



## Management Committee Meeting Summary

April 24, 2019

9:30 am – 12:30 pm

Location: 100C Cambridge St., Room 2B, Boston

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### Attendees:

#### *Management Committee*

Julia Blatt (Massachusetts River Alliance [MRA])  
Robert Buchsbaum (Salem Sound Coastwatch [SSCW])  
Harlan Doliner (Marine & Oceanographic Technology Network [MOTN])  
Kate Frew (Division of Marine Fisheries [DMF])  
David Goldstein (Department of Transportation [MassDOT])  
Andrew Gottlieb (Association to Preserve Cape Cod [APCC])  
Regina Lyons (U.S. Environmental Protection Agency [EPA])  
Becca Newhall (National Oceanographic and Atmospheric Administration [NOAA])  
Kristin Uiterwyk, Chair (Urban Harbors Institute [UHI])  
Samantha Woods (North and South Rivers Watershed Association [NSRWA])

#### *Coordinators and Staff*

Pam DiBona (MassBays, Executive Director)  
Prassede Vella (MassBays, Staff Scientist)  
Sara Grady (NSRWA, South Shore Regional Coordinator)  
Torrie Hanley (NU, Metro Boston Regional Coordinator)  
Jo Ann Muramoto (APCC, Cape Cod Regional Coordinator)  
Peter Phippen (MVPC, Upper North Shore Regional Coordinator)  
Barbara Warren (SSCW, Lower North Shore regional Coordinator)  
Margherita Pryor (EPA, U.S. Environmental Protection Agency)

#### *Guest speaker*

John Walkey, *Waterfront Initiative Coordinator, GreenRoots*

### Welcome

Committee Chair Kristin Uiterwyk opened the meeting, reviewed the agenda, and handed over to Pam DiBona.

### Committee Business

*Communications Subcommittee meeting:* The Subcommittee is scheduled to meet following this meeting. They are considering a proposal to change our name from Massachusetts Bays National Estuary Program to Massachusetts Bays National Estuary *Partnership*, and will make a recommendation to the Committee in the future.

*Science & Technical Advisory Subcommittee:* Prassede Vella announced the next STAC meeting scheduled for April 29. The focus of the agenda is to present and discuss the results of the recently completed study on water residence in MassBays by Woods Hole Group. The results will be used by Northeastern University to rerun the analyses to categorize the 47 estuarine embayments as part of the

target-setting project. STAC will also reach out to DEP to find a representative in place of Kim Groff. STAC will also be reviewing its membership in the coming months.

*Nominating Subcommittee report:* Pam DiBona announced that from July 1, the Vice Chair position will be open and invited management committee members to provide nominations. This is a two-year position and at the end, the person will move to the Chair position. Starting July 1, Colin Van Dyke will assume the position of Chair of the Management Committee.

### **Presentation of the 2019-2020 Workplan**

Pam DiBona walked the group through the budget for 2019-2020. 320 funding for EPA for FFY2020 will be \$600k plus an addition \$25k supplemental funding. An additional \$79k from the Exchange Network grant and \$150k from CWA Section 106 funds via DEP will bring the total to \$854k. Projected expenses are \$854k for FY20 and include about \$42k for the Healthy Estuaries grant. A total of \$82k will be available for the Healthy Estuaries grant in Fall 2019. In response to questions about the scope of the next call for proposals, Pam explained that the RFP will solicit projects that will address data gaps and/or advance proof-of-concept research.

Pam described activities managed directly by central staff, sometimes in direct coordination with the respective regional coordinators, under the three main goals of the CCMP. Additional tasks will be provided in the work plans submitted by each region in May.

Margherita Pryor announced the availability of about \$4 million (\$1.5 million in the first grant year) to be made available, nationwide, for projects. MassBays will not be eligible to apply directly but the regional service providers will be eligible.

Andrew Gottlieb reiterated the urgent need for MassBays to be able to access state funds and the need for support by CZM and/or EEA to be able to access funds in the bond bill. CZM on the other hand is reluctant to advance the ask to EEA unless Buzzards Bay National Estuary Program is also included. A suggestion was made to consider having a 5-year “plan” on how all the annual activities come together and that will lead to state of the bays reporting, among others.

Action to be taken:

- Reconvene Finance Committee to continue discussion on accessing state finances.
- Draft workplan will be provided to the Management Committee for review as content is provided by Regional Service Providers.

### **A Virtual Tour of Chelsea Creek – completed and ongoing actions**

*John Walkey, GreenRoots•Raices Verdes*

John Walkey, Waterfront Initiative Coordinator at Green Roots, provided a presentation of green space advocacy and environmental justice in Chelsea and East Boston. Over 45,000 residents including 73% ethnic minorities inhabit the 1.8 sq. mi. of Chelsea. 24% of the population lives below the poverty line. East Boston covers 5 sq. mi. and is the home of 55,000 people. 53% of the population is Latino and 17% live below the poverty line.

Over the past few years Chelsea has experienced enhanced gentrification. However, there is a clear need for more awareness on environmental and social justice. John explained that social justice is more than just getting a park. Rather, it is getting a park that meets the needs of the community. There are many challenges facing communities around Chelsea Creek, mainly based on its location surrounded by industrial facilities. 70-80% of home heating oil and the majority of gasoline and jet fuel are transported up the river through Chelsea Creek. This translates in increased road transportation and air pollution.

Street conditions are far from ideal and salt stored in the area contains a cyanide-based anti-scaling agent that may be harmful.

Green Roots is working to increase awareness of the unequal distribution of environmental and public health burdens. For example, a green space development proposal was combined with the construction of a diesel power plant across from an elementary school. Push-back by local groups resulted in a nixing of the power plan and elementary school kids enjoy the new park without power plant stacks looming in the background. The New England Produce Independence Centre stores weeks-long supplies for the Northeast and Mid-Atlantic coast. The refrigerated trucks were diesel operated. With EPA funding, electric ones replaced these. Through such collaborations and innovative solutions, 2000 tons of air pollutants were eliminated annually, resulting in improved health conditions and reduced health care costs in the long run.

Green Roots is involved in a number of projects to improved environmental conditions for the surrounding communities. Close collaboration with Mystic River Watershed Association and with funding from NOAA and EPA (through MassBays), habitat restoration work is underway. The Mill Creek restoration/dredging started years ago but sedimentation from Route 1 has increased. MyRWA has deployed data loggers and looking for pinch points. It appears that one particular bridge is the main pinch point. Phragmites is also spreading. Green Roots, MyRWA and their partners are exploring options to introduce saltwater into the creek. There is a need to have a better understanding of the hydrology of the area in order to proceed with a project and conduct a long-lasting restoration effort.

In East Boston, Eversource added a high-voltage electrical sub-station on East Eagle Street to a project originally aimed to provide a redundant transmission line from the Mystic Generating facility to the existing Chelsea sub-station. Concerns include flooding, equipment failure in close proximity to jet fuel storage tanks, playgrounds, and a densely populated neighborhood, and electromagnetic radiation. In addition, the substation location precludes other more appropriate uses of the area and the capital cost of the projects will be shouldered completely by consumers. Opposition to the project stated that ISO-New England peak summer demand forecasts have been trending down, and actual usage numbers have also been trending out as a result of efforts to increase demand.

John explained that home-owners are greatly concerned by increased home insurance costs. Working with legislators, the city is helping to make changes in bills to reduce impact on end users.

### **Management Committee Member Updates**

Marine and Oceanographic technology network: On May 4, the Marine Advanced Technology Association will be hosting a competition on remotely operated vehicles in Sandwich, MA.

Department of Transportation: MassDOT is currently conducting an effort to identify and check the locations of culverts with clogging issues that are preventing trout from migrating upstream on Cape Cod. Once identified, action will be taken to remove obstructions and fix any issues. Project is expected to last in the next one to two years.

Department of Environmental Protection (via Pam): (1) Funding is available under section 319 of the CWA and solicitation for projects is underway [LINK]. (2) the 2020-2024 management plan for non-point sources is published and available. (3) The Watershed Based Planning tool is functional has additional components and information to support better grant application and reporting.

Department of Ecological Restoration (via Pam): Four new staff members have recently joined DER to assist with work related to dams, culverts, and cranberry bog restoration. An environmental engineer position has been posted.

Merrimack Valley Planning Commission: Joe Cosgrove is no longer with MVPC. His position has been filled by Jennifer Hughes.

Urban Harbors Institute: (1) UHI has been contracted by MassBays to research and examine historical data related to the EDA to help in the development of a BCG framework for MassBays. UHI has reached out to management Committee members with questions about historical resources. (3) UHI is supporting Paul Kirschen and Ellen Douglas to develop a climate change impact report for MAPC.

U.S. Environmental Protection Agency: (1) Reorganization at EPA has resulted in a split of the air section from the water section. Region 1 will be reflecting some of these shifts. Mel Cote will be taking on wetland and water quality in addition to surface water quality. (2) Watershed Based Planning may also be required by NRCS at the HUC12 scale. This might create some opportunities to work with conservation districts. (3) A small section of Plymouth feeds into Buzzards Bay and may be eligible for SNEP (although this is mostly kettle ponds).

Division of Marine Fisheries: (1) DMF is conducting its annual survey of tagged fish, including great white shark. (2) DMF is conducting an environmental review of coastal alteration projects including the deep dredge project in Boston Harbor and the laying of an HDEC cable in Boston Harbor. (3) A extensive bottom temperature database with data from over 60 stations will be available by the end of 2019.

Massachusetts Rivers Alliance: (1) MRA is supporting the Bill on public notification of sewage discharge into freshwater bodies. This bill will require public notification by wastewater treatment plant operators and this is currently being addressed. (2) MRA is also supporting the Bill on drought to allow communities to require water conservation.

National Oceanographic and Atmospheric Administration: (1) The New Hampshire coastal program assessment of all culvers in the state has been completed and provides a model that is transferable to other states. (2) The Oceans Reporting Tool on Economics and Use Data has been updated.

Association to Preserve Cape Cod: (1) Passage of new state law expanding the state hotel/motel tax to home stays created a new Cape Cod and Island Water Protection Trust Fund supported by the new 2.75% surtax for overnight stays in Barnstable County. This will bring in an estimated \$20 million/yr which will cover about 25% cost on nutrient management on Cape Cod. The surtax will come into effect the week of July 1, 2019. Martha's Vineyard has opted in but Nantucket is still pending and will have to petition the DEP for entry into the Trust.

North and South Rivers Watershed Association: (1) Third Herring Brook dam removal and restoration project is moving forward. \$75k has been committed and enabled grant application for funding to NOAA. (2) The Tagging of Brook Trout in Third Herring Brook has designated it as cold-water fisheries resource area. (3) Funding is available from the town to develop an engineering design for removal of the first South River dam from the ocean. (4) NSRWA has received a grant from DEP for water quality work. (5) The Watershed Action Alliance Conference, conducted with support from MassBays and DER, was attended by more than 100 attendees.

Office of Coastal Zone Management: (1) Lisa Engler has been established as the Director of the Office of Coastal Zone Management; Bob Boeri is the Acting Assistant Director. Position of Assistant Director has been posted. (2) In preparation for the review of the Massachusetts Ocean Management Plan, CZM, obo EEA, has prepared a survey to gather information and feedback on the 2015 ocean plan that will inform the next iteration of the plan. Survey closed on April 12 and results are currently being analyzed. (3) A joint meeting of the Ocean Advisory Commission and Science Advisory Council is scheduled on May 17 at 9:30 am at EEA.

Meeting adjourned at 12:30 pm.

**Attachment**  
**Staff Updates, January to April 2019**

**Regional Coordinators**

Regional updates are organized by region, then according to the seven action areas of the implementation workplan:

1. Gathering data on conditions and trends (DATA)
2. Reducing stormwater discharge volumes and pollutant loadings (SW)
3. Reducing contamination from wastewater (WW)
4. Adapting to/mitigating impacts of climate change (CC)
5. Removing barriers to streamflow and tidal flushing (SF)
6. Managing invasive species (IS)
7. Conducting education and outreach (E&O)

**Upper North Shore (Peter Phippen, Regional Coordinator)**

- **Gather data on conditions and trends (DATA)**
  - Eelgrass Restoration: Nelson's Island in the Parker River National Wildlife Refuge portion of Plum Island Sound was selected from a number of potential sites for eelgrass transplanting. Eelgrass was harvested from Cape Cod and planting and monitoring has started.
  - Mussel/Oyster Project: Working with MA Division of Marine Fisheries preliminary step are underway to lay the foundations for a potential living shoreline mussel reef. Water quality monitoring at existing mussel bed sites was conducted between November and December when equipment was retrieved due to winter ice conditions. Equipment was recently redeployed to measure pH, DO, temperature, conductance, salinity and light.
- **Climate change (CC)**
  - Dredging and Thin Layer Deposition: As a member of the Northeast Coastal Coalition, MVPC was tasked to investigate the viability of the upper north shore region to purchase a dredge for area channels as well as potential future TLD activities. Working with our consultant, Woods Hole Group, the Dredge Equipment Purchase Assessment project for the upper north shore activities included communication with harbor masters in the ten communities on past dredge projects to determine sediment quantity, quality and physical nature of the dredge material. The upper north shore dredge kickoff meeting for all the municipal officials was held in early March
  - NFWF Grant Proposal: MVPC spearheaded a NOAA/NFWF grant proposal to improve the resiliency of the Great Marsh. Through National Wildlife Federation, the team was awarded \$1.2M for invasive plant management, eelgrass restoration, and marsh drainage projects. Preliminary planning is underway and included: finalizing permitting for some of the projects, MEPA consultation, monitoring plan development, project scheduling, match and funding alignment. The grant contract has been completed between NWF and NFWF and is underway between NWF and project partners and should be completed before the end of the month.
- **Education and outreach (E&O)**
  - Meetings attended/presentations given: Merrimack River Beach Alliance (2), Green Crab R&D Project board meeting, Runnel Model coordination, Great Marsh Coalition (3), NFWF Monitoring Metrics, Sandy Impoundment Funding, New England Aquarium Live Blue Partnership Annual Meeting, Legislative Green Crab Funding, MA-NH-ME Invasives Workgroup, Eight Towns and the Great Marsh Committee (2), Old Town Hill Ditch Mitigation Permitting overview, Regional Transportation Plan Environmental Oversight, Interview and hiring of MVPC Environmental Program Manager (and MBP Management Committee Member), Essex Elementary School Great Marsh presentation, North Shore Task Force, Ipswich River Watershed Legislative Breakfast,

Natural Sediment Thin-layer Deposition MVP presentation, Essex National Heritage Commission Annual Spring meeting, DPW Directors (stormwater) monthly meeting (2), TLD presentation to the Legislative Coastal Caucus, Mayors/Managers/Legislators Merrimack Valley Breakfast.

### **Lower North Shore (Barbara Warren, Regional Coordinator)**

- **Gather data on conditions and trends (DATA)**
  - Water Quality Assessment (Nutrients) Project in Salem Sound: RC is working closely with partners (MassBays, SeaTrac, CZM, Salem State University, ACASAK) to collect nutrient data in the Danvers River estuary, at wastewater treatment discharge sites (SESD and Manchester) and near the outward boundary of the Sound. Other parameters to be assessed include salinity, temperature, pH plus a grab sample for isotopic analysis. For more details on this project see the Staff Scientist Updates below.
  - Eelgrass Monitoring in Salem Sound: RC convened *Marine Fisheries*, MassBays, SeaTrac and local boater to examine opportunities and plan summer eelgrass monitoring using citizen science monitoring methods developed for Duxbury Bay 2018.
- **Climate change (CC)**
  - Municipal Vulnerability Preparedness: RC helped facilitate the Beverly MVP workshop with BSC Group and Beverly Core Team; wrote Letters of Support for MVP Action Grant proposals for Manchester and Salem; and worked closely with Marblehead on their MVP Action Grant and provided LOS.
  - Salem Climate Change Vulnerability Assessment: Contracted with Salem to revisit their 2014 Salem Climate Change Vulnerability Assessment & Action Plan to introduce new staff to the plan and set new priorities.
  - Living Shoreline implementation at Collins Cove: The RC assisted the city of Salem with bid preparation and ready to organize volunteers to plant 15,000 salt marsh plants
- **Reduce stormwater discharge (SW)**
  - Clean Beaches and Streams Program: (1) SSCW was awarded funds from DEP to increase bacterial sampling and capacity building, and update the QAPP. ; RC received EPA Stormwater Toolbox with focus on upstream tributaries.
  - DEP MS4 grant for Greenscapes: RC was awarded funding to rework the Greenscapes Guide, create a state map with hot links to LID projects, complete 3 videos – Winter Island rain gardens, Urban LID projects, Suburban/Rural LID projects. To be completed by June 30, 2019.
- **Education and outreach (E&O)**
  - Presentations: RC gave presentations/participated on talks on climate change and coastal resilience for the Swampscott Conservancy, SSU Earth Day Climate Panel, Salem Rotary, Marsh Madness at Gulu-Gulu Café, SSU/CZM Coastal Resilience Workshop, Nahant Earth Day Symposium.
  - 7AM Quahog Digging Demonstration at Marblehead.
  - #SeaLevelRiseBlitz - Find the elevation of your favorite coastal place and subtract 10 feet. This number will be where the water could be in 2060! Take a photo demonstrating this and share it with us on Facebook or Instagram.
  - Attended the Climate Adaptation Forum: The 'R' Word: Retreat, Relocation and Climate Resilience; Natural Sediment Deposition Presentation, Greg Moore; Greater -Boston Research Advisory Group presentation (UMass Boston, UHI, MAPC)

### **Metro Boston (Torrance Hanley, Regional Coordinator)**

- **Gather data on conditions and trends (DATA)**

- EDA 2.0: The RC is coordinating re-analysis of Salem Sound embayment and working with STAC to decide which data from the water residence time report to incorporate in the final analysis.
- Boston Harbor Habitat Atlas (BHHA): RC is continuing to get feedback on BHHA from scientists, managers, and potential users in preparation for its release.
- **Climate Change (CC)**
  - Municipal Vulnerability Preparedness: The RC attended Hull's Community Resilience Building workshop on February 9 to identify climate-related hazards, current strengths and weaknesses, and ways to increase resilience. RC is following up with conservation administrator on funding options.
  - Greater Boston Research Advisory Group (GBRAG): The RC joined the steering committee, provided feedback on the stakeholder survey, and helped publicize and disseminate the survey and regional meetings to solicit feedback on climate change impacts and concerns for the Greater Boston Area.
- **Education and outreach (E&O)**
  - Boston Harbor Ecosystem Network: 1) held steering committee meetings on January 16 and March 20; 2) finalized meeting schedule and speaker list for BHEN meeting on May 15 – the theme is water quality and features speakers from Mystic River Watershed Association, Charles River Water Association, Charles River Conservancy, and Neponset River Watershed Association followed by a panel discussion; 3) decided on three field trips for 2019 and started planning
  - Helped organize and attended two science cafés, one on salt marshes at Gulu Gulu Café in Salem, MA (March 25) and one on ocean visualizations at Down The Road Beer Co. in Everett, MA (April 9)
  - Helped organize and participated in two High School Marine Science Symposium events in Boston, MA (March 7) and Salem, MA (March 13) that reached 415 participants from 25+ schools in the region
  - RC attended Zosterapalooza (regional meeting in Boston, MA at EPA on science, management, and conservation of eelgrass) and presented local seagrass research (March 27)
  - Released a new series of online educational resources for science teachers in collaboration with NU Marine Science Center and Ocean Genome Legacy including the Boston Harbor Habitats Poster Series – educational posters of local habitats developed as part of the Boston Harbor Habitat Atlas
  - Presentations: 1) presented on teamwork in marine biology at Bissell Grogan Humanities Symposium for high school students at Brimmer and May School in Newton, MA (January 14); 2) discussed research in coastal systems (marshes, dunes, and seagrasses) with visitors to NU Marine Science Center as part of Cambridge Science Festival (April 15); 3) designed and led activity on seagrass genetic diversity and wasting disease at Evolution in Changing Seas Career Workshop for Girls for high school girls from local communities (April 16&17)

### **South Shore (Sara Grady, Regional Coordinator)**

- **Gather data on conditions and trends (DATA)**
  - Eelgrass loss in Duxbury/Kingston/Plymouth: The RC participated in planning and scoping for the 2019 eelgrass monitoring in Duxbury-Kingston-Plymouth Bays in coordination with MassBays and Division of Marine Fisheries.
  - Anadromous fish run monitoring: In October 2018, the RC organized, QA/QC, analyzed, and submitted 2018 herring data
  - Horseshoe Crab Monitoring: Attended Horseshoe Crab Science Technical Committee meeting and planned 2019 surveys



- DKP Water Quality Monitoring: The RC started development of a volunteer water quality monitoring effort in Duxbury-Kingston-Plymouth Bays
- **Climate Change (CC)**
  - Municipal Vulnerability Planning: The RC attended the town of Kingston's MVP meetings and wrote a support letter for Norwell's MVP application
- **Reduce stormwater discharge (SW)**
  - Riverwatch: The RC wrote and proposal and received grant funding for MassDEP Water Quality Monitoring grant to expand Riverwatch temporally and spatially
- **Barriers to streamflow and tidal flushing (SF)**
  - River Herring Monitoring: The RC (1) attended the River Herring Network Steering Committee meeting and planned 2019 herring counts; (2) wrote research proposal for herring counts at Tidmarsh Wildlife Sanctuary; (3) installed a camera at the South River fish ladder
  - Stream flow: The RC developed a MSEXcel tool to help the Town of Scituate manage and predict streamflow releases and water bans
  - Dams: The RC (1) attended NOI hearings for Peterson Pond Dam (Third Herring Brook) removal and submitted NOAA grant application for final design and construction; (2) reviewed bids for Veterans Park Dam (South River) design and permitting.
  - The RC supported application from Scituate for culvert grant
- **Education and outreach (E&O)**
  - Coordinated South Shore Climate Network – May 9, 2019 (Norwell)
  - Attended MAPC South Shore Coalition climate meeting and open house
  - Collaboration and Partnerships with Networks: (1) Held monthly South Shore breakfasts; (2) Attended monthly Watershed Action Alliance meetings and helped plan and moderated 2019 conference; (3) Helped plan Spring 2019 NEERS meeting
  - Multisector Input to Decisionmaking: (1) Planned upcoming podcast episodes; (2) Filmed a short video on dunes and barrier beaches for Watershed Stewardship Curriculum; (3) \* Worked with Mass Audubon on NOAA BWET project to provide professional development to teachers
- Other
  - Hired Citizen Science Volunteer coordinator
  - Interviewed for NSRWA "Women of the Watershed"

## **Cape Cod (Jo Ann Muramoto, Regional Coordinator)**

- **Gather data on conditions and trends (DATA)**
  - State of the Waters: Cape Cod: The RC compared Eutrophic Index scores for coastal waters from the Buzzards Bay Coalition, Town of Chatham, and Center for Coastal Studies and found they were consistent and used the same endpoints. Data collection included two major databases (e.g., Center for Coastal Studies coastal monitoring and PALS ponds databases) and data from Chatham and Eastham. The CCS data include 16 estuaries on Cape Cod Bay and the Canal, and 22 estuaries elsewhere on Cape Cod. Work on calculating scores will begin in earnest. Development of a website and interactive map has begun.
  - Diadromous fish run monitoring: : The 2019 volunteer herring count season is underway at 20 runs throughout Cape Cod, including 8 on Cape Cod Bay. Electronic counters are also being used at several runs enabling comparison between visual and electronic counts. Volunteer counts are proving useful in monitoring completed restoration projects and identifying the need for follow-up fine-tuning.
  - Cyanobacteria monitoring: A public workshop was held on 4/5/19 covering pond water quality, reasons to monitor cyanobacteria, monitoring methods, and APCC's plans to expand monitoring throughout the Cape. Monitoring will begin in May and continue through October. An intern has

- been hired to help monitor the 10-20 ponds planned for this summer. Towns have shown interest. As sharks affect beach visitation, public use of ponds may increase.
- EPA SNEP: Cape Cod Monitoring Project: The Cape Cod Commission obtained an EPA SNEP grant to create a Cape-wide database of water quality data for the purpose of consolidating and making data available for use. Partners include APCC, CCS, WBNERR, WHOI, and others. APCC will develop a QAPP for the PALS ponds monitoring program, help to collect data to fill gaps, and provide report cards from the State of the Waters project which represents an example of one use for the database.
  - **Reduce stormwater discharge (SW)**
    - 208 Water Quality Plan for Cape Cod to include stormwater BMPS: The Cape Cod Commission formed a subcommittee to recommend stormwater BMPs to include in the 208 Water Quality Plan Technologies Matrix. Members include APCC/MassBays, DEP, EPA, Horsley Witten Group, Cape Cod Cooperative Extension, Buzzards Bay NEP, and The Nature Conservancy. The focus of the 208 Plan and Technologies Matrix is nitrogen removal or reduction to improve coastal water quality. In practice, bacteria, sediment and phosphorus are also important pollutants.
  - **Climate change (CC)**
    - Model bylaw for climate change adaptation: APCC met with the Wellfleet Conservation Commission to hear their comments on the draft bylaw, and the Commission wants to move forward with finalizing the bylaw and working on developing regulations. The proposed Boston ordinance which served as a model for our Wellfleet bylaw had its first hearing.
  - **Education and outreach (E&O)**
    - The RC provided the following outreach: 1) participated in a panel discussion on the effects of sea level rise on the Cape's groundwater at a climate change forum in Wellfleet (4/4/19); 2) Presentations on herring monitoring at training sessions in Sandwich, Dennis, Yarmouth, Brewster, Eastham, Wellfleet, Harwich, Mashpee, and Barnstable; 3) Moderated a panel discussion at the Cyanobacteria Workshop (4/5/19); and 4) Presentation on the Cape Cod Stormwater Managers Group to the Buzzards Bay Action Committee (2/28/19).
  - **Other**
    - Local governance committee: The Barnstable County Coastal Resources Committee (CRC) met on 3/26/19 for updates on major projects (e.g., Cape Cod Water Resources Restoration Project, Cape Cod Stormwater Managers Group, MassBays) and updates from towns on their coastal issues and needs. The County dredge program, which is important for maintaining safe navigation and water quality in embayments, is having problems. Twelve towns are working on MVP planning and/or action grant projects.

## Staff Scientist

- **Master QAPP:** MassBays submitted the draft Master QAPP to EPA and DEP for review and comments. A meeting to discuss is schedule for May 3. The contents of this document will be the main part of the materials that will form the basis of the online app that MassBays and ERG are developing with Exchange Network grant funding.
- **Science and Technical Advisory Committee:** The next STAC meeting is scheduled for Monday, April 29 from 10 AM to 12 PM at EPA Region 1. STAC will discuss and provide expert feedback on the findings of the Water Transport Studies in embayments and their integration into the embayment analysis work being conducted by Northeastern University.
- **Research projects** – (1) Water Residence Time: WHG submitted the draft final report and results for the water transport study. WHG is currently addressing comments and edits and is due to provide the final report together with all data and results for current and future scenarios as well as GIS shapefiles in the next couple of weeks. (2) Coastal Acidification Project: Testing of the system is

underway and almost completed with a tentative deployment date for 5/20 or 5/21. Testing was conducted and technical issues have been resolved. Some of the support system has been installed and ice-related issues have also been addressed over the winter. MassBays and UMass Boston will be scoping out the location for a system funded by MIT Sea Grant (NOAA) that will be deployed in Barnstable Harbor in the next year or so.

- **Biological Condition Gradient:** Staff Scientist continuing to work with EPA on development of a BCG framework of MassBays. MassBays contracted with Urban Harbors Institute to conduct a research and assessment of historical data pertaining to parameters used in the EDA 2.0 that will help MassBays develop target conditions and be used to develop and implement the BCG. Work is underway.
- **Eelgrass mapping in DKP:** (1) MassBays staff scientist and South Shore RC together with DMF continued to work on the case of the loss of eelgrass in DKP. Final report of 2018 study was submitted to EPA. (2) The team is currently working to continue monitoring this summer, repeating the eelgrass blitz and conducting water quality monitoring with SeaTrac. Plans are underway.
- **Water Quality Monitoring (Real-time/Continuous):** MassBays staff scientist and Lower North Shore RC have been working with CZM (Todd Callaghan), Salem State University (Brad Hubeny), SeaTrac, and ACASAK (Ben Wetherill) to develop a plan to conduct continuous water quality monitoring in Salem Sound to analyze conditions near wastewater outfalls and the mouth of the Danvers River. A proposal submitted to EPA in March was accepted and funding provided will enable monitoring to be conducted starting this summer.

### **Executive Director**

- **Program management:** Helped to bring the new Metro Boston RC up to speed, assessing status of workplan tasks and expectations for completing each.
- **Collaborations & partnerships:** 1) Joined a Coast Advisory Group for the Trustees, to provide input on a strategy for their coastal properties and how their efforts might be employed more broadly. 2) met with outgoing DEP program leader (Kim Groff) to plan for transition of joint projects; 3) participated in the quarterly NERACOOS Board conference call; 4) contributed materials about MassBays to be included in DEP's Nonpoint Source Plan update, documenting our contributions to the program; 5) Attended Watershed Action Alliance (South Shore) conference March 29<sup>th</sup>.
- **Association of National Estuary Programs:** Served on planning committee and presented at the Spring NEP-EPA meeting in Washington DC. Facilitated the Association Board meeting and subsequent Board conference calls.
- **Comprehensive Conservation and Management Plan:** Submitted final review version to EPA.
- **Citizen science capacity-building:** 1) Led a symposium at the biennial Citizen Science Association Conference in Raleigh NC to encourage use of quality assurance planning for community-driven monitoring; 2) worked with Massachusetts Rivers Alliance to scope a beta testing workshop for AquaQAPP/Exchange Network grant project; 3) participated in weekly check-in calls to advance AquaQAPP development; 4) attended EPA QAPP guidance workshop to learn about the new materials developed for citizen monitoring program coordinators.
- **Beach habitat assessment project:** Scoped a capstone project for University of Maryland University College graduate students to be provided as an option for the summer session.