



## AGENDA

### DAY 1 – TUESDAY, DECEMBER 4<sup>TH</sup> – WATER QUALITY

- 8:00 – 8:50 Sign-In and Morning Networking
- 8:50 – 9:00 Transition to Main Room
- 9:00 – 9:10 Welcome and Opening Comments  
*Tonna-Marie Rogers, Acting Manager, Waquoit Bay National Estuarine Research Reserve*

#### PLENARY SESSION 1: Shellfish Aquaculture

Restoring water quality and curbing nutrient pollution remains a pressing challenge and one of the most important environmental priorities for Cape Cod towns. Shellfish aquaculture is listed in the Cape Cod 208 Area-Wide Management Plan as one of the non-traditional approaches that could be utilized among the mix of solutions that towns could employ. The morning session will give attendees a taste of some of the shellfish aquaculture efforts underway in the region – goals, results and lessons from these projects. Updates will also be provided on local research aimed at addressing some of the important science questions that can help to inform shellfish aquaculture and water quality management efforts.

- 9:10 - 9:20 Shellfish 101 – A Primer on Local Shellfish Life History and Care  
*Christina Lovely, Fisheries Propagation Technician, Town of Falmouth*
- 9:20 – 9:45 Management Considerations for Shellfish Aquaculture and Propagation Activities in Massachusetts – *Christopher Schillaci, Aquaculture and Propagation Project Manager, Division of Marine Fisheries*
- 9:45 – 10:10 Town of Mashpee Case Study – *Rick York, Director of Natural Resources & Ashley Fisher, Shellfish Constable, Town of Mashpee*
- 10:10 – 10:30 Town of Falmouth Case Study – *Roy (Chuck) Martinsen, Deputy Director, Marine and Environmental Services & Shellfish Constable, Town of Falmouth*
- 10:30 – 10:55 **Coffee Break** (Visit Exhibitor Tables)
- 10:55 – 11:15 Restoration and Aquaculture: Shellfish Projects in MA  
*Stephen Kirk, Coastal Program Manager, The Nature Conservancy*
- 11:15 – 11:35 Mashpee Wampanoag Tribe Case Study – *Chuckie Green, Natural Resources Assistant Director & Clayton Oakley, Water Quality Technician, Mashpee Wampanoag Tribe*
- 11:35 – 12:00 Town of Wellfleet Case Study – *Alex Hay, Co-Owner, Mac’s Seafood & Wellfleet Shellfish Company, & Chair, Wellfleet Wastewater Management Planning Committee*
- 12:00 – 1:00 **Lunch – provided** (Visit Exhibitor Tables)

- 1:00 – 1:20 Dynamics in Using Shellfish Harvest for Nitrogen Mitigation - *Joshua Reitsma, Marine Program Specialist, Cape Cod Cooperative Extension & Woods Hole Sea Grant*
- 1:20 – 1:40 Working Towards an Ecosystem Level Understanding of How Different Oyster Aquaculture Practices Alter Nitrogen Cycling – *Dr. Daniel Rogers, Stonehill College*
- 1:40 – 1:55 The Massachusetts Shellfish Initiative: Background, Overview, Participation, Opportunities *Scott Soares, Boston Bay Consulting & Sean McNally, UMass Boston*
- 1:55 – 2:25 Extended Q&A & Large Group Discussion with Panel  
(*Panelists: Brian Dudley, DEP, Joshua Reitsma, Cape Cod Cooperative Extension, Daniel Rogers, Stonehill College and Christopher Schillaci, DMF*)
- 2:25 – 2:45 **Coffee Break** (*Visit Exhibitor Tables*)

### **PLENARY SESSION 2: Watershed Permit Case Study**

In August 2018, MassDEP issued a first-of-its-kind Massachusetts watershed permit. This presentation describes what the permit is, how it came to be, and why this is a blueprint for the future of watershed planning and permitting.

- 2:45 – 3:30 Hatching a Watershed Permit: A Pleasant (Bay) Experience  
*Mike Giggey, Senior Vice President, Wright-Pierce, Carole Ridley, Principal, Ridley & Associates, & Brian Dudley, Environmental Engineer, MA Dept. of Environmental Protection*
- 3:30 – 3:35 Transition to Break-Out Sessions
- 3:35 – 5:00 **Concurrent Break-Out Sessions**

#### **Session 1: Harmful Algal Blooms & Stormwater Management** (*Room: Osterville A*)

*Facilitator: Jo Ann Muramoto, MassBays Regional Coordinator/Cape Cod & Association to Preserve Cape Cod*

- Utilizing the ecology of cyanobacteria to address problems of cyanotoxins in lakes - *Dr. Jim Haney, Dept. of Biological Sciences, University of New Hampshire*
- Part 1: Improving Water Quality in the Three Bays through Stormwater Management – *April Wobst, Restoration Ecologist, Association To Preserve Cape Cod*
- Part 2: Design and Construction of Stormwater BMPs in Three Bays – *Michelle West, Senior Water Resources Engineer, Horsley Witten Group*

#### **Session 2: Contaminants of Emerging Concern** (*Room: Osterville B*)

*Facilitator: Nancy Church, School & Interpretive Programs Coordinator, Waquoit Bay NERR*

- Sources, Transport, Exposure and Effects of Poly- and Per Fluoro Alkyl Substances: A Program Update Focusing on Cape Cod Efforts – *Alyson Mccann, Water Quality Program Coordinator, University of Rhode Island, Cooperative Extension, Department of Natural Resources Science*
- The Occurrence of Poly and Per Fluoro Alkyl Substances (PFAS) in Cape Cod Groundwater - *Tom Cambareri, Water Resources Technical Services Director, Cape Cod Commission*
- Geochemistry of PFAs from historical fire-training activity in surface and groundwater on Cape Cod – *Bridger Ruyle, Harvard University*
- Strategies for removing contaminants of emerging concern at municipal wastewater treatment facilities – *Marc Drainville, Principal, GHD*

### **Session 3: Onsite Septic Systems** (Room: Centerville A&B)

Facilitator: Joan Muller, Education Coordinator, Waquoit Bay National Estuarine Research Reserve

- West Falmouth Harbor Nitrogen-Reducing Septic System Demonstration Project - *Maureen Thomas, Water Resource Specialist, Buzzards Bay Coalition*
- An Overview of Onsite Septic System Performance and Research Update on Promising New Approaches - *George Heufelder, Director, Massachusetts Alternative Septic System Test Center*

5:00 pm          Wrap-up & Adjourn (Please complete DAY 1 evaluation ☺)

## **DAY 2 - WEDNESDAY, DECEMBER 5<sup>TH</sup> - COASTAL RESILIENCE**

- 8:00 – 8:50                  Sign-in & Morning Networking
- 8:50 – 9:00                  Transition to Main Room
- 9:00 – 9:10                  Welcome & Opening Comments – *Tonna-Marie Rogers, Acting Manager, Waquoit Bay National Estuarine Research Reserve*
- 9:10 – 10:10                When the Storms Just Kept Coming: Mining Resilience Lessons for the Region from this Past Winter – Panel Discussion  
Panelists:
- Emergency Preparedness & Resiliency in the Energy Industry  
*Matthew Waldrip, Senior Specialist, Eversource Energy*
  - Emergency Management & Regional Coordination – *Sean O'Brien, Department Director/ Emergency Preparedness Coordinator, Barnstable County*
  - Public Works and Safety – *Ray Jack, DPW Director, Town of Falmouth*
  - Shoreline Changes and Community Experiences  
*Robert Duncanson, Director, Health and Environment, Town of Chatham*
  - Mapping Storm Tide Pathways for Preparedness Planning  
*Steve Mague, Adjunct Faculty, Center for Coastal Studies*
- 10:10 – 10:20                Mapping Stormtide Pathways on Cape Cod Bay: A New Flood Mapping & Preparedness Project – *Shannon Hulst Jarbeau, CRS & Floodplain Coordinator, Barnstable County/Cape Cod Cooperative Extension & Woods Hole Sea Grant*
- 10:20 – 10:40                **Coffee Break** (View Exhibitor Tables)
- 10:40 – 11:10                Update on Regulations for Land Subject to Coastal Storm Flowage and Thoughts on Resiliency Planning  
*Lealdon Langley, MA Department of Environmental Protection*
- 11:10 – 12:00                State and Federal Guidance for Permitting Coastal Resilience Projects: A Panel Discussion with Regulatory Experts. Panelists will present practical experiences and perspectives related to use of living shorelines for shoreline stabilization  
*Moderator: Julia Knisel, Coastal Shoreline & Floodplain Manager, MA Office of Coastal Zone Management*  
Panelists:
- Rebecca Haney – MA Office of Coastal Zone Management
  - Kathryn Ford – Division of Marine Fisheries
  - Lealdon Langley – MA Department of Environmental Protection
  - Christine Jacek – U.S. Army Corps of Engineers

12:00 – 1:00	<b>Lunch – provided</b> ( <i>View Exhibitor Tables</i> )
1:00 – 1:20	Massachusetts Municipal Vulnerability Preparedness (MVP) Program: Empowering Communities to Address Climate Resilience from Planning to Implementation <i>Margot Mansfield, Climate Change &amp; Coastal Hazards Analyst, MA Executive Office of Energy &amp; Environmental Affairs</i>
1:20 – 2:05	Protect, Accommodate or Retreat? Integrating Adaptation Strategies and Ecosystem Services in the Cape Cod Coastal Planner <i>Jennifer Clinton, Special Projects Coordinator, Cape Cod Commission &amp; April Wobst, Restoration Ecologist, Association to Preserve Cape Cod</i>
2:05 – 2:15	Table Discussion
2:15 – 2:30	<b>Coffee Break</b>
2:30 – 3:50	Planning for Marsh Resilience, Ecosystem Changes, and Habitat Restoration in a Changing Climate: <i>Session Facilitator: James Rassman, Stewardship Coordinator, Waquoit Bay National Estuarine Research Reserve</i> <ul style="list-style-type: none"> <li>• Innovative use of SLAMM to project wetland changes due to tidal restoration to guide adaptive management decisions for the Herring River Estuary <i>Elise Leduc, Coastal Scientist, Woods Hole Group</i></li> <li>• Soil Survey and the Coastal Zone: Bridging the Land-Water Divide - <i>Maggie Payne, Resource Soil Scientist, USDA Natural Resources Conservation Service</i></li> <li>• Opportunities for, and limitations on, salt marsh landward migration with Sea Level Rise – <i>Stephen Smith, Ecologist, Cape Cod National Seashore</i></li> <li>• Update on Results from the NERRS Salt Marsh Thin Layer Placement Experiment &amp; Crab Research - <i>Megan Tyrrell, Research Coordinator, Waquoit Bay National Estuarine Research Reserve</i></li> </ul>
3:50	Wrap-Up & Evaluation
4:00 pm	Adjourn