



## Management Committee Meeting Summary

April 26, 2017

8:30 am – 2:00 pm

Northeastern University Marine Science Center

430 Nahant Road, Nahant MA

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### Attendees:

#### *Management Committee*

Robert Buchsbaum (Salem Sound Coastwatch) [SSCW]  
Bruce Carlisle (Office of Coastal Zone Management [CZM])  
Joe Cosgrove (Merrimack Valley Planning Commission [MVPC])  
Mark Fine (Metropolitan Area Planning Council [MAPC])  
Andrew Gottlieb (Association to Preserve Cape Cod [APCC])  
Jon Kachmar, Chair (The Nature Conservancy [TNC])  
Dan Codiga (Massachusetts Water Resources Authority [MWRA])  
Regina Lyons (U.S. Environmental Protection Agency [EPA])  
Rebecca Newhall (National Oceanic and Atmospheric Administration [NOAA])  
Julie Simpson (MIT Sea Grant)  
Kristin Uiterwyk (Urban Harbors Institute [UHI])  
Colin Van Dyke (Anderson & Krieger)  
Samantha Woods (North and South Rivers Watershed Association [NSRWA])

#### *Coordinators and Staff*

Pam DiBona (MassBays, Executive Director)  
Prassede Vella (MassBays, Staff Scientist)  
Margherita Pryor (EPA Region 1, Coordinator)  
Sara Grady (NSRWA, South Shore Regional Coordinator)  
Carole McCauley (NUMSC, 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)

#### *Guests*

Alison Branco (Peconic Bay National Estuary Program)  
Nancy Laurson (U.S. Environmental Protection Agency [EPA])

### Welcome and Introductions

Chair Jon Kachmar opened the meeting and reviewed the agenda, noting that the election of officers (Chair and Vice Chair) is deferred to a later date. Jon introduced Andrew Gottlieb, the newly-appointed Executive Director of APCC as the new representative of APCC to the Management Committee. Prior to introductions around the room, Jon welcomed Nancy Laurson and Alison Branco (Executive Director, Peconic NEP) who, along with Margherita Pryor, are serving as the Program Evaluation Team for MassBays. This Management Committee meeting served as a component of the Program Evaluation site visit which occurs every 5 years.

### MassBays Highlights, 2012 to 2016

The meeting began with presentations by the Regional Coordinators, snapshots of their work with local communities and to fulfill the goals of §320 of the Clean Water Act and MassBays' evolving Comprehensive Conservation and Management Plan. Much of this work was described in the program

evaluation package submitted to EPA in March 2017. The presentations were intended to highlighting the uniqueness of each region while emphasizing the cross-regional commonalities that provide opportunities for close collaboration among regional coordinators and the role of MassBays in bringing these together to address common issues. Below is a brief description of each presentation.

### ***Achieving restoration by engaging stakeholders in ecosystem monitoring***

*Jo Ann Muramoto, Cape Cod Regional Coordinator at Association to Preserve Cape Cod*

*Sara Grady, South Shore Regional Coordinator at North and South Rivers Watershed Association*

Jo Ann described how an ecological monitoring program can help build partnerships to undertake restoration and protection efforts, using APCC's volunteer herring count program as an example. This program, developed in close coordination with natural resource directors and municipal herring wardens, served to provide herring population data to managers to better assess, manage, and protect river herring. Example of successful restoration projects include: Upper Shawme Pond fish ladder (>5000 fish in 2012; 500 fish/day in 2016) and Stony Brook (Brewster) where culvert replacement restored access to 386 acres of spawning habitat. The success of APCC's efforts in monitoring, grant-writing and project development of successful restoration projects funded by ARRA has built trust and collaboration among groups and communities. This allowed APCC to form the Cape Cod Restoration Coordination Center to help communities plan and implement successful ecological restoration projects. So far, meetings with towns have resulted in identifying over 170 potential restoration projects of all types.

Sara described the holistic approach to a successful passage restoration of herring habitat in Third Herring Brook, a tributary to the North River. Close cooperation among several federal, state, and especially local partners, resulted in the removal of two out of four dams since 2014. Volunteers also monitored how streams are responding to changes in land use, water withdrawals, dams and precipitation (data available at [RIFLS.org](http://RIFLS.org)). Good management practices and close collaboration between the NSRWA and communities resulted in a decline in water withdrawal from First and Third Herring brooks. In Norwell, the top 1% of the population utilizes about 2,300 GPD, the next 10% only 990 GPD. The top 1% is made up mainly of industries and nursing homes. This year's drought proved to be a test of how the system will react – town residents polling results showed 80% think restricting water withdrawal is a good idea. Ultimately, engaging volunteers who witness the issue first hand resulted in spreading the knowledge while stakeholders gained a better understanding of the issue and took ownership of the issue.

#### ***Discussion***

During the discussion Jo Ann described the role of the municipal herring wardens. Under Commonwealth law, the Division of Marine Fisheries often delegates authority for river herring management of local herring runs to local communities and the town manager will then appoint a volunteer or hire a herring warden to maintain the run. Committee members discussed possible impacts of the 2016 drought - with water levels in runs at record low, fish on the southern coast of the Cape could not access spawning grounds, causing municipalities to place sand bags to raise water levels and allow juveniles to move out in the fall. In response to questions, Sara explained there was initially significant resistance to remove the first dam and it took years of effort to engage municipalities and the right stakeholders. In the end, people gained a better understanding of the benefits that dam removal can have on the ecosystem as well as the economic wellbeing of surrounding communities, when done right, and within two years a second dam was removed.

### ***Stakeholder Engagement in Invasive Vegetation Management in the Great Marsh***

*Peter Phippen, Upper North Shore Regional Coordinator at Merrimack Valley Planning Commission*

Peter described the ongoing efforts to manage and control invasive species from the Great Marsh. *Phragmites australis* has taken over substantial acreage in the marsh, replacing native marsh communities and putting the marsh at risk due to loss of resilience. Over the years, the Great Marsh Revitalization Task Force, which includes stakeholders from various backgrounds, was convened to address this problem. Close collaboration resulted in procurement of funding, most recently from the Hurricane Sandy grant, to continue efforts to eradicate *Phragmites*, and at the same time provided research opportunities to learn more about its biology and the best control methods. These efforts are

finally showing results: reduction in stand size and revegetation with native salt marsh plants (e.g. *Spartina* spp., *Juncus* spp.) has been recorded in various locations.

The Task Force is exploring how to prevent *Phragmites* from coming back in areas where low salinity prevails, such as in the area where the Plum Island River flows into the Merrimack River. Meanwhile, additional research funded by the Sandy grant is underway to better understand sediment and salinity effects on the marsh complex, identify sediment transport and erosional forces on barrier beaches, identify sediment deposition patterns into the marsh and tidal creeks, and define marsh salinity dynamics to reduce suitable habitat for invasive plant species (*Phragmites*, perennial pepperweed). The ultimate goal is to provide a variety of scenarios and recommendations for long-term ecosystem improvements of sediment transport and salinity concentration changes through hydrodynamic flow alterations.

#### *Discussion*

In response to questions, Peter explained that there is increase in the use of drone technology to monitor *Phragmites* in Great Marsh. Drones are pre-programmed for area, height, and elevation, and can go up to 1000 ft to monitor high stands and get better areal coverage.

#### ***Supporting municipal stakeholders to prompt action coastal resilience***

*Barbara Warren, Lower North Shore Regional Coordinator*

Barbara described Salem Sound Coastwatch as a regional organization working with emphasis on partnerships and is therefore the perfect platform for implementation of the goals of MassBays' CCMP. It took several years for SSCW to bring together municipalities and stakeholders to recognize the reality of sea level rise as a concern - in 2014 they finally came together to support development of an adaptation plan. Ultimately, funding made available through the coastal resilience grants enabled coastal communities to start addressing these concerns and taking action to adapt to SLR and explore opportunities for coastal resilience.

#### *Discussion*

The Committee discussed the key to engaging stakeholders to address regional issues. Some members recognized the challenges municipalities face when resources are limited, thereby ending up focusing on short-term priorities. Nonprofit organizations can help as they have more freedom in voicing issues and bringing issues to bear. Committee members appreciated the role of nonprofit organizations such as SSCW to provide technical support to communities lacking resources such as dedicated expert staff to develop and implement the right project at the right time. MassBays then serves as the body that brings local work and accomplishments to the MassBays level e.g. through SSCW, Manchester took advantage of the water utility program and MassBays made possible water quality assistance offered by EPA to towns implementing this program. Nancy emphasized the importance of branding and sharing examples and lessons learnt. The regional coordinators all indicated they have systems in place to showcase success stories when engaging towns, either through the Local Governance Committee or through dedicated presentations or publications.

#### ***Leveraging partnerships and resources for CCMP implementation***

*Carole McCauley, Metro Boston Regional Coordinator at Northeastern University's Marine Science Center*

Carole described the efforts underway in the Metro Boston region to leverage social capital. Because the regional coordinator is hosted by an academic institution, this provides unique opportunities for collaboration between academia and local stakeholders. Results of a social network analysis based on a survey of 56 organisations across the Metro Boston region revealed the nature and strength of partnerships including municipalities, nonprofits, education, state and federal agencies, etc. Carole explained that the focus of the Boston Harbor Habitat Coalition originally established to develop an atlas of the ecosystems in this region, is shifting to become the Boston Harbor Ecosystems Network and expand its role to cover other regional interests and concerns as the Local Governance Committee.

## **Program Evaluation Overview**

*Nancy Laurson, EPA Headquarters*

*Alison Branco, Peconic Bay National Estuary Program*

Nancy thanked MassBays staff and regional coordinators (Upper and Lower North Shores) for the hosting an exciting day-long tour of some of the work ongoing within the regions to implement the MassBays CCMP and the requirements of the CWA. Nancy then proceeded to describe the purpose of the program evaluation of the NEP: 1) to ensure progress in CCMP implementation, justify continued EPA support, and to emphasize the local and national value added by NEPs to environmental management; 2) to highlight each Program's unique environmental strengths, and challenges, and to identify areas where EPA can help provide resources to meet needs or enhance performance; and 3) to confirm EPA's continued support for the NEP, and ensure host and stakeholders' commitment to the program. EPA uses information gathered during the program evaluation process to highlight research findings, success stories and achievements for Congressional briefings, meetings with partners, etc., to ensure connection with other EPA offices and programs, and to share products, lessons, and approaches across EPA and other NEPs.

Alison highlighted the strengths of the program. She indicated that regional service providers are at the core of the success of this program and praised their efforts to bring in their communities with whom they work closely and have established a deep-seated trust. Their non-governmental status also allows them the opportunity for some flexibility to get the work done. She pointed out that such a large and diverse system presents many management challenges and setting targets is essential for success of the program. Therefore, coordinating with the regional coordinators to develop a work plan is a great asset.

Nancy proceeded to describe preliminary findings of the team, which will be compiled into a formal letter to MassBays this summer.

*Comprehensive Conservation and Management Plan (CCMP):* Nancy expressed appreciation of the significant progress in the CCMP revision in spite of the many challenges including new EPA guidance published in the middle of the process. She highlighted the importance of linking the revised CCMP with the work plan and working with stakeholders to make it region specific. I

*Communications:* Nancy pointed out that in some cases it was hard to find a direct link to the MassBays website from the individual regional service provider websites. She also strongly suggested that the massbays.org website include links to projects to highlight accomplishments and environmental results. This is very important since EPA often uses these links to find material for reporting to various audiences across all levels. She recognized that the lack of communications staff is proving to be a challenge and a strong communications plan is an essential part of the CCMP to communicate progress to external stakeholders.

*Stakeholder engagement:* Nancy highlighted progress in bolstering MassBays' governance and engagement, including reinvigorating the Science and Technical Advisory Subcommittee (STAC) with members bringing in a broad range of expertise to the table; establishing a citizen science coordinators' network; and strong Management Committee leadership and membership bringing in resources to move the program forward. The set up with regional coordinators responding to local needs and central staff taking the local interests to develop area wide studies is a very successful model. In addition, the longevity of the staff and regional service providers, as well as hosting by CZM show a great commitment to the program which contributes to its success.

Nancy invited the two host agencies (EPA Region 1 and Coastal Zone Management) to insert their thoughts regarding progress over the previous 5 years.

Regina Lyons remarked on the successful work accomplished since the last program evaluation in spite of challenges including changes in Director (2013) and EPA coordinator (2016), loss of key staff (outreach coordinator, 2015), and new guidance released by EPA HQ in 2016 that requires substantial revision of

MassBays' 2015 Public Review Draft CCMP. She indicated her appreciation of the ongoing efforts on all parts that make this program a success.

Bruce Carlisle described the value of having MassBays within CZM. Together, CZM and MassBays are able to leverage support from the Secretary (EEA) and the Governor's Office and use the partnerships and collaborations they develop to achieve shared goals and objectives and move forward.

Several management committee members expressed appreciation of the role MassBays plays in the state and larger region. Others noted that their own organizations gain from engagement in the strong collaboration supported by MassBays. Jon Kachmar expressed appreciation for the level of investment made by CZM and the state through the coastal resilience grants – this money goes to communities, making it possible to get things done at the municipal level, with technical assistance from MassBays RCs. This significant resource will pay off through increased resilience to climate change. Becca Newhall pointed out that CZM also played a significant role in making it possible for MassBays to apply for, and receive, funds under NOAA's Project of Special Merit grant program to conduct a study on tide gates in Massachusetts and these types of coordinating efforts connect NOAA with MassBays. Such joint efforts produce resources that can be shared – Becca described how the tide gates project served as a springboard for a region wide NROC meeting on how to effectively manage tidal restrictions in the northeast.

Robert Buchsbaum also highlighted the expertise of regional coordinators that bring their unique perspective and skills to bear in environmental management, such as the Great Marsh initiative, a coalition made up of dedicated people/organizations. They were responsible for putting together a proposal for funding from Hurricane Sandy grant and the successful outcome which lead into so much important research and on the ground management work. Joe Cosgrove also appreciated the work of the regional coordinators in educating the public and bringing everyone to the table. The Great Marsh coalition is a great example of bringing civic leadership to the table and enabling dialogue that makes all this work possible.

Nancy concluded by stating that the EPA PE team will recommend a "pass" for the MassBays National Estuary Program (the PE is on a pass-fail ranking). She reiterated EPA's commitment to the NEP program and moving ahead with projects. She indicated there is funding for the next two years and hopefully beyond. Demonstrating the value of the NEPs helps increase commitment by lawmakers.

### **Staff updates**

While the RCs did not present the following at the meeting, their quarterly reports for the period February through April 2017 are shared below, organized according to the seven action areas of the 2016-2017 [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)

### **Gathering data on conditions and trends [DATA]**

#### Upper North Shore

- Marsh Edge Erosion (MEE) Assessment: Data were collected for the 22 sites in the Great Marsh. Pre-winter and post-winter (erosional period) data, currently being collected, will be compared to determine rates of loss. Findings will be reported after all data have been analyzed.

#### Lower North Shore

- Salem Harbor Plankton and Nutrient Study: (1) Funding was provided by the SSU Seed Grant for monitoring during summer 2017; SSCW partners with the City of Salem on this effort.

- Lower North Shore Coastal Acidification Citizen Monitoring: The *Acidic Waters* citizen science program will be underway by 6/30.
- Three-Year Monitoring Plan: Working closely with DMF, SSCW hosted an eelgrass stakeholders meeting. The meeting brought together representative from key agencies, academia and local communities. Input at the ensuing discussion provided will inform data interpretation and recommendations for management actions.

#### Metro Boston

- Boston Harbor Habitat Atlas: RC presented a poster at the Boston Harbor & Islands Science Symposium (4/12).

#### South Shore

- Anadromous Fish: RC developed plans to install a fish ladder camera and discussed with the Cape Cod RC on co-presenting data. The RC conducted herring count training and attended Pembroke Herring Commission meeting.
- Shellfish Restoration: The RC is developing a student project on shellfish restoration in 2017 and presented on project at NEERS.
- Coastal Acidification monitoring: RC met with project partners in Duxbury to discuss installation of a coastal observation monitoring system being developed by UMass Boston. Project proposed by MassBays was funded by EPA and will form part of a growing nationwide network of acidification monitoring systems.
- Vegetation response to sea level rise: (1) The RC interpreted data from 2014 study and clarified causes of salt marsh loss to town officials; the RC also discussed survey methods with experts, looked at aerial photos of marsh; (2) A dock owner survey project is under development.
- Green crabs and saltmarsh erosion: Crab traps were deployed and the survey of green crab burrows was completed. Green crab and burrow data were analyzed and some preliminary [findings](#) are available.

#### Cape Cod

- River herring monitoring: RC completed training of volunteer herring count groups in towns, and volunteers began counting between late March and mid-April.
- Monitoring juvenile herring: With assistance from an intern, the RC will develop a research plan to monitor juvenile river herring using video counting methods.

### **Reducing stormwater discharge columns and pollutant loadings [SW]**

#### Lower North Shore

- Greenscapes: 1146 students, 44 teachers and 103 adult volunteers participated in “Keep Water Clean”.
- Low-Impact Development: (1) RC discussed how best to conduct LID outreach with developers and Planning Boards of each Greenscapes municipality; (2) Adopted Commercial Street rain gardens: cleaning, planting and outreach. 30+ employees of Cell Signaling coming to work on June 20.
- Adopt-a-Beach program: (1) RC held two Adopt a Beach trainings for 26 new beachkeepers; one beach survey and conducted clean ups at 12 beaches; publicizing Salem's single-use plastic bag reduction ordinance; Talking Trash for Clean Oceans high school interns have begun a similar call for an ordinance in Beverly.

#### South Shore

- Regional stormwater management and outreach: (1) The RC has discussed MassDOT outfall bacteria with MassDEP; (2) RC is also planning the WaterSmart program and the Riverwatch monitoring.

#### Cape Cod

- 604b proposal for Cape Cod Stormwater Coalition: The RC provided the Cape Cod Stormwater Coalition with support to write a proposal to assist towns meet MS4 needs by conducting a needs

assessment, cost assessments, develop tools and recommendations to form a cost-effective and environmentally effective stormwater coalition.

- Restoration and stormwater projects: The RCC has identified and prioritized almost 170 projects for restoration and is currently assisting some towns in developing proposals for funding for stormwater restoration projects.

### **Reducing contamination from wastewater [WW]**

Lower North Shore

- Clean Beaches and Streams Program: The [final report](#) is now available.

### **Adapting to/mitigating impacts of climate change [CC]**

Upper North Shore

- Eelgrass restoration: Eelgrass habitat biodiversity data collection continued in Essex Bay. A poster presentation was provided at the annual eelgrass symposium hosted by EPA on 3/29.
- Hydrogeologic modeling: The Hydrodynamic Modeling Oversight Committee identified two alternatives for regular and high flow (~2-year return period) scenarios in the Merrimack River to be modeled by Woods Hole Group to address salinity concerns in the northern Plum Island Sound. A third scenario will be designed based on the response of the Great Marsh Revitalization Task Force to the results from the first alternatives analysis.

Lower North Shore

- Coastal resilience: (1) RC encouraged four communities to apply for the Municipal Vulnerability Preparedness grant funding and currently assisting Marblehead with a proposal. RC is also working closely with City of Salem on a continuing CZM CPR Winter Island grant and a CZM Coastal Resilience grant for Collins Cove. RC is currently assisting the Town of Manchester with a project to design an infrastructure retrofit to address stormwater entering Sawmill Brook, an important rainbow smelt spawning habitat currently impacted by runoff pollution. The retrofit will also address stormwater flow and backups in the drainage system due to flooding, which is predicted to increase with climate change. Funding was awarded in 12/2016 (2) RC is working on a MEPA ENF for the living shoreline at Collins Cove and developing a ESRI Story Map. Draft will be submitted to CZM by 6/1 and a public presentation will be held 6/8 in Salem; (3) The RC was a presenter at Green Infrastructure for Coastal Resilience Training hosted NOAA Office for Coastal Management in Nahant, MA.

### **Removing barriers to streamflow and tidal flushing [SF]**

South Shore

- Dam Removal & Stream Continuity: (1) RC provided assistance for monitoring Bound Brook; (2) Re Third Herring Brook, the RC fixed vegetation survey locations, checked on stream channel development, and assisted with the NOAA grant administration; (3) The RC reflagged quadrats at Mill Pond, conducted PIT tagging project coordination, and coordinated Tack Factory celebration event; (4) The RC helped developed a grant proposal for Temple Street Dam (South River) and coordinated with Marshfield on South River management; (5) The RC also assisted Plymouth with a support letter for Holmes Dam removal (Town Brook).
- Streamflow Restoration: The RC worked on First Herring Brook SWMI grant tasks and attended project team meetings and Scituate water use analysis.

Cape Cod

- Restoration projects: The RCC enabled towns to identify potential stormwater/restoration projects for proposals.
- Thin-Layer-Deposition for salt marsh resilience: RC participated in a NERRs survey of potential end-users (APCC's RCC is a potential end-user) for a NERRs pilot test to evaluate TLD for salt marsh restoration climate resilience, provided feedback on a NERRs proposal to NOAA and agreed to serve on an advisory committee if the proposal is funded. A summer intern will assist in identifying potential salt marsh restoration sites that may benefit from TLD.

## Managing invasive species [IS]

### Upper North Shore

- Green Crab Population monitoring: All 24 sites (including 11 in Plum Island Sound and 13 in Essex Bay) we sampled in April. Additional trapping was conducted to provide green crabs for the [Green Crab Research and Development Culinary Project](#) funded by a DMF marketing grant.
- Great Marsh *Phragmites* Monitoring and Control: 2016 treatment maps submitted
- Plum Island Sound *Phragmites*/Pepperweed management: Map of areas to be treated by MassBays in Field season 2017
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- Great Marsh Pepperweed Monitoring and Control: The 2016 data analysis is being wrapped up and plans are underway for the 2017 monitoring and control. The number of sites and location will depend on funding from DCR. The pink outlines in the example figure represent targeted areas around the lower Merrimack (2017).



### Lower North Shore

- Pepperweed eradication: (1) Pepperweed pulling will commence in June 2017.
- Coastal Habitat Invasives Species monitoring: (1) 2017 season will begin in May; (2) SSCW will attend the CZM MIMIC coordinators' meeting 5/24.

## Conducting education and outreach [E&O]

### Upper North Shore

- Great Marsh Sea Level Rise Adaptation workshop: RC participated in coordination and planning meetings for the fall 2017 event.
- Green Crab: A green crab workshop was conducted in early April in Ipswich and a green crab/clam festival is held in Ipswich in May. Both events served to share information about the ecology of the green crab as well as increase public awareness of green crab as a food resource.

### Lower North Shore

- The RC provided technical assistance to municipalities including: (1) [Greenscapes](#): developed a [letter](#) to municipalities for FY18 enrollment and continued with website development; (2) stormwater: completed and distributed the [MS4 rack card](#); conducted outreach and education on MS4 NOI and targets planning for FY18; (3) resiliency: participate on the Beverly Coastal Resiliency Plan Advisory Team (FEMA and CZM), the Manchester Coastal Resilience Advisory Group - Prioritization of Future Actions (FEMA HMP), Winter Island Stormwater Management Design Team (City of Salem, CZM CPR grant), and [Collins Cove Living Shoreline Project for the City of Salem](#).

### Metro Boston

- Boston Harbor Coalition: Meeting on 5/11 attended by 29 people, hosted at MIT Sea Grant; Topics presented at BHHC meeting (fish passage, Rumney Marsh restoration, regional food distribution center); joined steering committee for Boston Harbor protection project (meeting on 4/13), Winthrop salt marsh interpretation (5/4)
- Establishing a Municipal Working Group: Met with 11 out of 12 municipalities (Revere is not



- communicating); verbal feedback on a phone-based municipal working group is positive
- Events: (1) RC hosted Green Infrastructure workshop on 3/30 that engaged reps from 5 Metro Boston municipalities and 3 NGOs, as well as many state/feds we work with; (2) RC hosted Boston High School Marine Science Symposium on 3/9 engaged 275 youth (89 metro Boston youth from 3 schools (Boston Latin Academy, O'Bryant HS, Urban Science Academy), 39 of which were supported on scholarships); 18 teams of presenters included 5 organizations that regularly participate in the Boston Harbor Habitat Coalition (MIT Sea Grant, NOAA, Northeastern, MA Division of Marine Fisheries, New England Aquarium); (3) RC helped coordinate and host the Boston Harbor & Islands Science Symposium on April 11-12; engaged 196 people, over 50 presenters (keynote, science café, concurrent, posters, panels, lightning talks)
- Social Network Analysis: First round of survey completed in Feb/March, would like to continue to target groups that did not participate
- Meetings with communities: RC met with 11 out of 12 metro Boston municipalities; Byrnes/UMB (1/12), MyRWA (2/7), Mystic River Watershed Initiative (1/26), MAPC Climate Task Force (1/31), Mystic River initiative steering committee (3/1), Chang/Rep. Capuano's office (3/7), USACE/Rumney (3/13), DER (3/17); Meetings with various stakeholders re: Hyde Park stretch of Lower Neponset and WQ issues; Assembled matrix of municipalities, grants they've received;

#### South Shore

- The RC provided estuarine stewardship and education including: assisted Hanover middle school students in presenting to ConComm, planned dune grass planting event in Scituate, prepared presentation on herring to Marshfield Boy Scouts, taught about estuaries at STEM outreach event, held poster-making trainings to prepare for CSCR State of the Harbor forum
- The RC shared the successful [Tack Factory dam removal](#): wrote newsletter article on Tack Factory removal, newspaper interview about Tack Factory project,

#### Cape Cod

- Ponds presentations: Most freshwater ponds on the Cape are groundwater-fed and hydrologically linked to estuaries via streams and groundwater discharge. Following up on the 4<sup>th</sup> Cape Coastal Conference session on ponds, and to meet wide demand for information on how to improve pond water quality and habitat, APCC is providing a series of workshops on ponds, beginning with basic pond hydrology and habitat and proceeding to protection and restoration methods.
- APCC hired three summer interns: one full-time and two part-time interns. Intern projects will include salt marsh monitoring, mapping natural communities, testing HAB monitoring methods, video monitoring of juvenile herring, outreach and other activities.

### **Staff Updates: Central Staff**

#### **Executive Director**

##### Meetings and conferences

- Presented a Summary of Findings of the Massachusetts Tide Gate Inventory at the NROC Workshop on Marsh Migration (Gloucester, April 4-5). (ppt download: <http://bit.ly/2stmCvV>)
- Attended South Shore "Solutions for Healthy Waters" Conference (Hanson, March 16).

##### Partnerships and Collaboration

- Participated in Northeast Regional Association of Coastal and Ocean Observing Systems' (NERACOOOS') Board meeting (conference call, March 6).
- Provided meeting design advice and onsite facilitation for DEP's Watershed Planning Priorities workshop (Worcester, 3/8).
- Served on the planning committee for the Boston Harbor and Islands Science Symposium, led an onsite activity to introduce students and other newcomers to the community of scientists working in the Harbor and Islands at the event (Boston, 4/12).
- Participated in conference calls with Association of National Estuary Program colleagues and EPA headquarters (2/7, 2/14).

## Program Management

- Convened Regional Coordinators to discuss FFY2017 workplans (Boston, 2/28).
- Submitted Program Evaluation Package to EPA (March 3), participated in planning calls for site visit.

## Staff Scientist

### EDA 2.0

- Comments by STAC on the draft report and updated maps provided by Geosyntec have been addressed by the consultant. Final report and maps will be shared with the Northeastern team who will switch out the EDA1.0 maps and redo their analyses on the updated maps.
- In February, the Northeastern University team provided a draft report for comment. The report described the approach developed to identify embayment types and a possible approach to identify targets for estuarine conditions. The work was presented at the February STAC meeting. Comments were compiled to be share with the team. Preliminary work was done using the EDA1.0 maps and resulted in the identification of 7 embayment types. These results will be revised substantially once the updated maps from EDA2.0 replace the EDA1.0 maps.
- Immediate next steps will focus on: (1) development of an approach to identify indicators and associated targets possibly using the Biological Condition Gradient tool developed by EPA in 2006 and used in other NEPs.; (2) development of a new viewer for the EDA possibly using ESRI Story Map; and (3) development of a reporting card system for state of the bays reporting.

### MassBays Monitoring Plan

- The Monitoring Plan Work Group provided feedback on the inventory of monitoring programs.
- A draft outline of the monitoring plan based on EPA guidance was distributed to STAC for comments.
- Immediate next steps: (1) a meeting of the Work Group to nail down the key questions and goals of the plan and make sure that it addresses the goals of the CCMP; (2) working on the approach to collect data especially from citizen science groups and address the priority issues identified by the network.

### Science and Technology Advisory Subcommittee

- At the January meeting, the management committee approved the SOPs of STAC and approved Julie Simpson (MIT Sea Grant) and Dan Codiga (MWRA) as Chair and Vice Chair respectively.
- The next meeting will focus on the next steps identified above.

### Other

- UMass Boston and MassBays are collaborating on a proposal to further work on coastal acidification. The pre-proposal was submitted to MIT Sea Grant and the team was invited to submit a full proposal due June 12.
- A proposal for supplementary funding for a project on eelgrass in Duxbury-Kingston-Plymouth Bay submitted by MassBays and DMF has been accepted. Funding will be used to develop a rapid assessment method that can be used by citizen scientists in order to address the need for more frequent monitoring of eelgrass bed condition in the embayments. Results of mapping conducted in 2015 indicate a worrisome loss of eelgrass in parts of Duxbury and this will be part of the approach to identify the source(s) of this degradation, if possible.