



Management Committee Meeting Summary

January 25, 2017

9:30 am – 12:30 pm

Executive Office of Energy and Environmental Affairs

100 Cambridge Street, Room 2B, Boston

Attendees:

Management Committee

Julia Blatt (Massachusetts Rivers Alliance [Rivers Alliance])
Joe Cosgrove (Merrimack Valley Planning Commission [MVPC])
Ed Dewitt (Association to Preserve Cape Cod [APCC])
Harlan Doliner (Marine & Oceanographic Technology Network [MOTN])
Jon Kachmar, Chair (The Nature Conservancy [TNC])
Ken Key (Massachusetts Water Resources Authority [MWRA])
Regina Lyons (U.S. Environmental Protection Agency [EPA])
Rebecca Newhall (National Oceanic and Atmospheric Administration [NOAA])
Jane Peirce (Massachusetts Department of Environmental Protection [MassDEP])
Vandana Rao, Vice Chair (Executive Office of Energy and Environmental Affairs [EEA])
Julie Simpson (MIT Sea Grant)
Kristin Uiterwyk (Urban Harbors Institute [UHI])
Colin Van Dyke (Mintz Levin)
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)
Barbara Warren (SSCW, Lower North Shore Regional 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)

Welcome and Introductions

Chair Jon Kachmar opened the meeting and welcomed the attendees. After introductions and review of the agenda, Pam DiBona introduced Ken Key as the new representative of the MWRA. Ken serves as the environmental monitoring program manager and receiving waters monitoring manager for the Deer Island Treatment Plant.

Committee Business

NEP funding, joint meeting update

Pam described the current state of NEP funding. Only new contracts were affected by a funding freeze as of January 25. Funding will continue through April 28 under a Continuing Resolution. Regina explained that funds for MassBays for the current fiscal year are available until September 30, 2017. More information on subsequent funding will be available after the FFY18 budget is considered by Congress. Pam then explained that the Association of National Estuary Programs (ANEP) has been monitoring the situation. She reminded the Committee that Section 320 of the CWA was reauthorized in 2016 with

bipartisan support. ANEP has also been preparing an outreach factsheet that highlights the work of the NEPs, including leveraging, to share with decisionmakers in DC.

With regard to the workplan for next fiscal year, Pam explained that is planning to develop a workplan based on a \$600k budget and an alternative option incorporating 25% cut. The work plan will be discussed in greater detail at the Regional Coordinators' meeting on February 28.

Discussion

The committee had several suggestions on items to be highlighted in the outreach factsheet as well as during the upcoming Program Evaluation visit and meetings with EPA Headquarters, including jobs created and emphasis on public-private partnership. On the regional side, once the new EPA Administrator is confirmed, Regional Administrators will be named. Currently, Deb Szaro is serving as Acting Administrator for Region 1.

Chair and Vice Chair vacancies

Based on the Management Committee's SOPs, new leadership is due July 1, 2017. Because the current Vice Chair will be unable to step into the Chair position due to other commitments, and the Chair is not allowed to serve more than one continuing term, both positions will become vacant on July 1. The Chair asked for nominations during the meeting; Pam explained that the Nominating and Governance Subcommittee will meet in the afternoon to start the process. A slate will be presented and voted on during the next meeting on April 26.

Science and Technical Advisory Subcommittee business

Prassede Vella presented the SOPs developed and discussed by STAC to affirm the role of the committee and guide its work moving forward under the new CCMP. The SOPs call for the positions of Chair and Vice Chair. The SOPs as well as Chair and Vice Chair were presented to the Management Committee for approval. The committee approved the SOPs (with minor edits) and approved Julie Simpson, Ph.D. (MIT Sea Grant) and Dan Codiga, Ph.D. (MWRA) as Chair and Vice Chair of STAC for the next 12 months. The SOPs are in Appendix A.

During the November meeting, STAC discussed updates on the monitoring plan and approved the establishment of a work group to advise on the development of the plan process and document that will be brought before STAC for discussion, input, and approval. STAC also approved the inclusion of three non-management committee additions to the work group, per SOPs. Amy Costa (Center for Coastal Studies), Judith McDowell (WHOI Sea Grant) and Nora Conlon (EPA) were invited based on their expertise. The work group has met once and has weighed in on the inventory of monitoring programs. The next step is for the work group to discuss and provide feedback on the gap assessment that will inform the development of the monitoring plan. This will be conducted in early February.

Program Evaluation Planning

Pam DiBona, MassBays

Program Evaluation Subcommittee

Pam DiBona reported on the Program Evaluation Subcommittee work. Besides planning for the event the subcommittee focused on messaging: 1) why EPA's investment in MassBays (and NEPs in general) is important, and 2) what more MassBays could accomplish with additional funding opportunities.

Response to 2012 Findings

Pam explained that a majority of MassBays' work is focusing on responding to the 2012 Findings, including: CCMP process, and finance, communications, and monitoring plan status and timeline. Pam shared the 2012 Program Evaluation Findings and Responses timeline with the Committee (Appendix B), as well as a summary of the CCMP revision timeline (Appendix C) to be submitted with the Program Evaluation package.

Proposed April 26th Management Committee meeting agenda

The next Management Committee meeting, scheduled for April 26, will host EPA Headquarters staff and will be a vital part of the Program Evaluation. Pam described briefly the work of the Program Evaluation subcommittee towards planning for the event. Pam shared the proposed agenda with the committee (Appendix D). The committee suggested the field visit take place the day before the meeting in order to inform Nancy Laurson's presentation and provide an opportunity for feedback. Committee members recommended that EPA's presentation follows the MassBays RC's highlights in order to provide the opportunity for EPA feedback. Margherita also suggested tying the highlights with the after-break discussion so that Management Committee members can describe that their respective organizations get out of the partnership with MassBays.

Working and Learning Session: Program Evaluation Materials review

Pam DiBona, MassBays

The committee broke out in groups to review, discuss and provide input on the draft forms compiled as part of the Program Evaluation package. Focus areas include: Reporting, Financial Management, Program Planning and Administration, Research, Assessment and Monitoring, and Outreach and Public Involvement.

Staff Updates: Regional Coordinators

Regional updates are organized according to the seven action areas of the current year's [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)

Gather data on conditions and trends [DATA]

- Upper North Shore
 - Marsh Edge Erosion (MEE) Assessment: Data were collected for the Marsh Edge Erosion sites for pre-winter conditions at all 22 sites in the Great Marsh. These data will be compared with the measurements to be collected in the spring to determine rates of loss. Marsh core sediments taken in the summer are being analyzed for organic versus inorganic materials by Boston University.
- Lower North Shore
 - Salem Harbor Plankton and Nutrient Study: (1) RC met Salem State University researchers to discuss next steps. (2) SSU Seed Grant for a pilot study April through November 2017: "Phytoplankton Productivity and Turbidity: Toward an Environmental Solution for Salem Harbor Water Quality". (3) SSU Seed Grant submitted with SSCW as a partner.
 - Lower North Shore Coastal Acidification Citizen Monitoring: January "Underwater in Salem Sound" lecture will be on ocean and coastal acidification with Matt Liebman (EPA). Acidic Waters, a new citizen science program - will be announced.
 - Three-Year Monitoring Plan: Met with DMF (Tay Evans and Jill Carr) to discuss eelgrass in Salem Sound; Planning with DMF an eelgrass stakeholders meeting.

- Metro Boston
 - Boston Harbor Habitat Atlas: Scheduled workshop for educators at MOS on 3/18; planning meetings with MOS and EOL; worked on sections related to "about the basins/watershed", "management", and cleaning up text; identifying graphic designer to provide input. (2) Met with gigapan team on 1/17 to discuss next sets of gigapans. (3)
 - Following the success of the rocky intertidal habitat completed over summer, the RC is building on the positive feedback to seek additional funding to continue the work on the BHHA and develop other habitats. A proposal was submitted to the Massachusetts Environmental Trust for funding. It was decided that NOAA B-WET proposal would be premature at this time without more of the Atlas being completed. No word has yet been received from the American Honda Foundation about the status of that proposal.
 - Report on current, recent, and seminal ecological research in the Metro Boston region: Section being worked on, informed by proposal coming in for Boston Harbor & Islands Science Symposium
 - Assembled matrix of municipalities, grants received; inventorying active and near future projects at upcoming municipal meetings.

- South Shore
 - Anadromous Fish: Attended River Herring Network Annual Meeting, finalized and submitted herring count data to MassDMF.
 - Shellfish Restoration: Compiled mussel project data, discussed grant partnership with Mass Audubon, analyzed Gulf River shellfish data and presented at Gulf River Association board meeting
 - Eelgrass mapping and monitoring in DKP: Met with MassDMF to discuss next steps in exploring possible causes of eelgrass loss in DKP. The first step will be getting together a group of experts to discuss findings from this study.

- Cape Cod
 - Inventory and prioritization of coastal habitat restoration and stormwater projects for funding: APCC's Restoration Center staff and the RC are nearing completion of a prioritized list of projects. Meetings were held with Truro, Bourne and Brewster to update the inventory.
 - Evaluate impacts of sea level rise on water resources and infrastructure and provide outreach regarding adaptation measures: Coordinated a presentation given by USGS on the results of the 3-year study at the 4th Annual Cape Coastal Conference on December 6-7, 2016, Hyannis.
 - Diadromous fish run monitoring. (1) Outreach: The Cape Cod Times published an article on the Cape's herring runs in late December, utilizing RC summary of run sizes from 2007 – 2016. (2) Climate change impacts: In early January Jo Ann and Sara participated in a conference call with Michelle Staudinger (USGS Climate Change Center) and Abigail Archer (River Herring Network Coordinator, Cape Cod Cooperative Extension) to discuss possible climate change impacts and ways in which MassBays could help. Suggestions included monitoring juvenile herring phenology. Next steps are to compare run sizes in MassBays regions and evaluate trends for State of the Bays. (3) Volunteer counts, 2017: APCC is planning to start volunteer count program earlier this year (mid-March) due to the warmer weather (so far).
 - Citizen Monitoring Summit: Followed up on requests for APCC Salt Marsh Monitoring QAPP and prepared an APCC newsletter article on the Citizen Monitoring Network. Distributed links to the Network to encourage people to join.
 - Requests for technical assistance: Value of coastal monitoring: At the request of the Center for Coastal Studies (CCS), the RC prepared talking points on the value of a coastal monitoring program, for a CCS presentation to the Barnstable County Commissioners. A Cape-wide coastal monitoring program is needed to monitor implementation and effectiveness of the 208 Water Quality Plan for coastal water quality.

Reduce stormwater discharge volumes and pollutant loadings [SW]

- Lower North Shore
 - Greenscapes: New Greenscapes website is in process.

- Implement Low-Impact Development: Completed 6 KWC events at 5 schools for 417 students and 53 adults; Planning partner with MA Sustainability on Campuses and Communities for the SUSTAINABILITY BY LAND & SEA; Massachusetts Sustainable Communities & Campuses Conference.
- Cape Cod
 - Stormwater management: The Cape Cod Stormwater Managers met in December to discuss governance and whether they want to form a formal stormwater collaborative or work together informally. The RC provided a presentation summarizing the MS4 permit and presented resource materials prepared for the group (e.g., outreach materials, checklist, resources, webpage (“Stormwater Hub”), newsletter, etc.). The group agreed to meet monthly, form a Steering Committee, and plan to ramp up readiness for the MS4 permit which becomes effective July 1, 2017. At the next 2/2/17 meeting Fred Civian (DEP) and Newton Tedder (EPA) will describe MS4 requirements, cost implications, and existing stormwater coalitions and their benefits, and take questions.

Reduce contamination from wastewater [WW]

- South Shore
 - Met with NSRWA staff about WaterSmart program, planned "water coalition" meeting for January

Adapt to/mitigate impacts of climate change [CC]

- Upper North Shore
 - Eelgrass restoration: Eelgrass habitat biodiversity data collection continued in Essex Bay.
 - Hydrogeologic modeling: The Hydrodynamic Modeling Oversight Committee conducted two meetings to further refine the alternatives to be modeled by Woods Hole Group to address salinity concerns in the northern Plum Island Sound. Additional data were collected and input into the model as the scenario selection process began to focus on the connection between Plum Island Sound and Merrimack River. The Sandy funded USGS gauge at the Plum Island Turnpike bridge yielded some interesting data that will significantly inform the alternatives to be modeled.
- Lower North Shore
 - Coastal resilience: (1) Town of Beverly's Waterfront Resiliency Advisory Group met twice regarding the CZM Coastal Resilience Grant and a public engagement meeting will be held 1/31. (2) RC joined Beverly's FEMA Working Group. (3) RC working with Salem and Chester Engineers on the Collins Cove Bioengineering with Coir Rolls and Salt Marsh Creation CZM grant. Pre-permitting meeting scheduled for 1/24 and public meeting for 2/16. SSCW has been conducting photodocumentation of present conditions and is creating an ESRI storymap with Collins Cove history, maps, definition of living shorelines, project goals, etc. (4) Continuing to attend Coastal Resilience Advisory Group and FEMA Hazard Mitigation meetings for Manchester. Recommended Manchester apply to DER to have the Sawmill Brook become a Priority Site and it received preliminary priority status. (5) Presentation at the 3/17 Sustainability Conference and 2/16 Collins Cove Living Shoreline Project.
- Cape Cod
 - Thin-layer deposition for salt marsh restoration: WBNERR is partnering with other NERRs on a proposal to NOAA to conduct a pilot study of thin-layer deposition as a means of helping salt marshes to keep up with sea level rise. APCC participated in a survey as a potential end-user of the method.

Remove barriers to streamflow and tidal flushing [SF]

- South Shore
 - Dam Removal & Stream Continuity: RC reviewed potential channel impediments for additional restoration at Bound Brook. After several years of studies Tack Factory Dam on third Herring Brook was removed in December. The RC role included pre-bid site walk, construction oversight

- logistics, NOAA semiannual reporting, managing project budget, public outreach, construction site visits, reviewing MET proposal for monitoring, making project site sign, setting up daily time lapse photography, setting up vegetation monitoring plots. The RC developed and submitted annual purple loosestrife monitoring report. The RC also provided technical support through: drafting scope of work for January meeting with Hanover Mall about Peterson Pond Dam, reviewing water quality monitoring data, writing MET letter of interest for Temple Street Dam; and working with intern to start poster/brochure about South Shore dam removals.
- Streamflow Restoration: Maintained reservoir level record, provided data to Norwell for presentation to town, wrote newspaper article on water conservation action.
 - Cape Cod
 - Upper Herring River Fish Passage Restoration: In January the Friends of Herring River in Wellfleet were invited by the Massachusetts Environmental Trust to submit a full proposal for permitting and construction of the fish passage restoration project. The Mayo Creek Restoration Committee of Wellfleet was also invited to submit a full proposal to MET for a followup hydrological study and monitoring. The RC provided assistance for both projects including: preparing a NOAA grant for a Mayo Creek feasibility study and 2009 for herring monitoring along the upper Herring River. Both projects also received MassBays grants for feasibility planning and technical studies to further restoration efforts.

Manage invasive species [IS]

- Upper North Shore
 - Great Marsh Pepperweed Monitoring and Control: 2016 season was wrapped up and planning of 2017 is in development,
 - Green Crab Population monitoring: Several green crab marketing events were held including one with Reds Seafood in the Boston Public Market. Over 50 people attended that event and were treated to green crab bisque, broth, pate, and meat, as well as a slide show on the culinary attributes of green crab. A working group has been established with partners from Maine, Canada, and Italy as well as the local North Shore contingent.
 - South Shore
 - Marine Invasive Monitoring: RC formatted and submitted MIMIC invasive species data to CZM; corrected and submitted horseshoe crab data to DMF.
 - Green crabs and salt marsh erosion: Traps were deployed in two locations - the river (North River, yellow dot) and a creek that runs parallel to the upland (red dot). Six sites on the North and South Rivers were established for burrow surveys While 81 burrows were found in 2015, only 3 burrows were found in 2016. Investigations on these findings will be continued to monitor trend over the next few years to determine if this year was an anomaly. Despite the lack of burrows, there were some interesting findings. At one site (Rexhame), 0.7 meters of marsh edge had been lost since the previous summer. At another, a 1 meter section of marsh had cleaved off the edge. This indicates that regardless of green crab activity, it is useful to maintain these permanent transects for monitoring marsh loss.

Conduct education and outreach [E&O]

- Upper North Shore
 - Progress was made on the preservation planning of Great Marsh icon, the “Pink House”. Meetings were held with the regions senators and representatives and the Supportthepinkhouse organization as well as nonprofits and other potential partners to develop a strategy for the structures repurposing and protection.
- Lower North Shore
 - 1/25/2017 "Imagine a World Without Clams: how our New England coastal waters are becoming more acidic" Presenter: Matt Liebman, Ph.D. 2/22/2017 "MantaRay - Advancing Research on Marine Debris" Presenter: Ethan Edson 4/26/2017 "Now and Then – Eelgrass Distribution and Mapping in Salem Sound" Presenter: Jill Carr

- Metro Boston
 - Boston Harbor Coalition: Convened first BHHC steering committee on 1/19 comprised of 7 members + RC (2 NGO, 1 federal, 1 state, 2 universities, 1 citizen) A summary of social network analysis of Metro Boston region organizations to establish a baseline of current connectivity and draft survey questions were completed and the proposal to conduct the study is being submitted to NU's Institutional Review Board. Followed up with IRB on status of application on 1/19, which is still pending. Boston Harbor & Islands Research Symposium: 5 planning meetings; 4 HSMSS planning meetings.
 - In order to enhance connections with local partners, RC will be meeting with 8 out of 12 municipalities in the next 3 weeks; pending response from other 4; attended MAPC Inner Core Committee MS4 meeting on 1/18
 - RC conducted an interview on Braintree Public Access TV on 1/6
 - Seminar: Dr. Jen Bowen of Northeastern on salt marsh microbes (11/15), Andy Hrycyna of MyRWA on Mystic River work (1/16)
- South Shore
 - Contacted Scituate teachers to discuss potential projects, presented basic lesson on sampling to Plymouth elementary school
 - Attended Watershed Action Alliance meetings and assisted with conference planning, held MassBays Regional Advisory Group meeting
- Cape Cod
 - 4th Annual Cape Coastal Conference: Planned and participated in the 4th Annual Cape Coastal Conference on December 6-7, including: coordinating a USGS presentation of the Cape Sea Level Rise-Aquifer study and APCC facilitation of a special session on pond water quality.
 - Upcoming events: (1) March – April, 2017: Training sessions for herring count volunteers. (2) April and May 2017: Ponds Lecture Series. Topics will cover natural history of ponds, protection and restoration. Lectures will be held in Orleans and Chatham. (3) Workshop on Climate Change and River Herring: TBD. (4) APCC Rain Barrel Program: Dates TBD.
 - Internships: APCC plans to have two interns this summer. Possible intern projects include outreach, mapping natural communities, assisting with restoration and monitoring, researching and developing policies, and other topics. To learn more about these paid internships, visit www.apcc.org.

Staff Updates: Central Staff

Executive Director

- Meetings and conferences:
 - Participated in NEP-EPA national conference call (November 16), and ANEP Executive Committee conference call (January 9)
 - Attended Great Marsh Sea Level Rise Symposium, November 17
 - Attended South Shore Sea Level Rise Symposium, December 1
 - Attended Cape Coastal Conference, December 6
 - Abstract accepted for a “scholarly presentation” at Citizen Science 2017, to take place in St Paul, Minnesota, May 18-19.
- Partnerships and Collaboration:
 - Served as a reviewer for Massachusetts Environmental Trust, providing comments on 49 Letters of Interest at a meeting on December 5
 - Attended the Northeast Regional Association of Coastal and Ocean Observing Systems (NERACOOS) Annual Meeting December 7, and was elected to their Board of Directors for a 3-year term.

- Participated in a quarterly conference call of the New England Ocean Science Education Collaborative on December 8
- Met with DEP December 12 to help design a workshop that will inform strategic planning for their CWA-mandated watershed-based planning
- Participated in conference calls to plan the Boston Harbor and Islands Science Symposium, scheduled for April 2017.
- Participated in planning conference calls for an NROC/NALCC coastal restoration workshop to take place April 4-5.
- **Project Implementation:**
 - Tide Gate Inventory: Incorporated information gathered by MassBays intern into inventory and database; met with NOAA, EPA, and CZM staff to explore next steps; prepared a draft Summary of Findings from the database; and set a meeting date with the Tide Gate Inventory Advisory Committee (including representatives from CZM, DEP, DER, NOAA, EPA, ACOE, and DOT).
 - Joined Staff Scientist for meetings with partners regarding Merrimack River monitoring programming and Estuarine Delineation and Assessment analysis.
 - Explored opportunities for capacity-building for citizen monitoring groups, e.g., science communications training with COMPASS and technical and funding mini-grant program to address one-off needs (e.g., QAPP review or data input).
- **Program Management**
 - Compiled materials for Program Evaluation submission
 - Developed agenda and supporting materials for Management Committee and Nominating Subcommittee meetings.
 - Conducted performance review for Staff Scientist according to state parameters.

Staff Scientist

- **EDA 2.0**
 - Following a meeting with the regional coordinators, Geosyntec incorporated the input provided by the RCs and has now developed new boundaries to incorporate “interembayment” areas and other areas that represent resources that had not previously been included. The draft maps were distributed to the RCs for review and comments and will be presented to STAC this afternoon.
 - Geosyntec and Northeastern University teams met to discuss next steps in the EDA 2.0 and where their work converges. The Geosyntec team has been sharing the revised layers so enable the Northeastern team to start working on categorization of the embayments.
- **Science and Technology Advisory Subcommittee**
 - STAC met November 16. During the meeting STAC:
 - (1) Discussed draft SOPs (with minor edits) and made nominations for Chair and Vice Chair positions for approval by the Management Committee.
 - (2) Discussed the latest updates of the Monitoring Plan including the inventory of monitoring programs and first steps of the gap assessment.
 - (3) Approved proposal to establish a work group dedicated to the development and review of the monitoring plan. The work group includes the following members: Dan Codiga, Margherita Pryor, Sara Grady, Todd Callaghan, Jo Ann Muramoto, Barbara Warren, Judith McDowell (WHOI Sea Grant), Nora Conlon (EPA Region 1), and Amy Costa (Center for Coastal Studies). The last three are not represented on the Management Committee but were approved by STAC to form part of the work group due to their specific expertise.
 - (4) Discussed options to assist citizen science groups in analyzing data and sharing results, and options for MassBays to access data.
- **MassBays Monitoring Plan**
 - The Monitoring Plan Work Group met remotely to discuss the process and their role. The work group provided feedback on the database monitoring programs. The next step is to discuss, share, and invite feedback on the gap assessment.

Management Committee Member Updates

Massachusetts Rivers Alliance: MRA is working closely with EEA to make the approach more consistent across the state and within municipalities. The [Drought Management Task Force](#), chaired by Vandana Rao has been test-driving the state drought plan (published in 2000, updated in 2013) to address this issue. Representative Dikeman filed a bill that would give the Secretary of EEA authority to set consistent restrictions across all regions suffering drought conditions.

North and South Rivers Watershed Association: (1) The NSRWA convened the first meeting of the South Shore Water Coalition on stormwater and drinking water on January 25. This will include a presentation on MS4 and a needs assessment discussion with the Department of Public Works. (2) The Tack Factory Dam removed project was completed in December 2016 with the removal of the dam. The project came in under budget and the saved money will be used to start work on the next dam upstream on 3rd Herring Brook. (3) NSRWA was commended for its successful South Shore Climate Change and Sea Level Rise symposium (December 1, 2016).

Merrimack Valley planning Commission: MVPCC has a new Executive Director, Karen Conard, formerly Community Development Director for the City of Peabody. (2) On September 16, 2016 Governor Baker issued an [Executive Order](#) (Establishing an Integrated Climate Change Strategy for the Commonwealth) which lays out a comprehensive approach to further reduce greenhouse gas emissions, safeguard residents, municipalities and businesses from the impacts of climate change, and build a more resilient Commonwealth. Massachusetts will update the Commonwealth's climate adaptation plan starting in February. The public process will start in March.

Urban Harbors Institute: UHI will be issuing a newsletter soon and will include internship opportunities.

Association to Preserve Cape Cod: (1) APCC's Executive Director Ed DeWitt will be retiring from his position at the end of January. APCC will be posting his position soon on February 1. (2) The Cape Cod Stormwater Collaborative will be meeting February

U.S. Environmental Protection Agency: Updates will be provided as official word comes through.

Massachusetts Department of Environmental Protection: the [604\(b\) grant](#) will be posted in March 2017. The availability of [319 funds](#) to complete started projects has not been confirmed. If funds are available, the RFR will be posted April 1. MS4 communities are urged to submit projects before July 1, 2017.

Executive Office of Energy and Environmental Affairs: (1) The 15 year old Commonwealth's drought management plan will be updated and will be based on sound science and analyses of indices to help determine hydrological conditions. A more robust actions section will be included and Vandana solicited input/suggestions from the Management Committee. The plan will be incorporated into MEMA's hazard mitigation plan. (2) The Water Conservation Standards will be updated in line with the Interbasin Transfer Act. Revisions will be coming out for public comment.

Salem Sound Coastwatch: (1) The first presentation of the 2017 Underwater in Salem Sound Lecture Series, co-sponsored by Marblehead's Abbot Public Library is scheduled for 1/25/2017. Matt Liebman (EPA) will present: "Imagine a World Without Clams: How Our Coastal Waters are Becoming More Acidic" on ocean acidification. (2) SSCW will also establish a citizen monitoring program with adults and school children.

Metro Boston Regional Coordinator: The [Boston Harbor and Islands Symposium](#) is scheduled to be held April 11 and 12, 2017. More information will be forthcoming.

National Oceanographic and Atmospheric Administration: The [2017 Coastal Resilience Grant](#) program's solicitation for projects has been posted. A total of \$15 million are available to fund projects between \$550K and up to \$ 1 million. The deadline is March 15 and an information session is scheduled for January 30 at 3:00 pm. The focus is on: Habitat Restoration and Strengthening Coastal Communities.

Upper North Shore Regional Coordinator: The NFWF (Sandy) grant has been extended until November 30. 98% of the \$1.2 million grant for work in Great Marsh has been used. The remaining 2% will be used to purchase equipment to continue the work.

Office of Coastal Zone Management: The Ocean Advisory Commission is scheduled to meet on January 26, 10:00am to 12:30pm. The focus of the meeting will be the introduction of background work to address ocean-based aquaculture as an ocean development and establish an advisory work group.

Marine Ocean and Technology Network: MOTN teamed up with the City of Gloucester and Endicott Innovation Center to launch a “mini boat” to measure pH, DO, and other parameters. Harlan Doliner will be publishing a series of articles on ECO Magazine on citizen monitoring and connection with big data and its ramification on the industry.

The meeting adjourned at 12:45 PM.

Next Management Committee Meeting

Wednesday, April 26, 2017

Northeastern University Marine Science Center

430 Nahant Road, Nahant MA 01908

10:00am to 12:00pm

Followed by Science and Technical Advisory Subcommittee meeting, 1:45 to 3:30pm

Appendix A

SCIENCE AND TECHNICAL ADVISORY SUBCOMMITTEE STRUCTURE AND OPERATING PROCEDURES DRAFT JANUARY __, 2017

Massachusetts Bays National Estuary Program Mission:

The Massachusetts Bays Program is an EPA National Estuary Program dedicated to protecting, restoring, and enhancing the estuarine resources of Massachusetts and Cape Cod Bays. We facilitate partnerships to prompt local, state, and federal action and stewardship, convening stakeholders on the local and regional level, providing scientific basis for management decisions, and educating decision makers about problems and solutions.

Article I. Name and Function

Section 1. Name and geographic scope

The name of this organization shall be the Science and Technical Advisory Subcommittee (STAC). It is one of the advisory subcommittees of the MassBays National Estuary Program (MassBays). The geographic scope includes Upper North Shore and Ipswich Bay, Massachusetts Bay, and Cape Cod Bay, extending offshore to Stellwagen Bank. The MassBays planning area includes 50 communities from Salisbury to Provincetown.

Section 2. Authority

The STAC was created by the MassBays Management Committee in 2013. STAC replaces the Technical Advisory Committee which was convened by the Management Committee in 1991.

Section 3. Purpose and Function

The STAC will provide advice, guidance, and direction to MassBays in its role of providing a scientific basis for management decisions under its Comprehensive Conservation and Management Plan. The STAC shall:

- 1) Provide a forum for MassBays and its partners to examine, discuss, and exchange existing and emerging scientific issues to facilitate the integration of sound science into effective management of the MassBays planning area;
- 2) Support, review, and advise on the development and implementation of the MassBays Monitoring Plan and other research and assessment priorities as needed;
- 3) Support the development and implementation of a framework to track the status and trends of the ecology and condition of the Bays, set goals and thresholds, and provide information to assess progress in the implementation of the CCMP;

- 4) Provide advice to determine the scope of, and contribute content to the State of the Bays Report;
- 5) Serve in an advisory capacity for scientific and technical products generated by MassBays;
- 6) Assist in the development of requests for proposals and in the evaluation of proposals submitted, as needed;
- 7) Assist in identifying funding opportunities, including potential partnerships to enhance technical and scientific expertise for research and monitoring.
- 8) Serve in an advisory capacity for other scientific or technical issues.

Article II. Membership and Officers

Section 1. Composition

The STAC shall be composed of dedicated environmental managers, scientists, engineers, and local practitioners associated with academic and private institutions, industry, and from local, regional, state, and federal government agencies that conduct environmentally based scientific and/or policy research or activities in the MassBays planning area. The MassBays Regional Coordinators may serve on the committee. Members shall be primarily associated with organizations represented on the Management Committee. Additional members may be invited to ensure a diversity of disciplines and local knowledge as needed. Nominations for new members will be approved by the Management Committee or the Executive Committee. Membership shall be reviewed every year.

Section 2. Staff Support

Overall staff support for the STAC shall be provided by the MassBays staff scientist. In coordination with the Chair, the staff scientist shall be responsible for the planning and substantive work of all STAC meetings, and shall communicate notices, agendas, and meeting materials to the members prior to the meetings, and shall prepare and distribute a summary of each meeting.

Section 3. Chairperson and Vice-Chairperson

Officers of the STAC shall be selected by consensus or majority vote of the members. The officers shall be a Chair and a Vice Chair. The Chair will hold the position for 1 year and may be renewed for a total of no more than 2 years. The Chairperson shall have the following responsibilities:

1. Chair STAC meetings;
2. Serve on the Management Committee and attend Management Committee meetings;
3. Define agendas for STAC meetings in coordination with MassBays staff scientist;
4. Receive requests from, and communicate recommendations and concerns of the STAC to the Management Committee.

5. Submit nominations for STAC members to the Executive Committee or Management Committee.

The Vice-Chair shall:

1. Serve as alternate to the Chair in the absence of the Chair.
2. Assist the Chair in the general management of the committee.
3. Help in the development and review of the agenda.

Section 4. Work groups

The STAC shall form *ad hoc* work groups to focus on specific issues and will involve topic-specific experts. Work groups shall report regularly to the STAC and maintain open communication throughout the duration of a project. Work groups will be formed to assist and advise MassBays staff and the STAC on specific issues and review specific products. Additional experts may be invited to join the work group if specific expertise is needed.

Article III. Meetings and Communication

The STAC will generally convene at least two times a year. Additionally the STAC may meet virtually through conference calls and/or webinars to discuss specific issues as necessary. STAC will from time to time be required to review materials and provide input and feedback as needed. The meeting schedule for the following year shall be established at the end of each calendar year. Any member of the STAC and Management Committee may request an item be placed on the STAC agenda by contacting the STAC Chairperson and MassBays staff scientist. The agenda will be distributed to STAC members at least one week before a meeting.

Section IV. Policies

Section 1. Conflict of Interest Rules

The Conflict of Interest Rules of the MassBays Management Committee will apply to the STAC as a Subcommittee.

Section 2. Policies and Amendments

Policies and any amendments shall be effective immediately upon adoption. Amendments to these Structure and Operating Procedures may be made at a STAC meeting. The Structure and Operating Procedures and memberships will be reviewed on an annual basis. Decisions will be made by consensus.

Adopted by the MassBays Science and Technical Advisory Subcommittee: November 25, 2016.

Appendix B

2012 Program Evaluation Findings and Responses

| Finding of Need | Status as of 1/25/2017 |
|--|--|
| CCMP Update | See Appendix 3; draft anticipated by early April 2017 |
| State of the Bays report | Symposium held, proceedings posted April 2015 |
| CCMP tracking system/progress report/posted on website | Workplan tracking spreadsheets in use; CCMP measures determined and tracking planned; website expanded to include grantee reporting, estuarine delineation and assessment viewer, planning documents linked to embayments. |
| Finance Strategy | Memo prepared by ED for ExComm review |
| Monitoring Strategy | Management Committee's Science & Technical Advisory Subcommittee and Monitoring Workgroup currently focused on this task, draft to be presented April 2017 |
| Communications Strategy | Strategy drafted by Management Committee's Communications Subcommittee Spring 2016 |

Appendix C

CCMP Development timeline

| Timeline | Activities | Products |
|---------------------------|--|--|
| Spring 2013 | CCMP Scoping meetings with Regional Coordinators and Management Committee | Decision to start-stop-continue for each 1996 CCMP action MassBays Mission & Vision adopted |
| Summer 2013 | Regional meetings (5) with Local Governance Committees | New and reengaged partners, Region-specific priorities |
| Fall 2013 | Survey of existing management and planning documents (500+) | Documented gaps in knowledge, and opportunities to augment previous work through the CCMP |
| Spring – Summer 2014 | One-on-one interviews (32) conducted by social scientist with elected officials, grantees, existing and potential partners | New and reengaged partners, Region-specific priorities, Comparison between LGC and individuals' input |
| Fall 2014 | Meetings (3) with state agency representatives | Documentation of existing resources, complementary programs, data and resource gaps, and capacity to address priorities. |
| Fall – Winter 2014 | Management committee retreat | CCMP goals and desired impacts |
| Winter 2014 – 2015 | Staff writing, Management Committee review | Public Review Draft CCMP |
| Spring 2015 | State of the Bays Symposium, Public Review Draft release, Public Review Draft provided by EPA Region 1 to EPA HQ, EPA announces process to develop new CCMP Guidance | Comments from engaged stakeholders |
| Summer 2015 | CCMP Goal 3 revised to address EPA HQ comments; 1996 CCMP Actions compared to revised | Second review draft CCMP, Draft table documenting progress/ status of 1996 CCMP actions |
| Summer 2015 – Summer 2016 | Provided comments, participated in discussions regarding EPA CCMP Guidance | Final guidance released by EPA HQ |
| Summer – Fall 2016 | Staff, Management Committee worked with new EPA MassBays Coordinator to review and revise CCMP Goals | Final CCMP Goals endorsed by Management Committee |

Appendix D

DRAFT

April 26th Management Committee Agenda

DRAFT

Northeastern University Marine Science Center
Nahant, MA

9:30am Coffee & muffins

10:00 Welcome, Introductions

Jon Kachmar, Management Committee Chair

Review agenda and anticipated outcomes

10:20 Program Evaluation Overview and Response to Submitted Materials

Nancy Laurson, EPA Headquarters

10:40 MassBays Restoration Highlights, 2010 to 2016

Herring runs – status and trends

Jo Ann Muramoto, Cape Cod Regional Coordinator and

Sara Grady, South Shore Regional Coordinator

Invasive species management – pepperweed and *Phragmites*

Peter Phippen, Upper North Shore Regional Coordinator

Barbara Warren, Lower North Shore Regional Coordinator

Stakeholder engagement

Carole McCauley, Metro Boston Regional Coordinator

11:45 Break & lunch

12:30 Management Committee Members' Report-out

Why I participate, what our organization gets from our partnership with MassBays

1:30 Adjourn

1:45 to 3pm Science and Technology Advisory Subcommittee Meeting

Estuarine Delineation and Assessment 2.0