

Report to the Community

April 1, 2015 – March 31, 2016 (FY16)

Baykeeping

Friends of Casco Bay is first and foremost an environmental organization using advocacy based on science.



We work to defend the health of the Bay on many fronts: stormwater and sewage overflow remediation, nitrogen pollution and coastal acidification, oil spill preparedness, discharge permits, snow dumping, dredging, restricting plastic bags, polystyrene, microbeads, and pesticides, and dealing with unexpected issues that come in "over the transom."

Our Pumpout Service removed **13,640** gallons of raw sewage from **535** recreational boats in 2015. Where does

all that wastewater go? For the past ten years, Maine Yacht Center generously accepted sewage from our pumpout boat, to pass along to process at the Portland wastewater treatment plant.

This past year, in our advocacy for BayScaping, we partnered with **628** citizens, lawn care professionals, and town officials at **16** workshops and presentations, explaining why communities should limit or ban pesticides and fertilizers.

Research

Our Baykeeper boat, *Research Vessel Joseph E. Payne*, is on the water 365 days a year.



You may see us patrolling the Bay to investigate pollution incidents, highlight threats to our waters, and conduct scientific studies and data collection. Our staff assesses the environmental health of Casco Bay, collecting water quality data year-round. We also collaborate with other researchers studying eelgrass distribution, clam survival, nitrogen levels, and pesticides.

Our citizen scientists collect data at **37** sites along Casco Bay's coast and islands.

92 Citizen Stewards monitor water quality between Cape Elizabeth and Cape Small, on **10** Saturdays from April through October, contributing over **2,000** hours of volunteer time each year.

Education & Outreach

Friends of Casco Bay participated in **44** community events.



We reached over **3,200** people directly through our presentations and exhibits at public events, meeting with Mainers to explain how we all can be good stewards of our coastal waters.

Our work was mentioned in at least **55** media outlets, featuring stories about our report *A Changing Casco Bay*, Portland's plastic bag and polystyrene ordinances, banning pesticides, and our search for the new Casco Baykeeper.

54 volunteers stenciled more than **187** storm drains through our Storm Drain Stenciling Program.

49 volunteers picked up nearly **800** pounds of trash on Coastal Cleanups with Friends of Casco Bay.

Filmgoers consumed **520** bags of popcorn at our **8th** Annual Wild & Scenic Film Festival, where inspiring films motivated audience members to take action.

And numbers alone don't tell the whole story.



Friends of Casco Bay Casco BAYKEEPER

43 Slocum Drive
South Portland, Maine 04106

Non-Profit
Organization
PAID
Portland, ME
Permit No. 510

www.cascobay.org

OUR KEEPERS



All 3 Casco Baykeepers were present at our annual Volunteer Celebration in January 2016. This marked Ivy Frignoca's (right) first public appearance as Casco Baykeeper. Cathy Ramsdell served as both Baykeeper *Pro Tem* and Executive Director after Joe Payne's retirement in early 2015.

We are proud that our first Casco BAYKEEPER®, Joe Payne, was one of the founders of WATERKEEPER® Alliance.



Today, more than **300** Waterkeeper organizations and affiliates in **34** countries work to protect rivers, lakes, and coastal waters.



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KEEPING CASCO BAY BLUE

WATER WOMEN



92 citizen scientists helped collect data on the health of Casco Bay in 2015.

Cathy Ramsdell, a leader with a plethora of skills to protect the Bay



Photo: Arthur Ceriallo

In 2015, **Cathy Ramsdell**, Executive Director and Casco Baykeeper *Pro Tem*, was featured in an exhibit at the Portland Public Library on women in maritime commerce, *Staying the Course: Working Women of Portland's Waterfront*.

Cathy Ramsdell never imagined as a girl growing up in Belfast, Maine, as the first four-year Maine graduate of College of the Atlantic in Bar Harbor, as a CPA in Boston and Bangor, or as a private consultant to various entities over the years, that she would finally put down roots in southern Maine. Cathy has been the Executive Director for Friends of Casco Bay since 2003, half of the organization's 27-year history.

In 2015, in addition to dealing with the fiscal and managerial challenges of running a nonprofit with

a full-time staff of 9 and more than 200 volunteers, she accepted the role of Casco Baykeeper *Pro Tem*. Cathy divided her time between board rooms and our Baykeeper boat, exploring ways to combat threats to the Bay from stormwater pollution and climate change.

Cathy was instrumental in helping to pass groundbreaking ordinances in Portland. She served on the City of Portland's Green Packaging Taskforce. Two years of meetings resulted in two ordinances to reduce waste through a 5-cent fee on single-use shopping bags and a ban on polystyrene packaging (e.g., Styrofoam). In effect since April 2015, these ordinances have become models for other Maine communities. Cathy also worked with Portland officials to help draft a Stormwater Service Utility Fee to find a way to share the cost of upgrading the City's sewer systems and stormwater protections more equitably.

At the state level, Cathy worked with both industry and environmental groups to pass a law phasing out plastic microbeads, used in personal care products like facial scrubs and toothpaste. These can pass through water treatment plants and may be ingested by fish and shellfish—and seafood lovers. Maine and other states passed bans that led to a federal law banning microplastics in December 2015.

Casco Baykeeper Ivy Frignoca uses science and policy to protect our Bay



Ivy Frignoca collects a water sample from Casco Bay on her first scientific research trip aboard the *R/V Joseph E. Payne*, in January 2016.

"Challenging" is how Ivy Frignoca describes the grueling, seven-hour interview process for the position of Casco Baykeeper. "The Baykeeper Search Advisory Committee clearly put a lot of thought into all the attributes they wanted in the next Baykeeper." Since joining the staff of Friends of Casco Bay in January 2016, Ivy has clearly demonstrated that she has quite enough stamina, commitment, and passion for the job!

In her first few months, she helped defeat a bad bill before the Legislature that would have weakened Maine's Oil Spill Prevention Law, and met with

coastal legislators to discuss pending marine-related bills. Ivy also met with Portland officials and the Portland Water District to discuss ways to deal with stormwater pollution. Ivy conducted many media interviews to highlight her focus on continuing Friends of Casco Bay's work to reduce water pollution and to study and address climate change in our community.

Ivy helped advance statewide efforts to confront ocean acidification by working with others to create the all-volunteer Maine Ocean and Coastal Acidification Partnership, to coordinate the work of government agencies, academic institutions, resource harvesters, and nonprofit organizations that are studying ways to reduce the impact of—and how to adapt to—the changing chemistry of our ocean. They have put together a work plan and have been meeting to address how lower pH of sea water is affecting our shellfisheries and the overall health of our coastal waters.

Before Ivy came on board with Friends of Casco Bay, she worked on issues confronting our waters as an attorney at Conservation Law Foundation. Prior to moving to the Casco Bay region 26 years ago, she taught marine biology and ecology, interpreted natural history for park visitors, and advocated on behalf of Vermont state parks and forests.

Althea Bennett McGirr says, "It shucks to be a clam!"



Photo: Lucia Kearns

Althea Bennett McGirr, a Board member since 2011, doesn't need Friends of Casco Bay to tell her that the chemistry of Casco Bay is changing. She has seen the effects of Coastal Acidification firsthand.

At the annual Labor Day clambake on Little Diamond Island, Althea and her sister Priscilla help out at the end-of-the-season event that draws the community together for a farewell to summer. While the lobsters, sweet potatoes, sausages, and corn are roasting in a fire pit outside the hundred-year-old Casino, their job is to wash and de-sand freshly harvested Casco Bay clams.



even shattered. Althea says that the clams they buy now are smaller and more fragile than the ones she recalls from years back.

Althea recalls scooping huge handfuls of clams into 8 heavy kettles to steam them for the feast. Nowadays, they have to place the clams into the pot delicately, or else the shells may end up chipped or

Althea's observations seem to correspond to observations Friends of Casco Bay has been making over the years. We are studying Coastal Acidification, the problem of increasing acidity from the ocean absorbing carbon dioxide released by the burning of fossil fuels, and, we believe, from excess nitrogen washing into coastal waters by stormwater runoff. Fertilizers, sewage discharges, and pet wastes trigger algae blooms that add excess carbon dioxide to coastal waters.



Staff Photo

The pitted shell shows that life can be tough for a clam spat in acidic mud.

Our data shows that the acidity of Casco Bay has increased since we began our water quality monitoring program nearly 25 years ago.

In 2011, we began sampling the pH (acidity) of mudflat sediments, where soft-shell clams live. We found that the mud nearest to shore was more acidic (had lower pH) than sediments further away from sources of land-based pollution. Higher acidity makes it harder for shellfish to extract calcium carbonate from their environment, the material that clams, mussels, and other mollusks need to build and strengthen their shells.

In the summer of 2014, Friends of Casco Bay installed several clam "condos" in the intertidal mudflats of Recompense Bay in Freeport. Our goal was to see what would happen when we exposed juvenile clams to acidic mud. Research Associate Mike Doan caged baby clams inside PVC tubes and left them in the mud for several days. Microscope photographs of the tiny clam spat showed that after just one week, their shells had become pitted, showing signs of dissolving.

Collectively, these staff members have over a century of service to Friends of Casco Bay.



Staff Photo

