

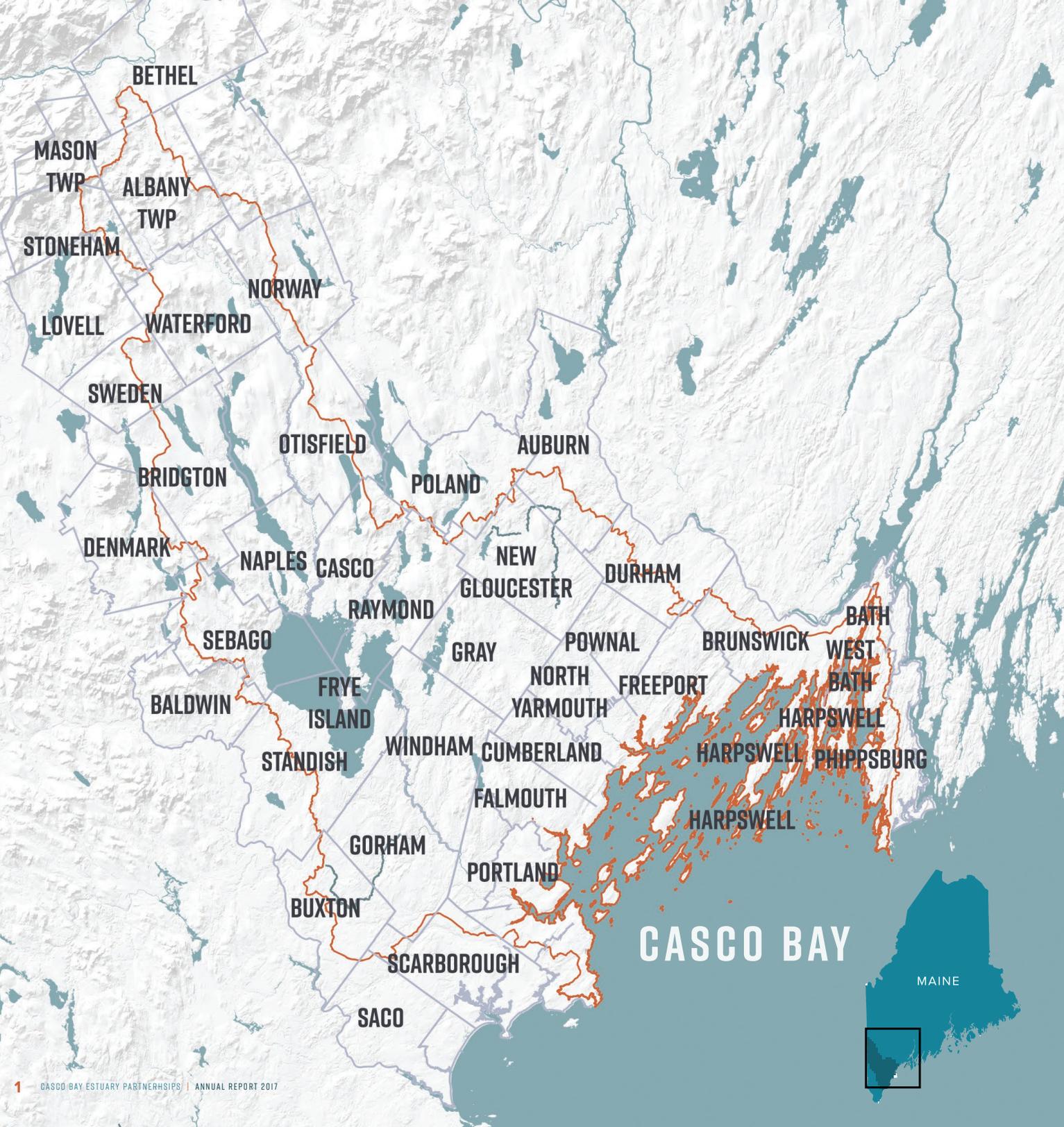
ANNUAL REPORT 2017

SCIENCE-BASED | NON-REGULATORY | LOCALLY-LED | COLLABORATIVE | WATERSHED-FOCUSED

The mission of the Casco Bay Estuary Partnership is to help conserve the ecological integrity of Casco Bay and its watershed through science, public stewardship and effective management.

Casco Bay Estuary Partnership
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Muskie School of Public Service
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Wishcamper Center #229
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Portland, ME 04104





THE
CASCO BAY
 Watershed

986
 SQUARE MILES

WITH THE BAY REPRESENTING

160
 SQUARE MILES

MAKING UP

3%

OF MAINE'S
 LAND AREA

BUT HOME TO

17%

OF THE
 POPULATION

MEMBER OF THE EPA'S
 NATIONAL ESTUARY PROGRAM

SINCE **1990**



CASCO BAY

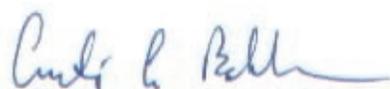
MAINE

Letter from the Director

Maine's Casco Bay is in a period of unprecedented change, not only due to climate change, but also the cumulative impacts of human activity going back at least as far as European settlement. Signs of change are everywhere.

- Aquaculture is booming in the Bay, with 15 companies in full production for 2017 at 21 locations, and dozens of companies and individuals working on aquaculture at a pilot scale.
- This past summer saw one of the longest and most severe “red tide” blooms in Casco Bay’s history, shutting down all shellfish harvests in the Bay for a couple of months.
- Several novel phytoplankton species turned up in the Bay in 2017, including a species of *Karenia* that caused a troubling bloom in September.
- Four growing seasons after the boom in green crabs caused a precipitous decline in eelgrass, especially in the Eastern Bay, there are signs of slow recovery. A new survey is being planned for 2018 to see where we stand.
- Casco Bay Estuary Partnership, like each National Estuary Program, is charged with working collaboratively to implement community-based priorities. Those priorities are captured in the Casco Bay Plan, which is periodically updated to reflect changing circumstances and threats to the Bay.

We are nearly two years into implementing the most recent Plan, and we have made real progress. We created the Casco Bay Monitoring Network to improve our collective ability to observe the Bay and understand how it is changing. The Casco Bay Nutrient Council has begun wrestling with the thorny challenge of seeking cost-effective and equitable ways to reduce harm to the Bay from nutrient pollution. CBEP staff are working at the local community level on coastal restoration and climate resilience. Anchored by our many partners and guided by our Plan, CBEP looks forward to the challenges and opportunities ahead.

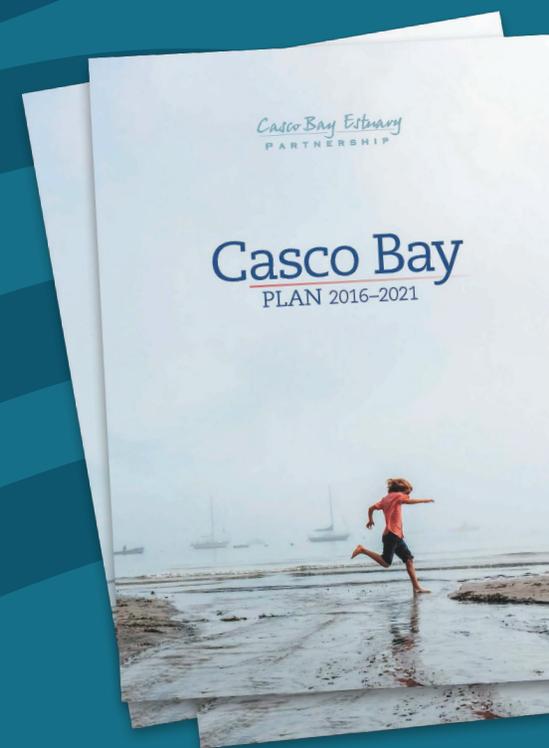


IMPLEMENTING THE CASCO BAY PLAN (2016–2021)

In our second year implementing the Casco Bay Plan, CBEP staff and partners have been laying the foundation for dealing with the challenges accompanying our changing coast, by reaching out to new partners and embracing new technologies.

OUR CHANGING BAY

Casco Bay’s coastal environment is changing due to a combination of forces including regional climate, ocean acidification, invasive species and coastal development. Resilient coastal ecosystems are less likely to collapse in the face of change and are more likely to continue to provide environmental goods and services despite external pressures. Protecting and enhancing the resilience of coastal ecosystems and coastal economies are important policy goals for CBEP.



This report highlights just some of the important work we are doing. To learn more about the Casco Bay Plan, visit us online:

WWW.CASCOBAYESTUARY.ORG

GOAL #1

Protect, restore and enhance key habitats that sustain ecological health.

CASCO BAY EELGRASS CONSORTIUM

The Casco Bay Eelgrass Consortium, an informal network of government, academic, organizational, and citizen collaborators convened by CBEP, was organized in 2014 following widespread loss of eelgrass beds in the Eastern Bay. Following successful Consortium efforts to transplant eelgrass in 2015, anecdotal reports suggest eelgrass is naturally returning to some areas. To better assess current eelgrass coverage, the Consortium plans to commission Bay-wide mapping of eelgrass beds in 2018.



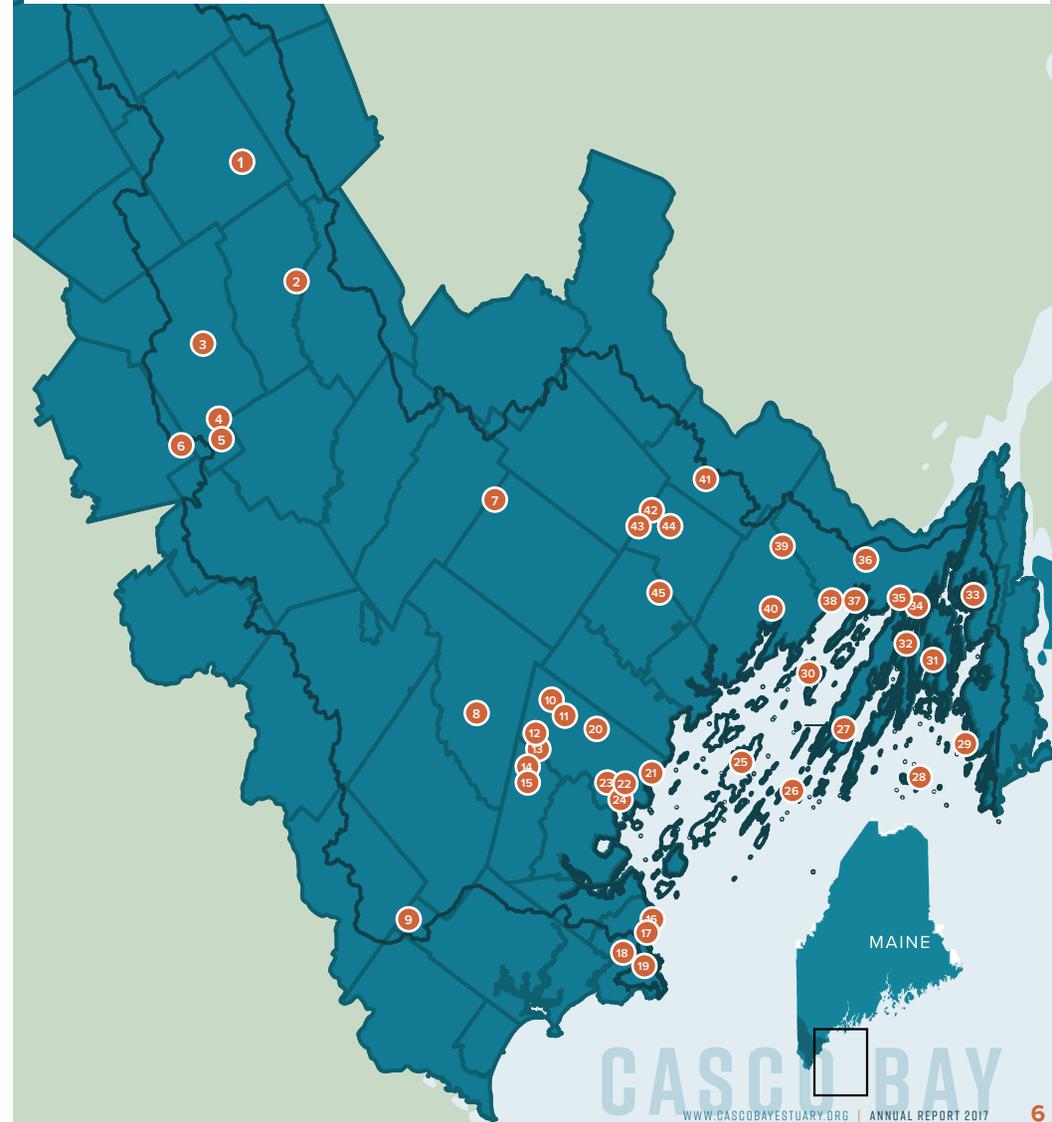
▲ Consortium members transplating eelgrass, 2015.

CBEP HABITAT PROTECTION FUND

- Cape Elizabeth Land Trust's Great Pond Preserve project, which protected 21.5 acres adjacent to Great Pond and Alewife Brook, closed in August 2016, with CBEP funds contributing towards project costs.
- Presumpscot Regional Land Trust closed on a 15-acre parcel with 2,844 linear feet adjacent to Mill Brook in January 2017. CBEP funding contributed towards project costs.
- Western Foothills Land Trust closed the 64-acre Howe Woodlot with 1,362 feet of frontage on a tributary to the Crooked River in May 2017. CBEP directly supported technical assistance by the US Fish and Wildlife Service Gulf of Maine Coastal Program.

HABITAT PROTECTION

- | | | | |
|------------------------------------|------------------------------------|--------------------------------------|---------------------------------------|
| 1. WFLT-CROOKED RIVER-HAGUE | 13. SUCKFISH BROOKE II | 25. CCLT - CURIT | 37. MCHT - LASKEY |
| 2. WFLT - CROOKED RIVER-WATKINS | 14. MILL BROOK II | 26. CCLT - MINISTERIAL ISLAND | 38. BTLT - HENSHAW |
| 3. PONDICHERRY PARK | 15. PRLT - MILL BROOK | 27. HHLT - CURTIS FARM PRESERVE | 39. FLORIDA LAKE |
| 4. LELT-SEBAGO HEADWATERS PRESERVE | 16. CELT - ROBINSON WOODS | 28. MCHT - RAGGED ISLAND | 40. FCT - QUARRY WOODS |
| 5. HOLT POND PRESERVE | 17. CELT - ROBINSON WOODS II | 29. MDIFW - FLAG ISLAND | 41. RRCT - RUNAROUND POND LANDSCAPE |
| 6. PERLEY MILLS | 18. CELT - JORDAN FARM | 30. FCT - PETTINGILL ISLAND | 42. RRCT - PISGAH HILL RIDGE |
| 7. MDIFW-MORGAN MEADOWS | 19. GREAT POND PRESERVE II | 31. LONG REACH PRESERVE | 43. RRCT - PISGAH HILL PRESERVE |
| 8. MFT-CLARK FARM | 20. FALMOUTH CONSERVATION CORRIDOR | 32. OTTER BROOK FARM | 44. RRCT - BRADBURY PINELAND CORRIDOR |
| 9. SLDT-MESERVE FARM | 21. FLT - MILL CREEK | 33. MAS - HAMILTON SANCTUARY | 45. RRCT - CHANDLER BROOK PRESERVE |
| 10. STILLINGS | 22. PT - BRICKYARD POINT | 34. HHLT - SKOLFIELD SHORES | |
| 11. FLT-BLACKSTRAP HILL PRESERVE | 23. FLT-PRESUMPSCOT RIVER PLACE | 35. BTLT - PACKARD FARM | |
| 12. SUCKFISH BROOK I | 24. PT - BERLE MILL POND | 36. BTLT - CRYSTAL SPRING FARM NORTH | |



GOAL #2

Reduce nutrient pollution and its impacts, including coastal acidification.

FRIENDS OF CASCO BAY PUMPOUT BOAT

CBEP has provided funding for over 15 years to support Friends of Casco Bay's operation of a recreational vessel pumpout program in Casco Bay, which offers a convenient way of disposing of vessel sewage from marine toilets. FOCB also provides education for boaters on water quality issues and the Casco Bay "No Discharge Zone." CBEP utilizes an annual contribution from Portland Water District for water quality improvement programs to support this service.



Friends of Casco Bay Pumpout Captain Jim Splude.



CSO outfall on Back Cove in Portland.

NUTRIENT COUNCIL

CBEP has created an innovative regional forum for collaborative problem solving regarding strategies for reducing the impacts of nutrient pollution on Casco Bay. The 12-member Casco Bay Nutrient Council and supporting Advisory Network have been meeting to build a common understanding of nutrient pollution, its sources and solutions. The Council has been cited as a unique and valuable collaborative venue for non-confrontational discussion of the complicated issues surrounding reduction of nutrient pollution in the Bay.



Baxter Boulevard, Portland.

CASCO BAY NUTRIENT COUNCIL MEMBERSHIP

Cumberland County Soil & Water Conservation District • Friends of Casco Bay
Greater Portland Council of Governments • Island Institute
Maine Department of Environmental Protection • Maine Water Environment Association
Midcoast Economic Development District • Portland Public Works Department
Portland Water District • South Portland Treatment Systems Manager
University of Maine • Yarmouth Town Engineer

GOAL #3

Foster resilient communities and their connections to Casco Bay.

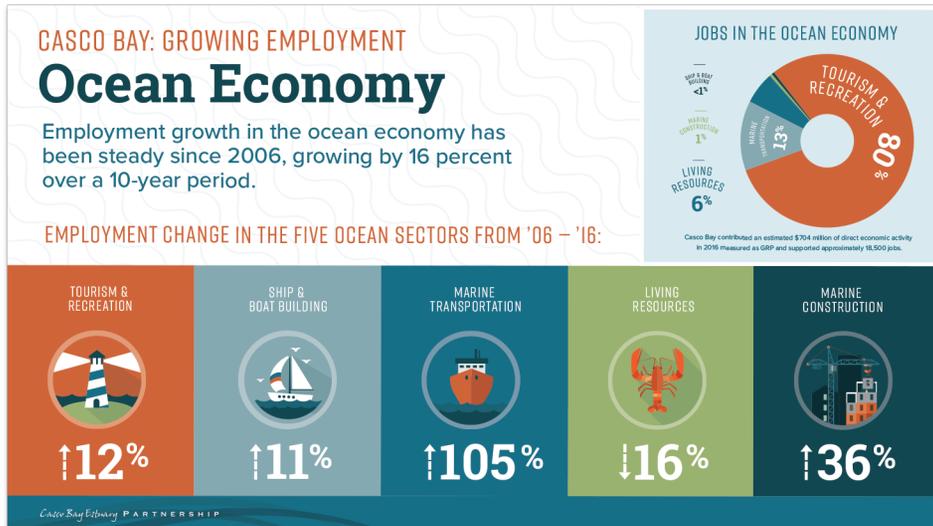
ECONOMIC STUDY

CBEP released a study, "The Economic Contribution of Casco Bay," prepared by the Maine Center for Business and Economic Research with rbouvier consulting.

✦ Excerpt from the economic study highlighting the Ocean Economy.

COMMUNITY GRANTS PROGRAM

The Community Grants program strives to fund locally-led projects that bring together new partnerships and engage communities with Casco Bay and its watershed. In 2017, CBEP funded six Community Grant projects at \$13,243 total. CBEP received fifteen proposals totaling nearly \$45,000.



SINCE THE PROGRAM'S INCEPTION IN 2016
 COMMUNITY GRANTS PROGRAMS:
 SUPPORTED **13** SCHOOLS,
 MUNICIPAL & NONPROFIT PARTNERS



IMPACTED
NINE
 CASCO BAY
 COMMUNITIES

THE **HARPSWELL**
 HERITAGE LAND TRUST'S
 BOOKLET REACHED
164
 COMMUNITY MEMBERS

OVER 200 PEOPLE PARTICIPATED IN THE
CHEBEAGUE ISLAND
AQUACULTURE FESTIVAL

THE MAINE COAST FISHERMEN'S ASSOCIATION VIDEO RECEIVED
915 VIEWS **100** LIKES **96** SHARES

GOAL #4

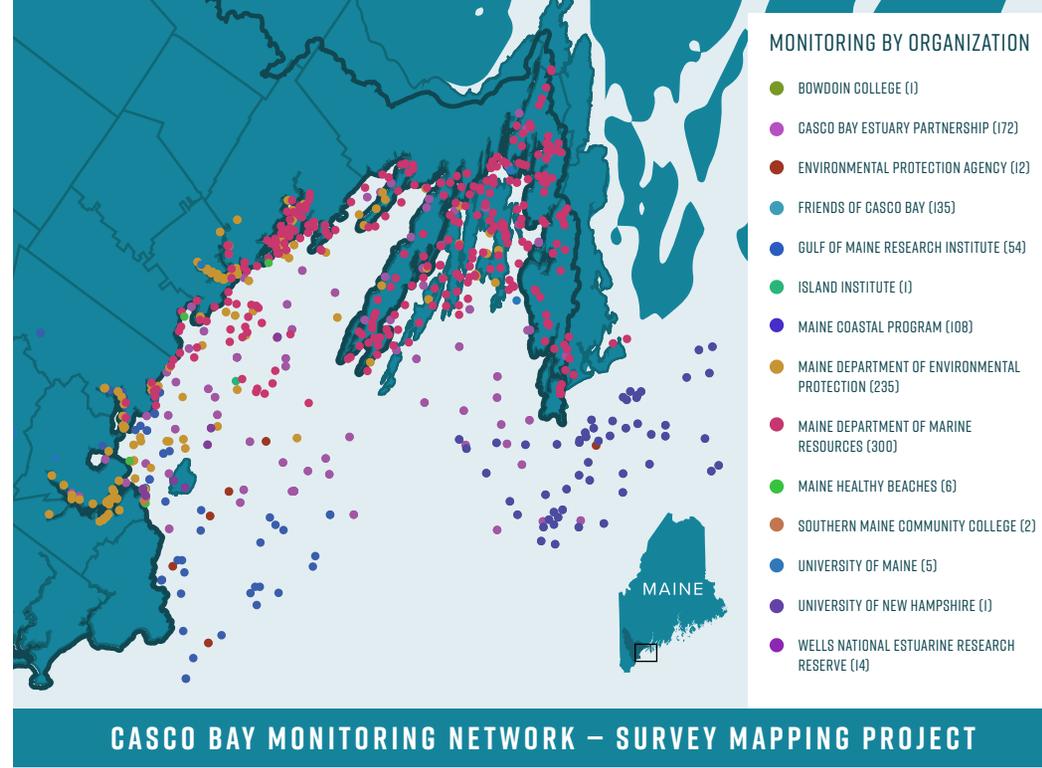
Mobilize collective knowledge and resources to support Casco Bay.

VOLUNTEER-BASED MARINE INVASIVE SPECIES MONITORING (MIMIC)

CBEP funds ongoing work by the Marine Invasive Monitoring and Information Collaborative (MIMIC), sponsored by the Wells National Estuarine Research Reserve, to monitor marine invasives on Chebeague and Peaks Islands and engage volunteers in stewardship efforts.



⚡ A MIMIC project on Peaks Island. Photo courtesy of Wells National Estuarine Research Reserve.



CASCO BAY MONITORING NETWORK – SURVEY MAPPING PROJECT

CASCO BAY MONITORING NETWORK

In 2016, CBEP created the network to identify shared monitoring priorities among the growing number of organizations who are monitoring the waters within Casco Bay and its watershed. In 2016-17, we collected and organized water monitoring information from 14 organizations with a total of 31 monitoring programs addressing biota, nutrients, sediments, tidal wetlands, toxics, and water quality. This information is available in map form on CBEP's website.

CASCO BAY STORIES

WWW.CASCOBAYSTORIES.ORG

This year, we added stories from three new organizations: Waterfront Alliance, The Telling Room, Maine Coast Fishermen's Association.



6
SITES MONITORED
IN CASCO BAY

12
SITES MONITORED
IN MAINE

600
MONITORING EVENTS
IN MAINE
SINCE 2008



CBEP is funded by the US Environmental Protection Agency under Cooperative Agreements #CE96190301-0 and #CE00A00063-0 with the University of Southern Maine.

CBEP owes a great deal of credit to our Management Committee, our organizational partners who meet regularly to guide staff in carrying out our mission.

Thank you to our many Committee members!

IN MEMORY OF JED WRIGHT



A valued colleague and friend to CBEP. Jed was a project leader of the U.S. Fish and Wildlife Service's Gulf of Maine Coastal Program, was on CBEP's Management and Executive Committees, and throughout, was a close collaborator on many fish and wildlife projects. We will miss Jed and his many contributions to the conservation community.