

Field Reports 2024

Winter 2024 (Vol 21, No 1)  
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Have you seen our new website?

## Here is our latest news!

**New Research Awards:** In Fall 2023 MassBays has received two funding awards for research across the MassBays geographic areas.

- **Restore America’s Estuaries** grant for a project titled “Optimizing local tide gate operations and management to improve salt marsh health”, \$233,460, PI is [Prassede Vella](#). MassBays has posted a [Request for Proposal – MassBays Tide Gate & Salt Marsh Assessment Consultant | Massachusetts Bays](#). For more information and to submit a response click [here](#) and follow directions.
- **WHOI Sea Grant** for a project titled “Modeling and piloting a new seed-based approach to large-scale eelgrass restoration in Massachusetts”, \$197,538, PI is [Jill Carr](#).

## Healthy Estuaries Grants are here again!

MassBays is pleased to announce that the **Healthy Estuaries Grant Program** is resuming and funding is available for projects within the MassBays geographic area. To submit a proposal use these links, [here](#) and [here](#). For information about previously funded projects visit the [viewer](#) on the MassBays website where you will find more information. For questions contact [Prassede Vella](#).

## MassBays rated as Proficient for the 2023 Program Evaluation by EPA

In June 2023 EPA conducted a program evaluation of MassBays and the months of work and preparation culminated in a 3-day visit by the EPA review team to talk about accomplishments and future work with the staff and Management Committee. A highlight of the visit included site visits organized by the MassBays Regional Service Providers (RSPs) which this year included learning about the challenges and ecology of Belle Isle Marsh including the Salt Marsh Sparrow, a walking tour of the Boston waterfront to learn about resilience efforts, a visit to the Straights Pond Tide Gate in Hull, and a tour of South Shore restoration projects starting from Hingham. At the end the ***PE team concluded that our program continues to make significant progress implementing our CCMP and has rated MassBays as Proficient for the 2023 PE.***





Photos Top, Left, Right: MassBays staff, RCs, partners, EPA Coordinators and review team at Belle Isle Marsh (June 2023), Belle Isle Marsh Salt Marsh Sparrow, Salt marsh monitoring conducted by NSRWA and volunteer dock owners: the green marker on the dock indicates the how much the marsh has receded due to erosion. Credit: P.Vella 2023



### Upcoming Events

**January - March 2024:**  
[WaterWatch Lecture Series](#)

**February 6, 2024**  
[Barriers in the Great Marsh](#)

**February 7, 2024**  
[What Good are Mosquitos?](#)

**February 14, 2024**  
[Bird Migration & Climate Change](#)

**February 21, 2024**  
[Spawning Future Environmental Leaders](#)

## Welcome New Regional Coordinators!



**Hanna Mogensen,**  
**Upper North Shore Regional Coordinator**  
[Merrimack Valley Planning Commission](#)

Hanna serves as the Upper North Shore Regional

Coordinator and is the Coastal Resources Planner with the Merrimack Valley Planning Commission (MVPC). Hanna supports a number of initiatives including water resource management, stormwater assessment and mitigation, and coastal and estuarine habitat assessment and restoration, among others. Importantly Hanna works to facilitate collaboration and promote protection of critical

**February 21, 2024**  
[Ghost Gear in Coastal Waters](#)

**February 28, 2024**  
[1898 Portland Gale](#)

**March 2024**  
[Salem - Zero Waste Events](#)

**March 6, 2024**  
[Trivia Night at Stellwagen Beer Company](#)

**March 20, 2024**  
[Underwater in Salem Sound](#)

**April 10, 2024**  
[Drains, Pains, and Coastal Water Quality](#)



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## Publications

- *“MassWater: Improving quality control, analysis, and sharing of water quality data”* This is a product of an EPA Exchange Network grant that MassBays led. Additional information about the R package we developed can be found [here](#), and the publication in PLOS can be found [here](#).
- *“Recovery of eelgrass (Zostera marina) following conversion of conventional block and chain moorings to conservation mooring systems in Massachusetts: context-dependence, challenges, and management”* (accepted and in pre-print [here](#))

habitats and sustainable use of natural resources across the Upper North Shore. You can read [Hanna's full bio here](#).

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**Alex Mansfield,**  
**South Shore**  
**Regional**  
**Coordinator**  
[North and South](#)  
[Rivers Watershed](#)  
[Association](#)

Alex Mansfield is the MassBays South Shore Regional Coordinator and the

Watershed Ecologist for the North and South Rivers Watershed Association (NSRWA). Alex served many years on NSRWA’s Advisory Council and is now excited to bring his expertise to protecting and restoring our coastal watersheds with NSRWA and MassBays. [You can read Alex's full bio here](#).

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**Diana Chin Ph.D.,**  
**Metropolitan**  
**Boston**  
**Coordinator**  
[Northeastern](#)  
[University Marine](#)  
[Science Center](#)

Diana Chin Ph.D. is the MassBays Metro Boston Regional

Coordinator. Diana is an Associate Research Scientist at Northeastern University Marine Science Center. Her ongoing research includes the application of plant-animal-sediment interaction research - and benthic ecology more broadly - toward coastal conservation resilience, fisheries, aquaculture, and habitat restoration goals. Diana convenes the Boston Harbor Ecosystem Network (BHEN), a group of stakeholders from various backgrounds who meet regularly to share knowledge about the environment and issues surrounding Boston Harbor. [You can read Diana's full bio here](#).

Meet all five MassBays Regional

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## News from our Regional Coordinators



### **Prioritizing South Shore Salt Marshes For Restoration - North and South Rivers Watershed Association**

November 2023 - Among the most beautiful and environmentally important features of the South Shore coastline are the salt marshes that form in the estuaries where the region's rivers meet the sea.

As sea level rises our salt marshes are increasingly vulnerable to being lost and have had a history of impacts from nutrients, ditching, filling, tidal restrictions and use for agriculture. Can we help make them more resilient to sea level rise and give our marshes, and all that they support, more opportunities to adapt to changing conditions? To better understand where to focus our efforts at building more resilient salt marshes, the NSRWA and [MassBays South Shore National Estuary Partnership Program](#) were [recently awarded \\$88,129](#) in funding from the Massachusetts Office of Coastal Zone Management (CZM) for research on South Shore Salt marshes. The funding comes through CZM's Coastal Habitat and Water Quality (CHWQ) Grant Program.

[Read the full article here.](#)

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### **Results of 2023 Volunteer Counts of River Herring Continue to Be Troubling - Association to Preserve Cape Cod**

Each year APCC provides an annual summary of volunteer visual counts of [river herring in Cape Cod runs](#). This year the results of the 2023 herring counts again demonstrate a mixed bag containing both good

news and bad news.

Herring run size estimates were calculated by the Massachusetts Division of Marine Fisheries (MassFisheries) using herring count data collected by volunteers using a visual count method recommended by MassFisheries.

**The good news is first:** 1) Two runs, the Herring River in Wellfleet and the Marstons Mills River (Mill Pond) saw their highest-ever run size estimates in 2023; and 2) eleven runs had run size estimates that improved over 2022, which was a poor year for herring runs on the Cape.

**Now for the bad news:** 1) Four runs decreased in 2023; and 2) Most runs saw their highest-ever run size estimates in past years (e.g., 2012, 2014 or 2018) but several runs that used to number in the tens of thousand have continued to show a steady decline (less than a thousand) in recent years.

These mixed results indicate that while herring counts in 2023 were generally better than 2022, over the longer term of 5 to 11 years most herring runs have lower numbers than in past years when many runs saw their all-time highs. Herring still need protection throughout their life cycle in both freshwater and marine habitats, as well as restoration and protection of habitat. While in Massachusetts the ban on river herring fishing continues to be in place, APCC believes that offshore industrial scale harvesting of herring is of significant concern and should be controlled or banned.

[Read the full press release here.](#)



### State of the Waters Report 2023

Cape Cod continues to experience a significant number of coastal embayments and freshwater ponds with unacceptable water quality, while the quality of the Cape's public water supplies for the most part remains excellent.

The news comes from the Association to Preserve Cape Cod's recently released fifth annual State of the Waters: Cape Cod report. The report is a comprehensive assessment by APCC of the quality of the Cape's coastal embayments, freshwater ponds and public water supplies.

The report grades water quality based on up-to-date sampling and monitoring data collected by organizations, towns, and other sources. Three grading systems are used for the report, one each for coastal embayments, freshwater ponds and drinking water. Each of the grading systems utilizes specific water quality parameters to develop scores, and the scores are translated into grades of either acceptable or unacceptable water quality for coastal embayments and freshwater ponds, and excellent, good or poor for public water supplies.

[Read the full report here.](#)



### Proposal to Create Merrimack River Collaborative - Merrimack Valley Planning Commission

The Merrimack River is a coveted natural resource, connecting and defining communities throughout Northeastern Massachusetts. The river serves as a source of cultural, ecological, and recreational value for all who engage in its many uses. Yet, the interconnected nature of this resource also means that degradation in one location can have impacts on a regional level. In recent years, Combined Sewage Overflow events (CSOs) have garnered significant attention. CSOs occur during instances of heavy rainfall when the volume of sewage and rain exceeds system capacity, causing untreated stormwater and wastewater to discharge directly into the river.

To advance water quality efforts in the region, Merrimack Valley Planning Commission (MVPC) has partnered with other regional planning agencies, nonprofits, municipal and elected officials, as well as community groups to form the Merrimack River Collaborative (MRC). Led by the Merrimack Valley Planning Commission, the Merrimack River Watershed Council, and the Northern Essex Council of Governments, the MRC intends to be a clearinghouse of knowledge, data, resources, and funding opportunities related to the river's water quality, as well as an opportunity to connect municipal leaders with their

associated delegation regarding the Merrimack River.

In an effort to formalize the MRC, the group is pursuing legislation which will establish the Merrimack River Collaborative and support efforts to coordinate the monitoring and improvement of water quality along the Merrimack River to enhance the health of river adjacent communities. This legislation **Bill S.586/H.905 “An act to create a Merrimack River Collaborative”** brought forth by Senator Bruce E. Tarr and Representative Dawne Shand is moving through the current legislative session.

#### Links:

- Blog Post about the MRC: [Merrimack River Collaborative - MVPC](#)
- Blog post of funding received to advance effort- Early Alert Tool: [MVPC Awarded Grant to Advance CSO Early Alert Tool - MVPC](#)
- 1-Pager about Bill S.586/H.905: [learn more about the bill here](#)
- [Link to Mass Legislature Page to track bill progress Bill S.586 \(malegislature.gov\)](#)
- **Newburyport Daily News Coverage of the effort:** [Local leaders push for creation of Merrimack River Collaborative](#) | [Local News](#) | [newburyportnews.com](#)



#### Fall 2023 Boston Harbor Ecosystem Network (BHEN) - *Northeastern University Marine Science Center*

The MassBays Metro Boston region was pleased to organize the Fall 2023 Boston Harbor Ecosystem Network (BHEN) meeting on invasive and range-expanding species in partnership with the Boston office of EPA Region 1 on November 1, 2023. Discussion centered around four talks:

- “Marine Invasive Species Monitoring in Boston Harbor (and Beyond!)” – Lexie Neffinger, MA Office of Coastal Zone Management. Visit MA CZM’s [Marine Invasive Species Program website](#) for more information about state- and volunteer-coordinated invasive species surveys in eastern New England.
- “Lobster and the New Kid on the Block? Social and Ecological Impacts of Range-Expansion of Black Sea Bass on the American Lobster Fisheries” – Helen Cheng, Northeastern University. Listen to Helen talk about a different range-expanding species interacting with the lobster fishery in the Gulf of Maine, blue crab, on NPR’s [All Things Considered](#).
- “The Beautiful Savory Swimmer: Using Crowdsourcing and Open-Access Data Platforms to Study an Emerging Species” – Jessie Batchelder, Manomet. Visit Manomet’s [blue crab website](#) to view or submit sightings of blue crabs across the Gulf of Maine coasts.
- “City Nature Challenge and iNaturalist: Insights for Detecting Change” – Dr. Colleen Hitchcock, Brandeis University. For more information about collecting and analyzing participatory science data, including upcoming scheduled events, visit [City Nature Challenge](#) and [iNaturalist](#).

Please contact [Dr. Diana Chin](#), the MassBays Metro Boston Regional Coordinator, if you are interested in pdf copies of presentation slides from the Fall 2023 BHEN meeting or

have other questions about BHEN. Keep an eye out for the Spring 2024 BHEN meeting, field trips, and other announcements and resources by signing up for the monthly BHEN newsletter [here](#).



## **Horseshoe Crab & Good Harbor Marsh Studies - Salem Sound Coastwatch**

### **Horseshoe Crab Survey**

Salem Sound Coastwatch launched its first ever horseshoe crab population community science survey to gain insight into the abundance of horseshoe crabs that inhabit Salem Sound, as well as horseshoe crab hotspots. Volunteers were trained on how to identify spawning horseshoe crabs, measure prosomal width, and distinguish molts from dead horseshoe crabs. The survey was made public in April 2023 and, since then, we've collected 54 horseshoe crab sightings in five different towns, including one report of a mating pair! We will continue to train volunteers to collect data this spring and summer, which will direct conservation efforts in the future.

### **Links:**

Horseshoe Crab Survey and Underwater in Salem Sound Lecture are both linked on our [website under resources](#).

- [Horseshoe Crab Survey](#)
- [Horseshoe Crab Lecture](#)

### **Did You Know?**

MassBays hosts the [Monitoring Coordinators Network](#), comprised of folks who lead professional and participatory water quality or habitat monitoring projects across coastal Massachusetts. Consider joining the Network's mailing list [here](#) to stay informed about funding and partnership opportunities, new tools, and trainings.

## **Regional Coordinators & Staff**

### **Upper North Shore:**

[Hanna Mogensen](#), [Merrimack Valley Planning Commission](#)

### **Lower North Shore:**

[Barbara Warren](#), [Salem Sound Coastwatch](#)

### **Metropolitan Boston:**

[Diana Chin](#), [Northeastern University Marine Science Center](#)

### **South Shore:**

[Alex Mansfield](#), [North and South Rivers Watershed Association](#)

### **Cape Cod:**

[Jo Ann Muramoto](#), [Association to Preserve Cape Cod](#)

### **Boston-based staff:**

[Pamela DiBona](#), Executive Director- to explore partnership opportunities and find out how MassBays



works.

[Prassede Vella](#), Senior Staff Scientist- for information about research and monitoring efforts around the Bays.

[Jillian Carr](#), Coastal Data Scientist- for tools produced for the Monitoring Coordinators' Network, and all things eelgrass.

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The Massachusetts Bays National Estuary Partnership is a [Center within the School for the Environment at University of Massachusetts Boston](#), funded by the U.S. Environmental Protection Agency under Section 320 of the Clean Water Act.

[Massachusetts Bays National Estuary Partnership](#) - Pam DiBona, Executive Director

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