



# New England Estuarine Research Society

April 18-20, 2024

Freeport, ME



### Organized and Hosted By:

- Susan Adamowicz, US Fish and Wildlife Service
- Sawyer Balint, Boston University
- Nia Bartolucci, Boston University
- Curtis Bohlen, Casco Bay Estuary Partnership
- Savannah Judge, FlowCam by Yokogawa Fluid Imaging Technologies
- Eliza Moore, Narragansett Bay Commission
- Hilary Neckles, Retired USGS
- Autumn Oczkowski, US Environmental Protection Agency
- Danielle Perry, National Oceanic & Atmospheric Administration
- Holly Plaisted, National Park Service
- Tristan Taber, Lake Stewards of Maine
- Tricia Thibodeau, University of New England
- Megan Tyrrell, Waquoit Bay National Estuarine Research Reserve



- Platinum Supporters:**
- Maine Sea Grant
  - University of New England
  - USFWS—Gulf of Maine Coastal Program



- Gold Supporters:**
- FlowCam-Yokogawa
  - Onset-HOBO Data Loggers



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  - Casco Bay Estuary Partnership
  - Coastal and Estuarine Research Federation
  - FB Environmental
  - Maine Beer Company
  - Maine Coastal Program
  - The Nature Conservancy of Maine
  - YSI Xylem



- Bronze Supporter:**
- Wells National Estuarine Research Reserve



**NEERS SPRING 2024 MEETING**  
**PROGRAM AT-A-GLANCE**  
*Harraseeket Inn, Freeport, ME*  
*Oral and Poster Sessions are in the Casco Bay Ballroom*  
**Thursday, April 18<sup>th</sup>**

<b>11:00 – 11:30</b>	Executive Committee Meeting
<b>11:30 – 12:30</b>	Meeting Registration
<b>12:30</b>	Special Symposium
<b>4:45 – 5:30</b>	Meeting Registration
<b>5:00 - 6:30</b>	Welcoming Social

**Friday April 19<sup>th</sup>**

<b>7:30 – 8:30</b>	Meeting Registration
<b>8:00</b>	Welcome, Linda Blum, CERF President & Courtney Schmidt, NEERS President
<b>8:10</b>	Oral Session: Rapid Shoreline Change Along the New England Coast and Methods for Monitoring Macroalgae
<b>9:45</b>	Break
<b>9:55</b>	Oral Session: Salt Marshes
<b>11:30</b>	Business Meeting
<b>12:30</b>	Lunch
<b>1:30</b>	Oral Session: Estuarine Water Quality
<b>3:00</b>	Break
<b>3:15</b>	Oral Session: Collaborations and Urban Estuaries
<b>4:30</b>	Poster Session
<b>6:00 – 8:00</b>	Social at the Maine Beer Company

**Saturday April 20<sup>th</sup>**

<b>8:00</b>	Oral Session: A Bit of History and Water Quality Management
<b>9:40</b>	Break
<b>9:55</b>	Oral Session: Green Marshes and Green Energy
<b>11:05</b>	Break
<b>11:20</b>	Investigations on Marine Animal Populations
<b>12:35</b>	Concluding Remarks & Presentation of Student Awards
<b>1:00</b>	Meeting adjourns and Field Trips Begin

**Notes:**

- (K) Ketchum Prize candidate for best graduate student oral presentation  
(R) Rankin Prize candidate for best undergraduate student oral presentation  
(D) Dean Prize candidate for best graduate student poster  
(W) Warren Prize candidate for best undergraduate student poster

**NEERS Spring 2024**  
**Thursday April 18, 2024**



**Thursday Special Symposium**  
**Coastal Resilience Through Community Engagement:**  
**Inspiring Climate Solutions**

The climate crisis affects northeastern coastal communities in many and complex ways. Sea level rise and storm surge, rapid modern warming of the Gulf of Maine coupled with acute marine heat waves, and ocean acidification threaten coastal ecosystem services and present complicated challenges to homes, businesses, infrastructure, and marine-dependent economies. Often, climate risks are borne most heavily by vulnerable populations. Innovative strategies for climate adaptation and mitigation are being applied throughout the region. This half-day symposium will highlight climate solutions that are emerging from true collaborations between scientists and stakeholders. Our goal is to inspire collaborative approaches to climate action that engage the powers of science and community working together toward a sustainable and equitable future.

1:00 PM	<p><b>Curtis Bohlen</b> <i>Director, Casco Bay Estuary Partnership</i> Welcome</p>
1:10 PM	<p><b>Emily Greene</b> <i>Earth &amp; Equity</i> Introduction to the Symposium</p>
1:20 PM	<p><b>William Kochtitzky</b> <i>University of New England</i> RECORD BREAKING STORMS: WHAT HAPPENED TO MAINE'S COAST DURING THE HIGHEST TIDE IN RECORDED HISTORY</p>
1:45 PM	<p><b>Jessica Brunacini</b> <i>Maine Sea Grant &amp; Casco Bay Estuary Partnership</i> COMMUNITY-ENGAGED PLANNING FOR A CLIMATE READY COAST IN SOUTHERN MAINE</p>
2:20 PM	<p><b>Judy Colby-George</b> <i>Viewshed</i> MARSHES FOR MAINE'S FUTURE</p>
2:55 PM	<p><b>Break</b></p>

3:15 PM	<b>Jon Woodruff</b> <i>Northeast Climate Adaptation Science Center &amp; Center for Braiding Indigenous Knowledges and Science</i> RIDING THE WAVE OF CHANGE: FROM GLOBAL REDUCTIONISM TO LOCAL EMPOWERMENT IN COASTAL RESILIENCE RESEARCH
3:50 PM	<b>Jennifer Zhu</b> <i>Billion Oyster Project</i> LESSONS LEARNED WHILE RESTORING OYSTERS TO NEW YORK HARBOR AND APPLIED TO BROOKLYN BRIDGE PARK
4:30 PM	<b>Panel Discussion</b>
5:00 PM	<b>NEERS Welcoming Social</b>

**NEERS Spring 2024**  
**Friday April 19, 2024**



8:00	<b>Linda Blum</b> , <i>CERF President</i> & <b>Courtney Schmidt</b> , <i>NEERS President</i> , Welcome
<b>CHANGING SHORELINES AND METHODS FOR MONITORING MACROALGAE</b> Chair: Eliza Moore	
8:10	<b>Katie Castagno</b> Castagno, K.A. (1), T. Tucker (1), M. Borrelli (1), T. Smith (2); (1) <i>Center for Coastal Studies, Provincetown, MA</i> ; (2) <i>Cape Cod National Seashore, Wellfleet, MA</i> A SYSTEM IN TRANSITION: GEOLOGIC HISTORY AT DUCK HARBOR, WELLFLEET, MA
8:25	<b>(R) Jonathan Lepire</b> Lepire, J.L., B.O. Oakley; <i>Eastern Connecticut State University, Willimantic, CT</i> EVOLUTION OF A DYNAMIC COASTAL LAGOON SYSTEM NAPATREE POINT, RHODE ISLAND
8:40	<b>Bryan Oakley</b> <i>Environmental Earth Science Department, Eastern Connecticut State University</i> THE BLOCK ISLAND BEACH PROFILE PROJECT 10-YEARS IN; OBSERVATIONS AND LESSONS LEARNED
8:55	<b>Tim Cook</b> Cook T.L., M. Autery, J.D. Woodruff, B.C. Yellen; <i>University of Massachusetts Amherst, Department of Earth, Geographic, &amp; Climate Sciences, Amherst, MA</i> TIDAL WETLAND ACCRETION AND ELEVATION CHANGE ALONG THE ATLANTIC COASTLINE OF THE NORTHEASTERN UNITED STATES
9:10	<b>(K) Andrew Payne</b> Payne, A.R. (1), E.B. Watson (2); (1) <i>Drexel University, Philadelphia, PA</i> ; (2) <i>Stony Brook University, Stony Brook, NY</i> ENVIRONMENTAL DETERMINANTS OF PLANT SPECIES COMPOSITION ALONG THE MARSH-FOREST ECOTONE
9:25 <i>Lightning</i>	<b>Ernst Linder</b> Claesson, S., E. Linder, M. Duckett, C. Shipley; <i>Nearview, LLC</i> USING MULTISPECTRAL IMAGERY FROM DRONES AND SATELLITES TO ESTIMATE BIOMASS OF INTERTIDAL SEAWEED
9:35 <i>Lightning</i>	<b>Jamie Vaudrey</b> Vaudrey, J.M.P. (1,2), A. Hamilton (2), M. Leason (1), J.S. Krumholz (2); (1) <i>Department of Marine Sciences, University of Connecticut, Groton, CT</i> ; (2) <i>Connecticut National Estuarine Research Reserve, University of Connecticut, Groton, CT</i> METHODS FOR MONITORING MACROALGAE BLOOMS IN SHALLOW ESTUARINE EMBAYMENTS

9:45	<b>Break</b>
<b>GREEN MARSHES &amp; GREEN ENERGY</b>	
Chair: Sophia Fox	
10:00 <i>Lightning</i>	<b>Danielle Perry</b> Perry, D.C. (1), J. Loffredo (2), N. Bartolucci (3,6), W. Ferguson (4), K. Raposa (5), R. Fulweiler (3), C. Wigand (6); (1) NOAA Restoration Center, Narragansett, RI; (2) USDA Agricultural Research Service, East Wareham, MA; (3) Boston University, Boston, MA; (4) Save The Bay, Providence, RI; (5) Narragansett Bay Research Reserve, Prudence Island, RI; (6) US EPA ACESD, Narragansett, RI ASSESSING SALT MARSH RECOVERY OF RHODE ISLAND SEDIMENT ENHANCEMENT SITES
10:10 <i>Lightning</i>	<b>Stephen Smith</b> National Park Service, Cape Cod National Seashore THE EFFECTS OF <i>SESARMA RETICULATUM</i> (L.) HERBIVORY AND SEA LEVEL RISE ON CREEK EXPANSION IN CAPE COD SALT MARSHES
10:20	<b>(R) Devon Bolt</b> Bolt, D.A. (1), R.W. Jakuba (2); (1) Northeastern University, Boston, MA; (2) Buzzards Bay Coalition, New Bedford, MA IMPACTS OF <i>SESARMA</i> CRABS IN A FAIRHAVEN, MASSACHUSETTS SALT MARSH
10:35	<b>(K) Hillary Sullivan</b> Sullivan, H.L. (1,2), J.L. Bowen (2), L.A. Deegan (1), W. Ferguson (3), M. Tyrrell (4); (1) Woodwell Climate Research Center; (2) Northeastern University; (3) Save the Bay; (4) Waquoit Bay National Estuarine Research Reserve THE IMPACT OF ALTERED AND RESTORED HYDROLOGY ON SALT MARSH BIOGEOCHEMISTRY
10:50	<b>(K) Mya Darsan</b> Darsan M.A., K.R Garces, A. Moulton, A.R. Hughes, J.L. Bowen; Department of Marine & Environmental Sciences, Marine Science Center, Northeastern University, Nahant, MA FUNGAL ENDOPHYTES IN SALT MARSHES: FOUNDATIONAL WORK REGARDING THE INTERACTIONS BETWEEN <i>SPARTINA ALTERNIFLORA</i> AND FUNGI IN A CHANGING CLIMATE
11:05	<b>Melina Giakoumis</b> Giakoumis, M. (1), A. Calderon-Brito (2), S. Pelletier (3), M. Pelletier (4,5), J. Wares (6), A. Miller-Rushing (4); (1) The American Museum of Natural History, New York, New York; (2) Tulane University, New Orleans, LA; (3) University of Maine, Orono, ME; (4) The Schoodic Institute at Acadia National Park, Winter Harbor, ME; (5) Maine Aquaculture Innovation Center, Walpole, ME; (6) Odum School of Ecology, University of Georgia, Athens, GA HISTORICAL RE-SURVEY OF THE NEW ENGLAND INTERTIDAL REVEALS A MASSIVE DECLINE IN SEA STAR DENSITY

11:20 <i>Lightning</i>	<b>(K) Sarah Black</b> Black, S.K., D.M. FitzGerald, Z.J. Hughes; <i>Boston University, Boston, MA</i> INCREASED SUSPENDED SEDIMENT DEPOSITION FOLLOWING STORMS ON A NEW ENGLAND SALT MARSH, PLUM ISLAND ESTUARY, MASSACHUSETTS
11:30	<b>Business Meeting</b>
12:30	<b>Lunch</b>
<b>ESTUARINE WATER QUALITY</b> <i>Sponsored by HOBO ONSET</i> Chair: Stephen Smith	
1:30	<b>(R) Britney Xochipiltecat and Sofia Roberts</b> Xochipiltecatl, B., Roberts, S., Mulligan, C.; <i>Sound School</i> POTENTIAL IMPACTS OF ANTHROPOGENIC RUNOFF ON COASTAL WATERWAYS: A REGIONAL COLLABORATION (UWR) TO UNDERSTAND OUR CONNECTION TO WATER CHEMISTRY IN A COASTAL WATERSHED
1:45	<b>(K) Nicole Flecchia</b> Flecchia, N., H. Stoffel, C.A. Oviatt; <i>Graduate School of Oceanography, University of Rhode Island, Narragansett, RI</i> MONITORING HYPOXIC CONDITIONS DURING WET AND DRY YEARS USING THE NARRAGANSETT BAY FIXED SITE MONITORING NETWORK (NBFSMN)
2:00	<b>(K) Sawyer Balint</b> Balint, S.J. (1), C. Oviatt (2), H. Stoffel (2), R.W. Fulweiler (1,3); (1) <i>Department of Earth &amp; Environment, Boston University, Boston, MA</i> ; (2) <i>Graduate School of Oceanography, University of Rhode Island, Narragansett, RI</i> ; (3) <i>Department of Biology, Boston University, Boston, MA</i> TWO DECADES OF NET ECOSYSTEM METABOLISM IN NARRAGANSETT BAY, RI REFLECT AN ESTUARY UNDER CHANGE
2:15	<b>(K) Rebecca Venezia</b> Venezia, R.E. (1), C. Thornber (1), G. Pantoni (2), L. Green-Gavrielidis (3), N. Hobbs (1), G. Cicchetti (4), D. Taylor (5) A. Geisser (6), R.W. Fulweiler (6); (1) <i>University of Rhode Island, Kingston, RI</i> ; (2) <i>Florida Atlantic University, Boca Raton, FL</i> ; (3) <i>Salve Regina University, Newport, RI</i> ; (4) <i>US Environmental Protection Agency, Narragansett, RI</i> ; (5) <i>Roger Williams University, Bristol, RI</i> ; (6) <i>Boston University, Boston, MA</i> ECOLOGICAL STORYTELLING WITH ArcGIS StoryMap: AN APPLICATION FOR ECOSYSTEM ENGINEERS IN NARRAGANSETT BAY

2:30	<p><b>(K) Elizabeth Ells</b> Ells, E.E., M.S. Labrie, M.A. Sundermeyer; <i>UMass Dartmouth School for Marine Science &amp; Technology, New Bedford, MA</i> NUTRIENT REMEDIATION THROUGH SHELLFISH AQUACULTURE: EASTERN OYSTER, <i>CRASSOSTREA VIRGINICA</i>, AS A SOURCE OF DENITRIFICATION</p>
2:45	<p><b>Cathleen Wigand</b> Wigand, C. (1), S. Ayvazian (1), P. Colarusso (2), D. Cobb (1), A. Beardwood (1), S. Miller (1), N. Schafer (2); (1) <i>US EPA, ACESD, Narragansett, RI</i>; (2) <i>US EPA, Region I, Boston, MA</i> GREENHOUSE GAS FLUXES ASSOCIATED WITH EELGRASS BEDS AND NEARBY OYSTER FARMS IN COASTAL LAGOONS IN RI</p>
3:00	<b>Break</b>
<p><b>COLLABORATIONS AND URBAN ESTUARIES</b> Chair: Tricia Thibodeau &amp; Will Kotichtitzky</p>	
3:15	<p><b>(K) Emily Watling</b> Watling, E., J.M.P. Vaudrey, K. Lund; <i>Connecticut National Estuarine Research Reserve &amp; Department of Marine Sciences, University of Connecticut, Groton, CT</i> FORMING A LONG ISLAND SOUND EELGRASS COLLABORATIVE</p>
3:30	<p><b>(K) Beryl Kahn</b> Kahn, B.C.M. (1,2), M. Alldred (3), A. Flores (2), C. Zarnoch (1,2); (1) <i>Department of Biology, The Graduate Center, City University of New York (CUNY), New York, NY</i>; (2) <i>Department of Natural Sciences, Baruch College CUNY, New York, NY</i>; (3) <i>Center for Earth &amp; Environmental Science, SUNY Plattsburgh, Plattsburgh, NY</i> DE-VEGETATED MARSHES MAY CONTRIBUTE REACTIVE NITROGEN TO URBAN ESTUARIES</p>
3:45 <i>Lightning</i>	<p><b>(K) Shannon Cooper</b> Cooper, S. (1), B. Kahn (2), J. Smith (3), C. Zarnoch (2), M. Alldred (1); (1) <i>Center for Earth &amp; Environmental Science, SUNY Plattsburgh, Plattsburgh, NY</i>; (2) <i>Department of Natural Sciences, Baruch College CUNY, New York, NY</i>; (3) <i>New York Restoration Project, New York, NY</i> RESTORING URBAN TIDAL MARSHES TO ENHANCE COASTAL ECOSYSTEM SERVICES IN NEW YORK CITY</p>
3:55 <i>Lightning</i>	<p><b>(K) Vincent Deingeniis</b> <i>Department of Marine Affairs, University of Rhode Island, South Kingstown, RI</i> STORMWATER MANAGEMENT WITHIN GREENWICH BAY RHODE ISLAND</p>



4:05 <i>Lightning</i>	<b>Abigail Ernest-Beck</b> <i>Narragansett Bay Commission</i> EVALUATING THE CHANGING RESPONSE OF BACTERIA LEVELS TO STORM EVENTS IN THE NARRAGANSETT BAY WATERSHED
4:15 <i>Lightning</i>	<b>(R) Meg Shah</b> Shah, M. (1,2), J.M.P. Vaudrey (1,2); (1) <i>Department of Marine Sciences, University of Connecticut, Groton, CT</i> ; (2) <i>Connecticut National Estuarine Research Reserve, University of Connecticut, Groton, CT</i> HISTORICAL CONSTRUCTION OF EELGRASS IN THE NORTHEAST AND MID-ATLANTIC
4:30	<b>Poster Session</b>
6:00-8:00	<b>Social at the Maine Beer Company</b>

**NEERS Spring 2024**  
**Saturday April 29, 2024**



**A BIT OF HISTORY AND WATER QUALITY MANAGEMENT**

Chair: Megan Tyrrell

8:00	<p><b>Larry Spencer</b> <i>Dept. of Biology, Plymouth State University, Plymouth, NH</i> THE HMS ENDEAVOUR, CAPTAIN JAMES COOK AND NEWPORT, RHODE ISLAND?</p>
8:15	<p><b>Paul Stacey</b> <i>Footprints In The Water LLC, Moodus, CT</i> LIFE ON THE NUTRIENT PLATEAU – IMPLICATIONS FOR ESTUARINE MANAGEMENT</p>
8:30	<p><b>Sandy Macfarlane</b> <i>Coastal Resource Specialists</i> WHEN VICTORY COMES – OBSERVATIONS ON THE LONG GAME 1970-2023</p>
8:45	<p><b>Veronica Berounsky</b> Berounsky, V.M. (1,2), A. DeSilva (1,2), E. Peterson (2), R. Sharif (2), L. Green (3), E. Herron (3); (1) <i>Graduate School of Oceanography, University of Rhode Island, Narragansett, RI</i>; (2) <i>Narrow River Preservation Association, Saunterstown, RI</i>; (3) <i>Watershed Watch Program, University of Rhode Island, Kingston, RI</i> THIRTY YEARS OF WATER QUALITY MONITORING AND MANAGING ANTHROPOGENIC INPUTS IN PETTAQUAMSCUTT ESTUARY (NARROW RIVER) IN SOUTHERN RHODE ISLAND.</p>

**GREEN MARSHES & GREEN ENERGY**

Chair: Danielle Perry

9:00	<p><b>Lena Champlin</b> Champlin, L.K. (1), E.M. Wilson (1), K. Raposa (2), J. Vaudrey (3), M. Tyrrell (4), C. Peter (5), J. Goldstein (6), R.W. Fulweiler (1,7); (1) <i>Dept. of Earth &amp; Environment, Boston University, Boston, MA</i>; (2) <i>Narragansett Bay National Estuarine Research Reserve (NERR), Portsmouth, RI</i>; (3) <i>Connecticut NERR, Groton, CT</i>; (4) <i>Waquoit Bay NERR, Falmouth, MA</i>; (5) <i>Great Bay NERR, Greenland, NH</i>; (6) <i>Wells NERR, Wells, ME</i>; (7) <i>Dept. of Biology, Boston University</i> A NEW ENGLAND GRADIENT OF SALT MARSH GREENHOUSE GAS FLUXES</p>
9:15	<p><b>(K) Emily Wilson</b> Wilson, E.M. (1), L.K. Champlin (1), R.W. Fulweiler (1,2).; (1) <i>Dept. of Earth &amp; Environment, Boston University, Boston, MA</i>; (2) <i>Dept. of Biology, Boston University</i> PLANT SPECIES IMPACT SALT MARSH CARBON DIOXIDE FLUXES EVEN IN WINTER</p>

<p>9:30 <i>Lightning</i></p>	<p><b>Chris Peter</b> Peter, C.R (1), D.M. Burdick (2), K.B. Raposa (3), M. Tyrrell (4), J. Goldstein (5), K. Cressman (6), S. Shull (7), C. Fuert (5), K. McGovern (1), T. Corsetti (1), J.G. McKown (2); (1) <i>Great Bay National Estuarine Research Reserve (NERR), Greenland, NH</i>; (2) <i>Jackson Estuarine Laboratory, University of New Hampshire, Durham, NH</i>; (3) <i>Narragansett Bay NERR, Prudence Island, RI</i>; (4) <i>Waquoit Bay NERR, East Falmouth, MA</i>; (5) <i>Wells NERR, Wells, ME</i>; (6) <i>Catbird Stats, Gautier, MS</i>; (7) <i>Padilla Bay NERR, Mount Vernon, WA</i> USING NATIONAL ESTUARINE RESEARCH RESERVES TO UNDERSTAND HOW CLIMATE CHANGE IS IMPACTING TIDAL MARSHES ACROSS NEW ENGLAND AND THE NATION.</p>
<p>9:40</p>	<p><b>Break</b></p>
<p>9:55</p>	<p><b>Erin Peck</b> Peck, E.K. (1,2), J.E. Walker (1,2), K. Ackerman (3), A. Besterman (4), J. Carr (5), T. Cook (1), M. Correll (6), L. Deegan (4), Z. Defne (3), M. Eaton (8), M. Eagle (3), N. Ganju (3), M. Hartley (6), S. Jackson (1), R. Jakuba (7), J. Mercer (3), B. Wilson (6), J. Woodruff (1,2), B. Yellen (1,2); (1) <i>University of Massachusetts Amherst, Amherst, MA</i>; (2) <i>Northeast Climate Adaptation Science Center, Amherst, MA</i>; (3) <i>USGS Woods Hole Coastal &amp; Marine Science Center, Woods Hole, MA</i>; (4) <i>Woodwell Climate Research Center, Woods Hole, MA</i>; (5) <i>USGS Eastern Ecological Science Center, Kearneysville, WV</i>; (6) <i>USFWS, Atlantic Coast Joint Venture, Hadley, MA</i>; (7) <i>Buzzards Bay Coalition, New Bedford, MA</i>; (8) <i>Southeast Climate Adaptation Science Center, Raleigh, NC</i> PART I: ABUNDANCE AND DISTRIBUTION OF DITCHES ACROSS SALT MARSHES IN THE NORTHEASTERN US</p>
<p>10:10</p>	<p><b>Julie Walker</b> Walker J.E. (1,2), E.K. Peck (1,2), K. Ackerman (3), A. Besterman (4), J. Carr (5), T. Cook (1), M. Correll (6), L. Deegan (4), Z. Defne (3), M. Eaton (8), M. Eagle (3), N. Ganju (3), M. Hartley (6), S. Jackson (1), R. Jakuba (7), J. Mercer (3), B. Wilson (6), J. Woodruff (1,2), B. Yellen (1,2); (1) <i>University of Massachusetts Amherst</i>; (2) <i>Northeast Climate Adaptation Science Center</i>; (3) <i>USGS Woods Hole Coastal &amp; Marine Science Center</i>; (4) <i>Woodwell Climate Research Center</i>; (5) <i>USGS Eastern Ecological Science Center</i>; (6) <i>USFWS, Atlantic Coast Joint Venture</i>; (7) <i>Buzzards Bay Coalition</i>; (8) <i>Southeast Climate Adaptation Science Center</i> PART II: EFFECTS OF DITCHING ON SALT MARSH VULNERABILITY IN THE NORTHEASTERN US</p>

10:25	<p><b>Geoff Wilson</b> Wilson, G.M. (1), S.C. Adamowicz (2), D.M. Burdick (3), W. Ferguson (4), N. Maher (5); (1) <i>Bear Creek Wildlife Sanctuary, Saugus, MA</i>; (2) <i>Rachel Carson NWR, USF&amp;WS, Wells, ME</i>; (3) <i>Jackson Estuarine Laboratory, University of New Hampshire, Durham, NH</i>; (4) <i>Save The Bay, Providence, RI</i>; (5) <i>The Nature Conservancy, Cold Spring Harbor, NY</i> EVERY MARSH WAS A FARM: UNCOVERING THE THREE CENTURIES OF HIDDEN AGRICULTURAL INFRASTRUCTURE STILL DRIVING MARSH SURFACE HYDROLOGY</p>
10:40	<p><b>David Burdick</b> Burdick, D.M. (1), S.C. Adamowicz (2), G. Wilson (3), J.G. McKown (1), N. Maher (4), G.E. Moore (1); (1) <i>Jackson Estuarine Laboratory, University of New Hampshire, Durham, NH</i>; (2) <i>Rachel Carson NWR, USF&amp;WS, Wells, ME</i>; (3) <i>Bear Creek Sanctuary, Saugus, MA</i>; (4) <i>TNC, Cold Spring Harbor, NY</i> SALT MARSH ECOLOGY AFTER EUROPEAN SETTLEMENT: REJECTING FALSE ASSUMPTIONS TO RESTORE SURFACE HYDROLOGY</p>
10:55 <i>Lightning</i>	<p><b>Grant McKown</b> McKown, J.G.(1), D. Burdick (1), G. Moore (2), J. Gibson (2), W. Ferguson (4); (1) <i>Jackson Estuarine Laboratory, Institute for Study of Earth, Oceans, &amp; Space, University of New Hampshire, Durham, NH</i>; (2) <i>Jackson Estuarine Laboratory, Dept. of Natural Resources, University of New Hampshire, Durham, NH</i>; (3) <i>Jackson Estuarine Laboratory, Dept. of Biological Sciences, University of New Hampshire, Durham, NH</i>; (4) <i>Save The Bay, Providence, RI</i> EVALUATION OF DRAINAGE ENHANCEMENT FOR VEGETATION RECOVERY IN SALT MARSHES IN NEW ENGLAND USING PUBLIC AERIAL IMAGERY</p>
11:05	<b>Break</b>
<b>INVESTIGATIONS ON MARINE ANIMAL POPULATIONS</b>	
Chair: Agnes Mittermayr	
11:20 <i>Virtual</i>	<p><b>Siddhartha Hayes</b> Hayes, J.S. (1), Y. Chen (2), H. Chang, (2), A. Costigan (2), P. Woodruff (2), C. Roble (1); (1) <i>Hudson River Park, New York, NY</i>; (2) <i>Stony Brook University, Stony Brook, NY</i> CORROBORATING LONG-TERM DATASETS TO ELUCIDATE SHIFTS IN LOCAL FISH POPULATIONS WITHIN THE LOWER HUDSON RIVER ESTUARY, NYC</p>
11:35	<p><b>Sara Grady</b> <i>Mass Audubon, Plymouth, MA</i> THE OLDEST BLUE BLOODS - TWO SEA SHANTIES ABOUT HORSESHOE CRAB ECOLOGY AND MANAGEMENT</p>

11:50	<p><b>Amanda Davis</b>  Davis, A. (1), J.M. Logan (1), C. McCall (2), T. O'Donnell (2), S. Voss (1), E. Strand (2), D. Comb (2), M. Rousseau (1), S. Wilcox (1), V. Manfredi (1), M. Szymanski (1); (1) <i>Massachusetts Division of Marine Fisheries, New Bedford, MA</i>; (2) <i>Gloucester Marine Genomics Institute, Gloucester, MA</i>  LESSONS LEARNED USING ENVIRONMENTAL DNA (EDNA) TO MONITOR MARINE HABITAT USAGE THROUGHOUT MASSACHUSETTS</p>
12:05	<p><b>Marianne McNamara</b>  Kopelman, A.H. (1), M. McNamara (1,2), D. Brown (3,4), L. Jones (5), J. Robbins (6), P. Sieswerda (3); (1) <i>Coastal Research &amp; Education Society of Long Island (CRESLI), West Sayville, NY</i>; (2) <i>Life Sciences Department, Suffolk County Community College, Selden, NY</i>; (3) <i>Gotham Whale, Staten Island, NY</i>; (4) <i>Rutgers University, Department of Ecology, Evolution, &amp; Natural Resources, New Brunswick, NY</i>; (5) <i>Allied Whale, College of the Atlantic, Bar Harbor, ME</i>; (6) <i>Center for Coastal Studies, Provincetown, MA</i>  OPPORTUNISTIC DATA COLLECTED ABOARD WHALE WATCHING VESSELS REVEAL INTERANNUAL VARIABILITY IN HUMPBACK WHALE (<i>MEGAPTERA NOVAEANGLIAE</i>) ABUNDANCE AND DISTRIBUTION OFF MONTAUK, NEW YORK</p>
12:20 <i>Lightning</i>	<p><b>Courtney Schmidt</b>  <i>Narragansett Bay Estuary Program, Providence, RI</i>  SOLAR FIELDS IN THE FOREST</p>
12:30-12:50	<p><b>Concluding Remarks &amp; Student Awards</b></p>
1:30	<p><b>Field Trip to Cousins River Marsh</b></p> <p><i>Please join Curtis Bohlen of the Casco Bay Estuary Partnership, Carrie Kinne of Freeport Conservation Trust, and other project leaders to learn about how land trusts, restoration specialists and scientists are working together to protect the long-term health of the Cousins River Marsh.</i></p> <p><i>The field trip will start at Freeport Conservation Trust's Walsh Preserve Trailhead, off Old County Road in Freeport, about a ten-minute drive from the conference locale. Parking is somewhat limited; please carpool if possible. There will be time to eat lunch while we introduce the people and organizations working on the project.</i></p> <p><i>Participants are encouraged to wear rubber boots or comfortable shoes that they don't mind getting wet and muddy. Expect the trip to last a couple of hours.</i></p>

<b>POSTERS</b>	
P1	<p><b>(D) Molly Autery</b>  Autery, M.R. (1), J. Woodruff (1), B. Johnson (2), B. Yellen (1), E. Peck (1); (1) <i>University of Massachusetts Amherst, Amherst, MA</i>; (2) <i>Bates College, Lewiston, ME</i>  SALT MARSH STRATIGRAPHY AND PROXIES FOR ENVIRONMENTAL CHANGE:  A CASE STUDY AT COUSINS RIVER, FREEPORT, MAINE</p>
P2	<p><b>(W) Emma Bean</b>  Bean, E.E., B. Oakley; <i>Environmental Earth Science Department, Eastern Connecticut State University</i>  DOCUMENTING STORM IMPACTS ON A COASTAL BARRIER SYSTEM:  NAPATREE POINT CONSERVATION AREA, RHODE ISLAND</p>
P3	<p><b>Alexandra Beardwood</b>  Beardwood, A., C. Wigand, S. Ayvazian, D. Cobb, P. Colarusso, N. Schafer; <i>Environmental Protection Agency, Narragansett, RI</i>  A NARRAGANSETT BAY MESOCOSM EXPERIMENT: EFFECTS OF EELGRASS  DENSITY ON GREENHOUSE GAS FLUXES</p>
P4	<p><b>Bri Benvenuti</b>  Benvenuti B. (1), K. O'Brien (2); (1) <i>Ducks Unlimited</i>; (2) <i>Rachel Carson National Wildlife Refuge</i>  HIGH HOPES: BUILDING MARSH ELEVATION AND UNDERSTANDING  THROUGH THIN LAYER SEDIMENT PLACEMENT</p>
P5	<p><b>Emily Bonacchi</b>  Bonacchi, E.C. (1), J.P. Browne (1), C. Freudenberg (1), R.L. Burke (2); (1) <i>Town of Hempstead Department of Conservation &amp; Waterways, NY</i>; (2) <i>Department of Biology, Hofstra University, NY</i>  EVALUATING EXPOSURE OF DIAMONDBACK TERRAPINS TO MICROPLASTIC  POLLUTION IN HEMPSTEAD BAY</p>
P6	<p><b>Finnian Cashel</b>  Cashel, F.S. (1), C.D. Knightes (2); (1) <i>Oak Ridge Institute for Science &amp; Education at United States Environmental Protection Agency, Narragansett, RI</i>; (2) <i>United States Environmental Protection Agency, Narragansett, RI</i>  IMPROVED SIMULATION OF DO AND WATER CLARITY WITH INCREASED  ECOLOGICAL COMPLEXITY IN A 3D WATER QUALITY MODEL</p>
P7	<p><b>(W) Katelyn DeWater</b>  DeWater, K.A. (1), W. Kochtitzky (1), T. Oakley (2).; (1) <i>University of New England, Biddeford, ME</i>; (2) <i>Cape Elizabeth High School, Cape Elizabeth, ME</i>  THE GROWTH OF MEGA POOL SYSTEMS IN 12 MAINE SALT MARSHES FROM  2009 TO 2021</p>
P8	<p><b>(W) Dominique Di Domenico</b>  <i>Molloy University, Rockville Centre, NY</i>  USING eDNA TO ASSESS IMPACTS OF OYSTER RESTORATION ON ECOSYSTEM  BIODIVERSITY AT A HEAVILY IMPACTED COASTAL LAGOON</p>

P9	<p><b>(W) Caroline Fales</b>  <i>University of New England, Biddeford, ME</i>          THE EFFECTS OF MEGA-POOLS ON NEW ENGLAND SALT MARSH VEGETATION</p>
P10	<p><b>(W) Amanda Flores</b>          Flores, A. (1), B. Kahn (2), T. Razmadze (1), J. Fong (1), C. Zarnoch (1,2); (1) <i>Department of Natural Sciences, Baruch College CUNY, New York, NY</i>; (2) <i>CUNY Graduate Center, New York, NY</i>          EVALUATING ECOSYSTEM STRUCTURE AND FUNCTIONING OF A CREATED TIDAL WETLAND IN HUDSON RIVER PARK</p>
P11	<p><b>(W) Olivia Gentile</b>          Gentile, O.G., B.A. Oakley; <i>Environmental Earth Science Department, Eastern Connecticut State University, Willimantic, CT</i>          COMPARISON OF MEASURED AND CALCULATED WAVE RUN-UP ELEVATIONS ON A MICROTIDAL PARAGLACIAL COASTLINE USING BEACH PROFILES</p>
P12	<p><b>(D) Rupert Ikeh</b>          Ikeh, R. (1), F. Echiejile (2), A. Chatman (2), C. Freyland (2), H. Sylla (2), E. Watson (1).; (1) <i>Stony Brook University, Stony Brook, NY</i>; (2) <i>Drexel University, Philadelphia, PA</i>          SPATIAL PATTERNS IN SALT MARSH PLANT STRESS DERIVED FROM PHOTOSYNTHESIS MEASURES AND SATELLITE IMAGERY ANALYSIS.</p>
P13	<p><b>(D) Engiliyage Lakmali</b>          Lakmali, E. N., K. Huguenard (1) <i>Department of Civil and Environmental Engineering, University of Maine, Orono, ME</i>          PROPAGATION OF A HURRICANE FROM COAST UP TO HEAD OF A TIDAL ESTUARY: A CASE STUDY IN PENOBSCOT ESTUARY DURING HURRICANE LEE</p>
P14	<p><b>Shelby Larubina</b>          Larubina, S.L. (1,2), J.S. Krumholz (1,2), J.M.P. Vaudrey (1,2), C. Chadwick (3), J. Barrett (4), E. Childs (1,2); (1) <i>Connecticut National Estuarine Research Reserve, University of Connecticut, Groton, CT</i>; (2) <i>Department of Marine Sciences, University of Connecticut, Groton, CT</i>; (3) <i>Center for Land Use Education &amp; Research, University of Connecticut, Groton, CT</i>; (4) <i>Emerita, Connecticut Sea Grant, University of Connecticut, Groton, CT</i>          MAPPING INVASIVES IN A COASTAL FOREST</p>
P15	<p><b>(D) Johanna L'Heureux</b>          L'Heureux, J.P., J. Feldman, J. Bowen; <i>Department of Marine &amp; Environmental Sciences, Northeastern University, Boston, MA</i>          APPLYING <sup>13</sup>CO<sub>2</sub> LABELING IN THE FIELD TO INVESTIGATE INUNDATION AND FERTILIZER EFFECTS ON SALT MARSH PLANT-MICROBE INTERACTIONS</p>
P16	<p><b>(D) Caitlin Lynch</b>          Lynch, C. (1,2), S.M. Dos Santos (1,2), C. Gaston-Greenberg (1,2), B. Branco (1,2), C. Zarnoch (1,3); (1) <i>Science &amp; Resilience Institute at Jamaica Bay, New York, NY</i>; (2) <i>Dept. of Earth &amp; Environmental Sciences, Brooklyn College, City University of New York, New York, NY</i>; (3) <i>Dept. of Natural Sciences, Baruch College, City University of New York</i>          LONG TERM MONITORING UPDATES AND BEST PRACTICES FROM THE WEST POND LIVING SHORELINE RESTORATION SITE IN JAMAICA BAY, NY</p>

P17	<p><b>Marianne McNamara</b>  McNamara, M.E (1,2), A.H. Kopelman (1); (1) <i>Coastal Research &amp; Education Society of Long Island (CRESLI), West Sayville, NY</i>; (2) <i>Life Sciences Department, Suffolk County Community College, Selden, NY</i>  DOCUMENTING A NEW, YET FAMILIAR SPECIES: ENCOUNTERS WITH TAMANEND'S AND COMMON BOTTLENOSE DOLPHINS REVEAL NOTABLE DIFFERENCES IN DISTRIBUTION AND MORPHOLOGY OFF EASTERN LONG ISLAND</p>
P18	<p><b>Agnes Mittermayr</b>  Mittermayr, A. (1), J. Gaeckle (2), J. Lefcheck (3), A. Novak (4), H. Plaisted (5), F. Short (6); (1) <i>Center for Coastal Studies, Provincetown, MA</i>; (2) <i>Nearshore Habitat Program, Washington State Department of Natural Resources, Olympia, WA</i>; (3) <i>University of Maryland Center for Environmental Science, Cambridge, MD</i>; (4) <i>Earth &amp; Environment, Boston University, Boston, MA</i>; (5) <i>Northeast Coastal &amp; Barrier Network, National Park Service</i>; (6) <i>Professor Emeritus, College of Life Sciences &amp; Agriculture, Jackson Lab, Durham, NH</i>  RE-CASTING THE SEAGRASSNET</p>
P19	<p><b>Gena Morin</b>  Morin, G.M., J. Urban-Rich; <i>School for the Environment, University of Massachusetts Boston, Boston, MA</i>  INPUT OF MICROPLASTICS INTO THE NEPONSET RIVER FROM STORM-WATER DRAINS</p>
P20	<p><b>Kelly Reiss</b>  <i>Environmental Science, Policy, &amp; Management Program, School of Science, Technology, Engineering, &amp; Math, American Public University System, Charles Town, WV</i>  TOO LITTLE, TOO MUCH, OR JUST RIGHT? EXPLORING FIELD SAMPLING EFFORT IN THE CONTEXT OF BIOTIC INTEGRITY</p>
P21	<p><b>(D) Sintra Reves-Sohn</b>  Reves-Sohn, S., W. Teng, E. Peck, J. Walker, B. Yellen; <i>University of Massachusetts Amherst</i>  USING MARSH SUBSIDENCE TO PREDICT VEGETATION RESPONSES TO TIDAL FLOW RESTORATION</p>
P22	<p><b>(D) Madison Sachs</b>  Sachs, M. (1), S. Moseman-Valtierra (1), J. McNamee (2); (1) <i>College of the Environment &amp; Life Sciences, The University of Rhode Island</i>; (2) <i>State of Rhode Island Department of Environmental Management</i>  ATLANTIC BLUE CRAB <i>CALLINECTES SAPIDUS</i> ABUNDANCE AND HABITAT SELECTION IN ANTHROPOGENICALLY ALTERED ESTUARINE SYSTEM IN THE FACE OF NORTHWARD RANGE EXPANSION</p>



P23	<p><b>(W) Isha Sangani</b>  Sangani, I. (1), L.K. Champlin (2), R.W. Fulweiler (2); (1) <i>Department of Organismic &amp; Evolutionary Biology, Harvard University, Cambridge, MA</i>; (2) <i>Department of Earth &amp; Environment, Boston University, Boston, MA</i>  SPATIAL HETEROGENEITY OF CARBON DIOXIDE FLUXES IN AN URBAN SALT MARSH</p>
P24	<p><b>(D) Sixto Taveras Lopez</b>  Taveras Lopez, S. (1), E. Watson (1), F. Montalto (2), F. Echiejile (2); (1) <i>Stony Brook University, Stony Brook, NY</i>; (2) <i>Drexel University, Philadelphia, PA</i>  EVALUATING ECOSYSTEM SERVICES OF COASTAL MARSH RESTORATION IN BARNEGAT BAY, NEW JERSEY</p>
P25	<p><b>(W) Shakira Thomas &amp; Abby Bressette</b>  Bressette, A. (1), S. Thomas (2) B. Branco (2,3); (1) <i>Center for Environmental Studies, Virginia Commonwealth University</i>; (2) <i>Department of Earth &amp; Environmental Sciences, Brooklyn College, City University of New York</i>; (3) <i>Science &amp; Resilience Institute at Jamaica Bay, NY</i>  FACTORS DETERMINING THE SUCCESS OF RECENTLY PLANTED <i>SPARTINA ALTERNIFLORA</i> ON A LIVING SHORELINE IN JAMAICA BAY, NY</p>
P26	<p><b>(D) Sophia Tigges</b>  Tigges, S.E., D. FitzGerald, Z. Hughes, A. Novak; <i>Boston University, Boston, MA</i>  EXAMINING SALT MARSH POND DYNAMICS THROUGH SEMANTIC IMAGE SEGMENTATION</p>
P27	<p><b>(W) Sam Walsh</b>  <i>University of New England</i>  ESTABLISHING PRE-RESTORATION SITES OF <i>AGALINIS MARITIMA</i> ON THE BIDDEFORD POOL SALT MARSH</p>