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Casco Bay Currents Fall 2024

2 messages

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Casco Bay Currents, an email newsletter of the Casco Bay Estuary Partnership

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Welcome,

to the Fall 2024 edition of *Casco Bay Currents*, the newsletter for Casco Bay Estuary Partnership (CBEP).

You are receiving this quarterly email newsletter because you signed up for our newsletters in the past. If you wish to unsubscribe, please click the link at the bottom of the newsletter.

Meet Natalie Bingham, CBEP's New Program Coordinator!

We're thrilled to welcome Natalie Bingham to the team as our new Program

Coordinator at CBEP!

Natalie has a bachelor's degree in Environmental Science from the University of Vermont. She spent summers in Vermont working on invasive species management in the Mad River Valley, helping the community tackle Japanese knotweed and restore natural resources.

In her new role, Natalie will play a leading role in coordinating implementation of the goals and objectives of the Casco Bay Plan and CBEP in conjunction with the U.S. Environmental Protection Agency's (EPA) National Estuary Program. She'll be taking the lead on critical tasks like subcontracting, budget management, and procurement, while also working closely with our team to prepare reports for our funders.

Natalie is eager to dive into her work with CBEP's many partners around the watershed. She'll be a key communicator, supporting various projects and joining the team for fieldwork too.

Since moving to Portland, Natalie has been making the most of her first summer here—exploring new restaurants, paddleboarding in the bay, hiking, biking, and soaking up the sun on local beaches.

Join us in giving Natalie a warm welcome to the CBEP team.

Dam Removal Restores Crooked River

After years of careful planning and navigating through extensive permitting processes, the Edes Falls Dam in Naples has been successfully removed, marking a major achievement in environmental restoration. This project, spearheaded by a dedicated coalition of partners, has restored the natural flow of the Crooked River, reopening more than 25 miles of critical spawning and nursery habitats for Sebago's landlocked salmon.

The project aimed to not only restore fish passage but also to enhance Edes Falls Park for the community. Repeated flooding events had damaged the

structure and posed a safety risk. The Naples Selectboard declared an emergency to authorize the expanded demolition of the dam, leaving an abutment in place to honor its historical significance.

With the dam now gone, landlocked salmon and brook trout can freely access essential spawning grounds upstream. Maine remains a crucial refuge for brook trout and is the only state in the U.S. where Atlantic salmon still exist. The Crooked River is home to its own unique sub-species of landlocked salmon, Salmo salar sebago.

This project is a collaborative effort managed and funded by several partners, including the Sebago Chapter of Trout Unlimited, Lakes Environmental Association, Maine Council of Trout Unlimited, Maine Department of Inland Fisheries and Wildlife, Natural Resources Conservation Service, Sebago Clean Waters, Sebago Lake Anglers, Sebago Rotary, The Nature Conservancy, U.S. Fish and Wildlife Service, and Casco Bay Estuary Partnership.

Photos: Edes Falls Dam before construction (Lakes Environmental Association) and after (Trout Unlimited).

CBEP Awards Grants to Build Resilience in the Casco Bay Watershed

Casco Bay Estuary Partnership (CBEP) is pleased to announce grants totaling $112,726 have been awarded to seven communities and nonprofit organizations. Funding for these projects is provided by CBEP through the U.S. Environmental Protection Agency (EPA) under the Bipartisan Infrastructure Law (BIL). These grants are part of a new CBEP pilot program that supports projects in the Casco Bay watershed aimed at:

- Advancing planning or strengthening networks to increase community resilience.
- Restoring or enhancing priority aquatic habitats to build ecosystem resilience.
- Increasing monitoring infrastructure and capacity to support the collection of environmental data throughout the Casco Bay watershed.

The seven grant recipients are:

- **Chebeague Island**: $12,000, to engage the community in developing a vision of climate resilience, set priorities, and turn planning into action.
- **Friends of Casco Bay**: $25,000, to install telemetry, a weather station, and additional equipment at one of their three Continuous Monitoring Stations in Casco Bay. This will allow them to provide real time data on coastal conditions and respond quickly to threats or equipment malfunctions.
- **Maine Department of Marine Resources: $**13,650**,** to increase the monitoring capacity of near-shore habitats in the Casco Bay region by linking intertidal ecological monitoring at three important shellfish harvesting locations.
- **Manomet Conservation Sciences,** $25,000, to explore novel methods to boost softshell clam populations and restore tidal mudflats at three different sites in Casco Bay.
- **Phippsburg:** $25,000, to develop a Climate Action Plan by building community capacity to address climate impacts and develop resilience strategies.
- **South Portland**: $6,038, to purchase equipment to improve the city's capacity to monitor water quality conditions and address threats in impaired streams.
- **Trout Unlimited - Sebago Chapter**: $6,038, to capture daily water quality and habitat data before, during, and after construction of the Gorham Bypass, to understand the impacts of roadway construction on water quality and fish habitat.

"Communities and organizations in the Casco Bay watershed selected for this funding are taking important steps to build capacity and infrastructure, plan for, and address the effects of climate change on water quality, community resilience, and ecosystem health," said Curtis Bohlen, Executive Director of CBEP. "These projects help communities address local priorities while advancing the goals of the Casco Bay Plan."

"Phippsburg is increasingly experiencing the effects of climate change, including heavier and more frequent storms, sea-level rise, and flooding," said Ross McLellan, Town Administrator of Phippsburg. "This project will help our community build much-needed capacity to assess and address these climate challenges."

Friends of Casco Bay Executive Director, Will Everitt, says "CBEP's grant will enable us to install telemetry at one of our Continuous Monitoring Stations, enhancing data accuracy and providing an early-warning system for issues in the Bay. This investment by the Partnership will not only strengthen our ability to monitor the health of our coastal waters but also support other critical scientific efforts in our region."

For more information about CBEP grant opportunities, **please visit the CBEP website.**

Thank you Olivia Tabor!

Olivia Tabor was CBEP's Coastal Habitat Intern this summer, and we're sorry to see her go!
Olivia is a third-year environmental science major and chemistry minor at the University of Southern Maine. She contributed to many field projects this summer, and her contributions have been invaluable. Olivia's favorite experiences with CBEP were investigating eelgrass beds, by boat, paddleboard, and with a snorkel, and she was excited to learn all about eelgrass reproduction and restoration.

She also spent many hours out on the salt marsh and back in the office doing follow-up data analysis, noting "I learned about how early settlers farmed the salt marshes and we can still see the impacts today. I also learned how to use Rstudio (programming language), identify salt marsh plants, and use different types of field equipment. I went on a family vacation this summer and enjoyed sharing my knowledge with my little cousins, who are now experts at identifying green crabs!"

Olivia is planning on getting her scientific diving certification and continuing to work on coastal and marine ecosystems.

Thank you for your many contributions, Olivia!

Photo: Olivia Tabor inspects a sea star from one of the sites she visited when conducting field work with COBALT/Team Zostera (Photo Glenn Page).

The Summer of Eelgrass

The Casco Bay Eelgrass Recovery Collaborative recently completed a successful field season, gathering extensive data on eelgrass in Casco Bay and the factors contributing to its decline. This effort was a partnership between CBEP, COBALT/Team Zostera, Friends of Casco Bay, Manomet Conservation Sciences, and Maine DEP. The group aims to use this information to better protect eelgrass beds and pilot restoration efforts in Casco Bay. So far as part of this project:

COBALT (Collaborative for Bioregional Action Learning and Transformation),

through its Team Zostera Initiative, monitored the flowering and seeding of eelgrass and tested methods for seed collection and processing for use in future restoration projects. They also promoted awareness of eelgrass in local classrooms, art exhibitions, and even on the local news. Read more about their work later in this newsletter.

Friends of Casco Bay collected data on water quality in areas with eelgrass beds, including temperature, nutrient levels, and the amount of light that reaches eelgrass. High temperatures, excessive nutrients, and low levels of light can harm eelgrass, making this data crucial for understanding the challenges facing these beds.

Manomet Conservation Sciences monitored the impact of invasive green crabs on eelgrass by deploying crab traps and underwater cameras to track crab numbers in different areas. They found high crab populations in some eelgrass beds, with notably large green crabs near Littlejohn Island, according to Marissa McMahan, Manomet's Senior Director of Fisheries.

Maine DEP focused on eelgrass itself, collecting data on shoot density, height, patchiness, and biomass, which will be correlated with data from other partners.

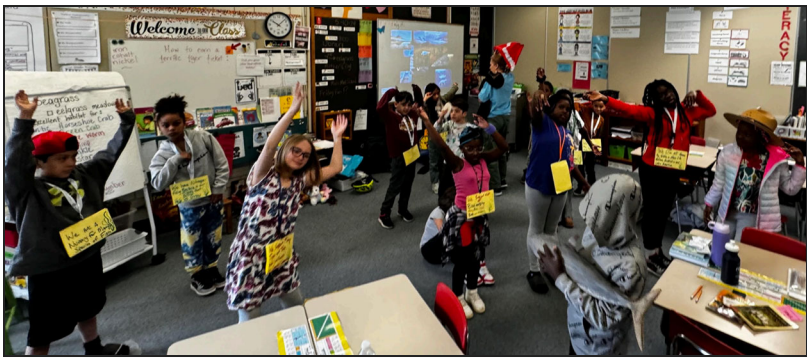
CBEP coordinated work across partners and assisted partners with data analysis and field work. They also collected data on the sediment at each field work site to see how sediment characteristics might impact eelgrass growth.

Thank you to all our partners for your hard work this summer. Stay tuned for more updates in future newsletters!

Photos:
Underwater shot of a reproductive shoot on the southern end of Ft. Gorges; A vibrant seagrass meadow off the northern end of Long Island where moorings are located. (Photos: Glenn Page).

Road Map for Community Based Seagrass Restoration in Casco Bay

The Collaborative for Bioregional Action Learning and Transformation (COBALT) is an NGO focused on community-based seagrass restoration in the Casco Bay Bioregion through their “Team Zostera” initiative. They’ve launched a scientific dive program for underwater seagrass surveys and formed working groups that integrate arts, indigenous wisdom, seagrass science, dive safety, and marine operations.



This summer, Team Zostera identified the timing of seagrass flowering in Casco Bay, crucial for future seed collection efforts. Collecting seagrass seeds and then re-seeding in areas that could support germination and success is a promising method of restoration. In July and August, they surveyed over 30 sites with previously high seagrass cover, finding that areas like southeastern Mackworth Island, Clapboard Island, and Sturdivant Island had nearly no seagrass. However, they identified 16 healthy sites with reproductive shoots and collected 1,100 shoots, which could yield over 20,000 seeds for pilot restoration. Bowdoin student Lucy Dutton developed a seed processing method at Bowdoin College's Schiller Coastal Studies Center and will conduct an honors thesis on seed germination.

Team Zostera has engaged a diverse group of community leaders. Artist Pamela Moulton created the “Zostera Superhero” displayed at the Maine Center for Arts and Design. In May, about 60 third-grade students at Gerald E. Talbot Community School, led by teacher Jes Ellis, participated in an interdisciplinary seagrass conservation curriculum, transforming into a seagrass meadow. Team Zostera also collaborated with Passamaquoddy Language Keeper Dwayne Tomah to translate the names of over 60 species that depend on seagrass meadows into Passamaquoddy/Maliceet language. Chief Hugh Akagi of the Passamaquoddy praised Team Zostera’s integration of cultural, societal, and scientific knowledge, calling it “groundbreaking” and a true example of “two-eyed seeing” (viewing the world through both Western and Indigenous knowledges and worldviews).

Photo: Third-grade students at Gerald E. Talbot Community School learning about the social and ecological value of seagrass by becoming a seagrass meadow. (Glenn Page)

All photos by Jerry Monkman, ecophotography.com, unless otherwise indicated.

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