



AGENDA

DAY 1 – TUESDAY, DECEMBER 4TH – WATER QUALITY

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.

Shellfish 101 – A Primer on Local Shellfish Life History and Care

Christina Lovely, Fisheries Propagation Technician, Town of Falmouth

Management Considerations for Shellfish Aquaculture and Propagation Activities in Massachusetts

Christopher Schillaci, Aquaculture and Propagation Project Manager, Division of Marine Fisheries

Town of Mashpee Case Study

Rick York, Director of Natural Resources & Ashley Fisher, Shellfish Constable, Town of Mashpee

Town of Falmouth Case Study

Roy (Chuck) Martinsen, Deputy Director, Marine and Environmental Services & Shellfish Constable, Town of Falmouth

Restoration and Aquaculture: Shellfish Projects in MA

Stephen Kirk, Coastal Program Manager, The Nature Conservancy

Town of Wellfleet Case Study – *Alex Hay, Co-Owner, Mac’s Seafood & Wellfleet Shellfish Company, & Chair, Wellfleet Wastewater Management Planning Committee*

Dynamics in Using Shellfish Harvest for Nitrogen Mitigation

Joshua Reitsma, Marine Program Specialist, Cape Cod Cooperative Extension & Woods Hole Sea Grant

Working Towards an Ecosystem Level Understanding of How Different Oyster Aquaculture Practices Alter Nitrogen Cycling – *Dr. Daniel Rogers, Stonehill College*

The Massachusetts Shellfish Initiative: Background, Overview, Participation, Opportunities

Scott Soares, Boston Bay Consulting & Sean McNally, UMass Boston

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)

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.

Hatching a Watershed Permit: A Pleasant (Bay) Experience

Mike Giggey, Senior Vice President, Wright-Pierce, Carole Ridley, Principal, Ridley & Associates, and Brian Dudley, Environmental Engineer, MA Dept. of Environmental Protection

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*
- 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*

DAY 2 - WEDNESDAY, DECEMBER 5TH - COASTAL RESILIENCE

Welcome & Opening Comments – *Tonna-Marie Rogers, Acting Manager, Waquoit Bay National Estuarine Research Reserve*

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

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

Update on Regulations for Land Subject to Coastal Storm Flowage and Thoughts on Resiliency Planning
Lealdon Langley, MA Department of Environmental Protection

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

Massachusetts Municipal Vulnerability Preparedness (MVP) Program: Empowering Communities to Address Climate Resilience from Planning to Implementation

Margot Mansfield, Climate Change & Coastal Hazards Analyst, MA Executive Office of Energy & Environmental Affairs

Protect, Accommodate or Retreat? Integrating Adaptation Strategies and Ecosystem Services in the Cape Cod Coastal Planner

Jennifer Clinton, Special Projects Coordinator, Cape Cod Commission & April Wobst, Restoration Ecologist, Association to Preserve Cape Cod

Planning for Marsh Resilience, Ecosystem Changes, and Habitat Restoration in a Changing Climate

Innovative use of SLAMM to project wetland changes due to tidal restoration to guide adaptive management decisions for the Herring River Estuary

Elise Leduc, Coastal Scientist, Woods Hole Group

Soil Survey and the Coastal Zone: Bridging the Land-Water Divide

Maggie Payne, Resource Soil Scientist, USDA Natural Resources Conservation Service

Opportunities for, and limitations on, salt marsh landward migration with Sea Level Rise
Stephen Smith, Ecologist, Cape Cod National Seashore

Update on Results from the NERRS Salt Marsh Thin Layer Placement Experiment & Crab Research
Megan Tyrrell, Research Coordinator, Waquoit Bay National Estuarine Research Reserve