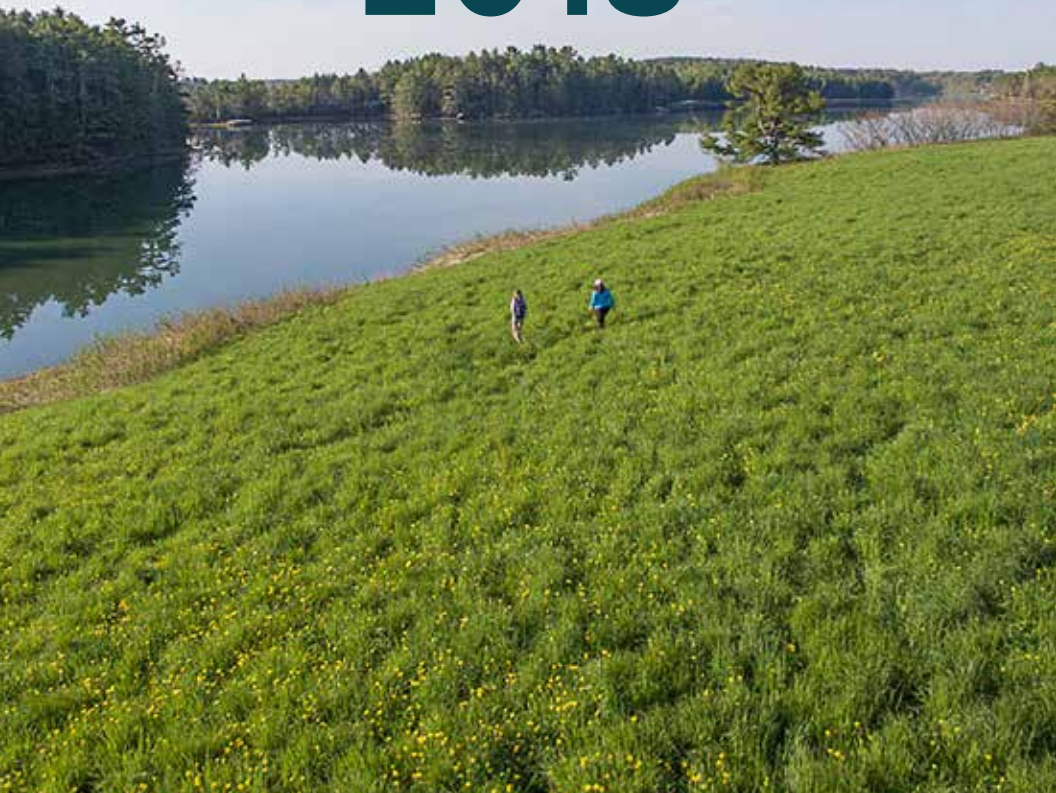


ANNUAL REPORT — 2018 —

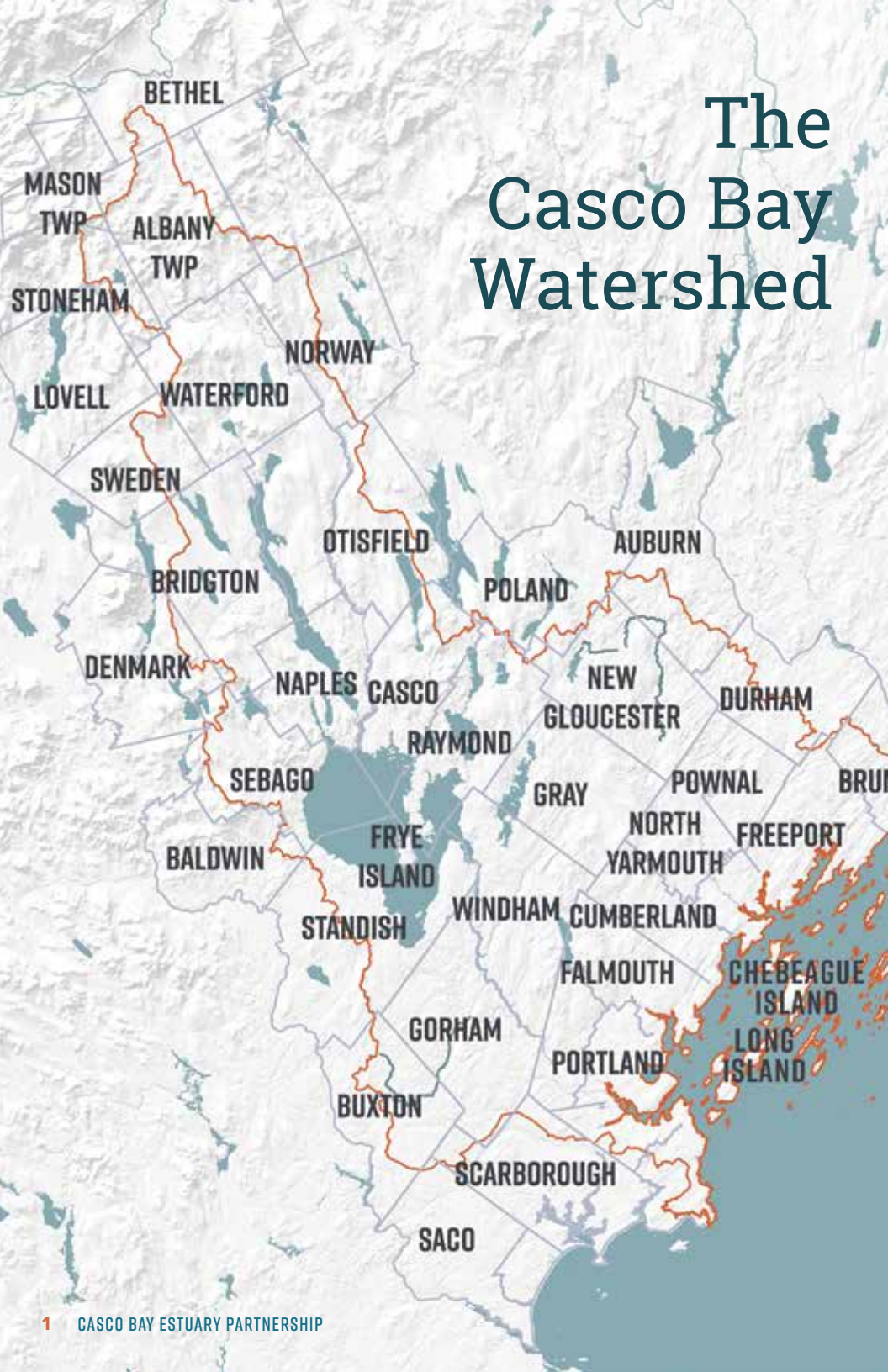


-LED | COLLABORATIVE | WATERSHED-FOCUSED



WWW.CASCOBAYESTUARY.ORG

The Casco Bay Watershed



986 SQUARE MILES

575 MILES OF SHORELINE

785⁺ ISLANDS & LEDGES

3% OF MAINE'S LAND AREA, BUT HOME TO

17% OF THE POPULATION

12 SIGNIFICANT LAKE & RIVER SYSTEMS FEED THE BAY

NEW SWICK
BATH
WEST BATH
HARPSWELL
PHIPPSBURG

CASCO BAY



Letter from the DIRECTOR & CHAIR

CBEP has been collaborating for over 25 years with a multitude of partners working hard to protect Casco Bay. 2018 brought us new and exciting collaborations.

The Casco Bay Nutrient Council, convened by CBEP, met for almost two years and produced a report that laid a path forward for all partners to tackle nutrient pollution.

CBEP worked closely with the EPA to establish the Casco Bay Monitoring Network, made up of over 20 member organizations, aimed at coordinating and upgrading monitoring in the Bay. The Network is currently updating the Casco Bay Monitoring Plan.

CBEP is an active participant in the City of Portland's new Integrated Plan for Water Resources. The end goal of the "Blue Portland" Integrated Planning Process is to analyze and refocus policies and funding toward more beneficial investments in stormwater, wastewater, and combined sewer overflows (CSO) abatement.

A new coalition in the Sebago watershed is focused on conserving upstream forests to protect Sebago water quality. And a burgeoning New England coalition is experimenting with using natural materials to reduce shoreline erosion and improve coastal habitat. CBEP is a partner in both collaborations.

Collaboration has always been a central mission for CBEP.

In continued partnership,



Curtis C. Bohlen
Director



Kathleen Leyden
Management Committee Chair



THANK YOU TO OUR PARTNERS

Casco Bay Islands Alliance

City of Portland

City of South Portland

Cumberland County Soil & Water
Conservation District

Friends of Casco Bay

Greater Portland Council of
Governments

Gulf of Maine Research Institute

Maine Coastal Program

Maine Department of
Environmental Protection

Maine Department of Inland
Fisheries and Wildlife

Maine Department of Marine
Resources

Maine Department of
Transportation

NERACOOS

Portland Water District

The Nature Conservancy

United States Environmental
Protection Agency

University of Maine

University of Southern Maine

*CBEP is funded by the US Environmental Protection Agency under Cooperative Agreements
#CE00A00063-0 and #CE00A00299-0 with the University of Southern Maine.*

Protecting & Restoring HABITATS



KNIGHT'S POND PRESERVE, CUMBERLAND

CBEP provided a Habitat Protection Fund grant to the Chebeague & Cumberland Land Trust to cover transaction and acquisition costs associated with purchase of the eastern shore of the pond. The parcel abuts the previously protected 213-acre Knight's Pond Preserve in Cumberland. Preserve land includes woodlands surrounding the pond, an upland meadow, and a cranberry bog, as well as a walking trail. The Maine Natural Areas Program designated Knight's Pond as high value inland wading bird habitat.





PRATT'S BROOK FISH PASSAGE IMPROVEMENT, YARMOUTH

The Town of Yarmouth replaced an old road crossing of Pratts Brook, a Cousins River tributary, with an open bottom culvert, restoring connectivity to 1.44 miles of upstream fragmented stream habitat. CBEP worked with the Town to assess the site and coordinated with the US Fish and Wildlife Service to perform a stream simulation survey. This led to a restoration plan that helped secure a \$100,000 Water Bond grant for the culvert replacement.



BASIN POINT ROAD RESILIENCE PROJECT, HARPSWELL

CBEP was commissioned by the Town of Harpswell to assess the impacts of restoring tidal exchange beneath the current road crossing on tidal wetlands. This is part of a broader Town-led coastal resilience study to examine the impacts of sea level rise on public roads that may become subject to more regular and intense flooding.

Protecting WATER QUALITY



Nutrient Sensor. CBEP led a pilot project to deploy two nutrient sensors, one water-based and one land-based.

ADDRESSING NUTRIENTS

18 CBEP worked with many partners to develop regional consensus on how to understand and address nutrient loading to the Bay.

The Casco Bay Nutrient Council produced a report and came up with 18 recommendations on how to tackle nutrient pollution.

PORTLAND STORMWATER UTILITY

CBEP is monitoring and supporting the implementation of Portland's Stormwater Fee, including reviews of the costs and benefits of projects funded by the fee. In 2016, after years of study and preparation, Portland enacted a stormwater service fee to raise an estimated \$170 million over 15 years to fund projects and initiatives mandated under the federal Clean Water Act. A report produced by Nancy Martin for CBEP outlines a snapshot of City stormwater initiatives and reviews the costs and benefits of these projects.

AN EXAMPLE OF A TREE BOX FILTER IN THE BACK COVE NEIGHBORHOOD

Sagamore Village is a 350-unit affordable housing community located within the Capisic Brook watershed. The city has used proceeds from the stormwater fee to install green infrastructure, specifically a bioretention basin and tree box filters, to mitigate stormwater runoff into the watershed.



GRAVEL WETLANDS AT CAPISIC BROOK

In the Capisic Brook watershed, the city installed constructed gravel wetlands, which will prevent stormwater runoff from discharging into open water. The city purchased 42.5 acres of wooded land to protect the watershed and allow its natural landscape the opportunity to absorb stormwater and improve water quality.



WOODFORD STREET

Portland and the Maine Department of Transportation (MDOT) shared the cost to construct a separated stormwater system located under Woodford Street that discharges at the shoreline of Back Cove.



Fostering RESILIENT COMMUNITIES



PREPARING COMMUNITIES FOR CHANGE

Climate vulnerability and adaptation was the subject of two municipal training events organized by CBEP and partners with funding from the Maine Coastal Program.



Over 50 municipal leaders
and others participated in
training sessions

Friends of Pope Preserve volunteers and other partners restored habitat and installed educational signage at the preserve at Mill Creek in South Portland.



CONNECTING EDUCATORS AND STUDENTS WITH CASCO BAY

Brunswick High School and its “outdoor classroom” at Wharton Point were the settings for an August workshop that connected educators with marine organizations and place-based curriculum.



\$10K

5 Community Grant projects awarded at \$10,000 total.

Cape Elizabeth Land Trust

Great Pond and Alewife Brook Monitoring

Town of Harpswell and Harpswell Conservation Commission

*Harpswell Citizen Scientists Document
Sea Level Changes*

Kennebec Estuary Land Trust

Community Clam Conservation

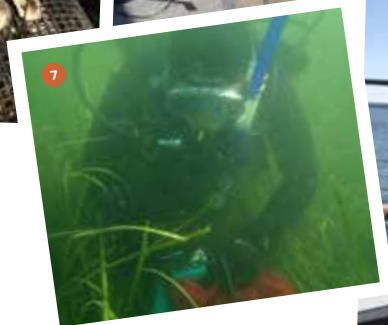
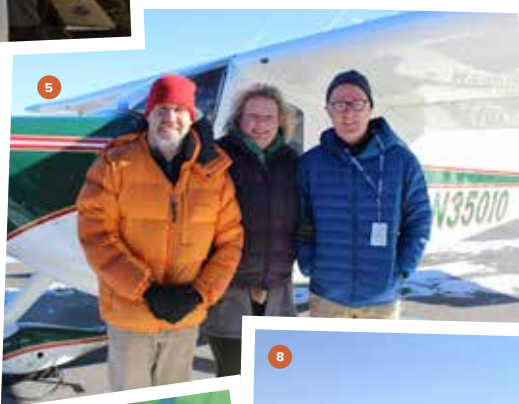
Lakes Environmental Association

Headwaters Initiative: Exploring our Watershed

City of South Portland and Friends of Pope Preserve

Pope Preserve

Our Partners AT WORK



WITH CBEP SUPPORT, OUR PARTNERS ACCOMPLISHED MUCH IN 2018



1. CBEP, Wells National Estuarine Research Reserve and New England Environmental Finance Center organized two municipal training events focused on climate adaptation.

2. CBEP, Tidelands Coalition and Brunswick School Dept. Educators from around Casco Bay engaged in new place-based curriculum at Brunswick's "outdoor classroom" on Wharton Point.



3. Maine Coastal Program. Tristan Taber of CBEP and Slade Moore of Biological Conservation install a sediment elevation table into a salt marsh at the head of Maquoit Bay in Brunswick. The station is part of a statewide network established by the Maine Coastal Program to improve understanding of the ability of salt marshes to keep pace with sea level rise.

4. The Nature Conservancy in Maine. In partnership with local, state and private agencies and organizations, TNC is testing oyster and blue mussel reef restoration techniques in the waters just off the Basin Preserve in Phippsburg.



5. Peter Slovinsky of Maine Geological Survey, with support from **LightHawk and Surfrider Foundation,** took recent aerial photographs in Casco Bay to document an astronomical high tide.

6. Sebago Clean Waters partners doing a site visit at the Sebago Community Forest.

7. Maine DEP Biologist, Emily Zimmermann, supports transect monitoring to assess eelgrass health metrics near Clapboard Island in Falmouth.

8. Friends of Casco Bay staff assessing Bay conditions on the "Casco Baykeeper."

9. Portland Water District staff releasing trout with students from South Portland.



Our Changing Coast: LOOKING AHEAD TO 2020



The warming climate represents a vast and unpredictable driver of regional change, with hotter ocean and air temperatures, more frequent and extreme storm events, and rising seas.

CBEP helps track and report on ever-changing conditions within the Bay and its watershed. Every five years, in its State of the Bay report, the Partnership illustrates evident trends in Casco Bay, visible progress we have made, and emerging challenges we face. By tracking indicators at regular intervals over time, we identify the collective work needed to sustain the Casco Bay region.

At our 2020 State of the Bay, just around the corner, we will be taking a close look

at current conditions of the Bay as well as progress we've made on meeting 2015 Partnership goals on habitat protection and restoration, water quality, and nutrients, among others.

The marine environment of Casco Bay is continually changing due to a combination of forces, including a changing regional climate, ocean acidification, invasive species and coastal development. And as the region's population continues to grow at a steady pace and development and urbanization push outward into more rural areas, landscape fragmentation can lead to increasing habitat loss and water quality degradation.

CBEP will look at our changing coast and develop a new five-year plan for how to tackle ongoing and emerging challenges.

The aggressive spread of non-native species like European green crabs is disrupting Casco Bay's ecosystems and fishery resources. Photo: Hillary Neckles






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.

SCIENCE-BASED | NON-REGULATORY | LOCALLY

Casco Bay Estuary Partnership

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Muskie School of Public Service
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Wishcamper Center #229
34 Bedford Street, Portland, ME 04104

Find multimedia stories that illustrate what makes Casco Bay special at cascobaystories.org

 Follow us on Facebook
Facebook.com/CascoBayEstuaryPartnership

*Cover images: Woodward Point, Brunswick.
Ken Woisard Photography*