how food web dynamics affect fish nursery habitat. Deborah Lichtl, Jacques Rinchard and David Kimmel</td>
<td>Utilizing a Basin-wide Deli3D Model for Planning of Large-scale Restoration in Coastal Louisiana. Elizabeth Jarrell, Ehab Meneitse, Melissa Baustian, Jenneke Visser, Scott Duke-Sylvester, Kazu Sadid, Hominh Jang, Francesca Messina, Joseph LeBlanc and James Pahl</td>
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<td>8:30am</td>
<td>554 AB</td>
<td>Environmental factors that influence benthic prey resources for waterbirds in managed ponds. Alison Flanagan, Susan De La Cruz and Laurie Hall</td>
<td>Land Development and Erosion in Mississippi River Subdelta: An Analysis of a Coastal Restoration Strategy. Alexander Kolker, Teda Amer and Amelie Muscutta</td>
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<td>8:30am</td>
<td>555 AB</td>
<td>Quantifying the resource use niche over gradients of productivity using n-dimensional hypervolumes. Justin Lesser, Christopher Stallings and James Nelson</td>
<td>Using map-math to track sedimentation, vegetation establishment and marsh migration at a marsh intervention site. Erin Reilly, Amanda Moore and Lora Harris</td>
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<td>9:00am</td>
<td>558 AB</td>
<td>Integrating change analysis for flow, nutrients, and sediment loads using Phase-6 Chesapeake Bay Watershed Model. Gopal Bhatt, Kyle Hinton, Peter Ciaglott, Matt Johnston, Andrew Semmertont, Suchanit Ravi, Jesse Bash and Lewis Linker</td>
<td>A standardized experimental approach to compare components of resiliency in marine benthic communities. Dean Janiak, Christopher Freeman, Justin Campbell, Janina Seemann, Ross Whipp, Michael Goodison, Valene Paul and Emmett Duffy</td>
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<td>9:15am</td>
<td>560 AB</td>
<td>Turbulence-resolving Two-Phase Flow Simulations of Wave- and Alongshore Current Supported Turbidity Flows. Celealtin Oudemir and Sahar Haddad</td>
<td>Applying nonlinear indices of climate variability and change to understand Chesapeake Bay climate impacts. Victoria Coles, Karl St. Laurent and Raleigh Hood</td>
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<tr>
<td>9:15am</td>
<td>562 AB</td>
<td>Ecosystem health report cards can be used as tools for adaptive ecosystem based management. Vanessa Vargas-Nguyen, Rensee Kelsey, Michelle Thiemer, Jorge Escuma, Alexandra Fries and William Dennison</td>
<td>Impacts of climate change on Chesapeake Bay water quality improvements resulting from regulatory nutrient reductions. Marjorie Friedrichs, Isaac (Ike) Iby, Fei Du and Richard Tian</td>
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<td>9:15am</td>
<td>563 AB</td>
<td>Integrating modeling analysis on the estuarine responses to extreme hydrobiological events. Wenting Wu, Zhaoying Yang, Xingjun Zhang, Yuhun Zhou, Bo Tian, Ying Huang and Quhong Tang</td>
<td>Integrative modeling analysis on the estuarine responses to extreme hydrobiological events. Wenting Wu, Zhaoying Yang, Xingjun Zhang, Yuhun Zhou, Bo Tian, Ying Huang and Quhong Tang</td>
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## ORAL SESSIONS  Tuesday 7 November | Session 4  8:00AM – 9:30AM

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<tr>
<td><strong>Coastal vegetated habitats as carbon sinks: sources in a changing world</strong>&lt;br&gt;Amada Spivak and Stacey Trevarthen-Tackett</td>
<td><strong>Going over the edge? Climate-related thresholds in coastal systems</strong>&lt;br&gt;Elizabeth Turner, Debra Hernandez and Marie Bundy</td>
<td><strong>Successful incorporation of “citizen scientists” in estuarine and coastal studies</strong>&lt;br&gt;Michael Wetz, Jace Tunnell and Rae Mooney</td>
<td><strong>Hurricane Sandy: Restoration and Resiliency at Northeast National Wildlife Refuges</strong>&lt;br&gt;Susan Adamowicz</td>
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<td>8:00 AM</td>
<td><strong>An in situ ocean acidification experiment in shallow water seagrass sediments</strong>&lt;br&gt;David Burdige, Richard Zimmerman, Fred Dobbs, Chin-Chang Hung and Chuang-Yi Ho</td>
<td>The application of early warning signals to brackish marshes. <strong>Merryl Alber</strong>, Jessica O’Connell and Joan Sheldon</td>
<td><strong>Key findings from a volunteer water quality monitoring program in Baffin Bay, Texas.</strong>&lt;br&gt;Michael Wetz, Kenneth Hayes and Emily Cira</td>
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<td><strong>Restoration and resilience of seagrass meadows affects long-term carbon sequestration.</strong>&lt;br&gt;Karen McGlothery, Lillian Ask, Matthew Oreska, Amelie Berger, Patricia Wiberg, Peter Berg and Lindsay Edwards</td>
<td><strong>Do high water temperatures explain spatial and temporal variations of eelgrass in Virginia’s coastal bays?</strong>&lt;br&gt;Patricia Wiberg, Karen McGlothery, Matthew Oreska, Joel Carr, Robert Orth and Kenneth Moore</td>
<td><strong>Assessing the priorities of citizen scientists and resource managers for environmental monitoring.</strong>&lt;br&gt;Suzanne Spitzer, E. Caroline Donovan, William Denison and Lea Rubin</td>
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<td><strong>Seagrass resilience measured by eddy covariance.</strong>&lt;br&gt;Amelie Berger, Peter Berg and Karen McGlothery</td>
<td><strong>Assessing changes in seagrass species dominance after die-off events.</strong>&lt;br&gt;Erin Shields, Kenneth Moore and David Parrish</td>
<td><strong>A two-way street: building capacity of volunteer efforts to produce quality estuarine data.</strong>&lt;br&gt;Prassesed Vella and Pam DiBona</td>
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<td><strong>Carbon flux and vegetation responses to active warming in a coastal wetland.</strong>&lt;br&gt;Genevieve Noyce, Patrick Megonigal, Ray Rich, Matthew Kirwan, Paul Dijkstra, Peter Thornton and Glenn Guntenspergen</td>
<td><strong>Pinfish incursion: ecosystem consequences for mid-Atlantic seagrass meadows.</strong>&lt;br&gt;John Richardson, Robert Orth and Jonathan Leftcheck</td>
<td><strong>Results, successes, and lessons learned from citizen science monitoring in the GTM NERR.</strong>&lt;br&gt;Nikki Dix, Shannon Rinning, Scott Eastman, Paige Preister, Janet Koehler, Mike Pogue and Lisa Sansom</td>
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<td>9:00 AM</td>
<td><strong>Multiple-stressor impacts on above- and belowground allocation in Spartina alterniflora and Distichlis spicata</strong>&lt;br&gt;Troy Hill, Autumn Goolkwai, Emily Santore, Nathalie Moore, Caroline Kanaake, Rose Martin, Cathleen Wigand and Earl Davey</td>
<td><strong>Historical and future hazards to marine life and their temporal evolution.</strong> Camino de la Hoz, Elvira Ramos, Arosell-Puente Trueta, Adrian Arovedo, Jose Juans and Inigo Lareda</td>
<td><strong>A newly digitized 45-year dataset of environmental and biological observations from Long Island Sound.</strong>&lt;br&gt;Jacob Snyder and Hannes Baumann</td>
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<td><strong>Effects of Nutrient Enrichment on Mangrove Range Expansion in the Temperate-Tropical Ecotone.</strong>&lt;br&gt;Ilka Feller, Emily Dangremond, Todd Osborne and Lorae Simpson</td>
<td><strong>Jellyfish blooms in a warming ocean: Temperature-induced asexual reproduction in three scyphozoan jellyfish polyps.</strong> Laura Treible and Robert Condon</td>
<td><strong>Citizen science and education in estuaries: 20 years of biodiversity monitoring in a Connecticut estuary.</strong>&lt;br&gt;David Hudson, Nicole Rosenfeld, Bridget Gerveno and Travis Mingo</td>
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<td><strong>Climate Change, Sea-level Rise and Watershed Management: Coastal Wetland Responses</strong>&lt;br&gt;David Rudnick, Tiffany Troxler, Fred Sklar and Michael Orland</td>
<td>Linking species and habitat conservation for global horseshoe crab populations&lt;br&gt;Ruth Carmichael, Mark Bottom, S Cheung, Paul Shin and John Tanacredi</td>
<td><strong>The Opportunities and Challenges of Urban Coastal Sustainability</strong>&lt;br&gt;Shona Patterson and Martin Le Tessler</td>
<td><strong>Special Event – a live joint session</strong>&lt;br&gt;with our colleagues in Cali, Colombia**&lt;br&gt;Mechanisms of HAB formation in the freshwater to marine continuum: A global perspective&lt;br&gt;Hans Paerl, Enrique Peña Salamanca and Emesto Maniera</td>
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<td><strong>Sea-level rise, ecosystem restoration, and the Everglades' future: the importance of building coastal wetland resilience</strong>&lt;br&gt;David Rudnick, Jed Redwine, Robert Johnson, Fred Sklar and Tiffany Troxler</td>
<td>Gathering local knowledge to detect distribution and threats of Tachypleus tridentatus in Beibu Gulf, China&lt;br&gt;Kit Yue Kwan, Yongyan Liao, Hwey-Lian Hsieh, Shuqin Xu, Qiiping Zhong, Juan Lei, Mingzhong Liang, Huaxi Fang, Lili Xu, Chang-Po Chen and S G Cheung</td>
<td>Integrating metrics to assess coastal ecosystem health in the Long Island Sound National Estuary Program&lt;br&gt;Georgia Basso, Jamie Vaudrey, Kevin O'Brien and Juliana Barrett</td>
<td>Mitigating global proliferation of freshwater-marine harmful cyanobacterial blooms in a human and climate-impacted world&lt;br&gt;Hans Paerl, Nathan Hall, Karen Rossignol, Hai Xu, Guangwei Zhu, Boqiang Qin, Mark McCarthy and J. Scott</td>
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<td><strong>Coastal subsidence as a function of salinity intrusion and peat decomposition in a karst environment</strong>&lt;br&gt;Fred Sklar, Tiffany Troxler, Carlos Coronado-Molina, Stephen Kelly, Christopher Madden and David Rudnick</td>
<td>Habitat use of Chinese horseshoe crab, Tachypleus tridentatus under the influence of simulated oyster catch&lt;br&gt;S G Cheung, H. K. Chan and Kit Yue Kwan</td>
<td><strong>Legacy of Urban Fill Alters: Current Urban Coastal Groundwater Si Concentrations</strong>&lt;br&gt;Timothy Maguire and Robinson Fulweiler</td>
<td><strong>Harmful algae blooms in Mexico: Causes and consequences</strong>&lt;br&gt;Ernesto García-Mendoza, Sonia Oujiano-Scheggia, Aramis Oliver-Oriz, Aramis and Erick Müller-Vázquez</td>
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<td><strong>Saltwater intrusion coupled with drought accelerates carbon loss from a brackish wetland</strong>&lt;br&gt;Benjamin Wilson and Tiffany Troxler</td>
<td>Exploring health of horseshoe crab habitats using benthic foraminifera as proxy&lt;br&gt;Punyasloke Bhadury and Areen Sen</td>
<td><strong>Connecting lessons learned from NY Harbor’s ecosystem health improvements to analogous urban coastal systems</strong>&lt;br&gt;Dylan Taillie, Judith O’Neil, Brianne Quijano-Scheggia, Aramis Olivos-Ortiz, Aramis and Erick Müller-Vázquez</td>
<td><strong>Defining Horseshoe Crab Habitat with Sparse Data</strong>&lt;br&gt;Maurice Estes Jr., Ruth Carmichael and Xiogwun Chen</td>
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<td><strong>Water pattern responses to sea-level rise and restoration actions in the southeastern saline Everglades</strong>&lt;br&gt;Jed Redwine and Joseph Park</td>
<td>Effectiveness of beach restoration to improve horseshoe crab spawning habitat quality in the Delaware Bay&lt;br&gt;Joseph Smith, Alek Modjeski and Larry Niles</td>
<td><strong>Ecologically informed designs for coastal infrastructure</strong>&lt;br&gt;Ana Bugnot, Mariana Mayer-Pinto, Nina Shaefer, Ana Bugnot, Mariana Mayer-Pinto, Nina Shaefer, Emma Johnston and Katherine Dafforn</td>
<td><strong>Imaging FlowCytobot provides novel insights on phytoplankton bloom dynamics</strong>&lt;br&gt;Lisa Campbell</td>
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<td><strong>Biphasic vegetation dynamics in the coastal Everglades</strong>&lt;br&gt;Michael Ross, Susana Stoffella, Rosario Vidalve, Himadri Biswas, Keping Zhang, John Mered, Jed Redwine, Joseph Park and David Rudnick</td>
<td>Present and future distributions of suitable habitats for horseshoe crabs&lt;br&gt;Stine Vestbo, Matthias Obst, Francisco Quedvedo, Itsara Intanai and Peter Funch</td>
<td><strong>Strengthening resiliency in coastal watersheds: An ecosystem services and ecological integrity decision support system</strong>&lt;br&gt;Anne Kuhn and Jane Copeland</td>
<td><strong>Our coasts are trashed, now what? Seeking lasting solutions to restore ecosystem services</strong>&lt;br&gt;Theresa Talley and Nina Venuti</td>
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| **Changing nesting patterns of roseate spoonbills in Florida suggest a response to sea level rise**<br>Jeremy Lorenzo, Peter Firezza, Michelle Robinson and Michael Hlave | Defining Horseshoe Crab Habitat with Sparse Data<br>Maurice Estes Jr., Ruth Carmichael and Xiogwun Chen | **San Francisco Bay sustainable management strategies addressing sea level rise, anthropification, and habitat restoration**<br>Michael Connor | **Reimagining coastal science: Past, present, and future**<br>**CERF 2017 24th Biennial Conference Coastal Science Inflection Point: Celebrating Successes, Learning from Challenges**<br>**CERF 2017 24th Biennial Conference Coastal Science Inflection Point: Celebrating Successes, Learning from Challenges**

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<td>10:00 AM</td>
<td>S51 AB</td>
<td>Natural and anthropogenic drivers of food web structure and productivity</td>
<td>Ryan Woodland, Sharon Herzka and Joel Hoffman</td>
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<td>S52 AB</td>
<td>From marshes to management: feedbacks between restoration science and management</td>
<td>Jennifer Bowery, Jonathan Grabowski and Michael Piehler</td>
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<td>S53 AB</td>
<td>Science to protect our estuaries and coasts from nutrient pollution</td>
<td>Galen Kaufman, James Hage and Jacques Oliver</td>
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<td>Climate Change in the Chesapeake and Other Coastal Systems</td>
<td>Lewis Linker, Gopal Bhatt and Richard Batruk</td>
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<td>S55</td>
<td>Impact of extreme weather on estuaries: innovative methods and modeling</td>
<td>Chunyan Li, Ming Li, Arnaldo Valle-Leon and Renhao Wu</td>
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<td>10:15 AM</td>
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<td>Growth rates, mixotrophy, and grazing activity of tropical coastal lagoon plankton communities in Puerto Rico</td>
<td>Juan Alvarez-Rosario, James Pierson and Lora Harris</td>
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<td>S52 AB</td>
<td>Three critical considerations for restoring oyster reefs as fish habitats</td>
<td>Nicholas Ortonosil, Ben Gibby, Andrew Olds, Charles Petteyen, Christine Vois, Rod Connolly and Thomas Schlager</td>
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<td>Dissolved Oxygen Thresholds to Protect Designated Aquatic Life Uses in Estuaries</td>
<td>James Hage</td>
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<td>Sensitivity of Chesapeake Hyposal to Tidal Wetland Loss Due to Sea Level Rise</td>
<td>Carl Cerco, Mark Noel and Lora Harris</td>
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<td>S55</td>
<td>Recurrent network model for forecasting weather effects on tidal currents in Superbana Bay (Brazil)</td>
<td>Priscila Lopes and Marcos Gallo</td>
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<td>Spatiotemporal gradients of black sea bass diet and condition in the coastal Mid Atlantic Bight</td>
<td>Ginni La Rosa and Ryan Woodland</td>
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<td>Invertebrate recovery is mediated by active restoration following eradication of an invasive plant ecosystem engineer</td>
<td>Rachel Wigginton, Whitney Thornton and Edwin Grosz</td>
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<td>Comparative analysis of nutrient export into Indian River Lagoon and San Francisco Bay</td>
<td>Yongshian Wan and Marcus Beck</td>
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<td>Gravitational circulation response to future climate change in Chesapeake Bay</td>
<td>Richard Tian, Ping Wang, Lewis Linker, Gopal Bhatt, Kyle Hinson and Andrew Sommelot</td>
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<td>Impact of Tropical Strom Lee in Channels and Shelf: calibration of transport using unmanned boat</td>
<td>Chunyan Li, Wei Huang, Eddie Weeks and Yixin Luo</td>
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<td>10:45 AM</td>
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<td>Changes in feeding ecology of market squid across across the ENSO cycle</td>
<td>Steven Litvin, Aaron Carlisle, John Field, Elizabeth Graham, Emmanuel Dervel and Bruce Ffryne</td>
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<td>Active restoration of ecological drivers in a temperate estuary: trends in intertidal benthic communities</td>
<td>Araceli Puentes Trueba, Cristina Galvan and Jose Juanes</td>
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<td>Influence of 2015 and 2016 climate change conditions on Chesapeake Bay water quality standards</td>
<td>Lewis Linker, Gopal Bhatt, Ping Wang, Carl Cerco, Richard Tian and Kyle Hinson</td>
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<td>Hydrodynamic Responses of Lake Pontchartrain to Winter Cold Fronts.</td>
<td>Wei Huang and Chunyan Li</td>
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<td>11:00 AM</td>
<td>S51 AB</td>
<td>Sez-dependent trophic cascade determines seagrass response to nutrient enrichment</td>
<td>Jiaguo Yan, Junhong Bai and Baohuan Cui</td>
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<td>S52 AB</td>
<td>Small-scale oyster restoration in Barnegat Bay, NJ: oyster survival and habitat monitoring</td>
<td>Christine Thompson, Steven Evert and Alek Maderski</td>
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<td>S53 AB</td>
<td>Determining the fate of land-derived nitrogen in salt marshes using a 15N isotope tracer experiment</td>
<td>Hillary Sullivan, Anne Giblin and Linda Deegan</td>
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<td>Using an individual based model to evaluate the effects of climate change on eelgrass</td>
<td>Jessica Foley and Lora Harris</td>
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<td>The impact of two successive severe droughts on Microcystis blooms in San Francisco Estuary</td>
<td>Peggy Lehman, Tomo Karobe, James Hollibaugh, Sarah Lesmeister and Swee Teh</td>
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<td>11:15 AM</td>
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<td>Effects of nutrient enrichment on a consumer’s resource use and niche width in a saltmarsh</td>
<td>David Behringer, Linda Deegan and James Nelson</td>
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<td>S52 AB</td>
<td>Oyster reef-associated macroinvertebrates are faced with hypoxia in Mississippi Sound</td>
<td>Chet Rakoczynski, J. Read Hendon, Kathy Vandenbooy, Jeremy Higgs, Scott McIntosh, Ginger Fieer and Danene Menke</td>
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<td>Reducing nutrient export through watershed-based stakeholder planning, using innovative technologies and developing nutrient reduction targets.</td>
<td>Sara Burns</td>
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<td>Pheneology of Estuarine Response to Anthropogenic and Climate Drivers.</td>
<td>Nicole Basenback and Jeremy Testa</td>
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<td>Simulating Storm Surge in the Salish Sea</td>
<td>Zhaoqing Yang, Drew Mahedy, Taiping Wang, Ian Miller and Guillaume Mauger</td>
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<td>11:30 AM</td>
<td>S51 AB</td>
<td>Sea otters may associate with greater eelgrass distribution, density and biomass in Southeast Alaska</td>
<td>Wendel Raymond, Ginnie Eckert and Catherine Mattrion</td>
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<td>S52 AB</td>
<td>Restoring salt marsh ecosystem services: microbes and the nitrogen cycle.</td>
<td>Christopher Lynum, Ashley Bulsco-MAXIM and Jennifer Bowen</td>
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<td>Coupling between hydrological changes, nutrient dynamics and cyanobacterial blooms in delta: Louisiana estuaries.</td>
<td>Sibcl Bargu and Dubravko Justic</td>
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<td>S54 AB</td>
<td>Effects of sub-daily precipitation events on coastal hydrology.</td>
<td>Bhana Paudel, Naresh Neupane, Elizabeth Watson, Clyde Goulden, Lin Perez and David Velinsky</td>
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<td>Assessing the water quality impacts from proposed tidal barriers in a tidal embayment</td>
<td>Richard Isleib, James Fitzpatrick, Nicholas Kim and Natalya Kogan</td>
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<td>10:00</td>
<td>Coastal vegetated habitats as carbon sinks: sources in a changing world</td>
<td>Final ecosystem goods and services (EGS) for ecosystem management</td>
<td>Enhancing Our Understanding of Coastal Ecosystem Resilience post Hurricane Sandy</td>
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<td>ardin Amanda Spivak and Stacey Trevathan-Tackett</td>
<td>Rich Fulford and Marc Russell</td>
<td>Amanda Babson, Rick Bennett and Sara Stevens</td>
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<td>10:15</td>
<td>Chronic nutrient enrichment alters blue carbon pools and processes. Thomas Mozdzierz, Emily Geoghegan, Joshua Caplan, Melissa McCormick, Don Barber, Caitlin Bauer, Paige Weber, Camila Silva and Francine Leech</td>
<td>Applying ecological function in environmental decision making</td>
<td>Geospatial application of the Marsh Equilibrium Model to assess saltmarsh resilience in the Northeast. Katherine Renken and James Morris</td>
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<td>Climate Change, Sea-level Rise and Watershed Management: Coastal Wetland Responses</td>
<td>Linking species and habitat conservation for global horseshoe crab populations</td>
<td>Hydrodynamics and Sediment Dynamics in Estuaries and Coastal Seas – Day 1</td>
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<td>10:45</td>
<td>Salt marsh resilience to disturbance varies along a hydrologic gradient. Scott Jones, Camille Stagg and Mark Hester</td>
<td>Sediment texture affects the response of spawning horseshoe crabs to nourished estuarine beaches. Mark Botton, Christina Colon, John Rowden, Susan Elbee, Debra Kriensky, Kim McKown and Matthew Scifian</td>
<td>Linking sediment dynamics to habitat quality in tidal fresh water shallows. Jessica Lacy and Emily Carlson</td>
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<td>11:00</td>
<td>Testing for local adaptation across short and tall growth forms of Spartina alterniflora. Robyn Zerebecki, Tammy Hanley, Erik Sotka and Randall Hughes</td>
<td>Recent advances in Atlantic horseshoe crab (Limulus polyphemus) studies in South Carolina, USA. Michael Kendrick, Peter Kingsley-Smith, Jeff Brunson, Kristin Linnehan, Elizabeth Cushman and Tanya Darden</td>
<td>Near-bed cross-shore suspended sediment transport over a macro-tidal beach under varied wave conditions. Wenhong Pang, Zhiyuan Dai, Zhengpeng Ge, Shuzhu Li, Xuefeng Xi, Jinghua Gu and Hu Huang</td>
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<td>11:15</td>
<td>Interacting effects of genotype and environment on tall form Spartina alterniflora. Caitlin Bauer, Melissa McCormick, Linda Deegan, J-Adam Langley and Thomas Mazdzer</td>
<td>Analysis of the northeast Florida genetic break in the American horseshoe crab (Limulus polyphemus). Patrick Norby and H Jane Brockmann</td>
<td>Influences of wind–induced waves on hydrodynamics and sediment resuspension in the turbidity maximum. Jie Jiang, Qing He, Jian Shen and Chao Guo</td>
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**ORAL SESSIONS**  
Tuesday 7 November | Session 5  
10:00AM – 11:30AM

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**Ballroom D**
- Climate Change, Sea-level Rise and Watershed Management: Coastal Wetland Responses
  - David Rudnick, Tiffany Truelle, Fred Sklar and Michael Osland

**Ballroom E**
- Linking species and habitat conservation for global horseshoe crab populations
  - Ruth Carmichael, Mark Botton, S Cheung, Paul Shin and John Tanacredi

**Rotunda**
- Hydrodynamics and Sediment Dynamics in Estuaries and Coastal Seas – Day 1
  - Carl Friedrichs, Henk Schuttelaars, Alejandro Souza and Arnoldo Valle-Levinson

**Ballroom A**
- **Special Event – a live joint session with our colleagues in Cali, Colombia**
  - Mechanisms of HAB formation in the freshwater to marine continuum: A global perspective
    - Hans Paerl, Enrique Peña Salamanca and Ernesto Mancera
**ORAL SESSIONS**  
**Tuesday 7 November | Session 6 | 1:00PM – 2:30PM**

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| Natural and anthropogenic drivers of food web structure and productivity  
Ryan Woodland, Sharron Herzka and Joel Hoffman | From marshes to estuaries: feedbacks between restoration science and management  
Jennifer Bowen, Jonathan Grabowski and Michael Pelehier | Science to protect our estuaries and coasts from nutrient pollution  
Galen Kaufman, James Hagy and Jacques Olivier | Tidal restrictions’ effects on passage and connectivity in developed environments  
Megan Tynell, Dorn Small, Padraic Smith and Theodore Castro-Santos | Climate and Climate Change  
R Eugene Turner and Kenneth Sebens | Coastal vegetated habitats as carbon sinks—sources in a changing world  
Amanda Spivak and Stacey Trevathan-Tackett |
| Macrophytal (Ova) bloom trophic transfer of PCBs in an urban estuary  
John Logan, Donald Cheney, Elizabeth Sly, Kevin Gardner, Brian Wyssor and Mark Altabet | Reviewing coastal habitat restoration efforts in the U.S. and the services they deliver  
Jonathan Grabowski, Rachel Gittman, Kate Arkema, Rick Bennett, Jeff Benoit, Seth Blitch, Kelly Burke-Copes, Anthony Chavrin, Allison Golden, Alyssa Dauzaman, Bryan Delegoine, Ran Howard, Randall Hughes, Steven Scyphers, Tina Shorsik and Aruna Sutton-Gier | Integrating Science And Monitoring Results Into The Chesapeake Restoration Effort  
Joel Blomquist | Future Challenges in the North Sea Estuary Management in Germany  
Friederike Piechotta | Shrinkfish and changing food webs with coastal warming  
R Eugene Turner | Estuarine submerged aquatic vegetation (SAV) beds provide significant carbon storage in deltaic environments.  
Eva Hillmann, Victor Rivera-Mompy and Megan La Peyre |
| Evaluating Effects of Extreme Salinity Change in a Benthic Predator: Natasha Breaux, Benoit Lefebvret, Terry Palmer and Jennifer Pollock | Using citizen science and various restoration techniques to build living shorelines in an urban estuary  
Allison Fitzgerald and Meredith Cott | Nutrient reductions promote Submersed Aquatic Vegetation: Thirty years of change in Chesapeake Bay  
Christopher Patrick, Jonathan LeFevre, Robert Orth, William Denison, Carise Gurbat, Jeni Reiszman, J. Brooke Landry, Kenneth Moore, Rebecca Murphy, Jeremy Testa, Donald Weller, David Wilcox and Richard Batik | Multiple impact pathways of reduced connectivity from tidal inlets upon fish communities in the Pacific Northwest  
Correigh Greene, Jason Hall, Eric Bremer and Don Small | Effects of climate change on winter flounder and its impacts on fisheries in Narragansett Bay  
Joseph Langan and Jeremy Callie | From living seagrass to soil stocks: Dynamics of recalcitrant carbon in seagrass meadows  
Stacey Trevathan-Tackett, Peter Macmullin, Jeff Baldock, Just Ceban, Rod Connolly, Thomas Jeffries, Jonathan Sanderman, Justin Seymour, Alexandra Thomson, Caitlin Wesel and Peter Ralph |
| Macrophytal (Ova) bloom trophic transfer of PCBs in an urban estuary  
John Logan, Donald Cheney, Elizabeth Sly, Kevin Gardner, Brian Wyssor and Mark Altabet | Using hydrodynamic models to compare salinity variability encountered by benthos and plankton: Wim Kimmerr, Edward Gross and Michael MacWilliams | Urbanization and shoreline armoring modes complexity in coastal social-ecological systems  
Steven Scyphers, Steven Gray, Michael Beck, Matthew Ruth, Rachel Gittman, Keli Furman, Lauren Josephs and Jonathan Grabowski | Stakeholder-Driven Nutrient Modeling for the Chesapeake Bay  
Gary Shenk, Lewis Linker, Gopal Bhatt and Andrew Sammerlot | Fish Passage at Interstate Obstructions: Approaches in Washington State  
Correigh Greene, Padraic Smith and Don Small | Decadal Scale Research in Rocky Subtidal Habitats, Massachusetts Bay  
Kenneth Sebens and Edward Maney | Productivity and carbon accumulation trends across hydrogeomorphic zones in a newly emergent coastal deltaic floodplain  
Annabeth McCall and Robert Twilley |
| Evaluating Effects of Extreme Salinity Change in a Benthic Predator: Natasha Breaux, Benoit Lefebvret, Terry Palmer and Jennifer Pollock | Residence time of water in estuary alters resource use on multiple trophic levels: W. Ryan James, Linda Dregen, Robert Garritt and James Nelson | Stakeholder support for diversity-enhancing restoration practices has potential to benefit coastal ecosystem function  
Randall Hughes, Jonathan Grabowski, Heather Leslie, Steven Scyphers and Susan Williams | Solute-Transport Methods to Estimate Time-Varying Nitrogen Loading Rates to the Peconic Estuary, New York  
Donald Walter, Paul Minut and Christopher Schubert | Tidal tributary restoration by modification of salinity control structures  
Scott Deitche, Ed Sherwood, Nancy Norton and Lianne Garcia | Modeling Phytoplankton Community Response to Climate Change and Nutrient Loading in a Shallow Temperate Estuary  
Sara Blachman and Mark Brush | Shallow ponds and carbon biogeochemistry in salt marsh ecosystems  
Amanda Spivak, Kelsey Gosselin, Megan Gonneea and Sean Sylva |
| How the distribution of nitrogen has changed in Narragansett Bay, RI after nutrient reductions: Autumn Oczkowski, Courtney Schmidt, Anna Hamon, Donald Cobb, Jason Knutmdotz and Rick McKinney | How the distribution of nitrogen has changed in Narragansett Bay, RI after nutrient reductions: Autumn Oczkowski, Courtney Schmidt, Anna Hamon, Donald Cobb, Jason Knutmdotz and Rick McKinney | Examining the Role of the Connecticut River Watershed in Nutrient Loading to Long Island Sound  
Rachel Lowenthal, Peter Raymond, Lisa Werber, Bryan Youn, Jake Hosen, Ethan Kyzivat, Jenn Fair, Serena Matt, Jonas Komas, Jon Morrison and Jamie Sharley | Hooked on Healthy Estuaries: Fish Assemblage Diversity of the Satilla River Estuary  
Jennie Wiggins, Bruce Saul and Jessica Reichmuth | Seagrass responses to environmental variables from Maryland to New Hampshire show impacts of ocean warming  
Holly Plaisted, Erin Shields, Jillian Carr, N. Tay Evans, Sophia Fox, Stephen Heck, Robbie Hudson, Kenneth Moore, Hilary Neckles, Betty Nekirk, Alyssa Novak, David Parish, Bradford Petron, Amanda Tinoco and Fredrick Short | Distribution, drivers, and disturbance of blue carbon stocks in southeast Australia  
Carolyn Ewers Lewis, Paul Caneil, Jonathan Sanderman, Jeff Baldock, Stacey Trevathan-Tackett, Daniel imreadonov, Mary Young, Kaylee Rogers and Peter Macreadie |
| Estuarine water quality and plankton community responses in the Pensa Bay Estuary  
Michael Murrell, Janet Nestenede, James Hayg, Brandon Jarvis, Diane Yates and Jessica Aiukamp | Estuarine water quality and plankton community responses in the Pensa Bay Estuary  
Michael Murrell, Janet Nestenede, James Hayg, Brandon Jarvis, Diane Yates and Jessica Aiukamp | Essential considerations for marsh restoration success  
Taylor Sloey and Mark Hester | Modeling nitrogen loads to address point and non-point source nutrient pollution  
Jamie Vaudrey, Lorne Broussard, Charles Yanish and Kang Kim | Sediment transport from a tidal inlet: results from laboratory experiments  
Matias Duran-Matur, Rueda de Zwart and Geritvan van Heijst | Characterizing the seasonal cycle of sea level in U.S. coastal regions  
John Brubaker | Global mangrove forest soil carbon mapping at 30 m resolution  
Jonathan Sanderman, Tomislav Hengl, Greg Fiske, Kyle Solvik and Emily Landes |
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<td><strong>Science by non-governmental organizations driving estuarine management, conservation and restoration</strong></td>
<td>Coastal Carbon</td>
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<td><strong>Integrating volunteer monitoring data into the decision-making process of Chesapeake Bay management and restoration</strong></td>
<td>Seagrass restoration results in a next-generation gas benefit.</td>
<td>A new perspective on coastal sediment availability: insights from post-Sandy Fire Island, NY</td>
<td>Sediment management in deltas: innovative options to adapt to high-end scenarios of sea-level rise.</td>
<td>Assessment of Spawning Horseshoe Crabs in Mid-Atlantic (NY-AL) National Parks (2011-2013)</td>
<td>Quantifying sediment source contributions to sediments deposited in the upper Chesapeake Bay.</td>
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<td><strong>Use of volunteer-collected water quality data to motivate and track management in Buzzards Bay, Massachusetts</strong></td>
<td>Sediment and blue carbon dynamics in natural and restored marshes in a Popper Sound estuary</td>
<td>The Evolution of the Breach in Fire Island Produced by Super Storm Sandy.</td>
<td>Applying community sanctuaries to conserve horseshoe crabs and their habitat in underserved regions.</td>
<td>Estuaries and sediment dynamics in an estuary of high fluid discharge: Matpalaena River (South America).</td>
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<td>Rachel Jakuba, Tony Williams, Richard McHinney, Lindsay Scott, Christopher Neil, Joseph Costa and Mark Rasmussen</td>
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<td><strong>Integration of environmental monitoring data into management of Delawares Inland Bays</strong></td>
<td>The effect of community response to a storm-induced barrier breach within a temperate estuary: implications for ecosystem structure.</td>
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<td><strong>Paring through drivers of marsh resiliency in an altered Pacific Northwest (USA) estuary</strong></td>
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<td><strong>Blue Carbon: New approaches to add value and increase investment for estuarine conservation and restoration</strong></td>
<td>Seasonal variation of net ecosystem exchange in a scrub mangrove forest in the Florida Everglades.</td>
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<td>Kevin Simans, Gail Kinke and Rockwell Geyer</td>
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www.erf.org
## ORAL SESSIONS  Wednesday 8 November | Session 7  8:00 AM – 9:30 AM

### $51$ AB

**Regional Monitoring and Assessment for Ecosystem Restoration and Management**  
Richard Rayne, Angelina Freeman and Syed Khalil

**Acidification in the coastal environment: Drivers, co-stressors, and biological responses**  
Jason Gear, Cheryl Brown, Christopher Gabler, Matthew Lieberman, Matt Long and Zhouchun Wang

**Response of Coastal Wetlands to Sea-Level Rise and Climate Change**  
Ryan Meyer, Simon Engelhart, Nicole Khan and Benjamin Horton

**Quantifying the exchange of carbon between coastal habitats**  
Elien Herbert, Charles Hopkins, Matthew Kirwan and Nathan McGigue

**Incorporating indigenous knowledge into the research, management and governance of estuarine and coastal resources**  
Jamie Vaudrey and Gary Williams

**Linking changing watershed characteristics to water quality trends**  
Rebecca Murphy and Jeni Keisman

### $52$ AB

**Integrating and implementing adaptive management and programmatic monitoring in Louisiana**  
Richard Rayne, Syed Khalil and Angelina Freeman

**Quantifying the covariance of pH and oxygen conditions across the diversity of US nearshore habitats**  
Hannes Baumann and Erik Smith

**Effects of the 2015-2016 El Nino in Southern California estuaries: Implications for sea level rise**  
Madeleine Harvey, Sarah Giddings, Eric Stein, Richard Ambrose, Christine Whitcraft and Jeff Crooks

**The shape we're in: Geomorphology and hydrodynamics influence rates of salt marsh carbon burial**  
Carolyn Currin, Iris Anderson, Kenneth Capala, Jenny Davis, Scott Ensign, Elien Herbert, Matthew Kirwan, Nathan McGigue and Craig Tobias

**Welcome/Innovation**  
Cassius Spears, Jr.

**Changing atmospheric nitrogen deposition in Europe and North America: consequences for estuarine nitrogen loads**  
Javier Lloret, Ivan Valiela, Elizabeth Elsmstom and Caroline Owers

### $53$ AB

**Geophysical strategies for implementation of adaptive management program for Mississippi River Delta Plan**  
Syed Khalil, Richard Rayne and Angelina Freeman

**Effects of Acidification and Hypersalinity on pH and Aragonite Saturation in the Coastal Waters**  
Richard Feely, Tenny Ojokazi, Wei-Jun Cai, Nina Bednasnik and Robert Byrne

**Coastal wetland responses to sedimentation: A review of our understanding of the Sediment Subsidy Hypothesis**  
Julia Cherry, James Grear, Nigel Temple, William Verwaal and Michael Osland

**Application of spatially integrative metrics to quantify salt marsh trajectory and carbon fluxes**  
Neil Ganju, Lofer Drine, Matthew Kirwan, Sergio Fagherazzi, Andrea D’Alopa and Luca Carriello

**Introduction to the Session**  
Charles Hudson

**Manure and Fertilizer Inputs to Land in the Chesapeake Bay Watershed, 1950-2012**  
Jeni Keisman, Olivia Deveroux, Andrew LaMotte and Andrew Selleck

**Estimating a 31 year annual history of agricultural soil phosphorus concentrations over the Chesapeake Bay**  
Andrew Sommerlot, Gary Shenk and Guido Yacoy

### $54$ AB

**Identification of Hardbottom and Potential Oyster Areas in Barataria Bay, Louisiana**  
Angelina Freeman, Mieg O’Connor, Richard Rayne and Syed Khalil

**Assessing Seasonal Drivers of Aragonite Saturation States in the Acidification Vulnerable Gulf of Maine**  
ZhaoHui Alexe Wang, Gareth Lawson, Cynthia Pilskaln and Amy Maas

**Decoupling of channel and marsh sediment availability: Implication for marsh response to sea level rise**  
Daniel Coleman, Neil Ganju, Glenn Gunstenspergen and Matthew Kirwan

**Biomass ratio, nutrients, and salt marsh resilience in the Barnegat Bay**  
Jessie Buckner, LeAnn Haf, Angela Padellette, Daniellie Knepper and Martha Maxwell-Doyle

**Survival of tidal marshes? A sediment mass balance approach that tells two stories**  
Charles Hopkins, James Morris, Sergio Fagherazzi, Wil Walthem and Peter Raymond

**The Namaqua (All Things Fish) Project: Community-engaged environmental health research in collaboration with the Naranagapet Tribe in Charlestown, Rhode Island**  
Marcella Remer Thompson

**Using SPARRow to Understand Nutrient Trends in Chesapeake Bay Tributaries, 1992-2012**  
Scott Ator, Ana-Maria Garcia, Gregory Schwartz, Joel Blomquist and Andrew Selleck

**Unraveling the drivers of orthophosphate trends in tributaries to the Chesapeake Bay**  
Rosemary Fanelli, Robert Hinch and Joel Blomquist

### $55$

**From projects to programs: adaptive management of Gulf restoration following the Deepwater Horizon oil spill**  
Ann Hijuelos, Melissa Carle, Michelle Meyers, James Redding, Stephanie Remanuch and Greg Styer

**Combined Effects of Warming and Acidification on life-history traits of the Calanoid Copepod Acartia tonsa**  
James de Mayo, Gihong Park, Lydie Norton, Wesley Hoffman, Michael Fingasera, Hannes Baumann and Hans Dam

**Relative sea-level changes in Rhode Island (USA) during the last ~3.2 ka**  
Byron Halavik and Simon Engelhart

**Will marsh migration lead to increased carbon sequestration?**  
Marcello Ardon and Gillian Gundersen

**Evaluating the concept of Netukulimk in Charlestown, Rhode Island**  
Promoting and restoring the concept of Netukulimk in the Bay of Fundy Watershed  
Angie Gillis

**Unraveling the drivers of orthophosphate trends in tributaries to the Chesapeake Bay**  
Rosemary Fanelli, Robert Hinch and Joel Blomquist

### $56$

**Identifying the relationships among forested and herbaceous floristic quality indices, and biomass in Louisiana swamps**  
William Wood

**CO2 flux and long-term pCO2 trends of the estuaries of the Northwestern Gulf of Mexico**  
Melissa McCutcheon and Xingping Hu

**A High-Resolution Reconstruction of Late-Holocene Relative Sea Level in Rhode Island, USA**  
Simon Engelhart, Rachel Stearns, Andrew Kemp, Niamh Cahil, Byon Halvok, D. Reidie Gerbitz, Matthew Brain and Troy Hill

**Modeling carbon exchanges between bay, marsh and upland systems under accelerated sea level**  
Elien Herbert, David Walters, Lisamarie Windham-Myers and Matthew Kirwan

**When Knowledge Systems Collide: Successes and challenges of M/kamp Inclusion in Atlantic salmon governance in Nova Scotia, Canada**  
Shelley Denny

**Quantification of Fine Sediment, Organic Carbon, and Chlorophyll-a Export from Major Tributaries to the Chesapeake Bay**  
Qian Zhang

**Our Values in Place: Cultural values and vulnerabilities in the coastal zone**  
Randy Angus

**Twenty-five years of monitoring water quality and managing anthropogenic inputs in the Potomacmarshcoast Estuary (III)**  
Veronica Borsuk, Arnette DeSilva, Eric Peterson, Rabat Shabir, Linda Green and Elizabeth Hemm
### ORAL SESSIONS  
**Wednesday 8 November | Session 7**  
**8:00AM – 9:30AM**

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<tbody>
<tr>
<td>Metrics that couple water quality management with coastal ecosystem health</td>
<td>Soren Dahl</td>
<td>At the intersection of ecology and management: Toward coastal resilience</td>
<td>Rose Martin and Catheleen Wigand</td>
<td>Microbial Communities and Geochemical Processing in Redox Gradients</td>
<td>Sarah Malikin and Jeffrey Cornwell</td>
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<tr>
<td>Ecological indicators for assessing seagrass ecosystem condition in the Gulf of Mexico</td>
<td>Victoria Congdon and Kenneth Dunton</td>
<td>Salt marshes in times of change: sub-millimeter variation in redox dynamics and salt marsh microbes</td>
<td>Jennifer Bowen and John Angell</td>
<td>A Stormwater Pond Inventory for the Coast of South Carolina</td>
<td>Denise Sanger, Erik Smith, Andrew Tweet and Erin Koch</td>
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<tr>
<td>Isoscape and stoichioscape patterns in the dominant seagrasses in the Western Gulf of Mexico</td>
<td>Victoria Congdon, Sara Wilson and Kenneth Dunton</td>
<td>The role of salt marsh plants in influencing the fate of nitrogen in sediments</td>
<td>Anne Giblin, Jane Tucker, Suzanne Thomas and Zoe Cardon</td>
<td>Long-term trends and environmental causes of fish kills in coastal stormwater ponds</td>
<td>Dianne Greenfield, Rebecca Montensen and Cameron Doll</td>
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<tr>
<td>Evaluating seasonal community nutrient status with ecological stoichiometry in a salt marsh tidal creek</td>
<td>Douglas Bell, Susan Denhars, Erik Smith and Claudia Benitez-Nelson</td>
<td>Salt marsh rhizospheres - O2, pH and CO2 gradients in time and space</td>
<td>Retil Koop-Jakobsen and Peter Mueller</td>
<td>Coastal stormwater pond nitrogen cycling affects downstream water quality</td>
<td>Adam Gold, Michael Pfeiler and Suzanne Thompson</td>
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<tr>
<td>Chesapeake Bay SAV water quality habitat requirements: How robust and useful are these metrics been?</td>
<td>Kenneth Moore, Betty Nekirk, Erin Shields and David Parrish</td>
<td>The seagrass rhizosphere: a mosaic of chemical microgradients</td>
<td>Kasper Brodersen, Daniel Nielsen, Peter Ralph, Ole Pedersen and Michael Kuhl</td>
<td>Advances in Understanding Constructed Wetland and Detention Pond Functioning</td>
<td>Michael Mallin and Song</td>
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## ORAL SESSIONS

**Wednesday 8 November | Session 8  10:00 AM – 11:30 AM**

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<th>Time</th>
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<tbody>
<tr>
<td>10:00 AM</td>
<td>Regional Monitoring and Assessment for Ecosystem Restoration and Management</td>
<td>Richard Paynrie, Angelina Freeman and Syed Khalil</td>
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<tr>
<td>10:15 AM</td>
<td>Determination of regional barrier island restoration trajectories through the development of a standard monitoring protocol</td>
<td>Taylor Sloey, Mark Henter and Jonathan Willis</td>
</tr>
<tr>
<td>10:30 AM</td>
<td>Acidification in the coastal environment: Drivers, co-stressors, and biological responses</td>
<td>Jocin Grez, Cheryl Brown, Christopher Gabler, Matthew Liebman, Matt Long and Zhouchi Wang</td>
</tr>
<tr>
<td>10:45 AM</td>
<td>Response of Coastal Wetlands to Sea-Level Rise and Climate Change</td>
<td>Ryan Aoye, Simon Eugnhturh, Nicole Khan and Benjamin Horton</td>
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<tr>
<td>11:00 AM</td>
<td>Quantifying the exchange of carbon between coastal habitats</td>
<td>Ellen Herbert, Charles Hopkins, Matthew Kirwan and Nathan Mccague</td>
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<tr>
<td>11:15 AM</td>
<td>Incorporating indigenous knowledge into the research, management and governance of estuarine and coastal resources</td>
<td>Jamie Vaudrey and Gary Williams</td>
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<tbody>
<tr>
<td>10:45 AM</td>
<td>Regional patterns in seagrass distribution, and their implications for management in greater Puget Sound</td>
<td>Bart Christiaen, Lisa Sauer, Richard Bartleson and Jeff Swice</td>
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<tr>
<td>11:00 AM</td>
<td>Unexpected Responses of autotrophs to nutrient loading: Influence of water residence time on eutrophication expression.</td>
<td>James Rady, Cheryl Brown, Stephen Panizza, Christina Tension and Sarah Stryfel</td>
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<td>11:15 AM</td>
<td>The impact of root growth on changes in salt marsh surface elevation.</td>
<td>Linda Blum and Earl Davey</td>
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<tr>
<td>11:30 AM</td>
<td>Regional patterns in seagrass, and co-stressors, on eutrophication expression.</td>
<td>Craig Young, Bradley Peterson and Christopher Gobler</td>
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<tr>
<td>11:45 AM</td>
<td>The bloom forming macroalga, Ulva rigida, outcompetes the seagrass, Zostera marina, under elevated CO2 conditions.</td>
<td>Claire Young, Bradford Peterson and Christopher Gobler</td>
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<tr>
<td>11:00 AM</td>
<td>Comparing vertical change measurements in mangrove soils using ESIs,-marker horizons, PB-210 and acentrum models.</td>
<td>Joshua Breithaupt, Gordon Anderson, Kevin Whelan, Joseph Smaak, Laura Feher and Michael Olslad</td>
</tr>
<tr>
<td>11:15 AM</td>
<td>Particulate Organic Carbon Composition at the Marsh-Estuary Interface</td>
<td>Elizabeth Canuel, Amanda Koolich, William Reay and Maria Tortozzi</td>
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<tr>
<td>11:30 AM</td>
<td>Factors influencing catch rates of traditional eel traps in the St. John River, New Brunswick, Canada.</td>
<td>Aruna Jayawardane</td>
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<tr>
<td>11:45 AM</td>
<td>Documenting impacts of climate, clams, and a changing watershed on the Potomac Estuary</td>
<td>Lora Harris, Rebecca Murphy, Ryan Woodland, Robert Sabo, Keith Eshleman, Henry Walker and Dong Liang</td>
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<tr>
<td>11:00 AM</td>
<td>In-Situ Habitat Monitoring for Fisheries Management.</td>
<td>Emma Clarkson</td>
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<td>11:15 AM</td>
<td>Expected limits on the ocean acidification buffering potential of a temperate seagrass meadow.</td>
<td>David Kowkew, Richard Zimmerman, Kate Hewitt, Kerry Nichols, Jennifer Russink, John Stachowicz, Ya Taliens, Sarah Goldberg, Brian Gaylord and Ken Caldwell</td>
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<tr>
<td>11:30 AM</td>
<td>Modeling long-term freshwater inflow needs of subtropical estuary to manage and maintain forested wetlands.</td>
<td>Melissa Baustian, Andrea Jerabek, Eric White, Yushi Vargas, Tom Pechey, Robert Sabo, Lora Harris, and Serena Moseman-Valtierra</td>
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<td>11:45 AM</td>
<td>Modeling of photochemical degradation and biogeochemical cycling in a wetland-estuary system.</td>
<td>J. Blake Clark, Wen Long and Raleigh Hood</td>
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<tr>
<td>12:00 AM</td>
<td>Spatial and temporal trends of Enterococcus in the U.S. Virgin Islands and Sydney Hick</td>
<td>Krisztin Wilson Grimm</td>
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<td>11:15 AM</td>
<td>Integrated ecological assessment of urban channel health at mesoscale prior to river restoration.</td>
<td>Yao Wang and Ony W.H. Wai</td>
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<td>11:30 AM</td>
<td>The role of carbonic anhydrase in regulating phototplankton community structure in North Inlet, SC.</td>
<td>Ellea Knotts and James Pincney</td>
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<td>11:45 AM</td>
<td>Can a crab build a marsh? The role of ecology in salt marsh geomorphic processes.</td>
<td>Bethany Williams and David Johnson</td>
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<tr>
<td>12:00 AM</td>
<td>Quantifying dissolved organic carbon (DOC) exchanges between tidal wetland and shelf environments.</td>
<td>Christopher Osburn, Ishan Joshi, Cindy Lebasse, Diana Oviedo-Vargas, Thomas Blanch, DeWayne Bohmoteeh, Eric D’Sa, Puinyi He, Dong Ko, Ane Arreliano and Nicholas Ward</td>
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<td>12:15 AM</td>
<td>Benthic community condition trends in the Chesapeake Bay – 30 years and what progress?</td>
<td>Daniel Dauer and Roberto Llanos</td>
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<td>1515</td>
<td>Influence of black mangrove expansion on salt marsh food webs in coastal Louisiana. Christina Powell, Melissa Baustian and Michael Polito.</td>
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<td>1530</td>
<td>Ecological responses to climate induced mangrove expansion into salt marshes. Melissa Baustian, Jennifer Doerr, Michael Polito and Jimmy Nelson.</td>
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<td>1545</td>
<td>The genetics of Avicennia germinans at the northern climate boundary in the Gulf of Mexico. Catherine Vincent and Manuel Lefald.</td>
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<td>1600</td>
<td>Seasonal nutrient allocation as black mangrove (Avicennia germinans) encroach into salt marsh (Spardina alterniflora). Aaron Macy, Just Gebran, Michael Olsland and Julia Cherry.</td>
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<td>1615</td>
<td>Mechanisms of mangrove expansion: dispersal, survival, and growth dynamics at the salt marsh-mangrove ecotone. Erik Yando, Michael Olsland and Mark Hester.</td>
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<td>1700</td>
<td>Quantifying the exchange of carbon between coastal habitats. Ellen Herbert, Charles Hopkinson, Mark Kirwan and Nathan McGlathery.</td>
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<td>1715</td>
<td>Diadromy across estuaries: research, management and citizen science. Pedro Moreira, Karin Limburg, Benjamin Walther and Thomas Bigford.</td>
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<td>1730</td>
<td>Coastal Ecosystem Design: Integrating design thinking to envision future coasts. Robert Twilley and Taci Birch.</td>
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<td>1800</td>
<td>Aerial and satellite remote sensing reveals the spatial ecology of kelp forests and seagrass meadows. Max Castorani, Tom Bell, Kyle Cavanaugh, David Reed, David Siegel, Rachel Simons, Peter Raimondi and Filipe Alberto.</td>
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<td>1815</td>
<td>Dissolved Carbon Fluxes and Composition at the Marsh-Estuarine Interface: Seasonal and Tidal Patterns. Amanda Knobloch, Elizabeth Canuel, Mark Bruch, William Bray, Maria Tornere and Patrick Neale.</td>
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<td>1830</td>
<td>Reconstructing estuarine migration in Chinook salmon: the role of habitat barium in large river systems. Jessica Miller, Cheryl Morgan, Brian Beckman, Brian Burke, Don Van Doorm and Laurie Weikamp.</td>
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<td>The influence of black mangrove expansion on salt marsh food webs in coastal Louisiana. Christina Powell, Melissa Baustian and Michael Polito.</td>
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<td>1915</td>
<td>Acidity and hypersalinity in temperate coastal habitats: dynamics and potential to affect marine mollusks. Ryan Wallace and Christopher Gobler.</td>
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<td>1930</td>
<td>Diurnal hypersalinity and acidification: effects on the growth and survival of finfish and bivalves. Christopher Gobler, Andrew Griffith and Ryan Wallace.</td>
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<td>1945</td>
<td>Comparisons of two types of SONAR methods used during surveys of Submerged Aquatic Vegetation. Joseph Luczkovich and Hilde Spright.</td>
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<td>2100</td>
<td>Resilient settlement and productive aquatic landscapes: framing medium term redevelopment strategies for Virginia’s coastal communities. Alex Wall.</td>
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<td>2115</td>
<td>Carbon exchanges between a shelf sea (North Sea) and its intertidal coastal region (Wadden Sea). Yoana Voynova and Wilhelm Petersen.</td>
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**ORAL SESSIONS  Wednesday 8 November | Session 9  1:00PM — 2:30PM**

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<tr>
<td>1:00 PM</td>
<td>Detecting and Determining Effects of Emerging Contaminants in Urban Estuaries</td>
<td>At the intersection of ecology and management: Toward coastal resilience</td>
<td>Microbial communities and the dynamics and resilience of ecosystem function</td>
<td>Artistic Pathways to Scientific Understanding</td>
<td>Hydrodynamics and Sediment Dynamics in Estuaries and Coastal Seas — Day 2</td>
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<td></td>
<td>Vena Haynes and J. Evan Ward</td>
<td>Anne Bernhard, Annette Gilbin and Brian Roberts</td>
<td>George Rasmussen and Ayusha Gray</td>
<td>Robert Holmes, James McClelland, Suzanne Tank, Rob Spencer and Alexander Shkolomov</td>
<td>Fengyan Shi, Tian-Jian Hsu, James Kirby and Rockwell Geyer</td>
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<tr>
<td>1:15 PM</td>
<td>Development of the Coastal Biosensor for Endocrine Disruption (C-BED) Assay Reveals Implications for Ecological Health.</td>
<td>Relating ammonia oxidizer diversity to stratification throughout the northern San Francisco Bay water column.</td>
<td>Above and below the water: the changing scope from fresh to brackish waters.</td>
<td>Visualizing an emergent coastal deltaic floodplain chronosequence.</td>
<td>Assessing the influence of surface gravity waves on small-scale buoyant coastal outflows.</td>
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<td>Bonnie Blalock, William Robinson, Keegan Krick and Helen Peyton</td>
<td>Julian Damashek, Patrick Kearns, Jennifer Bowen, Karen Casciotti and Christopher Francis</td>
<td>Deborah Lichti and Patricia Kalchhoff</td>
<td>Anika Aarons, Alexandra Christensen, Annabeth McCall and Kathleen Eubanks</td>
<td>Angelica Rodriguez, Sarah Giddings and Nimmishwar Marar</td>
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<td></td>
<td>Charles Major and Juanita Urban-Rich</td>
<td>Pia Moisander, Donald Canfield and Brute Kraf</td>
<td>Friday night at the sea table.</td>
<td>Watershed Export and Estuarine Nitrogen Dynamics along the Alaskan Beaufort Sea Coast.</td>
<td>Fall Cooling and Mixing in Long Island Sound: Amin Ili, Kay Howard-Selm and James O’Donnell</td>
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<tr>
<td>1:45 PM</td>
<td>Polysysteme microbrads as a vector for Geminibacillus contamination in the bay scallop larva (Argopecten iradians).</td>
<td>Effects of nitrogen on abundance, diversity, and activity of competing nitrate-reducing microbes in salt marshes.</td>
<td>Friday night at the sea table.</td>
<td>Watershed Export and Estuarine Nitrogen Dynamics along the Alaskan Beaufort Sea Coast.</td>
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<td>Anna Murphy and Jennifer Bowen</td>
<td>Karen Haberman</td>
<td>James McClelland, Craig Connolly, Michael Rawlins and Kenneth Dunton</td>
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<tr>
<td>2:00 PM</td>
<td>Plastic Microbead Contamination in New Haven and Mystic Rivers, Connecticut.</td>
<td>Effects of Inundation on Wetland Soil Strength: Implications for Sediment Diversions in the Mississippi Delta.</td>
<td>Friday night at the sea table.</td>
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<td>Vincent Brelin, Cody Edison and Lela Jackson</td>
<td>John Nyman, Charles Sasser, Robert Lane, James Pahl, Kuehi Xu and John Day</td>
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<td>Are microplastics a risk to oysters?</td>
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<td>Kenneth Dunton, Carolyn Harris, James McClelland, Nathan McTigue, Byron Crump and Taya Connolly</td>
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<td>Juanita Urban-Rich, Julia Wallace, Jessica Carilli and Randi Rotjan</td>
<td>John Nyman, Charles Sasser, Robert Lane, James Pahl, Kuehi Xu and John Day</td>
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**ORAL SESSIONS**  Wednesday 8 November | Session 10  3:00PM – 4:30PM

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<tr>
<td>Ecological responses to climate induced mangrove expansion into salt marshes</td>
<td>Linking dissolved oxygen and nitrogen in urbanized estuaries</td>
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<td>Pedro Moraes, Kain Limburg, Benjamin Witherell and Thomas Bigelow</td>
<td>Robert Twilley and Taci Birch</td>
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### 3:30pm

**Effects of Black Mangrove Avicennia germinans Expansion on Marsh Neoteny Before and After a Flood**

- **Meredith Diskin** and Delbert Snee

- **Evidence of Improved Water Quality in Long Island Sound**
  - James O’Donnell

- **Oxygen dynamics across scales in a nutrient-enriched, macrotidal estuary**
  - Lissa MacLean, Rusty Holliman and David Sinn

- **The sink and source role of the Curonian lagoon in the Baltic Sea**
  - Giannarco Giordani, Irena Lubienie, Mindaugas Zilius, Patras Zemlys and Maro Bartolino

- **Changing types of organic detritus influences nitrogen cycling rates in temperate estuary sediments**
  - Josie Crawshaw, Iri O’Meara, Candika Savage and Marc Schallenberg

- **Life history plasticity of a diadromous fish across its distribution range**
  - Estor Dias, Françoise Davenat, Jonathan Sellieseith, Caterina Malheste, Carlos Auntes, Jonathan Wilson, Kain Limburg and Pedro Moraes

- **Protocols for transdisciplinary engagement in the design of future coastal infrastructure**
  - Justine Holzman, Rob Holmes, Brett Milligan and Brian Davis

### 3:45pm

**Saltmarsh to Mangroves: does organic matter source after foodweb dynamics?**

- **Todd Osborne, Lorne Simpson, Paul Julian and Michael Shields**

- **Nitrogen cycling in an enriched, urbanized estuary**
  - Rusty Holliman, Emma Nuss, Zhenlin Zhang and David Sinn

- **Electronics at the coast: Designing and testing an inexpensive GPS-tagging system using the teensy microcontroller**
  - Courtney Morrison, Ashley Holmes, Joseph Haeger and Jessica Riechmann

- **Proximities with that much ammonia? Decadal cycles in productivity and ecology of NSW intermittent lagoon**
  - Peter Scanes, Jaime Potts and Angus Ferguson

- **Weakfish gymnoseps regulus ecology in the non-native range: diet, trophic niche overlap, and habitat use**
  - Ines Cerveira, Estor Dias, Alexandra Tedesio and Pedro Moraes

- **Environmental education as a framework to support diadromous fish conservation and research**
  - Pedro Moraes, Estor Dias, Françoise Davenat and Carlos Auntes

- **Horseshoe Crab (Limulus polyphemus) Movements in the Delaware Inland Bays: a 15 year Tagging Study**
  - Andrew McGowan

### 4:00pm

**Avicennia germinans survival and growth varies among maternal cohorts but not with cohort diversity**

- **Donna Devlin**

- **Spatial Surveys of Summertime Hypoxia and Water Quality Improvements in Narragansett Bay, RI**
  - Warren Proell and David Murray

- **Characterization of a porewater sampling device**
  - Emily Chua, Andres Cardenas-Valencia, Timothy Short, William Savidge and Robinson Fulweiler

- **Proximities with that much ammonia? Decadal cycles in productivity and ecology of NSW intermittent lagoon**
  - Peter Scanes, Jaime Potts and Angus Ferguson

- **Stripers for the future: An Angler-Based Research and Education Campaign**
  - John Tiedemann and Andy Danyuch

- **Remote sensing data to support assessment of risk associated with storm events**
  - Paul Hamilton, Lauren Dunkin, Cristiano Magalhaes and Kelly Burks-Copes

### 4:15pm

**Aiding your replacement? Context-dependent effects of saltmarsh wrack on mangrove establishment**

- **Rachel Smith, Julie Bluer, Todd Osborne and James Byers**

- **Identification of organic matter sources contributing to hypoxia in two eutrophic Southern Texas estuaries**
  - Kenneth Hayes, Michael Wetzi, Weigang Wang and Xiping Hu

- **Estuarine lagoon shoreline destabilization caused by the invasive macroalga Gracilaria verrucosa**
  - Byron Toothman, Melissa Demostes and Deson Eule

- **The tensile root strength of Spartina patens: Response to atoxine and nutrients**
  - Laurie Hollis and R Turner

- **Can we enhance community metabolism and nutrient cycling in urbanised estuaries by eco-engineering coastal infrastructure?**
  - Jaime Potts, Mairana Mayer-Pettig, Ana Bugnot, Shinjiro Uehama, Elizabeth Strain, Tim Glazby, Peter Scanes, Laura Arndt, Emma Johnston and Katherine Dafton

- **“Sis-dammit”: Assessing Public Receptivity to Dam Removal in the Hudson River estuary**
  - Kayla Smith, Andrea Feldpausch-Parker and Kain Limburg

- **Integrating birds, threats, and socio-economic factors to identify conservation priorities in the mid-Atlantic Coast, USA**
  - Bradley Pickens, Walker Gallant, Chad Wiseley, Sara Schwantes and Felicia Sanders
### ORAL SESSIONS
**Wednesday 8 November | Session 10  ❔  3:00PM – 4:30PM**

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<td>Infection Point in Chesapeake Science: Contributions to Role of Benthic Systems</td>
<td>Skylights to the Ocean: The Biological/Biogeochemical Impacts of Light Transmission Through Melt-Ponded First-Year Sea Ice</td>
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<td>Metrics of seagrass ecosystem status across human impact gradients in Atlantic Canada</td>
<td>Grace Murphy, Melisa Wong and Heike Latze</td>
<td>Salt marsh microbial community change and trace greenhouse gas fluxes under precipitation intensification</td>
<td>Prospective Opportunities: Benthic Microbes and the Long Road to Restoration</td>
<td>Investigating relationships between phytoplankton, sea ice extent and other environmental variables in the Chukchi Sea</td>
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<td>Spatial and temporal variation in phenology in a Georgia salt marsh</td>
<td>Jessica O’Connell, Meryl Alber and Steven Penning</td>
<td>Regional and micro-environmental patterns in the seagrass microbiome</td>
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<td>Does declining sea ice boost kelp production? Four decades of evidence from the Beaufort Sea</td>
<td>Dredging Influences on Stratification and Flushing Times in Norwalk River Hypoxic Areas</td>
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<td>A multi-year record of plant biomass, alломetry, and primary production in Louisiana salt marshes</td>
<td>Anthony Rietl, Troy Hill, Annela Chelsky and Brian Roberts</td>
<td>Developing an adaption blueprint for nature-based adaptation to sea level rise on the California coast</td>
<td>Regional and micro-environmental patterns in the seagrass microbiome</td>
<td>Zooplankton communities near the Alaskan Arctic Coast and their role in shaping fish dietary preferences</td>
<td>Multi-inlet lagoon: Eulentic versus Stokes transport and dependence thereof on inlet characteristics</td>
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<td>Twenty years of seagrass monitoring. What have we learned?</td>
<td>Dorothy Byron, Kenneth Heck and Maddie Kennedy</td>
<td>Assessment of estuarine water quality condition: The intersection of science, management and citizen involvement</td>
<td>Genetic Investigations of a Ciliate Epibiont of Copepods in Chesapeake Bay</td>
<td>Zooplankton communities near the Alaskan Arctic Coast and their role in shaping fish dietary preferences</td>
<td>Morphologic change in a macro-tidal slough enhanced by wetland restoration</td>
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<td>Statistical Analysis of Sarasota Bay Seagrass Programs: Directing and Quantifying Change</td>
<td>Jay Leverone and Mary Christman</td>
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<td>Heike Lotze, Grace Murphy, Melisa Wong and Thomas Schlacher</td>
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<td>Kang-kyu Kim and Chang-Kun Kang</td>
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<td>Arctic land-ocean connections - from inland to coastal waters</td>
<td>Joanna Carey, Linda Dregnan, James McMillan and Kenneth Dunton</td>
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<td>Working waterfronts and ecosystem services: Integrating aquaculture in coastal management</td>
<td>Ashley Smyth, Austin Humphries, Anmar Murphy and Tracy Dalton</td>
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<td>Ecological and Fisheries Impacts of Hypoxia on Coastal Ecosystems</td>
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<td>Cecily Stegge, William Ball, Marjorie Friedrichs and Raleigh Hodd</td>
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<td>Joseph Carlin, Timothy Dellapenna and Joshua Williams</td>
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<td>Nicholas Ray and Robinson Fulweiler</td>
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<td>Justin Ridge, Heather Heinehan, Alyse Larkin, Avery Panton and Ethan Theuerkauf</td>
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<td>Steven Kuehl, Elizabeth Clime and Timothy Dellapenna</td>
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<td>Simulating hypoxia and nutrient reduction effects on the Northern Gulf of Mexico fishery ecosystem.</td>
<td>Kim de Mutsert, Stephen Brandt, Kristy Lwing, Arnaud Laurent, Joren Steenbeek and Joe Buszowski</td>
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<td>Littoral gradients in oceanic and watershed nitrogen sources to Pacific coastal estuaries of North America.</td>
<td>Cheryl Brown, James Kaldy, Daniel Wise, William Rugh, Kenneth Willard, Peggy Fong, T Chris Mochon Gallura and Catlin Fong</td>
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<td>Vegetarian shrimp become carnivores when large fish leave town.</td>
<td>David Johnson, John Fieger, Kari Galvan, James Nelson and Linda Degen</td>
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<td>Land Area Change in Coastal Louisiana (1932 to 2015)</td>
<td>Brady Covuilliolli, Holly Beck, Dan Schoolmaster and Michelle Fischer</td>
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<td>Physical controls on spatiotemporal variability in phytoplankton abundance and productivity in a subtropical estuary.</td>
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<td>Integrating ecological processes into marine reserve design.</td>
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<td>Modeling fish movement in J-D. Elizabeth LaBone, Dubravko Justic, Kenneth Rose, Luoia Wang and Haozheng Huang</td>
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<td>Buffer Options for the Great Bay Integrated Assessment Project.</td>
<td>David Rosnack, Cody Eggenberger, Jennifer Rehage, Tom Frankovich and James Nelson</td>
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<td>Influence of freshwater induced habitat changes on the movement and trophic dynamics of Common Snook.</td>
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<td>Synergistic effects of parental and embryonic exposure to predation risk impact offspring size at emergence</td>
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<td>Sediment and Management Challenges of the Central Outer Banks Barrier Island System, North Carolina, USA.</td>
<td>A 1500 year sedimentary record of environmental change in the Eel River Estuary, CA. Andrew Gray, Gregory Paternack, Elizabeth Watson, Miguel Gori and Nick Hatten</td>
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<td>Ashley Smyth, Annie Murphy, Bongcheon Song and Iris Anderson</td>
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<td>Getting used to holding your breath – managing to grow when oxygen is low</td>
<td>Denise Breitburg, Timothy Targett and Kenneth Rose</td>
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<td>The Real Wealth Purchased in a Fish Dinner.</td>
<td>Daniel Campbell and Cathleen Wigand</td>
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<td>Water Residence Time Predicts Sources of Dissolved Organic Matter Expert: Implications from Stable Isotopes.</td>
<td>Yishen Li, Peter Raymond, James Saers and Jacob Hosen</td>
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<td>Comparing the Diet of an Important Wetland Resident in a Natural and Created Marsh.</td>
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<td>Hydrodynamic and morphodynamic alterations in coastal lagoons due to marine aquaculture activity.</td>
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<td>Evaluating ecological and economic potential of ocean foods using a food-web approach.</td>
<td>Carrie Byron, Eric Chapman, Di Jin, Tracey Dalton and Adrianus Both</td>
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<td>Climate, Temperature, and Hypoxia as Multi-facted Drivers of West Coast Ecosystems.</td>
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<td>Ecosystem service values and tools: We’re getting them, now what?</td>
<td>Jane Ballard</td>
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<td>Determination of monitoring locations in Green River Estuary, Korea.</td>
<td>Jim Huan Hwang and Nam-Hoon Kim</td>
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<td>Species identity controls consumer-mediated ecosystem function in a sandy beach ecosystem.</td>
<td>Kyle Emery, Jennifer Dugan and Robert Miller</td>
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<td>Lelekia Jenkins and Paul Carvalho</td>
<td>Suzanne Skelley and Mark Monaco</td>
<td>Variation of Tidal and Subtidal Current and Water Level along a Macrotidal and Convergent Estuary.</td>
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<td>The Life Autonomous-Development: Applications of Robotic Platforms for Mapping Coastal Ecosystems.</td>
<td>The potential role of biotic and abiotic stressors in a dwarf red mangrove (Rhizophora mangle) die-off.</td>
<td>Cultural continuity and resilient resources: Ecuador’s co-management approach to mangrove conservation and restoration.</td>
<td>An Ecological Assessment to Support NOAA’s Choptank Complex Habitat Focus Area</td>
<td>Effects of Tidal Asymmetry on Shear Flow in a Converging Estuary.</td>
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<td>Variability in methane emissions from Typha latifolia and Typha angustifolia stands in Maine salt marshes.</td>
<td>Improving estimates of salt marsh carbon storage using fine-scale hyperspectral and LiDAR remote sensing.</td>
<td>Who do you think you are?</td>
<td>Improving shellfish restoration and habitat assessment in coastal Alaska: Rachmanak Bay Habitat Focus Area.</td>
<td>Karen Less Sinke and Steven Ashby</td>
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<td>Exploring seagrasses as a tool to mitigate ocean acidification and climate change in California.</td>
<td>The effects of seagrass wasting disease on eelgrass morphology and growth.</td>
<td>Assessing tidal creek sediment and benthic quality in relation to coastal development changes over time.</td>
<td>An Introduction to the Mycrodetritus food web in the James Bay.</td>
<td>Laissa Baltygir, Erika Noguera, Manos Gallo and Susana Vinzon</td>
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<th>551 AB</th>
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<tr>
<td><strong>Working waterfronts and ecosystem services: Integrating aquaculture in coastal management</strong>&lt;br&gt;Ashley Smyth, Austin Humphries, Annie Murphy and Tracey Dalton</td>
<td><strong>Ecological and Fisheries Impacts of Hypoxia on Coastal Ecosystems</strong>&lt;br&gt;Kim de Mulder, Stephen Brandt, Michael Roman, Timothy Targett, Denise Brittreith and Kenneth Rose</td>
<td><strong>National Estuarine Research Reserves</strong>&lt;br&gt;Ayesha Gray, Mark Woodrey, Edward Buskey, Jane Turnell, Christine Feurt, Kari St. Laurent and Jennifer Merrill</td>
<td><strong>Observational and modeling studies at the land-estuarine interface</strong>&lt;br&gt;Cecily Steppe, William Ball, Marjone Friedrichs and Raleigh Hood</td>
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| 10:00am | 551 AB | **Exploring social implications of shellfish aquaculture in Rhode Island using a normative evaluation approach**<br>Tracey Dalton, Di Jin and Robert Thompson | **Sea-specific effects of deoxygenation and temperature on copepod vertical migration and distribution**<br>James Pierson, Michael Roman, Wencheng Slater and David Elliott | **Ebb and Flow: Monitoring marsh hydrology in space and time in a Delaware tributary**<br>Dreisel Siss, Kari St. Laurent and Bob Scartonborough | **Coupled Physical-Biogeochemical Model of the Dynamics of a Freshwater Estuary**<br>Qiangian Liu, Eric Anderson, Boppalath Biddanda, Anthony Winkel and Katie Knapp |

| 10:30am | 552 AB | **Social and Ecological Factors Influencing the Sustainability of Intertidal Clam Aquaculture**<br>Molly Miller and Teresa Johnson | **Impacts of Hypoxia in Warming Waters: Onliths as Recorders of Environmental Stress and Physiological Effects**<br>Karin Limburg | **Contribution of phytoplankton to gross primary production dynamics in shallow areas of York River, VA**<br>Qubin Qin, Jian Shen and Xun Cai | **Validation, Verification, and Improvement of Model Predictions for Chemical Releases in the Tidal-Fresh Potomac River**<br>Joseph Smith, Jenna Cragan, William Swick and Matthew Ward |

| 10:30am | 553 AB | **Marine Bivalve Aquaculture Services: A Quartet of Wins**<br>Ashley Smyth, Austin Humphries, Annie Murphy and Tracey Dalton | **Direct estimates of lifetime hypoxia exposure in fishes using redox-sensitive chemical markers in otoliths**<br>Benjamin Walther and Matthew Altenritter | **Solving the problem of measuring long-term trends in phytoplankton abundance in tidally varying environments**<br>James Pinckney and Erik Smith | **Nitrate removal in subtidal and intertidal freshwater marshes of an active coastal deltaic floodplain**<br>Alexandra Christensen and Robert Twilley |

| 10:30am | 554 AB | **Fishing to farming: Shellfish and seaweed aquaculture as a diversification strategy for wild capture harvesters**<br>Caillte Cleaver, Teresa Johnson and Samuel Haines | **A Framework for Development of Estuary-Specific Dissolved Oxygen Criteria in Massachusetts**<br>Jennifer Flippin, Robert Murphy, Ben Jessup, Kimberly Godf, Richard Carey, Rebecca Weidman and Jerry Diamond | **Local-scale impact of coastal storms using established long-term monitoring networks**<br>Shannon Dunnigan, Kimberly Cressman, Kari St. Laurent, Diwayne Porter and Marie Bundy | **Resolving spatiotemporal characteristics of the seasonal hypoxia cycle in shallow estuarine environments**<br>Andrew Muller |

| 10:45am | 551 AB | **Exploring Northeastern market opportunities for farmed kelp (sea vegetables)**<br>Taylor Witkin, Azure Cygler, Carole Engel, Dawn Kotowski, Amelia Moore and Austin Humphries |  | **Tuckerton Peninsula salt marsh: emergent salt marsh plant community characterization**<br>Michael Kennish, Marcia Meixler and Katherine Crowley |  |

| 10:45am | 552 AB |  | **Site selection matters: lessons learned from kelp-oyster cultivation systems in a Rhode Island salt pond**<br>Lindsay Green, Cindy West, John West, Carol Thonber and Austin Humphries | **Tropical dead zones and mass mortalities on coral reefs**<br>Andrew Altieri, Seamus Hanson, Hannah Nelson, Janina Svermann, Rachel Gellin, Robert Diaz, Maggie Johnson, Lucia Rodriguez and Nancy Knowlton | **Using NERR data to foster student inquiry, advance data literacy, and promote climate science**<br>Jude Apple, Catherine Halverson, Janice McDonnell, Kristen Hunter-Thomson, Emily Weiss and Sarah Pedemonre |

| 10:45am | 553 AB |  |  | **Using NERR data to foster student inquiry, advance data literacy, and promote climate science**<br>Jude Apple, Catherine Halverson, Janice McDonnell, Kristen Hunter-Thomson, Emily Weiss and Sarah Pedemonre | **Tidal Marsh Model: a cross-scale approach to assess marsh evolution**<br>Karina Nunez, Joseph Zhang, Julie Herman, Carl Henstifer and William Reay |

| 10:45am | 554 AB |  |  |  |  |

| 11:00am | 551 AB | **Spatiotemporal impacts of net primary productivity from macroalgae aquaculture: implications for remediating coastal acidification**<br>Nichole Price, Suzanne Arnold, Joseph Salisbury, Paul Dobkins, Britteny Horvitz, Christopher Hunt, Shawn Shellito, Melissa Oyola and Evangeline Fachen | **Coral reefs: extreme oxygen environments?**<br>Hannah Nelson and Andrew Altieri | **New collaborative model for communicating climate change: Chesapeake Bay example**<br>Dave Jasienski, Paula Jasinski, Kari St. Laurent, Raleigh Hood and Victoria Cokes | **A simple, dynamic, hydrological model of a mesotidal salt marsh**<br>Darryl Marois, Theodore DeVitt and Hilmar Stecher |

| 11:30am | 552 AB |  |  |  |  |

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CERF 2017 24th Biennial Conference  Coastal Science Inflection Point: Celebrating Successes, Learning from Challenges

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<th>Time</th>
<th>Session 12</th>
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**ORSAL SESSIONS**

**Thursday 9 November**

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<tr>
<th>Room</th>
<th>Session 12</th>
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<tr>
<th>10:00AM</th>
<th>Food Webs and Community Structure</th>
<th>Mitigating sea level rise using novel adaptation strategies</th>
<th>Coastal Blue Carbon: Current Science, Policy and Management Efforts</th>
<th>Coastal Mapping: Costly maps for cost-effective coastal and estuarine management</th>
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<tr>
<td></td>
<td>Matthew Kimball</td>
<td>Christine Whitcraft</td>
<td>Kristen Wilson Grimes, Steve Crooks, Stephen Emmett-Marron, Jessica Foley, Meagan Gonnella, Janine Harris, Beverly Johnson, Stefanie Simpson and Anana Sutton-Grier</td>
<td>Mark Borrelli and Megan Tynell</td>
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| 10:15AM  | Halodule wrightii Epiphyte Microbiome in Response to Fertilization and/or Grazer Inhibition. Kirk Cammarata, Whitney Roberson, Colin Bristow, Ernest Everett and Shawn Hare | Thin Layer Sediment Augmentation to Manage Sea Level Rise: Initial Sediment Monitoring Results from California Richard Ambrose | Blue carbon in salt marshes: Will restoration compensate for habitat loss? Anna Armitage, Kathleen Bowers, Scott Hall and Jacob Sigren | Shallow Water Benthic Habitat Characterization: Getting Baseline Data and Mapping the White Space Mark Borrelli, Emily Shumchena, Bryan Oakley, Heath Love, Theresa Smith, Bryan Legare, Samantha McFarland and Sophia Fox |


| 11:00AM  | How hot are beach-dune hotspots: a functional test with carrion and scavengers on ocean beaches. Thomas Schlacher, Charles Peterson, Ben Gilby, Andrew Olds, Christine Voss, Rod Connolly and Ellen Bingham | Recolonization of invertebrates in sediment augmentation sites in Southern California. Christine Whitcraft, Amanda Martinez and Kaelin McAtee | Spatial variability of coastal wetland carbon Christopher Owers, Kerrylee Rogers, Debanish Mazumder and Colin Woodroffe | Comparing topo-bathymetric surfaces and elevation transects along southern Rhode Island beaches Brian Cacciopepoli, John King, Monique LaFrance Bartley and Sierra Davis |


| 11:30AM  | Recruitment and habitat use of early life stage tarpon (Megalops atlanticus) in South Carolina estuaries. Matthew Kimball and Marvin Mace | A preliminary design for a large, intermittent river diversion into the Maurepas Swamp, Louisiana John Day, Jeffrey Rutherford, Christopher O’Ella, Clinton Willison, Adrian Wiegman, Gary Shafter and Robert Lane | Discussion | Shoreline Change Trends at Varying Timescales Along the Rhode Island south shore: Barriers vs. Headlands Robert Hollis and Bryan Oakley |

| 11:45AM  | Getting Baseline Data and Mapping the White Space Mark Borrelli, Emily Shumchena, Bryan Oakley, Heath Love, Theresa Smith, Bryan Legare, Samantha McFarland and Sophia Fox | Evaluating the success of sediment augmentation with carrion and scavengers on ocean beaches. Mark Borrelli and Megan Tynell | Developing next-generation methods to assess critical coastal habitats in North Carolina Justin Ridge, Alexander Seymour, Antonio Rodriguez and David Johnston | Aerial Drones, Quadskis, and Autonomous Kayaks: the strengths and weaknesses of coastal mapping platforms Stephanie Dohner, Arthur Trembanis and Stephanie Dohner |

| 12:00AM  | Shallow Water Benthic Habitat Characterization: Getting Baseline Data and Mapping the White Space Mark Borrelli, Emily Shumchena, Bryan Oakley, Heath Love, Theresa Smith, Bryan Legare, Samantha McFarland and Sophia Fox | Developing next-generation methods to assess critical coastal habitats in North Carolina Justin Ridge, Alexander Seymour, Antonio Rodriguez and David Johnston | Aerial Drones, Quadskis, and Autonomous Kayaks: the strengths and weaknesses of coastal mapping platforms Stephanie Dohner, Arthur Trembanis and Stephanie Dohner | Comparing topo-bathymetric surfaces and elevation transects along southern Rhode Island beaches Brian Cacciopepoli, John King, Monique LaFrance Bartley and Sierra Davis |

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## ORAL SESSIONS  
**Thursday 9 November | Session 12**  
**10:00AM – 11:30AM**

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<th>Ballroom C</th>
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<th>Ballroom E</th>
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| 10:00 am   | Humans and the Environment  
Leikela Jenkins and Paul Carvalho | NOAA Habitat Focus Areas: Blueprint for Restoration and Management Success  
Suzanne Skelley and Mark Monaco | Hydrodynamics and Sediment Dynamics in Estuaries and Coastal Seas — Day 3  
Carl Friedrichs, Henk Schutteleers, Alejandro Souza and Arnoldo Valles-Lavinson |
| 10:15 am   | Evolutionary Ecology of Oyster Disease in Chesapeake Bay  
Ryan Carnegie, Laurence Huey, Rita Crockett and Susan Ford | Endangered Species Act Section 7 consultation required for dredging: SDBI-infrastructure maintenance and dredging permitting program. Lawrence Malizia and Christopher Kriegner | Using Availability and Emission Limited Sediment Conditions to Explain Sediment Import into Tidally Dominated Estuaries  
Ronald Brouwer, George Schramkowski, Henk Schutteleers and Yooi Dijkstra |
| 10:30 am   | Exploring the oyster response to dynamic parasite interactions in the Chesapeake Bay.  
Lauren Huey and Ryan Carnegie | Impacts of oil spill and clean-up on benthic community recovery: A mesocosm study. Changkeun Lee, Junsang No, Dongyeo Kim, Hoang Kim, Hanna Bae, Hana Ju, Taewoo Kim, Bong-Oh Kwon, Jungsung Ryu, Seongjin Hong, Un Hyuk Kim and Jong Seong Kim | Reversing Shoreline Armoring: Assessing Responses of Coastal Biotica in the Puget Sound after Shoreline Restoration. Timothy Lee and Jason Roth |
| 10:45 am   | Coral species diversity and disease dynamics.  
| 11:00 am   | Interactions between foreign and resident bacteria lead to disease signs in a reef-building coral.  
Sarah Gignoux-Wolfsohn | Scenario-based simulation of macroalgae (Porphyra sp.) growth in aquaculture facilities near Guem River Estuary, Korea. Yong Hoon Kim, Jae-Cheol Kim, Jee-Gab Cho, Jungsung Ryu, Seunghyun Son and Chang-Hee Lee | Assessing Risk to Ecosystem Services Production across an Urbanization Gradient in Coastal South Florida. Geoffrey Cook and Chris Kelble |
| 11:15 am   | Ciguatoxin Detection and Model Predictions for Use in Fisheries Management in Puerto Rico.  
Henry Raab, Joseph Luczkovich and Wayne Ltaker | Deforestation mangroves affect the potential for carbon linkages between connected ecosystems. Lucy Gwen Gillis, FE Belize and Gita Narayan | Cohesive sediment distribution in an idealized estuary, a numerical study. Danielle Tarpley, Courtney Harris, Carl Friedrichs and Rau Randall |
| 11:30 am   | Using a particle tracking model for connectivity analysis of salmon farms in the Broughton Archipelago.  
Danielle Burnett, Erin Rees, Raphael VanderStichel and Crawford Revie | Using UAV’s for assessing impacts of climate change adaptation strategies on macro-tidal salt marshes. Graeme Matheson and Danika van Proosdij | Oyster related nutrient ecosystem services in Choptank River Complex Habitat Focus Area. Suzanne Bricker, Maya Spouz, Shaw McLaughlin and Suzanne Skelley |
| 11:45 am   | The potential for gear-based solutions in coral reef fisheries conservation and management.  
Paul Carvalho and Austin Humphries | Quantifying ecological, social, economic impact a restored oyster reef can have on people and nature. Bryan DeAngelis, Mark Dumesnil, Bill Balboa, Stuart Carlton, Jennifer Pollack, Andrew Ropick, Christine Shepard and R.J. David Wells | Hydrodynamics of a Tidally-Choked Marsh  
Mara Orescanin and Robert Hamilton |
### ORAL SESSIONS

**Thursday 9 November | Session 13 | 1:00PM – 2:30PM**

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<tr>
<td><strong>Stock assessment, monitoring, and management of wild shellfisheries</strong>&lt;br&gt;Steven Rumrill and Laura Rogers-Bennett</td>
<td><strong>Habitats and Their Inhabitants:</strong>&lt;br&gt;SAV&lt;br&gt;Anthony Riel, Antilla Chetkofsky, Brittany Schwartzkopf, Diana Chin and Janet Walker</td>
<td><strong>Collaborating across geographic scales: integrating estuarine and coastal ocean information</strong>&lt;br&gt;Jade Appleby, Rus Morrison, Chris Kinkade and Kenny Raposa</td>
<td><strong>Observational and modeling studies at the land-estuarine interface</strong>&lt;br&gt;Cecily Steppo, William Bell, Marjorie Friedricks and Raleigh Hood</td>
<td><strong>Invasives</strong>&lt;br&gt;April Blakeslee</td>
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<td><strong>OysterFutures: testing a collaborative process for developing oyster fishing regulations in Chesapeake Bay.</strong>&lt;br&gt;Elizabeth North, Michael Wilberg, Jeffrey Cornwell, Jeff Blair, Matthew Damiano, Rasika Gavde, Taylor Georz, Tony Hartley, Chris Hayes, Raleigh Hod, Melanie Jackson, Robert Jones, Jane Thomas and Lisa Wang</td>
<td>Using microbial spatial and successional patterns to identify seagrass habitat specificity.&lt;br&gt;Rhea Sanders-Smith, Laura Wegener Purfey, Evan Morien, Mary O’Connor, Coreen Forbes and Margot Hessing-Lewis</td>
<td>Establishing an operational collaborative coastal observing network using real-time data: successes, challenges, and looking forward.&lt;br&gt;Marie Bundy, Dwayne Porter, Jennifer Busch, Chris Kinkade, Heather Kenkening and Gabrielle Canonic Hyde</td>
<td>Ecosystem Variability along the Estuarine Salinity Gradient: Examples from Long-Term Study of San Francisco Bay.&lt;br&gt;James Cloern</td>
<td>The limitation of spread of non-native marine invertebrates from artificial structures to natural habitats.&lt;br&gt;Whitney McLee and Catherine de Rivera</td>
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<td><strong>Water management, not overharvest, contributed to the 2012-2013 Apalachicola Bay oyster fishery collapse.</strong>&lt;br&gt;David Kimbro, Wilson White and Christopher Stallings</td>
<td>Physiological responses of Halodule wrightii to pulsed salinity reductions in a controlled laboratory experiment.&lt;br&gt;Joseph Kowalski, Kirk Camarata, Hudson DeBoe and Paul Zimba</td>
<td>The Northeast Ocean Data Portal – A decision support tool for ocean planning.&lt;br&gt;Emily Shumchenia, Nicholas Napoli, Kelly Knee and Peter Taylor</td>
<td>Impacts of direct atmospheric nitrogen deposition and coastal nitrogen fluxes on Chesapeake Bay hypoxia.&lt;br&gt;Fei Da, Marjorie Friedricks and Pierre St. Laurent</td>
<td>Reconstructing the Invasion History of the Asian shorecrab, Hemigrapsus sanguineus, in the Western Atlantic.&lt;br&gt;April Blakesee, Yumi Kamakura, Jaclyn Onufrey, Wataru Makino, Jisato Urabe, Susan Park, Carolyn Keogh, Whitman Miller, Mark Minton, James Carlton and Osamu Miura</td>
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<td><strong>Larval quahog dispersal in Narragansett Bay.</strong>&lt;br&gt;Corinne Truesdale, Marion Cambridge, Robert Orth, Andrea Rasika Gawde, Taylor Georz, Taylor Goelz, Troy Hartley, Jennifer Busch, Chris Kinkade, Heather Kenkening and Gabrielle Canonic Hyde</td>
<td>Extreme weather events and the resilience of intertidal seagrasses of the Great Barrier Reef.&lt;br&gt;Len McKenzie, Catherine Gille, Lucas Langlois, Rudi Yoshida, Naomi Smith and Michelle Waycott</td>
<td>The Marine Weather Portal: Linking ocean observing programs with the marine community.&lt;br&gt;Jennifer Dorton, Dwayne Porter and Charlton Galvamo</td>
<td>Effects of Particulate Resuspension on Oxygen and Nitrogen Dynamics in Chesapeake Bay. A Modeling Study.&lt;br&gt;Julia Moriarty, Marjorie Friedricks and Courtney Harris</td>
<td>Focusing community distribution and diversity within an active harbor: Implication for water quality management.&lt;br&gt;John Melien and Carmela Cuomo</td>
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<td><strong>Engaging Fishermen to Address Data Gaps and Evolve Management of the Quahog in Narragansett Bay.</strong>&lt;br&gt;Anna Malek Mercer, Dale Leavitt, Conor McManus and Thomas Heinman</td>
<td>Quantification of carbon accumulation in eight New England seagrass meadows.&lt;br&gt;Marguerite Pelletier, Phil Colarusso, Alyssa Novak, Juliet Simpson, Nicole Gutierrez, Ariane Anais Ortiz and Pere Masque</td>
<td>Working across reserves to develop automated reporting tools for the NERRS System-Wide Monitoring Program.&lt;br&gt;Julie Padilla, Dave Eslinger and Dwight Trublood</td>
<td>Modeling Chlorophyll Variability and its Transport in Chesapeake Bay.&lt;br&gt;Fei Da and Raleigh Hood</td>
<td>The invasive tunicate, Styela clava, as an ecosystem engineer in Long Island Sound.&lt;br&gt;Kristen Wexler, Carmela Cuomo, Alexandra Rhoads and Samantha Davidson</td>
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<td><strong>Characterization of growth dynamics in Jonah crab, Cancer borealis, in Rhode Island.</strong>&lt;br&gt;Corinne Truesdale, Conor McManus and Jeremy Gille</td>
<td>Factors affecting carbon storage capacity of eelgrass (Zostera marina L.) meadows in New England.&lt;br&gt;Alyssa Novak, Marguerite Pelletier, Juliet Simpson, Nicole Gutierrez, Prasede Velia, Pere Masque and Ariane Anais Ortiz</td>
<td>Observing coastal storm signals by integrating geospatial monitoring systems along the Eastern United States.&lt;br&gt;Kari St. Laurent, Kimberly Caffrey, Shanice Rowland, Carine Cloern, Heather Kenkening, Jennifer Busch, Dwayne Porter and Marie Bundy</td>
<td>Estuarine and coastal shelf transport processes with experimental and modeling comparisons on the Georgia coast.&lt;br&gt;Trevor Richards and Daniela Di Iorio</td>
<td>Effects of introduced prey on the growth and reproduction of the blood star, Henricia sanguinolenta.&lt;br&gt;Kaitlin Van Volkom and Larry Harris</td>
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<td><strong>Carapace biogeochemistry reveals blue crab migratory connectivity from nursery to spawning habitats.</strong>&lt;br&gt;Matthew Ogburn, Cynthia Gilmour, Eric Johnson and Anson Hines</td>
<td>A novel adaptation to facilitate seed settlement and establishment in a marine angiosperm.&lt;br&gt;Robert Orth, Gary Kendrick, Marion Cambridge, Ryan Lowe, Lukaaz Kotula, Leonardo Ruiz-Montoya and Jeremy Shaw</td>
<td>Transferability of NERRS-IOOS data integration tools from East Coast to Gulf Coast applications.&lt;br&gt;Kimberly Cressman, John K. St. Laurent, Shannon Dunigan, Dwayne Porter and Marie Bundy</td>
<td>Improving the Representation of Estuarine Processes in Earth System Models.&lt;br&gt;Qiang Sun, Michael Whitney, Frank Bryan and You-Heng Tseng</td>
<td>Is larval recruitment, or subsequent competition, the primary driver for introduced tunicate success?&lt;br&gt;Niels-Viggo Hobb and Brandon Fuller</td>
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<tr>
<td>1:00 pm</td>
<td>556</td>
<td>Integrating coastal elevation change from m² plots to regional scales</td>
<td>Philippe Hensel</td>
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<td>557</td>
<td>Coastal Blue Carbon: Current Science, Policy and Management Efforts</td>
<td>Kristen Wilson Gneiss, Steve Crooks, Stephen Emmett-Mattos, Jessica Foley, Meagan Gonnella,</td>
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<td>Janine Hams, Beverly Johnson, Stefanie Simpson and Anana Sutton-Grier</td>
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<td>Ballroom D</td>
<td>Habitations and Their Inhabitants: fish and invertebrates</td>
<td>Anthony Rieti, Anela Chelsky, Brittany Schwartzkopf, Diana Chin and Janet Walker</td>
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<td>Ballroom E</td>
<td>Nutrient input declines and the restoration of urban coastal systems</td>
<td>Courtney Schmidt, David Taylor, Daniel Codiga and James Ammerman</td>
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<td>1:15 pm</td>
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<td>Factors to consider when converting existing SET – MH stations into a strategic sampling network.</td>
<td>Donald Cahoon, Jennifer Olker, Alice Yates and Glenn Guntenperrgen</td>
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<td>Scaling up from the plot level in a living marsh system.</td>
<td>James Morris, Katherine Renten and Scott Hagen</td>
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<td>Applying Coastal Marsh Resiliency Models at the Landscape-Scale Using Bias-Corrected Remotely-Sensed Elevation Data.</td>
<td>Understanding The Role of Seagrasses in Sequestering CO₂ in Coastal Habitats. Richard Zimmermann, Victoria Hill, David Burdige, Brian Collier and Matt Long</td>
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<td>Christine Hladik and Ellen Herbert</td>
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<td>The Measurement and Monitoring of Vertical Land Motion in Coastal Environments using GNSS Technology.</td>
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<td>2:00 pm</td>
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<td>Monitoring Wetland Elevation Capital and Deep Subsidence Using Real-Time GPS.</td>
<td>Laura Mitchell, Philippe Hensel, Jim Lyons, Galen Scott and Matt Whitebeck</td>
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<td>Positive and negative interactions between seagrass and inshore grazing patterns.</td>
<td>Adrianna Parson, Joseph Dimmenger and Britanny Pallaschke</td>
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<td>Changes to the structure and metabolism of Boston Harbor during the reversal of its hyper-eutrophication.</td>
<td>David Taylor, Candace Ovitt, Annie Giblin, Jane Tucker, Bob Diaz, James Blake, Nancy Maciulek and Ken Kray</td>
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<td>3:00 pm</td>
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<td>Fractal floc properties in estuarine surface waters: insights from video settling, LSSS, and pump sampling.</td>
<td>Carl Friedrichs, Kelsey Fall, Grace Massey, David Bowers and Jarrell Smith</td>
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<td>Positive and negative interactions between seagrass and inshore grazing patterns.</td>
<td>Adrianna Parson, Joseph Dimmenger and Britanny Pallaschke</td>
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<td>Changes to the structure and metabolism of Boston Harbor during the reversal of its hyper-eutrophication.</td>
<td>David Taylor, Candace Ovitt, Annie Giblin, Jane Tucker, Bob Diaz, James Blake, Nancy Maciulek and Ken Kray</td>
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<td>3:00 PM</td>
<td>551 AB</td>
<td>Relationships between commercially fished invertebrates and their habitats</td>
<td>Kelly Darnell, Tim Caruthers and M. Zachary Darnell</td>
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<tr>
<td>3:15 PM</td>
<td>552 AB</td>
<td>Habitats and Their Inhabitants: connectivity</td>
<td>Jamie Vaudrey</td>
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<td>3:30 PM</td>
<td>553 AB</td>
<td>Collaborating across geographic scales: integrating estuarine and coastal ocean information</td>
<td>Jade Apple, Ru Morrison, Chris Kinlaide and Kenny Raposa</td>
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<tr>
<td>3:45 PM</td>
<td>554 AB</td>
<td>Physiological ecology in the Anthropocene: linking the laboratory and field</td>
<td>Steven Livin, Hannes Baumann and Jody Beers</td>
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<td>4:00 PM</td>
<td>555</td>
<td>Disturbance</td>
<td>Margaret Hall</td>
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<td>4:15 PM</td>
<td>551 AB</td>
<td>Habitat-specific patterns of growth and mortality of juvenile blue crabs.</td>
<td>Lennah Shakeri, Kelly Darnell, Tim Caruthers and M. Zachary Darnell</td>
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<td>4:30 PM</td>
<td>552 AB</td>
<td>Juvenile ruddfish in estuaries, oh my!</td>
<td>Brittany Schwartzkopf and Scott Hoppell</td>
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<td>4:45 PM</td>
<td>553 AB</td>
<td>Climate-related interannual variability revealed through continuous, high-frequency, automated observations in Florida’s Indian River Lagoon system.</td>
<td>M Dennis Hanisak and Kristen Davis</td>
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<td>5:00 PM</td>
<td>554 AB</td>
<td>Temperature and salinity effects on Stuckenia pectinata traits and susceptibility to grazing.</td>
<td>Serina Sebian and Kathryn Boyer</td>
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<td>5:15 PM</td>
<td>555</td>
<td>Cast adrift physiology of benthic Sargassum during adaptation to surface raft conditions.</td>
<td>Daniel van Hees and Gary Kendrick</td>
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<td>5:30 PM</td>
<td>551 AB</td>
<td>Refining the blue crab habitat suitability index for fragmenting marshes in coastal Louisiana.</td>
<td>Tim Caruthers, Kelly Darnell, Lennah Shakeri, M. Zachary Darnell and Andrea Jenbek</td>
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<td>5:45 PM</td>
<td>552 AB</td>
<td>Mapping an ecosystem: Connectivity of fish and invertebrate communities and habitats in Pleasant Bay, Massachusetts.</td>
<td>Bryan Legare, Owen Nichols, Agnes Mittermayr and Mark Borelli</td>
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<tr>
<td>6:00 PM</td>
<td>553 AB</td>
<td>Seasonality, inter-annual variability, and long-term changes in water column ecology of the Massachusetts Bay system.</td>
<td>Daniel Codiga, Kenneth Hay and David Taylor</td>
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<tr>
<td>6:15 PM</td>
<td>554 AB</td>
<td>Multiple stressors and exposure patterns impact the metabolic and ecological function of a key grazer.</td>
<td>Natalie Low and Fiorena Micheli</td>
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<tr>
<td>6:30 PM</td>
<td>555</td>
<td>Changing predator-prey dynamics: effects of crown conch population increases on oyster persistence.</td>
<td>Harriet Booth, Timothy Pusack and David Kimbro</td>
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<tr>
<td>7:00 PM</td>
<td>552 AB</td>
<td>Use of pericoi bone chemistry to track manatee migrations in the northcentral Gulf of Mexico.</td>
<td>Kayla DaCosta and Ruth Camsichael</td>
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<td>7:15 PM</td>
<td>553 AB</td>
<td>Effects of pulsed freshwater inflows on ecosystem structure and function in the Mississippian Aransas Estuary.</td>
<td>Edward Buskey, Cammie Hyatt and Lindsay Scheff</td>
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<td>7:30 PM</td>
<td>554 AB</td>
<td>Atmospheric rivers and the mass mortality of wild oysters: insight into an extreme future?</td>
<td>Brian Cheng, Andrew Chang, Anna Deck and Matthew Femeer</td>
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<td>7:45 PM</td>
<td>555</td>
<td>Interdisciplinary evaluation of the status of large-bodied small mammal populations off the southern Baja California peninsula.</td>
<td>Sharon Herrza, Malte Eraschkine Extramiana, Octavio Alburgo, Gustavo Hinojosa-Aruando and Juan Cota Nieto</td>
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<td>8:00 PM</td>
<td>551 AB</td>
<td>Linking changing climate, estuarine habitat use, and declining catches of penaeid shrimps in South Carolina.</td>
<td>Dennis Allen and Matthew Kimball</td>
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<td>552 AB</td>
<td>Drift macroalgae as alternative habitat for macroinvertebrate and vertebrate communities in shallow coastal ecosystems.</td>
<td>Elizabeth Lacey</td>
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<tr>
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<td>553 AB</td>
<td>Characterizing Climate and Human Influences on Coastal Carbon Processes Across the Land-Ocean Interface.</td>
<td>Steven Lohrenz, Wei-Jen Cai, Jianqin Tian, Ruoying He, Zuo Xue and Katja Fennel</td>
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<td>8:45 PM</td>
<td>554 AB</td>
<td>An integrative approach to studying behavior and physiology of blue rockfish in coastal kelp forests.</td>
<td>Jody Beers, Steven Livin, Michael Squibb and Jeremy Goldbogen</td>
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<td>9:00 PM</td>
<td>555</td>
<td>Modeling the effects of varying disturbance frequency and magnitude on population persistence in predator-prey systems:</td>
<td>Christian Commander and Wilson White</td>
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<td>551 AB</td>
<td>Examination of trophic relationships affecting oyster reef restoration success in the Mississippi Sound.</td>
<td>Virginia Fleer and Chet Ralocinski</td>
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<td>552 AB</td>
<td>A model framework to determine production potential of fish derived from coastal habitats.</td>
<td>Melissa Wong and Michael Dowd</td>
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<td>553 AB</td>
<td>Variability in water column respiration in PMW waters and implications for coastal and oarion acidification.</td>
<td>Jude Apple, Natasha Chrestman, Claire Cook and Jan Newton</td>
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<td>554 AB</td>
<td>Three vignettes of physiological ecology: interdisciplinary tools for linking the laboratory and the field.</td>
<td>Emily Rivest</td>
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<td>10:15 PM</td>
<td>555</td>
<td>Assessment of Ecological Value of Benthic Habitats.</td>
<td>Roberto Llano, Daniel Dauer, Rochelle Setz and Michael Lane</td>
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### ORAL SESSIONS  Thursday 9 November | Session 14  🕑 3:00PM – 4:30PM

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<thead>
<tr>
<th>Time</th>
<th>Session 14</th>
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| 3:00pm | Nature, CoSMoS, and local climate adaptation planning  
Monique Myers and Juliette Finzi Hart | Coastal Ecosystem Goods and Services: Sustainability in a Changing Climate  
Chanda Littles, Theodore DeWitt, Lauri Green and Baryl Marois | Nutrient input declines and the restoration of urban coastal systems  
Courtney Schmidt, David Taylor, Daniel Codiga and James Ammerman | Hydrodynamics and Sediment Dynamics in Estuaries and Coastal Seas — Day 3  
Carl Friedrichs, Iren Schuttelaars, Alejandro Souza and Arnoldo Valle-Levinson |
| 3:15pm | Conserving California’s coastal habitats in the face of sea level rise.  
Walter Headly, Brian Cohen, Mary Gleason, Joshu Morris, Kirk Klausmeyer, Sarah Newkirk, Hilary Wealcke and Mary Small | From ecological relevance of ecosystem services to their use in governance. Case study of mudflats.  
Benoit Lebreton, Audrey Rivaud, Laurent Picot, Lauret Barillie, Thierry Sauzeau and Johann Lavau | Exploring Ecosystem Response After Nitrogen Inputs Reduced by 50% to Narragansett Bay.  
Courtney Schmidt, Tom Borden and Eivy Monroy | Hydrodynamics and sediment transport in a rapidly eroding salt-marsh complex.  
Daniel Nowacki, Neil Ganju and Steven Sturrles |
| 3:30pm | Using the USGS Coastal Storm Modeling System for Ecosystem-Focused Assessments.  
Juliette Finzi Hart and Patrick Barnard | Understanding the implications of a changing environment on harvested bivalve populations using habitat suitability models.  
Nathaniel Lewis, Theodore DeWitt and Eric Fox | Receiving waters monitoring following WWTF upgrades to reduce nitrogen loading.  
Christine Comeau | Wave Attenuation Across Marshes in San Francisco Bay.  
Madeline Foster-Martinez, Jessica Lacy, Matthew Ferrer and Evan Variano |
| 3:45pm | Integrating natural with built resources in coastal vulnerability assessments: California tidal wetlands case study.  
Maya Hayden, Sam Veloz, Nadav Nus, Leo Salas, Nathan Elliott, Dennis Jongsmijt and Julian Wood | Seagrass restoration reinstates nitrogen retention ecosystem service.  
Lillian Aoki and Karen McGlade | Changes to habitats over time in Narragansett Bay and setting management targets using BCG approaches.  
Giancarlo Cicchetti, Emery Shumchenia and Kevin Ruddock | Influence of Waves and Vegetation on Marsh Edge Accretion Dynamics in the Delaware Estuary.  
Debebe Fanta and Tracy Quirk |
| 4:00pm | Scenario planning: Using the tools in your toolbox to overcome uncertainty.  
Danielle Boudreau, Jeff Crooks, Julio Lona and Kristin Goddich | Phragmites: Ecosystem Services and Control.  
Judith Weis and Erik Kiviat | Upper Narragansett Bay phytoplankton community characterization post-wastewater treatment facility nitrogen load reductions.  
Sarah Flickinger | Wind waves drive multiple mechanisms of erosion of the marsh scarp in Barataria Bay, LA.  
Kendall Valentine and Giulio Mariotti |
| 4:15pm | Santa Barbara Area Coastal Ecosystem Vulnerability Assessment (SBA CEVA).  
Monique Myers, Patrick Barnard, Edward Brightley, Daniel Cayan, Jennifer Dugan, Sam Iacobellis, John Melack and Henry Page | Development of Final Ecosystem Goods and Services Indicators for Estuaries and Coasts.  
Walter Berry, James Latimer, John Kidden and Paul Ringold | Changes in growth rates in Mercenaria mercenaria in Narragansett Bay following reductions in nitrogen loads.  
Sandra Robinson and Autumn Oczkowski | Sub-grid modeling of biogeomorphological processes on salt marsh platforms.  
James Kirby, Fengyan Shi, Mithun Deb and Guoxiang Wu |
| 4:30pm | Discussion | Evaluating Buyer Interest in a Voluntary Ecosystem Services Exchange.  
Paul Bukaveckas | Will a replacement of Spartina increase vulnerability of coastal lagoon salt marshes?  
Barbara Proenza, Aldo Sottolichio, Richard Michalet and Florian Ganthy |

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**Note:** This table provides a summary of the sessions and topics covered in Session 14 of the CERF 2017 24th Biennial Conference. The sessions include a variety of topics related to coastal science, focusing on sustainability, ecosystem services, and the impacts of climate change. Each session is scheduled to run from 3:00 PM to 4:30 PM on Thursday, November 9th.
MONDAY POSTER SESSIONS

POPULATION ECOLGY, COMMUNITY ECOLGY, AND FUNCTIONAL DIVERSITY

Zimmermann, Danielle; Withers, Kim; Pollack, Jennifer. Effects of extreme freshwater events and Perkinsus marinus on stress response in Crassostrea virginica. (A006)

Roberts, Victoria. Status of Dermo disease (Perkinsus marinus) in Patuxent River oysters (Crassostrea virginica). (A007)

Caracappa, Joseph; Munroe, Daphne. Maternal effects on blue crab (Callinectes sapidus) larval morphology. (A008)

Mingledoph, Keturah; White, Brittany; Mannix, Sierra; Coleman, Austin; Reichmuth, Jessica; Abdulovic-Cui, Amy. Investigating genetic diversity of Callinectes sapidus and Areanaeus cibarius of the southeastern Atlantic coast. (A009)

Farleigh, Keaka; Ignotoff, Toni; Kimerer, Wirm. Variability in development rate within and between clutches from individual female copepods (Pseudodiaptomus forbesi). (A010)

Savoie, Allison; Wei, Hengchen; Newell, Silvia; McCarthy, Mark; McClelland, James. Phytoplankton Abundance, Size distribution, and Community Composition in the Aransas River Tidal Freshwater Zone. (A016)

Fisher, Kelsey; Wetz, Michael. Dust and soil enrichment effects on phytoplankton growth in Baffin Bay, TX. (A017)

Tominack, Sarah; Wetz, Michael. Spatial and temporal variability in Corpus Christi Bay water quality and relationship with Karenia brevis. (A018)

Cira, Emily; Wetz, Michael. Understanding drivers of spring phytoplankton dynamics in a eutrophying, subtropical estuary. (A019)

Mecalco, Angeles; Castillo, Manuel. Seasonal and diel zooplankton variability in an intermittent tropical estuary of Mexico. (A020)


Paperno, Richard; Markwith, Scott; McDevitt, Erin; Anderson, Eric; Whittington, James. Nekton response to habitat restoration: a case study from Lake Worth Lagoon, Florida. (A027)

Miller, Jeremy; Goldstein, Jason; Furbeck, Michelle. Observations of ichthyoplankton community structure, abundance, and diversity in a New England estuarine system. (A028)

Burns, Jillian; Grimaldo, Lenny; Kimerer, Wirm. Examining larval longfin smelt diets in shoals and tidal marshes of the San Francisco Estuary. (A029)

Munguia, Angie; Miller, Jessica; Weitkamp, Laurie; Van Doornik, Don. Potential indicators of habitat use: diet and stable isotope composition during juvenile salmonid emigration. (A030)

Hale, Stephen; Hughes, Melissa; Buffum, Henry. The Lives and Times of the Narragansett Bay Benthos: Biodiversity Trends over 161 Years. (A036)

Lockwood, Lucy; Byrnes, Jarrett. Assessing the impact of hard-substrate coastal protection structures on intertidal marine biodiversity. (A037)

Johnson, Shandon; Reichmuth, Jessica; Taylor Bennetts, Stacy. The case of towering Spartina: on-going assessment of salt marsh dynamics in an altered Estuary. (A038)

Mercer, Jennifer; Reichmuth, Jessica; Cannon, Jennifer. Signs of Endocrine Disruption: Morphometrics and EcR expression in fiddler crabs along the Georgia–Carolina coast. (A039)

WORKING WATERFRONTS AND ECOSYSTEM SERVICES: INTEGRATING AQUACULTURE IN COASTAL MANAGEMENT

Perry, Katie; Byron, Carrie. Ecological implications of commercial bivalve aquaculture on coastal food web dynamics. (A046)

Duball, Chelsea; Salisbury, Lauren; Amador, Jose; Stolt, Mark. Assessing impacts of oyster aquaculture on water quality and oyster biodeposition on the benthic environment. (A047)

Hollandbeck, Mary; St. Gelais, Adam; Grebe, Gretchen; Byron, Carrie; Burkholder, Kristen. Assessment of indicator bacteria on Sugar Kelp; Saccharina latissima, farmed in a nearshore coastal estuary. (A048)

Potti, Pooja. Relationship of Oyster Growth and Survival to Water Quality in Cape Cod Estuaries. (A049)

ECOSYSTEM SERVICES PROVIDED BY SHELLFISH RESOURCES

Westbrook, Phillip; Heffner, Leanna; La Peyre, Megan. Oyster-mediated nutrient bioassimilation, burial, and denitrification in Louisiana: effects of timing and location. (A056)

Munroe, Daphne; Goodwin, Jacob; Vasslides, James; Ganju, Neil; Defne, Zafer. Shellfish connectivity in Barnegat Bay: combining larval sampling, dispersal modeling and outreach to inform enhancement. (A057)

Volaric, Martin; Berg, Peter; Reidenbach, Matthew. Oxygen metabolism of intertidal oyster reefs measured by aquatic eddy covariance. (A058)

Porter, Elka; Franz, Heather; Lacouture, Richard. Impact of Crassostrea virginica biodeposit resuspension on water quality and ecosystem processes: A mesocosm experiment. (A059)

Marquez, Mario; Jagoe, Charles; Bricker, Suzanne; Colleen, Dwyer. Oyster (Crassostrea virginica) aquaculture as a method of nitrogen bio-extraction in Oyster Bay, Florida. (A060)

Carlton, Jessica; Darrow, Elizabeth; Alphin, Troy; Brander, Susanne; Puckett, Brandon; Posey, Martin. Effects of new oyster cultivation on sediment characteristics within Masonboro Island, NC. (A061)
MONDAY POSTER SESSIONS

NATIONAL ESTUARINE RESEARCH RESERVES

Watts, Alison; Thomas, W; Yednock, Bree; Goldstein, Jason. New Technology for Old Problems – Developing DNA Methods to Monitor Species in Estuarine Systems. (A065)

Watson, Elizabeth; Rahman, Farzana; Woolfolk, Andrea; Maher, Nicole. High nutrient loads amplify carbon cycling across California and New York coastal wetlands. (A066)

SEA LEVEL RISE AND TRANSGRESSION OF COASTAL ECOSYSTEMS

Peterson, Nicole; Bledsoe, Brian. Modeling effects of anthropogenic barriers on salt marsh migration under sea-level rise in coastal Georgia. (B006)

Burns, Christine; Alber, Merryl; Alexander, Clark. Historical analysis of marsh extent at three LTER site along the US Atlantic coast. (B007)

Kottler, Emily; Gedan, Keryn. Movin’ on up, with sea level rise: marsh seed dispersal into upland fields and forests. (B008)

MITIGATING SEA LEVEL RISE USING NOVEL ADAPTATION STRATEGIES

Rahman, M. Munsur; Urmi, Mahmida; Elahi, Wasif; Dustgir, M. Maruf; Haque, Anisul. Can floodplain sedimentation compensate Sea Level rise and Subsidence induced Deltaic Submergence? (B009)

COUPLED MODELS OF COASTAL ACIDIFICATION AND HYPOXIA: APPLICATIONS TO MANAGEMENT

Hu, Xining; Wang, Hongjie; Wetz, Michael; Hayes, Kenneth. Modeling of Dissolved Oxygen and pH Dynamics in Baffin Bay. (B017)

McWilliams, James; Deutsch, Curtis; Sutula, Martha; Feely, Richard; Bianchi, Danielle; Kessour, Faycal; Howard, Evan; Bednarsek, Nina; McLaughlin, Karen; Weisberg, Stephen; Ambrose, Richard; Alin, Simone. Integrated Model of Acidification & Hypoxia to Support Ecosystem Management in the CCS. (B018)

MANAGING ACIDIFICATION IN ESTUARIES: WHAT DRIVES ARAGONITE SATURATION STATE VARIABILITY

Jewett, Libby; Ombres, Erica; Dwight, Gledhill. NOAA’s Ocean Acidification Program – Funding Studies of Species’ Responses to Ocean Acidification Since 2012. (B019)

Degen, Tristan; Gassett, Parker; Strong, Aaron. Ocean and Coastal Acidification Management: Constraining Vulnerability to Acidification in Estuaries in Maine. (B020)

COASTAL CARBON CYCLING: KEY BIOGEOCHEMICAL PROCESSES AND BROAD-SCALE IMPACTS

Weston, Nathaniel; Zawatski, Mary; Jordan, Mikala; Donnelly, Brian; Sutter, Lori. Atmospheric and lateral exchange of carbon, nitrogen, and sediment in tidal marshes of contrasting elevation. (B031)

Herrmann, Maria; Najjar, Raymond; Goldberger, Sreece; Menendez, Alana. First System-Wide Estimates of Air-Water Exchange of Carbon Dioxide in the Chesapeake Bay. (B032)

Hodgkins, Casey; Testa, Jeremy. Spatial and temporal patterns in water column and sediment respiration in a coastal plain estuary. (B033)

Najjar, Raymond; Herrmann, Maria; Alexander, Richard; Burdige, David; Cai, Wei-Jun; Canuel, Elizabeth; Chen, Robert; Friedrichs, Marjorie; Feagin, Rusty; Holmquist, James; Hu, Xining; Kemp, Michael; Kroege, Kevin; Mulholland, Margaret; Pilskaln, Cynthia; Salisbury, Joseph; St. Laurent, Pierre; Tian, Hanqin; Tzortziou, Maria; Wang, Hongjie. Carbon budget of tidal wetlands, estuaries, and shelf waters of Eastern North America. (B034)

Lopes, Christian; Howard, Jason; Fourqurean, James. Trends in Inorganic Carbon Dynamics of Seagrass Thalassia testudinum. (B035)

COASTAL BLUE CARBON: CURRENT SCIENCE, POLICY AND MANAGEMENT EFFORTS

Cornu, Craig; Apple, Jude; Yednock, Bree; Kauffman, Boone; Janousek, Chris; Brophy, Laura; Borde, Amy; Diefenderfer, Heida; Thom, Ronald; Ewald, Michael; Angell, Cathy; Bragg, John; Crooks, Steve; Windham-Myers, Lisamarie; Penrith, Sean; Antonioli, David; Liu, Jenny; Gaeckle, Jeffrey; Sloane, Evyan; Moore, Amber; McMahon, Shawn. End User-Driven Quantification and Public Dissemination of Pacific Northwest Blue Carbon Information. (B042)

Powell, Elisabeth; Watson, Elizabeth; Martin, Rose; Krause, Johannes. The Effect of Open Marsh Water Management Practices on the Carbon Balance of Tidal Marshes. (B043)

Krause, Johannes; Watson, Elizabeth; Hinojosa Corona, Alejandro; Gray, Andrew; MacDonald, Julianna; Raper, Kirk. Assessment of blue carbon stocks and storage in seagrass meadows of Bahia San Quintin, México. (B044)

Sharma, Sahadev; Analuddin, Kangkusoro; Rahim, Saban; Gibranmusa, Alfirm; MacKenzie, Richard; Sparks, Jed; Litton, Creighton. Soil greenhouse gas emissions from intact, deforested, and restored mangrove forests in Southeast Sulawesi, Indonesia. (B045)
MONDAY POSTER SESSIONS

PHYSIOLOGICAL ECOLGY IN THE ANTHROPOCENE: LINKING THE LABORATORY AND FIELD

Zuelow, Angelina; Henkel, Sarah. Caloric density changes in the shrimp (Crangon alaskensis) associated with the North Pacific marine heatwave. (B052)

Ull-Hasan, Sabah; Malloy, Michael; Hofmeister, Jenny; Sistrom, Mark. Anthropogenic impacts on the morphology and ecology of venomous marine gastropod species Californiconus californicus. (B053)

Yeghissian, Talene; Glos, Haley; Cohen, Jonathan. Seasonal body-size variation of Delaware Bay copepods: effect of temperature and food on growth rates. (B054)

Heppell, Scott; Jainarine, Naomi. Assessing potential changes in reproductive success of female Sebastes melanops during changing climates in Oregon. (B055)

GOING OVER THE EDGE? CLIMATE-RELATED THRESHOLDS IN COASTAL SYSTEMS

Johnson, Adelaide; Noel, James; Kruger, Linda; Gregovich, David. Assessing Impacts of Submerging and Emerging Shorelines on Benthic Species. (B058)

Folger, Christina; Lee II, Henry; Graham, Rene; Reusser, Bob; Reusser, Deborah; Clinton, Patrick. Assessing Temperature Risk to Crab in the Northeast Pacific (Southern California to the Beaufort Sea). (B059)

CASTING THE NET WIDELY: BROADER IMPACTS PRACTITIONERS SHARE LESSONS LEARNED

Varadarajan, Ashwin; Kolonia, Emily; Condon, Ian; Varadarajan, Varun; Bostick, Cooper; Condon, Tristan; Flynt, Charlie; Condon, Robert. Effects of temperature on asexual budding and strobilation in Atlantic sea nettle jellyfish polyps. (B062)

Condon, Ian; Bostick, Cooper; Marsh, Julia; DenHartog, Anne-Claire; Darrow, Elizabeth; Condon, Robert. Potential connections between solar flares and jellyfish beaching events. (B063)

Varadarajan, Varun; Flynt, Charlie; Condon, Ian; Condon, Tristan; Varadarajan, Ashwin; Bostick, Cooper; Condon, Robert. Project deBort: Novel techniques for examining ocean-atmospheric interactions using stratospheric weather balloons. (B064)

IMPACTS OF URBANIZATION ON ESTUARINE ECOSYSTEMS & WATER QUALITY

Zheng, Guangming; DiGiacomo, Paul. Comparing water quality variability between two Chesapeake estuaries based on satellite observations. (B072)

Jackson, Lela; Grace, Sean; Breslin, Vincent. Mercury Sorption in Chondrus crispus (Stackhouse 1797) in Long Island Sound coastal harbors. (B073)

Sylvester, Zephyr; Peacock, Melissa; McKibben, Morgaine; Kudela, Raphael; Senn, David. Naturally occurring mussels as algal toxin biomonitor in San Francisco Bay. (B074)

Talley, Drew; Clay, Amber; DeSantiago, Ric; Talley, Theresa. Foraging strategy may predict anthropogenic debris consumption in wetland fishes. (B075)

HUMANS AND THE ENVIRONMENT

Gervasi, Carissa; Rehage, Jennifer. Detecting and Countering Fisheries-Induced Evolution Using Marine Protected Areas. (B076)

Boyd, Anjali; McKeen, Shelby; Mann, David; Stallings, Christopher; Gowans, Shannon; Simard, Peter. Soundscape analysis of Tampa Bay and the West Florida Shelf (Gulf of Mexico). (B077)

Porter, Read; Bowling, Terra; Jedziniak, Jamison. Preventing fishing gear loss from vessel interactions. (B078)

Parker, Ryan; Dorgan, Kelly; Ballentine, Will; Kiskaddon, Erin; Robertson, Allison; Berke, Sarah; Bell, Susan. Sublethal impacts of oil exposure on common bioturbating infauna of the northern Gulf of Mexico. (B079)

Tietz, Kasey; Crosby, Sarah; Cantatore, Nicole. Spatial distribution of E. coli in a waterway and implications for pollution source detection. (B080)

Walters, Linda; Donnelly, Melinda; Cook, Geoffrey; Chambers, Lisa; Kibler, Kelly; Rivera, Fernando; Timothy, Hawthorne. Restoration in Florida: interdisciplinary research to understand ecological function and sense of place. (B081)

Baechler, Britta. Providing a baseline of microplastic concentrations in Oregon’s Pacific Oysters and Pacific Razor Clams. (B082)

COASTAL SYSTEMS IN TRANSITION TO A NEW GEOLOGIC EPOCH

Long, Joshua; Hanebuth, J.J. Till. Late Quaternary stratigraphic architecture of the Santee River Delta, South Carolina, U.S.A. (B096)

Reynolds, Laura; Simms, Alexander. Variability in sedimentation rates in southern Californian estuaries from the late Holocene through the Anthropocene. (B097)

Adler, Michaela; Carlin, Joseph; Leeper, Robert; Aranda, Angela; Avnaim-Katav, Simona; Kirby, Matthew; Rhodes, Brady. Utilizing Wetland Stratigraphy to Reconstruct the Paleoseismic History of the Newport-Ingleside Fault Zone. (B098)

Dickson, Sarah; Carlin, Joseph; Bonuso, Nicole. Southern California wetland evolution in the Holocene: understanding the shift from oysters to salt marsh. (B099)

HABITATS AND THEIR INHABITANTS: SAV

Klohm, Cornine; Graham, Olivia; Harvell, Catherine. The influence of storage methods on wasting disease development in Zostera marina. (C036)
HABITATS AND THEIR INHABITANTS: FISH AND INVERTEBRATES

Garvey, Caitlin; Dix, Nikki. Comparing the Influence of Crabs in Salt Marsh and Mangrove Habitats. (C038)

Blenau, Jade; Glazner, Rachael; Armitage, Anna. Black Mangroves Decrease Callinectes sapidus (blue crab) Predation Success. (C039)

RELATIONSHIPS BETWEEN COMMERCIALLY FISHED INVERTEBRATES AND THEIR HABITATS

Robertson, Matthew; Midway, Stephen. Hypothesized mangrove-fisheries relationships in coastal Tanzania. (C046)

Condon, Michele; Parker, Katherine; Byron, Carrie; St. Gelais, Adam. A histopathological health survey of farmed blue mussels (Mytilus edulis) in the Gulf of Maine. (C047)

MUD, MACROFAUNA AND MICROBES: AN ODE TO MULTISCALAR BENTHIC INTERACTIONS

Salisbury, Lauren; Duball, Chelsea; Amador, Jose; Stolt, Mark. Community structure and successional patterns of benthic infauna of Rhode Island oyster farms. (C048)

Gore, Beija; Brooks, Kendra; Cesbron, Florian; Patterson, William; Caffrey, Jane. Evaluating primary productivity and respiration on artificial reefs using biofilm samplers. (C049)

FACTORS AFFECTING HOST-PATHOGEN DYNAMICS IN FOUNDATION SPECIES ACROSS MARINE ECOSYSTEMS

Shuey, Meli; Ellis, William. Isolation of phytopathogenic fungus gall disease found on Rhizophora mangle in Tampa Bay. (C050)

ECOLOGICAL AND FISHERIES IMPACTS OF HYPOXIA ON COASTAL ECOSYSTEMS

Jarrett, Robert; Lyubchich, Vyacheslav; Testa, Jeremy. Predicting anoxic volumes of Chesapeake Bay: utilizing bootstrapping to improve forecasts. (C061)

Gotthardt, Zachary; Harris, Lora; Testa, Jeremy. Quantifying the ecosystem metabolism of a tidal estuary as a consequence of aeration. (C063)

Ormerod, Kevin; Beroumsky, Veronica; Robinson, Rebecca. Increasing understanding of an anoxic ecosystem: oxygen, temperature, salinity, chlorophyll and nutrient profiles by season. (C064)

COLLABORATING ACROSS GEOGRAPHIC SCALES: INTEGRATING ESTUARINE AND COASTAL OCEAN INFORMATION

Thurston, Heather; McDermott, Greg; Tenzar, Jessica; Kelsey, Lyndsay; Diaz, Robert. Long-Term Monitoring of a Habitat Enhancement Cap at the Marine Corps Base Quantico. (C065)

ADAPTIVE MANAGEMENT AND INTEGRATION OF DATA AND MODELLING INTO DECISION-MAKING

Ramseur, George. Interstate collaboration prioritizes function over politics for a major Gulf of Mexico estuary. (C072)

Hitt, Jessica; Johnson, Tera. Advancing Climate-Informed Coastal and Estuary Adaptation through the Climate Adaptation Knowledge Exchange (CAKE). (C073)

Meyers, Michelle; Godsey, Elizabeth; Dalyander, Soupy; Enwright, Nicholas; McDonald, Justin. Baseline Conditions Assessment for the Mississippi Coastal Improvements Program, Barrier Island Restoration in Mississippi, USA. (C075)

Bosma, Kirk; Smith, Timothy; Derleth, Eric. Restoring the Herring River Estuary: Hydrodynamic Modeling to support Engineering Design and Adaptive Management. (C081)

Fox, Sophia; Mittermayr, Agnes; Medeiros, Kelly; Smith, Timothy. Understanding the effects of tidal restriction in Herring River Estuary and application to restoration planning. (C082)

Ferguson, Amy; Wiberg, Patricia. Characterizing marsh vulnerability to erosion along the Virginia Eastern Shore. (C083)

Whitney, Payson; Mahoney, Michael; Sebasky, Kristen. Use of state of the art buoy technology to monitor water quality. (C084)

Bosma, Kate; Sather, Nichole; Borde, Amy; Johnson, Gary. Data Availability and Approach for Salmon Estuarine Habitat Index (SEHI) Modeling. (C085)

MONDAY POSTER SESSIONS

NUTRIENT INPUT DECLINES AND THE RESTORATION OF URBAN COASTAL SYSTEMS

Plummer, Patrick; Rychtanek, Allison; Tobias, Craig. Reduction of NO\textsubscript{2} to N\textsubscript{2}O for Isotopic Determination. (C091)

Taplin, Bryan; Pruell, Richard; Miller, Kenneth. Changes in nitrogen isotope ratios in estuarine biota following nutrient reductions to Narragansett Bay. (C092)

Boothman, Warren; Coiro, Laura. Modern history of hypoxia in Narragansett Bay: the geochemical record. (C093)

Melrose, Donald; McManus, Michael; Krumholz, Jason. The influence of nutrients on summer phytoplankton community composition in Narragansett Bay. (C094)

Uva, Thomas; Motta, John; Kelly, James; Comeau, Christine; Moore, Eliza; Flickinger, Sarah; Cortes, Karen. Comprehensive environmental monitoring in a rapidly changing estuary. (C095)

ASSESSING GREEN AND GREEN-GRAY SYSTEMS FOR COASTAL RISK REDUCTION

Chambers, Randy; Bilkoic, Donna; Mitchell, Molly; Russell, Timothy. Accrual of Nutrients in Created Fringing Tidal Marshes. (C096)
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OBSERVATIONAL AND MODELING STUDIES AT THE LAND-ESTUARINE INTERFACE

Rosas, Richard; Testa, Jeremy. Quantifying Net Transport and Transformation of Carbon and Nutrients in the Delaware Bay estuary. (C097)

Lucas, Lisa; Kimmerer, Wim; Thompson, Janet; Achete, Fernanda; Martyr, Rosanne; van der Wegen, Mick; Knowles, Noah; Vroom, Julia; Troost, Tineke; Los, Hans; Fregoso, Theresa; Dinitz, Laura. 3D Phytoplankton Modeling in a Strongly Tidal, High-Nutrient, Low-Light, Clam-Rich System. (C098)

Turner, Jessica; Friedrichs, Carl; Friedrichs, Marjorie. Improving modeled light attenuation (KD) in a land-estuarine ocean biogeochemical model for Chesapeake Bay. (C099)

FROM OBJECTIVES TO ACTIONS: TECHNICAL SUPPORT FOR ECOSYSTEM MANAGEMENT PLANNING

Tian, Bo; Zhang, Ting. Priority management of migratory shorebirds habitat on dynamic delta estuary. (C111)

Roman, Charles; Becker, Austin; August, Peter; Neville, Amber; Rohr, Nicole; Sassi, Janice; Swift, Judith. Coastal climate response demonstration sites: a forum for evaluating adaptation strategies. (C112)

DATA-CENTRIC STRATEGIES FOR ESTUARINE AND COASTAL MANAGEMENT

DeWitt, Thomas; Rose, Kelly; Bishop, Michael; Martin, Shannon; Bauer, Jennifer; Smith, Cecilia. Data integration in the age of open-access. So now what? (C113)

Vella, Prassede; DiBona, Pam. Start making sense! Applying diverse data to track estuarine conditions and trends. (C114)

PHYSICAL AND BIOGEOCHEMICAL INTERACTIONS AFFECTING NUTRIENT CYCLING

Foster, Sarah; Fulweiler, Robinson. Impacts of low oxygen on sediment biogeochemical fluxes in a shallow, temperate estuary. (C115)

Shen, Yuan; Zhang, Jingping; Zhang, Xia; Liu, Songlin; Huang, Xiaoping. Form characteristics of phosphorus and its releasing potential in the sediments of Daya bay. (C121)

Walker, Lily; Wetz, Michael; Hayes, Kenneth. Timescales of Dissolved Oxygen Variability in a Semi-arid South Texas Estuary (Baffin Bay). (C122)

Banta, Gary; Hansen, Kristian; Andersen, Mikkel; Giblin, Anne. Decomposition in Danish saltmarsh sediments investigated using a flow-through plug reactor. (C124)
Lopez, Leysa; Staver, Lorie; Cornwell, Jeffrey. Nitrogen Fixation Assessment of the Restored Tidal Marshes at Poplar Island Using Acetylene Reduction Assay. (C125)

Li, Song; Twilley, Robert; Christensen, Alexandra. Nitrogen fluxes across hydrogeomorphic zones in coastal deltaic floodplain using flow-through technique. (C126)

Roose, Jordan; Cornwell, Jeffrey; Frana, Mark; Owens, Michael; Stribling, Judith. Comparing Denitrification Rates and Bacterial Community Structure in an Established and a Newly Constructed Wetland. (C127)

Courtney, Sophia; Watson, Elizabeth. Effects of poor water quality on arenchyma formation in Spartina patens. (C128)

FROM THE GROUND UP: STAKEHOLDER-DRIVEN PROCESSES FOR ESTUARY MANAGEMENT

Molino, Grace; Kennery, Melissa; Sutton-Grier, Ariana; Penn, Kim. Stakeholder-Defined Needs Analysis in Northeast U.S. Coastal Communities to Determine Research Gaps Informing Resilience Planning. (C129)

DeLorme, Denise; Stephens, Sonia; Collini, Renee; Hagen, Scott. Flooding Mitigation Options for Northern U.S. Gulf Coast Communities: Views from Stakeholder Focus Groups. (C130)

Detweiler, Derek; Pohlman, Kathryn. Stormwater management on a coastal university campus: assessing contaminant sources and promoting sustainable stewardship. (C136)

Hillyer, Gabrielle; Brady, Damian; McGreavy, Bridie; Beal, Brian; Garwood, Phillip. A Participatory Modeling Approach to Understanding the Transport of Pathogenic Bacteria on Maine Mudflats. (C137)

CMECS: A “COMMON LANGUAGE” FOR APPLICATION TO COASTAL HABITAT MAPPING

Moore, Eliza. Benthic video monitoring in Narragansett Bay – observations using the CMECS language. (C139)

COASTAL MAPPING: COSTLY MAPS FOR COST-EFFECTIVE COASTAL AND ESTUARINE MANAGEMENT

Payne, Maggie; Surabian, Debbie; Turenne, Jim. Coastal Zone Soil Survey. (C140)

van Proosdij, Danika; Graham, Jennifer; Matheson, Graeme; Bowron, Tony; Ross, Christopher; Bekkers, Kevin. Striking a Balance: Applying Ecomorphodynamic Principles to Enhance Resilience of Dykelands to Climate Change. (C149)

Smith, Theresa; Borrelli, Mark. Benthic mapping technologies: lessons learned using phase-measuring sidescan sonar to map shallow coastal embayments. (C150)

Venherm, Claudia; Alexander, Clark; Robinson, Michael. Benthic Habitat Mapping using different Tools and their Derivatives in Ossabaw Sound, GA. (C151)

Kalacska, Margaret; Chmura, Gail; Berube, Dominique; Lucanus, Oiver; Arroyo-Mora, J. Pablo. Structure from Motion will Revolutionize Analyses of Salt Marsh Landscapes. (C152)

Privott, Thomas; Stolt, Mark. Mapping the shallow subtidal coastal environment: An example from Niantic Bay, Connecticut. (C153)

INFLUENCE OF THE CONOWINGO POND ON CHESAPEAKE BAY WATER QUALITY+

Ball, William; Zhang, Qian. Net Deposition behind Conowingo Dam under Different Flow Conditions: Trends and Uncertainties. (C147)

Barletta, Stephanie; Sanford, Lawrence. Variability in particle sizes and settling speeds in the surface layer of upper Chesapeake Bay. (C148)

INFLECTION POINT IN COASTAL SCIENCE: RESEARCH ACCESS FOR UNDERREPRESENTED STUDENTS

Berouisky, Veronica; Heffner, Leanna; Oczkowski, Autumn; Fulweiler, Robinson; Schmidt, Courtney; Fields, Lindsey; Jessen, Brita; Windecker, Laura. From nitrogen to Tanqueray: a study of Nixonite production and biogeochemigraduate cycling. (C158)
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HYDRODYNAMICS AND SEDIMENT DYNAMICS IN ESTUARIES AND COASTAL SEAS

Bergondo, Deanna. Variations in Along Channel Stratification in the Thames River Estuary Connecticut from 2006-2016. (A001)

Orozco, Priscila; Miranda, Luiz; Moller Jr., Osmar. Patos Lagoon Estuarine Steady-state Circulation Using Analytical Models. (A002)

Guerra, Gisselle; Reyes-Merlo, Miguel; Diéz-Minguito, Manuel; Valle-Levinson, Arnoldo. Statistical assessment of saltwater intrusion in a subtropical estuary. (A003)

Salehi, Mehrdad. Thermal Dispersion in an Estuarine Environment under various Available Forcings. (A004)

Fitzpatrick, Catherine; Kolker, Alexander; Chu, Philip. MR plume variation in the GOM from data synthesis of model outputs and MODIS imagery. (A005)

Chen, Yu; He, Qing; Shen, Jian; Guo, Leicheng; Guo, Chao. Response of human driven on sediment transport in estuarine turbidity maximum. (A011)

Cao, Zhendong; Olabarrieta, Maitane. Relative contributions of subtidal flow and tidal distortion to net sediment transport in tide-dominated estuaries. (A012)

Styles, Richard; Smith, Jarrell; Bryant, Duncan; Gailani, Joe; Snedden, Gregg. Sediment Dynamics in a Vegetated Tidally Influenced Interdistributary Island. (A013)

Kalra, Tarandeep; Ganju, Neil; Aretxabaleta, Alfredo; Warner, John. Marsh Evolution Using A Coupled Wave-Flow-Sediment Model. (A014)

Wardwell, Nathan; Zieserl, Michael. Analysis of partial tide range datum uncertainty using an online tidal datum computation tool. (A021)

Luscher, Audra; Huang, Lijuan; Licate, Lou. Working with Water Level Data Using a New NOAA Tidal Datum Calculator Tool. (A022)

Du, Jiabi; Shen, Jian; Wang, Yaping; Yu, Xin. Overtides simulation in Bohai, Yellow and East China Seas and its implication on sediment transport. (A023)

Wolfgang, Dylan; Watson, Elizabeth; Gray, Andrew. Groundwater Hydrologic Exchange in Grid-Ditched Tidal Wetlands. (A024)

Whisner, Jennifer; Venn, Cynthia. Hydrologic restrictions limit resilience of salt marsh in Greenbackville, VA. (A025)

Huguet, Jean-Rémy; Brenon, Isabelle. Impact of pontoons on water circulation and turbulence in La Rochelle Harbor (France). (A031)

Lokesha, Lokesha; Sannasi Annamalaisamy, Sannsiraj; Vallam, Sundar. Hydrodynamic characteristics of multiple submerged reef breakwaters due to regular waves. (A032)

Sutherland, David; Conroy, Ted; Marin Jarrin, Maria; Ralston, David. Natural and human-induced interaction between two small, seasonal PNW estuaries. (A033)

Myers, Elise; Medina, Arianna; Juhl, Andrew; Levin, Simon; O’Mullan, Gregory. Modeling the fate of particle-associated fecal indicator bacteria and pathogens in the Hudson River Estuary. (A034)

Davis, Sierra; King, John; Grilli, Stephan. Utilizing Beach Profile Time-Series and Empirical Eigenfunctions to Assess Coastal Geomorphology in Southern Rhode Island. (A041)

Schambach, Lauren; Grilli, Annette; Hashemi, Reza; Grilli, Stephan; King, John. Assessing extreme storms impact on barrier beaches: Application to the southern Rhode Island coast. (A042)

Wei, Xiaoyan; Brown, Jennifer; Amoudry, Laurent. The impact of storm-tide interaction on coastal hydrodynamics: sensitivity to the storm propagation speed. (A043)

Hayward, Scott; Hashemi, M Reza; Grilli, Annette; Grilli, Stephan; King, John. Assessment of the response of beach to coastal storms: effect of offshore reefs and sandbanks. (A044)

Ralston, David; Chant, Robert; Ganju, Neil; Schubert, Christopher; Pianca, Cassia. A sediment Budget for Jamaica Bay. (A045)

EVALUATING THE RESILIENCE OF SOCIAL-ECOLOGICAL SYSTEMS FACING WATER QUALITY CHALLENGES

Mazzotta, Marisa; Mulvaney, Kate; Lyon, Sarina; Merrill, Nathaniel. Wading through perceptions: Understanding human perceptions of water quality in coastal waters. (A050)

THE OPPORTUNITIES AND CHALLENGES OF URBAN COASTAL SUSTAINABILITY

Furman, Kelsi; Scyphers, Steven. Integrating Ecological Variation and Environmental Justice for Coastal Planning in the Florida Keys. (A051)

O’Donnell, Kiera; Arkema, Katie; Beck, Michael; Gittman, Rachel; Grabowski, Jonathan; Ruth, Matthias; Scyphers, Steven. Does exposure to coastal hazards relate to societal concern? A study of northeast coastal residents. (A052)

FINAL ECOSYSTEM GOODS AND SERVICES (FEGS) FOR ECOSYSTEM MANAGEMENT

Skeehan, Emily; Yamakita, Takehisa; Matsuba, Misako. A systematic quantitative review of marine ecosystem services and Tokyo Bay case study. (A054)

Martin, Shannon; Kelble, Chris; Giordano, Steve. Applying the IEA process to Mississippi River sediment diversions: supporting management decision-making with objective science. (A055)
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INVASIVES

Remis, Ana; Cox, Daniel; Ceballos, Lina; Chang, Andrew. Salinity tolerance of the introduced Atlantic clam Gemma gemma from San Francisco Bay. (A067)

Drexler, Judith; Work, Paul; Schoellhamer, David; Lacy, Jessica; Downing-Kunz, Maureen; Khanna, Shruti. The impact of invasive aquatic vegetation on estuarine sediment dynamics and marsh formation processes. (A068)

Dionesotes, Mellissa; Eulie, Devon; Toothman, Byron. Examining invasive alga, Gracilaria vermiculophylla's effect on marsh erosion at the Zeke's Island Reserve, NC. (A069)

Arenas, Anita; Whitcraft, Christine; Porter, Kelly; Grewell, Brenda. Effects of Iris pseudacorus on Plant and Invertebrate Communities in a Southern California Estuary. (A070)

RESPONSE OF COASTAL WETLANDS TO SEA-LEVEL RISE AND CLIMATE CHANGE

Rodriguez, Elise; Weston, Nathaniel; Craft, Christopher; Solohin, Elena. Land Use Impacts on Mineral Sediment Delivery and Accretion Rates in Tidal Wetlands. (B001)

Lemein, Todd; Albert, Dennis; Cox, Dan. Spatial and Temporal Variations in Estuary Sediment Accretion in Tillamook Bay, OR. (B002)

Rybczyk, John; Poppe, Katrina. Elevation Change, Carbon Sequestration and Resiliency to Sea Level Rise in a Pacific Northwest Estuary. (B003)

Padgett, J.; Engelhart, Simon; Halavik, Byron; Stearns, Rachel; Janigian, G.; Russell, F. A sedimentary high-energy wave record from Narragansett Bay, Rhode Island. (B004)

Payne, Andrew. Sea level rise effects on plant growth and elevation dynamics in New Hampshire salt marshes. (B005)

Yuan, Lin; Li, Hui. Alternative Stable States of Coastal Wetland Ecosystem in Yangtze Estuary, China. (B011)

Kelsey, Samuel; Forbrich, Inke; Messerschmidt, Tyler; Giblin, Anne; Hopkinson, Charles. Calculating marsh porewater nutrient and DOC contributions to the surrounding estuary using water level loggers. (B012)

Lampasona, Diana. Creating Digital Elevation Models and Vegetation Classification Systems to Determine Marsh Response. (B013)

CLIMATE CHANGE, SEA-LEVEL RISE AND WATERSHED MANAGEMENT: COASTAL WETLAND RESPONSES

Woock, Celeste; Kulp, Mark; Kolker, Alexander; Khalil, Syed. Analysis of Subsidence Rates and Patterns along the Louisiana Coast: Barataria and Terrebonne Basins. (B010)

AT THE INTERSECTION OF ECOLOGY AND MANAGEMENT: TOWARD COASTAL RESILIENCE

Hardy, Amber; Stolt, Mark. Vegetative and edaphic responses of tidal marshes to deposition: Ameliorating effects of sea level rise. (B014)

Davey, Earl; Wigand, Cathleen; Martin, Rose; Hill, Troy; Turek, James; O'Reilly, Michael; Blum, Linda. Assessing saltmarsh recovery using computer-aided tomography technology (CTT). (B015)

Vlietstra, Lucy; Critser, Lindsey; Hosley, Cecelia. Kelp and coastal resilience in southeast Alaska: partnerships in marine conservation science and undergraduate education. (B016)

SYSTEMIC APPROACHES TOWARD UNDERSTANDING ESTUARINE AND COASTAL RESILIENCE AND SUSTAINABILITY

Balogh, Stephen; Wigand, Cathleen; Merrill, Nathaniel; Mulvaney, Kate. Incorporating a socio-ecological-technological perspective into the adaptive management framework. (B022)

Kim, Daehwan; Min, Dongki. Developing Sustainability Index of Geumgang Estuary, South Korea. (B023)

ACIDIFICATION IN THE COASTAL ENVIRONMENT: DRIVERS, CO-STRESSORS, AND BIOLOGICAL RESPONSES

Fontenot, Amanda; White, John; Poach, Matthew. Tidal Fluctuations of pH, DIC, and DOC in a Sandy Hook Bay Coastal Wetland. (B024)

Tokoro, Tatsuki; Nakaoka, Masahiro; Isaka, Yuichi; Ahn, Hyojin; Hori, Masakazu; Kuwae, Tomohiro. Development of Free-Ocean Real-Time Experimental System for an in-situ CO2 manipulative experiment in eelgrass beds. (B025)

Uetrecht, Madison; White, Meredith; Turner, Elizabeth; Mook, Bill. Oyster aquaculture in changing conditions: Influence of saturation state on juvenile calcification. (B026)

Longmire, Katherine; Glaspie, Cassandra; Seitz, Rochelle. The effects of ocean acidification on predator-prey interactions between Mya arenaria and Callinectes sapidus. (B028)

Cerny-Chipman, Elizabeth; Menge, Bruce. Ocean acidification weakens predation and increases handling times in a snail predator. (B029)

Kleinas, Nicole; Carroll, John. The effect of ocean acidification on sex-change cues in a protandrous gastropod. (B030)
WEDNESDAY POSTER SESSIONS

COASTAL VEGETATED HABITATS AS CARBON SINKS-SOURCES IN A CHANGING WORLD

Sacks, Joshua; Knobloch, Amanda; Canuel, Elizabeth. Sources and Composition of Organic Matter in Tidal Marsh Sediments of Chesapeake Bay. (B036)

Zawatski, Mary; Weston, Nathaniel. Carbon dynamics in the face of sea-level rise in salt marshes of Plum Island, MA. (B037)

Silva, Camila; Barber, Don; Aponte, Mercedes; Mozdzer, Thomas. Nutrient enrichment reduces blue carbon pools in a New England Salt Marsh. (B038)

Johnson, Beverly; Kulesza, Ashley; Dostie, Philip. A preliminary assessment of carbon stored in Maine salt marshes. (B039)

Zhang, Ting; Tian, Bo. Processed-based assessment of coastal wetlands condition with remote sensing and in-situ data. (B040)

Levoy, Shayne; Chmura, Gail. Impact of eutrophication on Spartina patens belowground biomass. (B047)

Sanford, Alison; Vulgaropulos, Zoe; Owens, Michael; Cornwell, Jeffrey. Remineralization of Eroded Tidal Wetland Sediments. (B048)

Hayn, Melanie; Marino, Roxanne; Howarth, Robert. Effects of eutrophication on seagrass habitat, biogeochemical cycling, and carbon storage in West Falmouth Harbor. (B049)

Schenck, Rowena; Gosselin, Kelsey; Yoo, Gyujong; Forbrich, Inke; Spivak, Amanda. Sediment respiration and sulfur cycling in salt marsh ponds. (B050)

QUANTIFYING THE EXCHANGE OF CARBON BETWEEN COASTAL HABITATS

Douglas, Sarah; Hardison, Amber. Lipids as particulate organic matter source biomarkers in the Mission-Aransas Estuary, Texas. (B051)

ECOLOGICAL RESPONSES TO CLIMATE INDUCED MANGROVE EXPANSION INTO SALT MARSHES

Walker, Julie; Angelini, Christine; Osborne, Todd. Effects of mangrove encroachment on fish habitat in Mangrove Saltmarsh transition zone. (B057)

Rasquinha, Dina; Mishra, Deepak. Mangrove forest dynamics of Bhittarkanika Conservation Area (BCA), India. (B065)

Sanchez, David; Mancera, Jose Ernesto; Bernal, Gladys. Erosion control and sediment dynamics in fringe mangroves from the Cispata Bay, Colombian Caribbean. (B066)

Ziegler, Mikaela; Weaver, Carolyn; Proffitt, C. Edward. A growing concern: black mangrove encroachment in south Texas. (B067)

Aslan, Herdem; Powell, Christina; Baustian, Melissa; Polito, Michael. Influence of mangrove expansion on salt marsh benthic infauna communities. (B068)

Howard, Rebecca; Allain, Larry; From, Andrew. Surface elevation dynamics in a marsh-to-mangrove transition zone: vulnerability to sea-level rise. (B069)

Glazner, Rachael; Armitage, Anna. Using an Unmanned Aerial Vehicle to Determine Relative Abundance of Wading Birds in Coastal Wetlands. (B070)

Weaver, Carolyn; Proffitt, C. Edward. Will mangrove expansion into salt marshes elicit changes in the detritivore community? (B071)

CLIMATE AND CLIMATE CHANGE

Sacatelli, Rachael; Lathrop, Richard; Fonseca, Dina; Kennish, Michael; Johnson, Brian; Auermuller, Lisa; Gannon, Kaitlin; Crans, Scott; Spahn, Andrea. Investigating the Interconnectedness of Climate Change and Nuisance Mosquito populations in Costal Salt Marsh Systems. (B060)

Swaney, Dennis; Howarth, Robert. Projected impacts of climatic change on seasonal variation of hydrology in the Hudson River. (B061)

IMPACT OF EXTREME WEATHER ON ESTUARIES: INNOVATIVE METHODS AND MODELING

Donnelly, Melinda; Shaffer, Michelle; Connor, Suzanne; Garvis, Stephanie; Kibler, Kelly; Walters, Linda. Extent of shoreline degradation in urbanized areas on the east coast of central Florida. (B083)

Deaton, Charles; Bost, Molly; Mahoney, Richard; Rodriguez, Antonio; McKee, Brent; Rodrie, Joel. Impacts of land-use change and sedimentation in coastal watersheds across an urban-rural gradient. (B084)

Montero, Angel; Reichert, Roman; O’Mullan, Gregory. Characterization of urban street runoff as a source of microbial fecal contaminants to coastal embayments. (B085)

Martin, Charles; Nejad, Erica; Schraga, Tara; Cloern, James. When it rained, it poured: water-quality and the end of the San Francisco Bay drought. (B086)

Pareja-Roman, Fernando. Tidal variability of the wave energy budget in Delaware Bay. (B087)

Howarth, Marina; Fuentes, Jose; Mejia, Alfonso; Garcia, Susana; Mahjabin, Tasnuva. Controls on evapotranspiration rates in a mangrove forest following hurricane Wilma in the Everglades, FL. (B088)

Turner, Evan; Crockett, Dale; Fernando, Nelun; Sansom, Taylor; Schoenbaechler, Caimee. Impacts of Hurricane Harvey Freshwater Inflows to Texas Bays and Estuaries. (B089)

Lemon, Mary Grace; Keim, Richard. Post-Katrina salt flushing from a forested ridge at Bayou Sauvage National Wildlife Refuge, Louisiana. (B090)
ENHANCING OUR UNDERSTANDING OF COASTAL ECOSYSTEM RESILIENCE POST HURRICANE SANDY

DiTroia, Alycia; Woodruff, Jonathan; Venti, Nicholas; Mabee, Stephen; Beach, Douglas. Legacy sediment controls on grain size for paraglacial beaches. (B091)

Babson, Amanda. Communicating Hurricane Sandy science and connecting it to management lessons learned to support climate adaptation. (B092)

HURRICANE SANDY: RESTORATION AND RESILIENCY AT NORTHEAST NATIONAL WILDLIFE REFUGES

Zeigler, Sara; Gutierrez, Benjamin; Studivant, Emily; Catlin, Daniel; Fraser, James; Karpany, Sarah; Plant, Nathaniel; Thielor, E. Robert. Influence of storms and human development on early successional coastal nesting habitat for piping plovers. (B093)

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VISIONS IV  Strategic Plan for the Coastal and Estuarine Research Federation

ABOUT THE FEDERATION

The Coastal and Estuarine Research Federation (CERF) is a multidisciplinary organization of individuals who study, manage, and promote awareness of coastal and estuarine ecosystems, including the effects of human activities on these environments. Federation members are dedicated to advancing understanding and appreciation of the Earth’s estuaries and coasts, to promoting the wise use and management of these systems, and to making the results of their research and management actions available to their colleagues and to the public. Members of the Federation are researchers, managers, educators, consultants, students, and others who are interested in estuaries, wetlands, and the coastal ocean.

CERF is a private, nonprofit organization. The Federation was created in 1971, when members of two regionally based estuarine research societies in the United States decided that an international organization was needed to address estuarine and coastal issues more broadly. The regionally based Affiliate Societies now number seven and encompass coastal regions along the United States, Canada, and Mexico; CERF’s vision is to more directly serve regions beyond North America.

MISSION AND ACTIVITIES

The Federation advances understanding and stewardship of estuarine and coastal ecosystems worldwide. Its overall mission is to:

- Promote research in estuarine and coastal ecosystems
- Support education of scientists, decision-makers, and the public
- Facilitate communication among these groups.

Membership in the Federation is open to all who support these goals. The Federation currently has approximately 1,400 members from more than 25 countries worldwide; Affiliate Societies have about 1,600 members (some with overlapping membership in CERF) who help to form the Federation.

The Federation addresses the purposes listed above through, but not limited to, the following activities:

- Convening international, biennial conferences
- Supporting frequent meetings of regional Affiliate Societies
- Publishing the scholarly journal Estuaries and Coasts, the quarterly Federation newsletter CERFs Up!, the management-focused electronic publication Coastal and Estuarine Science News (CESN), and the textbook Estuarine Ecology
- Maintaining a CERF website and social media platforms
- Offering training and professional development through webinars, in-person workshops, and similar resources
- Providing advice on estuarine and coastal management and policy issues.

PREVIOUS STRATEGIC PLANS OF THE FEDERATION

The Federation has developed three previous strategic plans. The first strategic plan covered the period 1993–2004, and the second spanned the period 2005–2011. Visions III, covering 2012–2016, was finalized under CERF President Susan Williams and implemented through the Governing Boards led by Walter Boynton (2011–2013), Ken Heck (2013–2015), and Robert Twilley (2015–2017). The goals of these three previous plans have largely been accomplished, although some are long term and ongoing.

At the beginning of Robert Twilley’s administration, the Governing Board began strategic planning for Visions IV, to cover the period 2017–2022. The plan was developed by eight Governing Board committees: Affiliate Societies, Career Development and Education, Communications, Conference Strategy, International, Membership, Policy, and Publications. The Governing Board also sought extensive grassroots input from members and Affiliate Societies. The Visions IV strategic plan was ratified by the Governing Board in September 2017 and presented to the Federation at the 24th biennial conference in Providence, Rhode Island. It will guide the Federation’s activities through the 50th anniversary celebration in 2021.

VISION FOR THE FUTURE OF THE FEDERATION

CERF is the leading scientific society promoting research, education, and management in coastal and estuarine systems worldwide. The society is the international voice of coastal and estuarine science, with a closely networked membership that is connected to a global community of scientists, managers, policy-makers, educators, and the public. Core to this vision is to promote and to increase support for disciplinary and multidisciplinary scientific research, and to integrate new scientific understanding that improves the management and stewardship of coastal and estuarine ecosystems. Contributing to the vision of CERF are the following elements:

- Recognized leadership in advancing coastal and estuarine research and in communicating its value to society
- A broad, diverse, and inclusive membership within and outside of North America
- Mutually beneficial relationships with regional Affiliate Societies that strengthen and enhance capabilities of both CERF and the Affiliates
- Strong partnerships with related scientific societies and organizations around the world
- Consistently excellent publications and conferences that are highly valued by CERF members and the broader scientific community
- Rich professional development opportunities for members at all career stages and across a range of career paths
- Members who are better able to communicate science and engage with managers and policy-makers to ensure their science is useful and used.
RESEARCH FOUNDATIONS

The Federation is founded on the value of scientific research to society, with a focus on improving the understanding of the structure and function of estuarine and coastal ecosystems. CERF supports and promotes scientific research that improves the fundamental understanding, and the management and stewardship, of coastal ecosystems. CERF serves this role by highlighting new discoveries in its journal, biennial conferences, and other publications and activities. CERF also promotes the communication of new discoveries and the synthesis of existing information to decision-makers and the public. This emphasis on high-quality research is a cross-cutting focus of the themes and objectives described in Visions IV. By promoting high-quality research at various scales, CERF helps to identify significant gaps in the technical knowledge and understanding of estuarine and coastal sciences and to articulate priority areas for new research. It also encourages academic institutions, government agencies, nongovernmental organizations, and other groups to contribute institutional, collaborative, and financial support to address the priority research issues identified by CERF.

THEME I: SUPPORT COASTAL AND ESTUARINE RESEARCH, COMMUNICATION, AND MANAGEMENT

CERF has many avenues for promoting and communicating coastal and estuarine science and management, both internally among members and externally to nonmember scientists, policy-makers, managers, and other audiences. CERF’s core tools for supplying information are the biennial conference and CERF’s primary publications: the scholarly journal Estuaries and Coasts, the newsletter CERFs Up!, the management-focused electronic publication CESN, and the textbook Estuarine Ecology. CERF’s biennial conferences are also recognized as premier networking opportunities for the coastal and estuarine science, management, and education communities. CERF utilizes other communication methods to connect, educate, and engage members and other audiences, such as its website, webinars, social media, and supporting meetings of its regional Affiliate Societies. CERF is also active in education and outreach activities to various audiences including policy-makers, the coastal and estuarine science community, formal and informal educators, and the public through the development and implementation of diverse activities such as briefings, letters, and workshops.

GOAL I-A. IMPROVE THE FEDERATION’S ABILITY TO PROMOTE RESEARCH AND TO COMMUNICATE KEY FINDINGS TO THE SCIENCE AND MANAGEMENT COMMUNITIES

Objectives

1. Develop a communication strategy that specifies and targets key audiences and communication needs, and elucidates how CERF members can use communication tools to achieve the core objectives of the Visions IV strategic plan.
2. Develop or enhance communications tools to achieve communication strategy objectives and to promote key CERF activities.

3. Strengthen the quality of CERF publications, including ensuring publication of high-quality research, reviews, and syntheses, and promote CERF publications and activities worldwide.
4. Transform the CERF newsletter CERFs Up! into a magazine-style publication with expanded content.
5. Evaluate the scope, format, content, and policies of the CERF conference and recommend changes to the Conference Organizing Committee that will enhance collaboration with the Governing Board and its strategic vision for the Federation.
6. Identify and implement mechanisms for promoting interaction among scientists, managers, and students at the international level (i.e., that transcend the North American context).

GOAL I-B. ENHANCE MECHANISMS FOR UTILIZING SCIENTIFIC FINDINGS TO IMPROVE THE EFFECTIVENESS OF POLICY AND MANAGEMENT

Objectives

1. Promote and sponsor educational activities that increase the understanding of coastal and estuarine systems and that enhance the capacity of CERF members and others to engage in outreach and in translation of scientific findings into effective resource management and policy.
2. Enhance and expand the communication of policy-relevant science and applications of scientific findings to support the wise stewardship and management of coastal and estuarine resources.
3. Enhance the role of the Affiliates as catalysts for regional collaborations that facilitate research and information sharing, increase knowledge, and generate syntheses that lead to management actions.
4. Partner with sister societies to leverage strengths and resources toward shared policy outreach goals and objectives.

THEME II: CREATE A COMMUNITY THAT FOSTERS COLLABORATION AND ADVANCES THE EDUCATION OF CURRENT AND FUTURE FEDERATION SCIENTISTS

A fundamental aspect of the CERF mission is to advance the education of, and facilitate collaboration within, the coastal and estuarine community. CERF’s value is in building a supportive network of individuals and teams dedicated to diverse aspects of coastal and estuarine science and management, and in providing resources to members to help them advance and succeed in their careers. Visions IV seeks to enhance the resources of the Federation and develop new benefits that help members develop their professional skills. In addition, Visions IV focuses on enhancing opportunities and outreach to key sectors, including the international community, underrepresented minorities, Affiliate Societies, and student and early-career professionals. By articulating and implementing its mission and values, CERF seeks to develop a broader, more diverse, and more inclusive society that will benefit all members.
GOAL II-A. ENHANCE THE MEMBER SERVICES OF THE FEDERATION

Objectives
1. Enhance the value of CERF membership for individuals across the spectrum of coastal and estuarine science careers and throughout the full continuum of career stages by providing educational and professional development resources.
2. Increase the recruitment and retention of student members and the transition of students to professional members by promoting activities that benefit student and early-career development.
3. Expand CERF membership through outreach efforts that articulate CERF’s value and through promotion of member benefits to key audiences, including Estuaries and Coasts authors, lapsed members, and the international community beyond North America.

GOAL II-B. ENHANCE BENEFITS TO AFFILIATE SOCIETIES AND OTHER PARTNER ORGANIZATIONS

Objectives
1. Collaborate with Affiliate Societies to engage students, early-career scientists, and other potential members to expand opportunities for CERF and Affiliate members simultaneously.
2. Enhance communication and collaboration among Affiliate Societies and between the Affiliates and CERF.
3. Seek opportunities and establish protocols for formalizing new relationships with scientific societies and regional entities, particularly those outside North America, to promote estuarine and coastal science, management, and policy to a broader membership.

GOAL II-C. BUILD A MORE INCLUSIVE AND DIVERSE FEDERATION

Objectives
1. Broaden participation in CERF by promoting an inclusive culture and opportunities for underrepresented and underserved minorities in coastal and estuarine science at all career stages.
2. Enhance benefits for current and potential international members.

IMPLEMENTATION PLAN

The implementation of this strategic plan is described in the actions, timelines, and metrics listed in a separate Implementation Plan table. The intent of a separate Implementation Plan is to allow the Governing Board and its committees the opportunity to develop detailed actions that can be added to and adjusted as conditions change. The Implementation Plan will be a living document that will be updated at least once during each two-year Governing Board period.

Announcing New Reviews Editor for Estuaries and Coasts

Estuaries and Coasts welcomes Ken Heck as our New Reviews Editor beginning in 2018.

Dr. Heck is Professor and Chair of University Programs at Dauphin Island Sea Lab, University of South Alabama, and CERF Past-President (2013–2015).

Ideas for Reviews and Perspectives can be sent to Dr. Heck at kheck@disl.org

We thank Iris Anderson (Virginia Institute of Marine Science, College of William & Mary) for her many years of service to the journal.
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Visit each exhibit booth and ask them about their product/services. 
Ask each exhibitor to initial or stamp their company name.

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Once you’ve visited **at least 20 booths**, fill in your name to the left and drop this page off at the registration desk to be entered to win a variety of prizes. Drawing will take place on Thursday during the Close Out Party & Student Awards Presentation from 5:30–8:30pm. You must be present to win!

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<td>University of Massachusetts Dartmouth School for Marine Science &amp; Technology</td>
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