



Friends of Casco Bay

Operating Plan

FY19

April 1, 2018 – March 31, 2019

ADOPTED MARCH 20, 2018

FOR INTERNAL USE ONLY



TABLE OF CONTENTS

I.	Context for FY19 (April 1, 2018 – March 31, 2019)	4
II.	Highlights from the Strategic Plan 2013 – 2017	6
III.	FY19 Operating Plan.....	7
A.	Programs	7
1.	Science: Water Quality and other Environmental Monitoring	7
a.	Ongoing Monitoring Programs	7
i.	Continuous Monitoring Station.....	7
ii.	Monitoring by Land	8
iii.	Monitoring by Sea	8
b.	Episodic Science Efforts	8
iv.	Color and Clarity Research.....	9
v.	Eelgrass.....	9
vi.	Nutrient Sensor Deployment.....	9
vii.	Microplastics	9
viii.	Macroalgal Blooms	9
ix.	Collaborative Cruise on Casco Bay	9
c.	Data Management and Analysis.....	10
d.	Lab Management.....	10
e.	Boat Operations.....	10
f.	Collaborations	11
2.	Advocacy: Baykeeping.....	11
g.	Casco Baykeeper’s Plan for FY19	12
x.	Internal	12
xi.	External	12
xii.	Issues	13
a)	Climate Change and Ocean and Coastal Acidification.....	13
b)	Nitrogen Pollution	14
c)	Stormwater/Combined Sewer Overflows/Sanitary Sewer Overflows.....	15
d)	Responding to the Almost Constant Flow of Unexpected Inquiries and Issues	15
e)	Offshore Drilling, the Clean Water Rule and Other Federal Regulatory Rollbacks	15
f)	Marine Debris and Microplastics	16
g)	Oil Spill Preparedness	16
h)	Dredging.....	17
i)	Impaired Regions.....	17
j)	Advocacy By and With Other Staff.....	17
3.	Community Engagement.....	18
h.	Volunteer Programs	18
xiii.	Volunteers and Environmental Monitoring.....	18
k)	Initiative #1: Measuring the Color and Clarity of Casco Bay	19
l)	Initiative #2: ON Casco Bay: Observing Network for Casco Bay	19
xiv.	Volunteer Support for Ongoing Projects and Organizational Needs.....	20
xv.	Internships.....	20
xvi.	Community Projects	21
m)	Storm Drain Stenciling	21
n)	Coastal Cleanups	21
i.	Casco Bay Matters Events.....	21

j.	BayScaping	22
k.	Local Ordinances	22
l.	The <i>Casco Bay Curriculum</i>	23
xvii.	Aligning the Curriculum to Education Standards.....	23
xviii.	Curriculum Questions We Plan to Explore in FY19:	24
4.	Pumpout Program.....	24
B.	Communications and Development	26
5.	Communications.....	26
m.	Fostering a Storytelling Culture	26
n.	Disseminating, Sharing, and Promoting our Stories	27
o.	Building Relationships with News Media.....	28
p.	Organizing and Taking Part in Community Events	29
xix.	Friends of Casco Bay Events.....	29
xx.	Community Events (organized by other groups)	30
q.	Developing Images That Tell Our Story	30
r.	Advancing Our Brand	31
s.	Creating and Updating Bay Papers	31
6.	Development.....	32
t.	Individual Giving	32
u.	Foundation Giving	33
v.	Corporate Donations	34
w.	Government Grants and Contracts	34
x.	Preparing for the quiet phase of a campaign to fund our work	34
y.	Leveraging our Science, Baykeeping, and Community Engagement efforts.....	34
z.	Organizational Memory: Tracking and Reporting	34
aa.	Exploring new events and ideas	35
bb.	Remaining nimble.....	35
C.	Technology and Capital Assets.....	36
D.	Management and Administration.....	37
7.	Staff	37
8.	Office Space	38
9.	Financial Stability.....	38
10.	Board.....	38
IV.	FY19 Operating Plan Summary	39
V.	FY19 Budget Highlights	42
VI.	APPENDICES.....	44
	Appendix A – Program Matrix.....	44
	Appendix B – Volunteer Opportunities in Relation Programs - 2018.....	45
	Appendix C – FY18 Media Report.....	46
	Appendix D – Pumpout Metrics, 1999 – 2017	49
	Appendix E – Where We Have Been – FY18	50
	Appendix F – FY19 Events We Anticipate Hosting.....	53

I. Context for FY19 (April 1, 2018 – March 31, 2019)

Please Note: The Table of Contents, pages 2 – 3, is your friend.

This document is set up to use the Table of Contents as your guide to better understand the plan AND, if you are reading this document electronically, it allows you to connect to specific sections of the plan straight from the Table of Contents. In the Table of Contents, simply click on the line item that you want to view, and viola! –the Table of Contents will put you there.

As we transition from FY18 to FY19, we enter our 29th year of operation. Our staff members collectively have 99 years of service to the health of Casco Bay through our work here. The longevity of our staff and our experience working together for a long time allow us to deepen our program and community work. In addition, the engagements with our Board in guiding our work and with our Volunteers in assisting with the work are central and unifying dynamics.

This Document

This document contains our FY19 Operating Plan with a summary of the FY19 Budget highlights. These elements support our Strategic Plan 2013-2017, which identified 6 strategic goals, a vision for the future, and 3 areas of our work seen as particularly strategic in advancing our mission for a healthier Bay. These strategic elements are summarized below (II.). This plan and those which have preceded it over the years serve as incredible sources of documentation of our work and supporting rationale.

This **Operating Plan** is for *internal use* and contains detailed narrative generated by Staff, specifically laying out the activities in which we will be engaged this next fiscal year, April 2018 to March 2019, to make progress on the goals outlined in our Strategic Plan. Please note, you will see references to both 2018, which likely indicates the field season in this next fiscal year, and FY19 itself; both are referring to efforts we intend to undertake during this next fiscal year.

The Operating Plan is in four sections: Programs, Communications and Development, Technology and Capital Assets, and Management and Administration. The contents of this plan are open for discussion among Board and Staff. **The FY19 Budget and its Supplemental Schedule are separate documents and are integral to this plan.**

While the Strategic Plan is elegant in its brevity – 3 pages, the Operating Plan is the opposite; the devil, as they say, is in the details. This year, we have refreshed our approach to writing the plan. The beauty of a plan such as this is that our intentions and rationale are clear and transparent, and we – Board and Staff – can all be on the same page in our messaging. Having a clear plan helps coordinate and prioritize our focus and use of resources, and it makes the search for resources – the details for our fundraising processes – markedly straightforward.

We engage in various assessment and planning activities throughout the year. You may “hear” different voices of Staff who wrote their sections. Sections are submitted to me, and I weave the pieces together, identify elements that need clarification or refinement, chase details for clarification in the plan and budget, edit, reformat, and try to limit our commitments where possible (Staff are very ambitious!). There are always more ideas to tackle than there is time to assess and implement, and in addition, work comes in over the transom unexpectedly every day. The assessment and planning processes we undertake throughout the year help us weigh alternatives and get our annual plan as close to right as we are able.

There is occasional repetition in this document in referring to different efforts or initiatives, and where we can, we will have tried to acknowledge that. Because this is for internal use only and because we have much to do, you will perhaps forgive us for imperfect editing and formatting. Arguably, the bulk of the value of this document is as much or more in all of the engagement in assessing, planning, and decision making that leads up to its creation, as in the document itself.

Our mission is to improve and protect the environmental health of the Bay. This is supported by efforts in science, community engagement, and advocacy – the three legs of the stool, so to speak. We conduct our advocacy using a “work with” approach, based on common sense, decency, humility, and compromise, backed up by science and the law.

Much of the value of what we offer to the community lies in our ongoing programmatic work, making that work and its implications understandable and relevant to people throughout our community and our state, empowering our neighbors to engage in activities that have a positive impact on the health of the Bay, strengthening our working relationships around the Bay and across the state, encouraging policy changes that make a difference in the health of the Bay, while we run our organization responsibly and professionally. We strive to be an organization that is both leading and learning.

In summary, in FY19, we will be tackling our goals in the following ways:

1. Communicating information about the health of the Bay using science and storytelling, through credible data collection and accessible presentations to educate our community, using various forms of outreach: presentations, events, meetings, print, special reports and our Bay Papers, along with web postings, email, social media, and other online communications, as well as television, radio, and press conferences
2. Advocating for permits, policies, and practices that protect the health of the Bay
3. Building and maintaining collaborations and partnerships that advance our mission—with the Board and Volunteers, colleagues and scientists, interns, members and donors, policy makers, municipal and other governmental partners, other water groups, Bay “users,” and other members of the public
4. Maintaining our operating capacity to realize our operating plan while responding to issues, threats, requests, and opportunities, as they arise, effectively and in a timely manner
5. Growing our financial resources to enable us to better deliver our mission

It takes a community to take care of a Bay, and an organization to lead that charge. It is a privilege to live in an area with such a relatively clean waterbody, but we are seeing many changes and new threats to its health. Given the increasing occurrence of algal outbreaks, changing weather patterns and increasing temperatures, our monitoring and community engagement efforts are as important as ever.

Many thanks to Staff for your contributions, both individually and collaboratively, for this plan and for each day we work together – we truly could not do the work without each and all of you – and to all of you readers for your dedication to considering the contents of this plan along with the budget and discussions that will follow in the days ahead.

Respectfully submitted,
Cathy L Ramsdell, CPA, CGMA
Executive Director, Friends of Casco Bay

II. Highlights from the Strategic Plan 2013 – 2017

[For more detail, please see the Strategic Plan in its three-page entirety]

Strategic Goals highlighted in the Strategic Plan 2013-2017

1. Advocate for standards and controls on nitrogen and acidification
2. Advance the visibility, branding, educational outreach, political involvement, and recognition of our mission
3. Apply technology and scientific methods; build credibility; communicate and educate
4. Pursue collaborations and partnerships that advance our mission
5. Build capacity in Baykeeping and maintain capacity in organization and infrastructure
6. Grow funding consistent with our resources

Our Areas of Work from 2013 to 2017

Our vision for the organization for the next five years is further refined by focusing on three strategic areas of work: Baykeeping, Community, and the Organization. The agendas for these areas cross connect and intersect dynamically. It is imperative that we balance staffing, budget, time, and energy, to maintain mission focus and avoid mission creep.

Closing summation

We plan to remain programmatically effective, financially strong, and growing in visibility and perceived value to the community by doing the following: Stick to our mission. Stay science-based in advocacy and policy. Build knowledge, build relationships, communicate our brand, educate, and maintain our credibility. Harness and apply technology. Use the “work-with” approach and develop alternative approaches when this is ineffective. Invest in the human capital of the organization and assure orderly succession. Build financial strength. Increase public awareness of impacts to the Bay and best practices to improve and protect the health of the Bay.

Important Note for FY19:

At present, we are deeply involved in crafting our next Strategic Plan, for the years 2018 – 2022. As this fiscal year draws to a close, we will have completed four group sessions (Board, Staff, and a half dozen invited guests) to explore the internal and external forces at work. We are about to enter the next phase of this planning process, to refine the data gathered in those four sessions and create a concise and focused plan.

III. FY19 Operating Plan

A. Programs

The employees of Friends of Casco Bay meet together regularly throughout the year to discuss our work, track progress, calibrate our positions, and assess opportunities. We work as an ensemble, and while we rely on each individual to expertly perform the duties for which they are employed, much of the art of running our organization efficiently and perhaps more importantly, effectively, comes from the insights and synergies of having worked together for an extended length of time. The sharing of expertise, experience, and inspiration are essential to setting direction together, whether staying the course in certain areas, sitting together to rehash a position or strategy, or shifting our focus to launch new initiatives with all of the logistical particulars to be sorted out.

Themed meetings, sometimes involving collaborative partners from outside the organization, range from reviewing aspects of our water quality monitoring program and exploring new volunteer initiatives, to content messaging, advocacy and legal positioning, relationship management, education and outreach efforts, event planning, and communications purposes and design. The shared sense of rationale and understanding about why we are engaging in certain activities (and not others) is essential for outreach, for fundraising, and for organizational harmony; we must continue to tell stories, effectively and compellingly, about what we are doing to improve and protect the Bay and *why* this work matters.

See Appendix A for a matrix of program activities.

1. Science: Water Quality and other Environmental Monitoring

2018 will mark our 27th year of collecting data on the water quality and environmental health of Casco Bay. We maintain and continue to add to one of the largest and most important long-term data sets on marine water quality in New England.

Our monitoring efforts are grouped into two categories: ongoing and episodic. Ongoing efforts are conducted by Staff and include Monitoring by Land, Monitoring by Sea, and our Continuous Monitoring Station. Our episodic projects include microplastics (Staff), macroalgal blooms (Staff and Volunteers), eelgrass (Staff), and the color and clarity of water (Staff and Volunteers).

a. Ongoing Monitoring Programs

The three ongoing monitoring programs together provide long-term temporal and spatial coverage of the water quality of Casco Bay. All three programs will now include the use of the Forel-Ule index system to record color using a smartphone application, to provide data that will complement our new Color and Clarity community engagement effort (see below).

i. Continuous Monitoring Station

We launched our flagship Continuous Monitoring Station at Cousins Island in Yarmouth in July 2016. FY19 will see the completion of the second full year and the start of a third, of year-round hourly measurements at this “cage of science.”

This program has two goals: first, to collect the high frequency data necessary to track changes over time in the water quality of Casco Bay; and second, to better understand existing conditions

and the seasonal and annual trends in carbonate chemistry and acidification in Casco Bay.

The station sits at the bottom in about four meters of water at high tide, and consists of a YSI data sonde and a Turner pCO₂ (partial carbon dioxide) sensor. Measured parameters include temperature, salinity, dissolved oxygen, pH, chlorophyll, depth, and the partial pressure of carbon dioxide. Derived calculations include total alkalinity, dissolved inorganic carbon, and calcium carbonate saturation state. Water samples will be collected, and total nitrogen and dissolved inorganic nutrient analyses (nitrate and nitrite, ammonium, silicate, and phosphate) will be conducted.

Maintenance of the station takes place biweekly and includes the swapping out of the deployed data sonde with a clean, calibrated sonde, the uploading of data from the pCO₂ logger, and the cleaning of the pCO₂ sensor. The deployed pCO₂ logger is swapped out every two months for a fully charged logger, and the pCO₂ sensor is calibrated annually by the manufacturer in California. This annual calibration will occur in late March/early April and will take approximately six weeks. Once a month, from May through September, we will record invasive species at the station as part of a Gulf of Maine-wide invasive species survey effort.

We will explore upgrades to the station in FY19, including new sonde technology and sensors, a second pCO₂ sensor to minimize data gaps, and station telemetry. Ongoing review of the current research on coastal carbonate chemistry and relationship building with others studying these parameters will also continue.

ii. Monitoring by Land

Monitoring by Land will take from early spring through late fall, at thirteen surface water sites around Casco Bay. We may sample every three weeks, with the intent of conducting 10 to 12 sampling events. These sites are accessed from piers and floats, and are all historic former Citizen Steward Water Quality Monitoring stations, continuing that dataset. Parameters include temperature, salinity, dissolved oxygen, pH, and chlorophyll, all measured using a YSI data sonde. Secchi depth will be determined, along with Forel Ule color, and water samples will be collected for total nitrogen and dissolved inorganic nutrient analyses.

iii. Monitoring by Sea

Monitoring by Sea will also take place from early spring through late fall, on the dates either just following or just before Monitoring by Land. We may sample every three weeks, with the intent of conducting 10 to 12 sampling events. Nine sites are monitored by boat, collecting data and samples at the surface, at one meter, and then every two meters to the bottom. These profiles of the water column will be conducted at the three historic “sentinel” sites - continuing that data set, three sites in Portland Harbor, and three sites in the Harraseeket. The 26 years of monitoring through the former Citizen Stewards program (see Community Engagement section Volunteers and Environmental Monitoring) identified Portland Harbor and the Harraseeket as challenged.

Parameters will include temperature, salinity, dissolved oxygen, pH, and chlorophyll, all measured using a YSI data sonde. Secchi depth will be determined, along with Forel Ule color, and samples will be collected for total nitrogen and dissolved inorganic nutrient analysis.

b. Episodic Science Efforts

Episodic projects include various initiatives and the array tends to change from year to year. For 2018, these projects include:

iv. Color and Clarity Research

Background materials will be reviewed for the new citizen science initiative Color and Clarity, which focuses on the color of the waters of the Bay and Secchi depth. Globally, coastal water colors are shifting away from the blue end of the color spectrum in response to increases in organic and inorganic matter. These color changes may result in reduced productivity. Research will involve literature reviews on the science of color changes in water, the technology we will be using to measure the color, and the possibility of a new sensor at our Continuous Data Station. See the Community Engagement section for more information on the Color and Clarity initiative.

v. Eelgrass

Eelgrass is a critical component in estuaries, providing a variety of key ecosystem functions, from nursery to filter to stabilizer to buffer. In FY19, a Casco Bay eelgrass mapping effort, which historically has taken place every five years, will be initiated through a collaborative effort by Friends of Casco Bay, the Casco Bay Estuary Partnership and the Department of Environmental Protection. Friends of Casco Bay's role will be advisory only. (See also Baykeeping section below).

vi. Nutrient Sensor Deployment

A collaborative effort between Friends of Casco Bay, the University of Maine, the University of Southern Maine, the Department of Environmental Protection, and the Casco Bay Estuary Partnership will explore seasonal monitoring with in situ nutrient sensors in Portland Harbor. Friends of Casco Bay's role will be mostly advisory in nature, although we may assist with deployment.

vii. Microplastics

Increasingly, Friends of Casco Bay is concerned about the presence of microplastics in the marine environment. Microplastics are defined as being smaller than 5.0 mm, and may enter coastal waters through primary (manufactured at that size, such as microbeads) or secondary (by degradation of larger plastic materials) vectors. Many marine organisms will ingest microplastics, and there are health implications throughout the food chain, as toxic contaminants have been found to adsorb to the plastic. In 2017, we sampled for microplastics in four distinct regions of Casco Bay, finding microplastics in each region. In 2018, these results will be more thoroughly assessed by comparing them with results from other regions in Maine and elsewhere, and new protocols and research will be reviewed. We will continue to build relationships with others studying microplastics along the coast of Maine, most notably Madelyn Woods of Maine Environmental Research Institute (MERI), and Abby Barrows of Adventure Scientists, who analyzed our first round of sampling. The potential of a second round of plastics sampling in 2019 will be explored.

viii. Macroalgal Blooms

Nuisance and harmful macroalgal blooms are considered an indicator of nutrient pollution, and Casco Bay has seen an increase in these blooms in recent years. In 2018, we are hoping that nuisance and harmful algal blooms will not be present, but we will be ready to document and track any episodes as they occur. See the Community Engagement section for more information on the ON Casco Bay observing network initiative.

ix. Collaborative Cruise on Casco Bay

Our colleague Dr. Joseph Salisbury, from the Ocean Processes Analyses Lab at University of New Hampshire has proposed collaborating on a 2-3 day survey cruise aboard the UNH Gulf Challenger, around Casco Bay to investigate areas of challenged carbonate chemistry, involving a wide variety of participants including Friends of Casco Bay. A number of parameters will be

sampled, and at the same time, measurements using different instrumentation may be compared. We have a funder who will be supporting our participation.

c. Data Management and Analysis

An updated data storage plan will be explored in 2018, with preference given to the highly recommended database WRDB (water resources database), a free software download designed specifically for water quality data and widely used around the country. Metadata structure for all of our data will be developed, as well.

Data presentation will be a priority in 2018, and quarterly then monthly updates will be generated for both *Ongoing* and *Episodic* monitoring. The utility of two new data mapping opportunities will be explored and possibly utilized, to supplement our software ArcGIS software (Geographic Information Systems). We will explore the possibility and value of uploading our “By Land” data into the Water Reporter app [see Community Engagement “ON Casco Bay” section for additional uses of this app]. We will explore using Ocean Data View (ODV), which is a free software program, to visually display our “By Sea” data.

JMP software by SAS will continue to be the statistical package we use for all of our data analysis.

In 2018, we will continue with the first of a two-year contract with the University of Maine on a Gulf of Maine ocean acidification data synthesis project.

With the shifts away from the Citizen Stewards Water Quality Monitoring Program (CSWQMP) and toward new citizen initiatives and Staff use of technological monitoring, we have been reassigning and redefining some Staff responsibilities. During FY19, we will review data housing, quality assurance processes, and data management, to determine optimal practices, with an eye toward clear assignments of responsibility so that data is secure and qualitative, data is being “worked up” in a timely way for our communications, and requests for data are easily fulfilled and not customized. This will entail making optimal use of the talents of Research Associate Mike Doan and Design, Data and Development Associate Sara Biron.

d. Lab Management

Another result of discontinuing the CSWQMP is that the Friends of Casco Bay lab will be completely reorganized in 2018. Updated calibration sheets (for the sensors on the data sondes) will be designed, and calibration and other quality assurance measures will be improved. A better system for scheduling equipment maintenance/replacement and calibration buffer tracking and purchase will be employed. A more efficient use of existing lab and storage space will be determined.

e. Boat Operations

As captain of the *R/V Payne*, Research Associate Mike Doan is responsible for scheduling routine maintenance and identifying any issues with performance or safety. The vessel will be left clean and fueled, ready for use on short notice. The vessel is used for monitoring efforts, stakeholder trips, fundraising cruises, staff outings, and other functions. In 2018, the possibility of pulling the boat out of the water from December to February will be explored. During our Strategic Planning exercises, the boat was described as “challenging” during the staff internal assessment, citing maintenance and instability issues in particular; the question has been raised as to whether this is “the right boat” for our current needs, so we will continue exploratory conversations about what might be a better fit in the future.

f. Collaborations

Internally, scientific support for the Baykeeper will continue to be a priority. Mike will also work closely with Communications staff to develop images and stories for our website and other communications channels.

Externally, we will continue to foster close working relationships with the Casco Bay Estuary Partnership, the Maine Department of Environmental Protection, the Maine Coastal and Ocean Acidification Partnership, the Maine Coastal Observing Alliance, the Wells National Estuarine Research Reserve, the University of New Hampshire, the University of Maine, Southern Maine Community College, University of New England, and Bigelow Laboratory for Ocean Science.

2. Advocacy: Baykeeping

Our Baykeeping Program exists to advocate for solutions to environmental challenges facing Casco Bay. In short, Baykeeping is about reducing pollution in our waters. This is our most visible program and it has generated significant permanent and positive changes for the Bay.

Casco Bay belongs to all of us. Friends of Casco Bay is committed to building a sense of shared ownership throughout our community, to help protect the health of this incredible resource, Casco Bay. We do that in many ways through our Baykeeping Program.

Friends of Casco Bay is a community of people who share a love for Casco Bay. Our founders chose the name FRIENDS of Casco Bay with purposeful intent. Our community engagement opportunities provide a wide array of activities for citizens to assist us in our work and become advocates and champions for Casco Bay.

Our advocacy is focused on improving and protecting the health of Casco Bay. We see water as fundamental habitat and work to ensure that public policies keep the importance of health of the Bay in mind.

We advocate for new protections, laws, ordinances, policies, and rules when simply educating the public is not enough to address a threat to the health of the Bay. We advocate against rollbacks to existing environmental laws and new policies that would be detrimental to the health of our coastal waters.

Our Casco Baykeeper is our primary public advocate. The Casco Baykeeper speaks out on behalf of the health of the Bay in public, acting as the eyes, ears and voice for the Bay. The Baykeeper works with teams within the organization and with many external partnerships.

Our Casco Baykeeper advocates for compliance with environmental laws, responds to citizen complaints, identifies and takes action on issues that may harm the health of the Bay, and works with our community to develop appropriate remedies to address problems that threaten the health of our waters. The Casco Baykeeper is just one of hundreds of tenacious Waterkeepers around the world. Each keeper acts as the chief advocate for their waterbody.

Friends of Casco Bay's professional staff is engaged in our Baykeeping Program, from advocacy and research, to community engagement, and hands-on pollution prevention.

Our Board of Directors and other Volunteers round out the "neighborhood watch" concept for Casco Bay. We count our many Volunteers among our closest circle of Friends. A cadre of dedicated Volunteers assist us with water quality monitoring projects, observation reporting,

coastal cleanups, storm drain stenciling, assistance with presentations and events, and advocating for the Bay.

g. Casco Baykeeper's Plan for FY19

x. Internal

In FY19, Casco Baykeeper Ivy Frignoca will work with the Communications team to complete the Oil Spill Response Plan started in FY18 and carried over due to website redesign. She will explore with the Communications team creating an additional response plan (see Oil Spill Preparedness section below) and will continue periodic meetings with Communications as they identify and develop a timeline of communications opportunities for ongoing advocacy.

The Baykeeper will continue to work closely with staff scientist Mike Doan, including engaging in water quality monitoring by Land and Sea (see monitoring section above). Doing so last summer deepened the organization's ability to directly link our science to our advocacy and also helped elevate our science with external partners. Participating in by land monitoring helps increase the Baykeeper's visibility around the Bay and leads to conversations with Bay users. In FY19, we will wear new staff shirts when we monitor.

The Baykeeper will actively engage in the rollouts of our two new Citizen Science Initiatives: Measuring the Color and Clarity of Casco Bay and ON Casco Bay: Observing Network for Casco Bay.

The Baykeeper will continue to have in-depth meetings with the Executive Director, to convey and share information, confer on positioning, and strategize about advocacy matters.

xi. External

Our organization advocates primarily by working within groups to address problems that degrade Casco Bay's water quality. In this manner we can best share scientific and other technical information, identify problems, and coalesce support for solutions. The important external partnerships to be maintained in FY19 include the following:

- **Waterkeeper Alliance (WKA):** The Baykeeper will continue to work with WKA on a regional and national level to advocate for policies and funding that support sound science and regulatory oversight sufficient to protect water quality.
- **Casco Bay Estuary Partnership (CBEP):** The Baykeeper will continue to serve on the Management Committee, the Nutrient Council, and the Monitoring Group. The Nutrient Council draws together scientists, regulators, municipal wastewater and stormwater managers, and nonprofit organizations such as ours, dedicated to protecting and improving water quality. The Monitoring Group includes a wide range of entities conducting research in the Casco Bay watershed.
- **Maine Ocean and Coastal Acidification Partnership (MOCA):** The Baykeeper will serve as the coordinator of the steering committee in FY19. This involves organizing at least two meetings, sending updates to the listserve, organizing steering committee meetings, and coordinating with the science and policy subgroups. As part of MOCA, the Baykeeper also will continue to attend phone meetings of the NorthEast Coastal Acidification Network (NECAN) and coordinate efforts with them.
- **Environmental Priorities Coalition (EPC):** The Baykeeper will continue to participate in the EPC as it sets priority state legislation and coordinates coalition efforts to defeat federal regulatory and budget rollbacks. The Executive Director will continue to serve on

the EPC's Strategic Direction Team as the EPC works to explore ways to increase its power and effectiveness.

- **Interlocal Stormwater Working Group (ISWG):** Cumberland County Soil and Water Conservation District created ISWG to represent the MS4¹ communities within the watershed. It also includes CBEP, Friends of Casco Bay, and representatives of the other MS4 community groups. The Baykeeper will continue to participate in ISWG, where important and hard conversations regarding the draft 2018 MS4 permit occur. The permit should issue in July 2018.
- **Waterfront Alliance:** This alliance convenes business owners and others with strong interests in a vital working Portland/South Portland harbor. It does not advocate but serves as an educational forum to discuss controversial issues concerning the Harbor. The Baykeeper attends these meetings, and other Staff also attend from time to time depending on the agenda. Attending these meetings allows us to mingle with waterfront business owners, community leaders, and fishermen whom we might not otherwise meet.
- **Portland Water Quality Stakeholder Group:** the Baykeeper, and often the Executive Director and sometimes the Associate Director, attend quarterly meetings that include Portland Water Resources, Portland Water District, Department of Environmental Protection (DEP), CBEP, Conservation Law Foundation, and others, as the City of Portland continues its work on stormwater and sewer separation and treatment.
- **Ad Hoc:** Through the course of the year, the Baykeeper will convene or participate in coalitions created to address particular issues. These issues likely will include, at a minimum, opening the Gulf of Maine to offshore drilling and further study of marine debris. In addition, the Baykeeper will work within a partnership spearheaded by the DEP to remap and assess eelgrass health in Casco Bay, particularly around permitted wastewater discharge pipes.

***xii.* Issues**

Baykeeping covers many topics and employs a variety of tools. The Baykeeper advocates through commenting on MEPDES/WDL² permits, regulatory changes, Integrated Reports which list impaired waters and watersheds, and more. In addition, she tracks state and federal legislation and comments or testifies on select issues of relevance to Casco Bay. The Baykeeper also convenes meetings by land and sea to facilitate discussion to foster better stewardship of the Bay. The Baykeeper will continue public speaking selectively, with an emphasis on presenting at our organization's events and at meetings such as at CBEP or MOCA events that have targeted audiences.

Priority Issues: Below are the issues anticipated to be most pressing in FY19.

a) Climate Change and Ocean and Coastal Acidification

This is issue number 1. Casco Bay is changing rapidly in response to the effects of carbon and other green house gas emissions. In FY18, we observed an increase in nuisance and harmful algal blooms, warmer ocean temperatures farther into the fall, a second summer of drought, low

¹ MS4 stands for municipal separate storm sewer system. MS4s are regulated through a general permit as point source discharges of stormwater.

² MEPDES stands for Maine Pollution Discharge Elimination System. Under the Clean Water Act, EPA issues National Pollution Discharge Elimination System (NPDES) permits. When EPA delegated its authority to Maine, the permits became known as MEPDES permits. WDL stands for Waste Discharge License and is a state law requirement.

calcium carbonate saturation for portions of the year, which presents challenges to shell-forming organisms, and more. In FY19, the Baykeeper will continue to focus on the impacts of climate change through federal and state advocacy, including supporting policies that reduce carbon emissions, a key underlying cause of climate change. She also will focus on these issues through MOCA, the EPC, and WKA. Finally this issue is very important to highlight in our communications.

b) Nitrogen Pollution

Nitrogen pollution stems from human sources. Excess nitrogen fertilizes nuisance and harmful algal blooms, degrades eelgrass beds, and causes secondary problems such as low dissolved oxygen which further diminishes the health of Casco Bay. In 2017, Casco Bay experienced a troubling increase in the occurrence of nuisance algal blooms and harmful algal blooms (HABs). The nuisance blooms started earlier, grew larger, and lasted longer than the blooms we saw in 2016. Although most blooms occur in areas where our data reflect high nitrogen levels, we also saw a bloom in Basin Cove in Harpswell—we have no nitrogen data for that area.

In FY18, Baykeeping achieved a major milestone by successfully advocating for the addition of meaningful nitrogen testing requirements in the MEPDES/WDL permits issued to wastewater treatment facilities that discharge near or directly into Casco Bay. Moreover, in FY18, our Baykeeping advocacy led to requirements to reduce nitrogen pollution at Portland's East End and South Portland's wastewater treatment facilities. The East End fact sheet³ describes the reduction as lessening the nitrogen load in its effluent by 20-40%. Preliminary data from the facility look very promising; by early fall the facility had reduced its load sometimes by as much as 40%. This amount likely will continue to fluctuate as treatment plant operators learn how to manage the new treatment system and as varying amounts of stormwater are run through the plant for treatment. Within the next year, based on testing data, DEP will set a nitrogen load level from which South Portland must reduce its load. No target figures have been set in this permit cycle, per an agreement that will allow South Portland to explore ways that it can reduce nitrogen pollution through a combination of factors, including reducing stormwater pollution. Finally in FY18, the Baykeeper participated in a stakeholder process designed to help draft the 2018 MS4 permit. Our advocacy to date has significantly improved the ability of the permit to improve water quality. For example, we have successfully advocated for the inclusion of testing for illicit discharges (*i.e.* polluted non-stormwater flowing through the system), the inclusion of measures designed to reduce flows to impaired waters with TMDLs,⁴ and stronger and more clear measures designed to reduce construction site runoff. The official draft will be issued in the near future.

In FY19, continuing advocacy on the terms of the 2018 MS4 will be a major Baykeeper focus. The preliminary drafts have continued to tighten requirements and eliminate loopholes. Our organization truly is the lead water quality advocate regarding the terms of this permit, and we will continue in that role as it pertains to discharges in the Casco Bay watershed. In FY19, the Baykeeper will continue work to reduce nitrogen pollution through monitoring with our staff scientist and DEP, as well as with collaborations with outside entities such as CBEP's nutrient

³ Each MEPDES permit is supported by a fact sheet that explains the basis for the regulatory decisions made in the permit. Permit terms are enforceable; the fact sheet is not per se enforceable.

⁴ TMDL stands for Total Maximum Daily Load and is, in essence, a pollution budget. For all waters impaired by pollution, the Clean Water Act requires that the regulatory entity prepare a TMDL, which then can be used to guide regulatory decisions designed to reduce pollution.

council and MOCA. Our Baykeeper has met with the new EPA Region 1 administrator and will continue to press for funding and policies that support municipalities as they work to reduce nitrogen pollution. She also will continue advocating for state water bonds that would finance upgrades to treatment plants, eliminate OBDs⁵ and replace failed septic systems.

c) Stormwater/Combined Sewer Overflows/Sanitary Sewer Overflows

Stormwater is a leading source of pollutants to Casco Bay. It can carry nitrogen, bacteria, oil products, pesticides, and a host of other contaminants. In FY18, the Baykeeper continued oversight of Portland's work to separate storm and sewer lines, install stormwater treatment, and reduce combined sewer overflow volumes. She attended stakeholder meetings, met periodically and separately with the City's water resources manager, tracked the City's and Water District's efforts to commence Integrated Planning, and participated in the MS4 stakeholder process discussed above. In FY19, the Baykeeper will devote the time necessary to ensure the MS4 permit has meaningful terms including, but not limited to, water quality testing to eliminate illicit discharges, actions designed to reduce stormwater pollution to impaired urban waters, and more clear and actionable construction site standards to reduce sediment runoff. In FY19, the Baykeeper will more actively watchdog the City's permit compliance and will participate in the City's integrated planning process as opportunities arise.

d) Responding to the Almost Constant Flow of Unexpected Inquiries and Issues

Each year, time must be reserved for unanticipated issues. FY18 saw no shortage of such issues. We hear from members of the public at frequent intervals on a wide variety of topics, and each of these must be weighed, discussed, and responded to. In 2017, we experienced an unprecedented and troubling season of harmful and nuisance algal blooms. We have also seen an onslaught of unexpected federal and state legislative threats. At the state-level, the Baykeeper identified and we successfully opposed: (1) a bill that would have required booming around ships that bunker to fuel (a measure that sounds good but actually creates a greater risk of spill); and (2) a bill to eliminate home rule with respect to pesticide ordinances. At the federal level, almost every action taken by the EPA has threatened clean water. Moreover, proposed budgets for NOAA and EPA defund scientific research (particularly related to climate change) and cripple the agencies' abilities to carry out their missions as defined by law. We rely on sound science and regulatory oversight to carry out our mission. Advocacy with respect to these federal rollbacks has been added to the priority issues identified above. In FY19, we fully anticipate that new issues will continue to emerge.

e) Offshore Drilling, the Clean Water Rule and Other Federal Regulatory Rollbacks

During FY18, we experienced an unprecedented and intentional attempt to rollback federal environmental protections and defund the federal agencies charged with conducting scientific research and implementing and enforcing environmental laws. Some of the proposed rollbacks—including significant slashes to NOAA's and EPA's budget, repeal of the Clean Power Plan and Clean Water Rule, and opening essentially all coastline to offshore drilling—threaten our ability to protect and improve the water quality of Casco Bay. In FY19, opposing these rollbacks will continue to be an episodic and important Baykeeping priority. The Baykeeper will continue to

⁵ An overboard discharge (OBD) is a direct discharge to state waters of sanitary waste or wastewater from household or commercial activities. OBDs are licensed and regulated by the State.

network through WKA, the Ocean Conservancy, and the EPC, to maximize our efforts to protect sound science and the regulatory tools that permit us to do our work.

f) Marine Debris and Microplastics

Marine Debris degrade water quality and impact the health of various marine species. For years, our organization has organized coastal cleanups, to reduce land-based sources of marine debris. In FY18, on June 15 and 16, we collected samples in four regions of Casco Bay to determine presence or absence of microplastics and types of microplastics. We found microplastics in all four regions, and found fibers, films and fragments but no nurdles and no microbeads. Our findings were published in the Portland Press Herald and were shared at various speaking engagements. In addition, the Baykeeper convened a small stakeholder meeting concerning marine debris, reviewed the NOAA draft marine debris plan, and assisted State Representative Mick Devin in drafting a marine debris study commission bill. She met twice with Maine Island Trail Association, to explore possible collaborative public education efforts. In FY19, the Baykeeper will:

- Continue to monitor and perhaps engage with further development of the NOAA plan (there are many others in the lead here)
- Monitor the progress of the marine debris study commission bill
- Continue to work internally with our staff and externally with other organizations such as the Marine & Environmental Research Institute (MERI) in Blue Hill, to identify appropriate further steps our organization might take with respect to this issue.

Other Issues: The Baykeeper will continue to track and engage in the below issues, as needed.

g) Oil Spill Preparedness

Historically, the Baykeeper has served on the ME/NH Area Committee⁶ and in the Unified Command (UC)⁷ center in the event of a spill. The Baykeeper will continue to fulfill these two duties. Although Portland Harbor sees less tanker traffic than in the past, it still receives fuel tankers at several terminals and large vessels traveling through the Bay take on fuel while bunkered near shore. We must remain prepared to respond if another spill should occur. Petroleum products pose a host of threats to wetlands, eelgrass, clam flats, marine mammals, birds, and more. In FY18, the Baykeeper completed 24 hour HAZWOPER⁸ training and is now fully certified to serve in the UC Center in the event of a spill. She also continued to serve on the ME/NH Area Committee and participated in a full scale exercise in June. During the exercise, she served as a member of the environmental unit and engaged Associate Director Mary Cerullo to serve in the Joint Information Center (JIC), from which all information released to the public flows. Together, the Baykeeper and Associate Director drafted an internal plan for oil spill response. Still to be created is a version of the response plan that will include a hidden web page, to be activated only in the event of a spill. In FY19, the Baykeeper will continue attending

⁶Formed in accordance with the Oil Pollution Act of 1990, the Maine and New Hampshire Area Committee is comprised of federal, state, and local officials and other persons/organizations who may respond in the event of a spill. The Committee must prepare an Area Contingency Plan for how the entities will respond to an oil or hazardous materials discharge from a vessel, offshore facility, or onshore facility. It also must hold exercises to practice and refine the plan.

⁷ The Unified Command (UC) is a structure that brings together the Incident Commanders of all major organizations involved in the spill to coordinate an effective response. The UC includes, but is not limited to, the USCG Captain of the Port and top officials from federal and state agencies with responsibilities related to the incident.

⁸ HAZWOPER stands for Hazardous Waste Operations and Emergency Response. HAZWOPER training is covered under OSHA standard 29 CFR Part 1910.120.

ME/NH Area Committee meetings and will keep certification current; she also will work with communications to complete the our internal response plan.

h) Dredging

Dredging occurs in Casco Bay and in at least two of its tributaries—the Fore River and Royal River—to maintain berthing depths and shipping channels. In recent years, our organization has tracked and studied a proposal to dredge around the wharves on both sides of the Fore River.⁹ Many of the piers have not been dredged in over 70 years, resulting in an accumulation of sediment laden with pollutants from pre Clean Water Act industrial discharges and more recent stormwater/CSO sediment deposits. Historically, our organization has supported the concept of dredging around the piers and placing contaminated sediments in a confined aquatic disposal (CAD) cell in the harbor, in a location designed to have the least environmental impact.¹⁰ In FY18, the Baykeeper tracked the progress of Portland-led efforts to select a CAD site, test sediments at the site, and test sediments around the wharves. In FY19, the Baykeeper will continue to track the progress of this proposed dredge. She will take a more active role if and when the permitting process commences. The goal is to ensure that dredging and disposal of dredged materials occur in ways that best improve and protect water quality, by confining contaminated sediments and causing the least disruption to benthic organisms.

The Baykeeper will attend, as time permits, Maine Dredge Team meetings. These meetings often conflict with other work which may take priority over attending the meetings. At present, the town of Chebeague is contemplating a dredge around one of its ferry wharves and is conducting sediment sampling. The Baykeeper will continue tracking this potential dredge project.

i) Impaired Regions

The Clean Water Act implements a system that classifies waterbodies for intended uses. If a waterbody fails to meet those uses, it is considered impaired. An impaired water must be added to a list of impaired waters (a 303(d) list) submitted to the EPA biannually. Steps must then be taken to restore water quality, including preparing a TMDL. The Baykeeper will continue to track water quality in Casco Bay, using our data as reference. Our intent is to prevent impairment by pressing for stricter discharge limits, advocate for additions to the 303(d) list, and press for measures to restore water quality. In FY19, the focus likely will be: (1) whether the 303(d) list should include Back Cove and Mill Cove as nutrient-impaired; and (2) improvement of impaired tributaries to Casco Bay covered by the Impervious Cover (IC) and Non Point Source (NPS) TMDLs. The former advocacy will occur through comments on the 303(d) list and the latter through comments on the MS4 permit and exploration of whether EPA/DEP should be petitioned to use their residual designation authority (RDA)¹¹ similar to their use of RDA to restore Long Creek.

j) Advocacy By and With Other Staff

Other Staff will continue to engage in various aspects of baykeeping advocacy. At present, the Casco Baykeeper relies on other Staff to engage in local advocacy for pesticide ordinances. As

⁹ For detailed information, open the following link: <http://www.portlandharbordredge.info/>.

¹⁰ <http://www.portlandharbordredge.info/solution.html>.

¹¹ Basically if, under the CWA, the EPA has issued permits and a water is still impaired, EPA can use its RDA to take further measures. For example, Long Creek is polluted by unregulated nonpoint source stormwater. Using RDA, the DEP issued a 10 year general permit that requires property owners to reduce the impacts of stormwater pollution from impervious surfaces like roads, parking lots, and roofs. See <http://www.restorelongcreek.org/>.

we begin to explore strategies and tactics to actively encourage the cities of Portland and South Portland to consider and enact ordinances to restrict or eliminate the use of fertilizers, the Baykeeper, as our primary public advocate, will become a key member of the local ordinance team efforts here at Friends.

3. Community Engagement

h. Volunteer Programs

Volunteers do important work for Casco Bay and are essential to our success. Volunteers are some of the best *Friends* Casco Bay has. In our experience, our Volunteers are some of the most active, outspoken, and well-spoken members of our community. We look forward to engaging more Volunteers than ever this year. The commitment of these Volunteers will send ripple effects through towns around the Bay. We work to connect Volunteers with opportunities that align their skills and interests with our organization's—and the Bay's—needs.

Community engagement, volunteer recruitment, and building affinity and value for our organization in the community all are closely related. In recognition of these relationships, we retooled Sarah Lyman's position as Community Engagement Coordinator. This will be our first full fiscal year with Sarah in this position.

Appendix B presents a schematic illustrating various Volunteer Opportunities in relation to our Programs.

xiii. Volunteers and Environmental Monitoring

We are in the midst of transforming our volunteer opportunities. Our Citizen Stewards Water Quality Monitoring Program (CSWQMP) was a signature effort of Friends for over 25 years. The program was designed to help address the questions "How healthy is Casco Bay?" and "What areas of the Bay are challenged in terms of water quality?" The data collected, along with data collected by Staff, provided snapshots of conditions around the Bay. The data were fundamental and foundational, helping us to address those questions, leading to both the design of the Casco Bay Health Index (see our website) and the release in 2015 of the report "A Changing Casco Bay." The process of developing these products led to the realization that the question we now want and need to ask is fundamentally different: "How is the Bay changing?"

In order to address that question with statistical integrity, we need higher frequency data than these "data snapshots" provide. Technology, in the form of data sondes with various, carefully calibrated probes and sensors, makes it possible to collect much more frequent and more detailed data that can allow us to look for trends in the health of the Bay.

At the same time, residents in our community have less time to volunteer. Demographic and economic realities are making it harder to volunteer on projects that require rigorous and inflexible time commitments. People may be working longer hours, working on weekends, and/or caring for young and older family members. The CSWQMP required a commitment to rigorous training and testing and availability on ten specific Saturdays from spring through fall, at specific times of day. Of the universe of people interested in helping us with citizen science, few prospective Volunteers were able to meet those requirements.

We have been hearing from many potential Volunteers that they would like "to get their hands wet" and help us but that they do not have a lot of time they can commit. The immediate

response to our call for Volunteers for the Nabbing Nitrogen effort in 2016, told us there is a lot of pent up goodwill and eagerness to participate. To take advantage of that, we need to provide opportunities that offer a lower threshold for involvement so that more people can volunteer, in ways that are meaningful, and in ways that are easily manageable by Staff.

The true strength of a Volunteer program is to connect our community—with one another and with Casco Bay; it takes a community to take care of the Bay. By revamping our volunteer monitoring efforts, we have the opportunity to broaden our network of knowledgeable ambassadors for our coastal waters—and make strides in our understanding of the Bay. We are significantly changing both the time commitment required and the types of data that Volunteers collect.

We rely on people around the Bay to relay to us changes they are observing. Our two new initiatives for FY19, using new technologies, are designed to engage more Volunteers in collecting data and sharing their observations of a changing Casco Bay.

k) Initiative #1: Measuring the Color and Clarity of Casco Bay

We are launching a pilot citizen science program to enlist Volunteers to help us measure the color and clarity of our waters.

For more than a century, marine scientists have used the Forel-Ule index color scale to document the color of oceans and lakes. People often consider blue water to indicate healthy oceans and dirty-brown water to indicate poor water quality. Scientists attest to color being an excellent indicator of what is happening in our oceans.

We are putting a modern spin on this old way of assessing water quality. We will train Volunteers to use a specific smartphone app, as well as a Secchi disk. On tide-specific days and times, Volunteers will be asked to use a smart phone with an app containing the Forel-Ule color index scale to photograph, measure, and report the color of the water. Some Volunteers will be asked to use a Secchi disk to measure clarity to depth, and then use the app to take a photo of the water color against the white background on the Secchi disk at half depth. The protocols for this data collection are easy to follow, and over time, the data will help address the question “How is the Bay changing?”

We are launching this initiative because our colleagues at Bigelow Laboratory for Ocean Sciences tell us that the waters of the Gulf of Maine have become increasingly yellow over the last century. We have seen heavy rains stain the surface waters of Casco Bay the color of tea. There is a lot of data on color and clarity for the Gulf of Maine, but not much has been collected in our nearshore areas.

We are developing implementation plans for this initiative. We are exploring ways we will host training events. We will be inviting previous Citizen Steward Water Quality Monitors to an exclusive training to provide us with feedback for future trainings. We will be partnering with Take Action Portland – an excellent source of Volunteers. We found a funding opportunity that would involve hosting a particular large public event for this project; if funded, it will likely take place on Saturday, July 28, with data collection occurring midday.

l) Initiative #2: ON Casco Bay: Observing Network for Casco Bay

In 2017, we saw an alarming increase in the number and extent of nuisance algal blooms in Casco Bay. Excessive amounts of algae covered tidal flats, smothering animals underneath the mats, preventing juvenile clams from settling, increasing the acidity, and lowering the oxygen

levels. In 2018, we will be on the lookout for nuisance, green slime outbreaks. Friends of Casco Bay Staff cannot be everywhere, and Casco Bay needs more eyes looking out for its health. So, we will enlist Volunteers to help observe and track nuisance outbreaks. Volunteers will simply commit to keeping their eyes focused on our changing Bay, reporting what they see.

We will train them to use a smartphone app, or alternatively, a camera and a computer, to document, catalogue, organize, and share their observations of the Bay. This information will be useful in our collaborations with other scientists, in expanding our community engagement by sharing observations on social media, and in our advocacy, to illustrate to regulators, legislators, and other decision makers, changes that are happening around the Bay.

We will plan a public launch of this initiative, branding the launch as a “Casco Bay Matters” event. The event will be in three parts: an educational presentation by Staff about nitrogen pollution and algal blooms, a practice session using talking points for Volunteers to become articulate about the issue, and a training session on how to report algal blooms, using the app or camera/computer.

As this effort evolves, we may ask Volunteers to report additional observations, anything exciting, interesting, or odd—from whales, osprey nests, or seals, to declines in eelgrass or mussel beds, clam die offs, jellyfish sightings, fish kills, invasive species outbreaks.

xiv. Volunteer Support for Ongoing Projects and Organizational Needs

We will continue to recruit Volunteers to support Staff at our special events, such as the Wild & Scenic Film Festival, at tabling events hosted by other organizations, and around the office to help with processing water quality samples, data entry, mailings, and other work as needed.

xv. Internships

We continue to offer internship opportunities for college and law students, which supplements staff capacity. Our Law Student internships, in particular, provide exposure to a unique blend of legal and regulatory work in an applied setting.

Internships may be offered as often three times a year: Spring (January - May), Summer (May - August), and Fall (September - December). We will continue to require that each intern possess a strong academic background, with course studies in environmental policy and/or marine sciences. Our ideal candidates will enjoy working both with Staff and independently and must have superior research and writing skills, as well as a passion for the marine environment.

We do not provide paid internships; however, when outside funding may be available to the student, we will be happy to help meet reporting requirements. Our aim is to provide students with an experience that exposes them to nearly all aspects of our operations at Friends of Casco Bay while engaging them in projects that will foster growth in their main area(s) of interest. Our goal is for them to understand how a professionally-run environmental nonprofit works in the larger arena of environmental advocacy, using hands-on science and community engagement. We have a strong track record of providing internships that teach students, engage them meaningfully in our work, and help them shape career goals.

Our college level internship opportunities are shared with Southern Maine Community College, University of New England, University of Southern Maine, and Bowdoin College.

xvi. Community Projects

m) Storm Drain Stenciling

Storm Drain Stenciling is a hands-on way for Volunteers to “take to the streets” and create greater awareness about the need to reduce pollution. We provide stenciling kits and easy-to-use instructions to help groups organize stenciling events. There are a number of benefits from this low-cost, easy-to-manage volunteer recruitment activity: community engagement, hands-on activity that helps the health of the Bay, team building, and education. By painting “DO NOT DUMP” messages near storm drains in the neighborhood, people learn about the connection to Casco Bay and become local advocates for reducing stormwater pollution.

Storm drains connect to various kinds of sewage and stormwater pipes, some of which open directly to Casco Bay and some of which route sewage and/or stormwater to treatment facilities before being released into the Bay.

When people pour hazardous wastes, such as household cleaners, unused paint, paint thinner, used oil, and lawn care chemicals, down a storm drain, they may not realize that they may be dumping pollutants directly into the Bay. Even if these products reach the sewage treatment facility, the treatment process may not be able to remove the hazardous components.

During 2018, we will restock and maintain our five stenciling kits and nine stencils. As stencils need to be replaced, we will explore creating new, smaller stencils, and we will replace the hand brooms with ones that will fit more easily into the kits to make transporting easier. We will continue to work with school groups, scout troops, civic organizations, and corporations looking to do days of service with employees as team building opportunities.

n) Coastal Cleanups

Trash is an unsightly blight that makes it hard for everyone to enjoy a special place. Litter and marine debris on the shores of Casco Bay can come from many sources. Careless beachgoers, boaters, fishing vessels, and other ships can leave trash behind. Stormwater washes trash from yards and parking lots into storm drains that empty into the Bay.

Litter and marine debris that wind up on our shores can pollute our water, hurt marine life, and reduce the quality of life of those who live, work, and play on Casco Bay.

Coastal Cleanups are a great hands-on activity for youth groups, scout troops, team-building, and corporate volunteer days. Our Volunteers record data about what trash they pick up, and that data is submitted to on line databases to be used to help create awareness and public policy for reducing pollution in marine waters.

We will participate in Coastweek by hosting a cleanup in the greater Portland area on September 23, 2018. In addition, we will continue to respond to requests from corporations looking to do days of service with employees as team building opportunities.

i. Casco Bay Matters Events

Friends of Casco Bay hosts presentations and panel discussions open to the public on issues of current concern through our Casco Bay Matters series. The purpose of a Casco Bay Matters event is to provide an opportunity for concerned citizens and local and state officials to learn about issues impacting the water quality of Casco Bay. We want people to leave with an awareness of a problem and possible solutions to consider.

Friends of Casco Bay has a history of organizing public forums that have had a significant impact on issues facing the Bay. In 2014, we organized the panel discussion *Casco Bay Is at Risk*. In 2002, we hosted *Pollution Solutions to Cruise Ship Discharges*, which led to actions at the state and federal levels that made our Bay the most protected harbor in the nation from cruise ship discharges.

In FY19, both of the new citizen initiatives described above, Color and Clarity and the roll out of ON Casco Bay (the observing network) are Casco Bay Matters events. In addition to recruiting attendees, we will be reaching out to the media, creating social media posts and encouraging others to share those, and crafting email communications about these events.

j. BayScaping

A workshop staple of our BayScaping Program has been our neighborhood socials, which explain the connections between lawn care practices and water quality in Casco Bay. We have found that providing evidence of pesticide use in a particular neighborhood (detections of pesticides in stormwater runoff from pipes in the neighborhood) inspires behavioral change. Explaining that excess nitrogen and ocean acidification are critical threats to the health of Casco Bay encourages homeowners to reduce or eliminate their use of fertilizers. The social aspect encourages peer pressure and positive conformity to a different perspective on lawn care.

Some of those who hold most tightly to the concept of the “perfect lawn” reside in condominium and senior living communities. We have been heartened by interest from retirement communities in Topsham and in Brunswick in switching to organic lawn care practices. In FY19, we will continue to support them by connecting them with organic lawn care providers and other resources. We also want to offer BayScaping workshops to coastal and island communities at times when we might engage the summer residents. We are now in dialogue with the Diamond Cove Homeowners Association on Great Diamond Island to explore possible collaborations. In FY19, we will participate in community events to educate residents and municipal officials about BayScaping, such as the City of Portland’s Green Neighbor Family Fest on April 21.

We continue to spread the BayScaping ethic through strategic media releases, op-eds, social media, emails, newsletters, and interviews.

k. Local Ordinances

We acknowledge that after 19 years of BayScaping outreach, education alone is not enough to change lawn care practices. We have been working with municipal officials and community members in South Portland, Portland, Harpswell, Falmouth, and elsewhere, to help implement local ordinances to reduce pesticide use. We will continue to work with other municipalities and community groups as they explore restrictions on lawn care chemicals.

In 2016, South Portland passed a pesticide ordinance, which went into effect for public property on May 1, 2017, and for private property goes into effect on May 1, 2018. They have not yet rolled out their public education plan. Portland passed a pesticide ordinance in January 2018, which does not go into effect until July 1, 2018, and Portland has not yet designed their public education plan.

We, as a community, must tackle fertilizers next, especially in light of the increasing occurrences of nuisance and harmful algal blooms. Both city councils have acknowledged the need to wrestle with a fertilizer ordinance. During FY19, we will be trying to assess possible effective approaches and timeframes for encouraging municipal officials in either community to move forward on this.

I. The Casco Bay Curriculum

Since education and collaboration are ways we engage the community to help us improve and protect the health of the Bay, the *Casco Bay Curriculum* is THE way we are able to get data about the Bay directly into the hands of local teachers in a form that will engage the next generation of stewards.

Casco Bay Curriculum: A Changing Estuary consists of 20 classroom activities that explore:

- What is an estuary and how has it changed over time?
- How is climate change impacting us locally in Casco Bay and in the Gulf of Maine?

The curriculum activities use data on Casco Bay and the Gulf of Maine to cite local evidence of climate change, including sea level rise, warming waters, the fractured food web, and the changing chemistry of our oceans. Supporting the 20 stand-alone, hands-on activities are data collected by Friends' and other scientists, PowerPoint presentations, activity sheets, references to children's literature, and resources, such as readings from scientific and news media articles and links to relevant videos and web pages.

Because of its emphasis on climate change, we believe this curriculum is appropriate for a broad grade range from at least 4th through 8th grades. The inclusion of current articles from popular and scientific media makes the material relevant to students in high school and beyond. These readings are useful background information for teachers, and the in-depth, timely local and national news and scientific articles can help teachers meet the growing demand through Common Core Education Standards for English language arts to provide students with more non-fiction reading.

When we revamped our website in FY18, we added two new elements in order to engage families with some of our curriculum activities.

- Family Projects help parents engage their children in exploring Casco Bay. We recognize that parents, too, are educators who would appreciate suggestions for family exploration, fun facts about our Bay, and neighborhood service learning projects.
- Kids' Corner has did-you-know facts, statistics, recommended books, and suggestions for what advocates of any age can do to protect the health of Casco Bay.

We will continue to add to and update these.

xvii. Aligning the Curriculum to Education Standards

We have shared the curriculum through professional development workshops and short courses, presentations at teacher conferences, or simply when a teacher has asked for it. Several teachers have told us that before administrators will approve reimbursement for professional development, they often ask how continuing education opportunities meet learning standards. In FY19, we will work to align our curriculum with the topics and skills that teachers must cover. We are working to incorporate the Next Generation Science Standards. We will seek advice on how deeply we will need to align our activities with curriculum standards.

The Next Generation Science Standards (NGSS), released in 2013, were developed by teachers from 26 states, including Maine, with support from partners in academia, nonprofits, and National Science Teachers Association. Although the Maine Legislature has not officially adopted these standards, Maine Mathematics & Science Alliance estimates that about 75% of Maine schools use them. NGSS complement Maine Learning Results, expectations as to what students should know, understand and be able to explain as they progress through each K-12 grade level. Originally created in 1997, Maine Learning Results were revised in 2011, to include Common Core, college and career readiness standards for English language arts and math. NGSS

are complementary standards for science, technology, engineering, and mathematics, since the Common Core does not include these.

xviii. Curriculum Questions We Plan to Explore in FY19:

Teacher Course Questions:

What is the best way to disseminate the curriculum to teachers?

In 2010, 2011, and 2012, we offered three-day Summer Institutes for teachers. In October 2016, we offered a two-evening mini-course through Southern Maine Community College.

In FY19, we want to offer another Teacher Institute. We are asking the experts—our past participants—for their ideas about the time of year, format, and additional content that might work best for teachers. We may include more outdoor exploration, possibly a field trip to coastal habitats or a boat trip around the Bay. In our next teacher course, we may include a class that explains the alignment of our curriculum with Next Generation Science Standards, or we may offer a workshop where teachers help us align the curriculum to the standards.

We realize that school systems often hold their own professional development or restrict reimbursement to those courses that are required for recertification or to meet the standards. Since we charge a minimal fee for our course, just enough to cover our out-of-pocket expense, what should that charge be?

Branding Questions:

How can/should we retain some identity/branding for Friends of Casco Bay?

We are considering posting all the curriculum activities and accompanying resources on our website. Other curriculum providers have found that without some in-person, hands-on training, such as the five-hour workshop by Project Learning Tree or Project Wild, many great curriculum resources sit on the shelf of a busy teacher. How can we ensure that the curriculum activities are used by area educators?

If we disseminate the curriculum online, we wonder how or even if we can retain “ownership” or at least receive acknowledgement of our efforts. Our teacher courses have been attended by both classroom teachers and informal educators, from the Gulf of Maine Research Institute, Wells National Estuarine Research Reserve, Cumberland County Soil & Water Conservation District, the Gundalow Project, and other environmental education organizations. We are happy to share with them, but we confess to having a tinge of angst that the material is being adopted as “theirs.”

Collaboration Question:

Might we explore how to complement or even combine our Casco Bay Curriculum with others, such as Island Institute’s Kelp curriculum, to maximize outreach? What would be the advantages/disadvantages of offering joint workshops with groups like Island Institute’s Outer Islands Teaching and Learning Collaborative (TLC) or through the Northeast Coastal Acidification Network (NECAN)?

4. Pumpout Program

Our Pumpout Program continues to play multiple and essential roles – the direct reduction of sewage discharges into the Bay, the education of boaters through the program’s ambassadorial function, and liaison between DEP and those marinas whose pumpout facilities are in out-of-

service mode. The effectiveness of this program hinges in large part on the boating and mechanical skills, as well as the character of the person who fills this position. Our Pumpout Coordinator and Captain Jim Splude, an exceptional ambassador on the Bay, will return in 2018, his ninth season with us. Customers and dock wranglers around the Bay respect and welcome Jim, who continues to provide excellent service and good cheer everywhere he goes on the water.

Thanks to our work in this program, Casco Bay was awarded the first No Discharge Area status in Maine in 2006. Since then, many other regions along the coast of Maine have attained No Discharge Area status. In order to attain this designation, regions have to have a requisite number of pumpout stations, and, in order to meet the spirit of the law, as well as the letter, these stations need to be operational and accessible at all tides. We will continue to notify DEP when stations are nonoperational.

Last year, the DEP agreed to increase our reimbursement rate through their federally funded program, from 75% (the rate used for private marinas and boatyards) to 90% (the municipal reimbursement rate). In addition, DEP has requested federal funding to provide us with a new pumpout boat; ours has been in service for over 20 years. The new vessel will be larger, safer, and more efficient. As of the drafting of this plan, we are awaiting a contract and check from DEP to use as the down payment on the new boat, to be constructed by Marine Boatbuilders CO of Warwick RI. As the boat construction proceeds, we will share the company's social media posts and updates, and we will be working on a fundraising campaign to secure the 10% margin of cost that is our responsibility. Once the new boat is operating effectively, we will explore ways to dispose of/sell the old pumpout boat and outboard. See Appendix D for pumpout metrics.

B. Communications and Development

Communication is job one. To be a vibrant and resilient organization, our work needs to be visible to—and resonate with—those who live, work, and play on Casco Bay.

We recognize that both our fundraising and outreach efforts can be described as building relationships through storytelling. Our Communications and Development team shares ideas, timelines, and language for outreach materials and proposals. Further, we have been working many of our ideas through the Board’s Community Engagement Committee, which meets monthly year-round.

We continue to foster a storytelling culture inside our organization. It is through the telling of stories that we can connect with members of our community, help the public recognize and remember key facts, highlight our responsiveness to issues the Bay faces, change behavior, foster better decision making, and encourage more participation in our work.

In our Communications and Development efforts, relationship building is essential, with our colleagues, Volunteers, members, and donors. Through building and maintaining relationships with individual donors and with individual members of the media, we are building a stronger, more visible, and more sustainable organization. Together, we seek to broaden our visibility, increase engagement, highlight our work, and get people to take action.

We have retooled Will Everitt’s job description as Communications and Development Director in recognition of how closely communications and development work need to be coordinated. The members of the Communications and Development team—Associate Director Mary Cerullo, Will, Sarah, and Design, Data and Development Associate Sara Biron—work closely with Cathy, Casco Baykeeper Ivy Frignoca, and Research Associate Mike Doan, to identify Science and Advocacy stories we can share with the public as well as with our stakeholders. We are creating a circular process to identify key talking points, set timelines, and fact check these stories.

5. Communications

m. Fostering a Storytelling Culture

Stories are the most important communications tool we have, so we are devoting more time to focus on collecting them. Our goal is to for our website to act as an ever-expanding storybank of content that represents our current positions on key issues and describes all of our areas of work.

Our efforts aim to support our programmatic and fundraising goals for the fiscal year. This process begins by taking a holistic look at our operating plan to identify topics from areas of our work, including the priority issues identified in the Baykeeping section of the plan.

Communications staff maintain an editorial calendar to plan and track potential stories throughout the year. We are ever aware of development deadlines (such as foundation proposal due dates and annual fund mailings) and programmatic efforts (such as a volunteer training event or a legislative hearing). We work to adapt the stories for use in our grant proposals—and vice versa.

Communications and development staff meet weekly to evaluate story ideas that may resonate with our audiences, prioritize what stories are going into production, and assess progress on the stories in development. Some of these are time-sensitive (“timely”); others can be used any time or at the appropriate time of the year or season (“timeless” or “evergreen”). We meet frequently with Staff, Board, and others, to add ideas to our editorial calendar. We conduct interviews, draft

stories and headlines, fact check, make a plan for the release, and adapt the stories for distribution in different media. We are utilizing online planning tools and templates that help us stay on track and make it easier and more transparent to share and edit drafts of stories.

Our stories live on our (newly redesigned) website. (For more on that, see the branding section below). This digital storybank allows us to keep our language consistent across our many forms of outreach, including in our presentations, interviews, social media, print media, fundraising appeals, grant proposals, and donor reports. It will keep up-to-date information accessible to our Staff, Board, Members and Volunteers.

In FY19, we will:

- Produce four stories a month to engage our audiences
- Work to improve our story telling skills via having our staff focus on best practices (for example, “Why Bad Presentations Happen to Good Causes” and having Staff practice talks internally prior to public presentations

n. Disseminating, Sharing, and Promoting our Stories

Producing stories is only the first step; we have to push them out into the world. We have moved to a “digital first” strategy.

We are adapting the way we work to reach audiences more effectively, with more frequent and timely messaging through email and social media. Frequency is important with today’s short attention spans and with the ever-changing algorithms of social media outlets. Our goal is to produce a weekly or bi-weekly email that features one major story with an eye-catching photo and a great headline [using new or re-posted stories]. We will also promote the story, as appropriate, on Facebook, Twitter, and Instagram. We glean the most up-to-date best practices for these tools by scouring the internet, attending workshops, and participating in online webinars.

We will track the metrics of the stories we share online, via email, our website, and social media. We will use this data to consider the most effective stories for our printed publications, i.e., our annual report and the two newsletters we release each year.

Internally, we recognized the need to serve our stories to our supporters in different ways. We have three distinct audiences. The first is comprised of supporters who have given us only a mailing address (i.e., we do not have their email addresses); we serve this audience through our printed publications and mailings. The second group is supporters who receive both our print publications and our email communications. Our third audience is comprised of those who stay up-to-date with our work only through email. Social media and traditional media stories support our communications to all these audiences.

The table below shows the current size of each audience. It also shows how many of each audience are donors. Our intent is that through good communications, no matter what their preferred medium, the Not-Yet Donors and Lapsed Donors will move up into the Donors/Members category.

The subtotal of 7,581 Not-Yet Donors and Lapsed Donors is a strong pool of potential which we can continue to grow and mine.

	Just Mail	Mail and Email	Just Email	subtotals
Donors/Members *	303	1,217	3	1,523
Not-Yet Donors and Lapsed Donors	>4,000 **	871	2,710	>7,581

* Households or businesses that donated in 2017 or 2016

** Our database houses more than 25,000 addresses. Each year, in our development efforts, we try to focus on specific regions or populations, to recruit as members/donors. This sort of subset also allows us to do recruitment in manageable, affordable chunks.

We also attempt to reach Not-Yet Donors through social media and traditional media outlets. Our goal is to bring them closer to us, as Members or Volunteers, and inspire them to take actions to help protect the health of Casco Bay. We will continue to evolve our matrix of communications platforms based on the ever-changing preferences of our audiences.

In FY19, we will:

- Update our website with our new Strategic Plan
- Update our website based on elements of our new Operating Plan
- Continue to update our website with four new stories a month
- Promote our stories through email and social media, directing our audience to our website
- Work with Board Members and Volunteers to help increase our social media engagement—and therefore our visibility.

o. Building Relationships with News Media

In FY18, our work was cited more than 70 times, in media stories featuring our work with local communities on nuisance and harmful algal outbreaks, sampling for microplastics, championing pesticide ordinances, recognizing awards garnered by our Volunteers, supporters, and our Executive Director Cathy Ramsdell, and more. See Appendix C – FY18 Media Report.

In FY19:

- We will use the launch of the Color and Clarity and ON Casco Bay initiatives to garner stories in media outlets.
- We will continue to identify media opportunities for interviews on radio, TV, and print. We will tailor specific story ideas to pitch to targeted news media outlets or to individual reporters/producers.
- We will invite individual reporters (especially TV) to accompany us on our boat or any time we have a highly visual activity.
- We will generate media alerts, media releases, and media conferences when we have something worthwhile to share.
- We will begin cultivating a relationship with a glossy publication, with an eye toward having a story printed in time for our 30th anniversary (NEXT fiscal year!). We will work to identify a contact person with whom we will engage.

- We will pitch the construction and launch of our new pumpout boat to Maine Boats, Homes and Harbors and other outlets.
- We will digitize our media kits. To elaborate on radio stories, Maine Public Radio is asking for photographs and video for its website. More and more, editors and producers have to produce multimedia stories for their audiences. We plan to help with that effort and increase our ability to get our story told more accurately by providing reporters with digital versions of images, fact sheets, and other background information.
- We will continue to buy sponsorship time on Maine Public Radio, for Film Festival and other selected events or issues.

p. Organizing and Taking Part in Community Events

***xix.* Friends of Casco Bay Events**

We are expanding on the substantive events we have held in the past by calling our educational presentations and workshops Casco Bay Matters events. We will host periodic presentations and panel discussions on issues of current concern. These events will be open to the public.

The purpose of a Casco Bay Matters event is to provide an opportunity for concerned citizens and for legislators (especially local and state officials) to learn about and discuss issues of importance to protecting the water quality of Casco Bay. These programs are held at various venues such as colleges, libraries, and other facilities. The format varies depending on the issue. We may offer a speaker or a panel to introduce a topic that will lead to further discussion, during and after the event. We want people to leave with an awareness of a problem and possible solutions to consider. It may not be necessary to offer a single “correct” solution but to be open to thinking about can be done.

In FY19:

- We will offer a new event to launch our ON Casco Bay initiative. The event will focus on our campaign to reduce nitrogen pollution, highlighting the connection between excess nitrogen and recent increases in the occurrence and duration of nuisance and harmful algal blooms in Casco Bay. See the Community Engagement section of the plan for more information.
- We will do a public launch of our Color and Clarity initiative as a Casco Bay Matters event. See the Community Engagement section of the plan for more information.
- We plan to organize two house parties, host our annual film festival, and host our annual donor appreciation event.
- We will organize the launch of our new Pumpout Boat. This has the potential to increase our visibility with the boating and working waterfront communities.
- We organize smaller community engagement events described elsewhere in this plan, such as coastal cleanups, storm drain stenciling events, and BayScaping socials. Some of these events will be targeted specifically to the eastern end of the Bay and the Islands, areas where we need to expand our reach.
- We will explore a new time of year and structure for our Volunteer Appreciation Celebration and Annual Members Meeting, something along the lines of a Friends Appreciation Event with an annual meeting.
- We will begin planning for our 30th Anniversary celebration in 2019.

In FY18, we reached well more than 2,600 people through presentations and exhibits at community events. For a list of our FY18 events, see Appendix E.

xx. Community Events (organized by other groups)

Invitations for speaking engagements and tabling events

Frequently, we are asked to speak about the health of Casco Bay, at gatherings of scientific colleagues, neighborhood groups, municipal boards, and civic organizations such as Rotary Club. These engagements provide us with an opportunity to bring our data and science into the community in a personal and easily understandable form. This builds knowledge about the issues, informs people about what they should and shouldn't do that can protect the health of the Bay, strengthens our relationship with attendees and the sponsoring organizations, promotes a sense of shared ownership of the Bay and its health, and increases the credibility, visibility, and relevance of the organization.

That said, if we were to accept all the requests that we receive, our staff members would be out several evenings and weekends each month. Consequently, we weigh how these commitments support or further the work outlined in our operating plan. We also take into account our longstanding relationships through our work partners, Board members, and like-minded organizations.

We will assess each request in terms of time commitment, audience, effectiveness, and potential benefits, such as generating memberships or other engagement. When we accept them, we will do so strategically, as we consider organizations, geography, social media tie-ins, and fundraising opportunities (such as targeting communities in which we may host a house party, upscale retirement communities, or zip codes we may do an appeal). We envision our presentations in the community as one more facet of our donor-centered approach to fundraising.

When we agree to participate in tabling at community events, we often invite a Board member or other knowledgeable volunteer to assist. We do not assign Volunteers to cover an event without staff support until we are confident they can represent our positions accurately and project our "work with" attitude.

The FY18 speaking and tabling engagements are integrated into the list in Appendix E.

q. Developing Images That Tell Our Story

Infographics, photographs, videos, maps, posters, displays, swag, and other visuals

In FY19, we will:

- Enhance our photograph bank by culling and organizing our sizeable collection of images. We are considering cloud storage as a more effective place for storage.
- Continue to employ outstanding photographers, including Kevin Morris, to continue to evolve the quality of our communications.
- Build the in-house design and artistic skills of Design, Data and Development Associate Sara Biron.
- Continue to use USM Media Studies students for video projects, as available.
- Call upon drone operators to volunteer to help document and publicize changes happening in the Bay.
- Stay alert for infographics that we may come across that we want to emulate. We will ask, "How could we create something similar to tell a Casco Bay story?"
- Explore hiring a graphics consultant to help us develop infographics using our data.
- Explore the possibility of creating a short film about our work through collaborating with O'Chang Studios and/or other local film makers.

r. Advancing Our Brand

We will advance our visibility through cohesive visual branding in our documents, publications, buttons, website, emails, social media, presentation materials, displays, signage, and other materials. Our website will serve as our story bank, helping Board and Staff to use consistent language and messaging across our work areas and communications channels. Our communications efforts will reflect our organizational values and our leadership.

Certainly one of the major highlights of FY18 was designing, drafting, editing, and posting an amazing centerpiece of our Communications work: the new Friends of Casco Bay website. It truly was a team effort, with all staff involved in the process. Community Engagement Coordinator Sarah Lyman spearheaded the effort. The Community Engagement Committee was essential to the process, providing direction and feedback as we worked on aspects of the new website. The resulting website uses easily-accessible information, stories, and eye-catching visuals to showcase our work, current issues, and actions that our community members can take to help the Bay.

In FY19, we will:

- Create a branding document to help Staff and others understand and highlight the characteristics and values that make Friends of Casco Bay different from other organizations and vital to our community. This will be useful tool should be move forward with a campaign to raise money for an invested fund to support our science work.
- Continue to enhance our website. Our website is the public-facing place we can point folks to for information our work. We will continue to revise the website as we garner reactions and suggestions from Staff and Board members.
- Improve the PowerPoint presentations Staff give, through improving our story telling skills and using images and infographics that help highlight our brand.

s. Creating and Updating Bay Papers

Bay Papers were originally designed as a tool to help our Board members understand and speak articulately about a particular issue impacting the Bay, why it matters, what Friends is doing on the issue, and what you can do. We soon realized that these are an invaluable tool for encouraging all of our supporters to speak knowledgeably with their friends, colleagues, and neighbors about key issues impacting the health of the Bay. As we continue to increase the number of our Volunteers and Donors/Members, we are building a network that can help lead the charge in moving issues forward, while better connecting us with their friends, family, colleagues, and neighbors.

Each paper begins with an engaging question or story, explains why an issue is a problem for the Bay, and suggests to the listener or reader what we can do about the problem. Bay Papers help us all speak with one voice about an issue, promoting advocacy, and promoting better choices. They help us create more ambassadors around the Bay who understand what we as an organization and what we as a community need to recognize about our relationship to this special resource. As completed, each Bay Paper is posted to our website and print versions are available at our events. While the print versions are useful in many ways, the true intent is to use them as tools to help start conversations about issues that matter.

We have created six Bay Papers (Nitrogen Pollution, Combined Sewer Overflows, Ocean and Coastal Acidification, Health Index, You Can Make a Difference, and Snow Dumping), as well as two publications on BayScaping.

In FY19:

- We will continue to use Bay Papers as tool for educating our Volunteers and anyone else who wants to be an active advocate on an issue.
- We will continue to revise and update old Bay Papers.
- We will add to the list of these publications. We will start planning a new Bay Paper to complement our upcoming Champions events, for the Color and Clarity initiative and for the Nitrogen, Algal Blooms and ON Casco Bay initiative.

6. Development

The mission of the Development Office is to ensure Friends of Casco Bay's long-term success through developing and sustaining diverse funding sources. Relationship building is crucial to our work. Key to this effort is being able to tell a story that highlights our effectiveness and that resonates with a donor's understanding of the world. We will work to integrate our stories into our development work and our development work into our communications efforts.

We recognize that our organization continues to operate in a challenging economic environment. The gap in income inequality among individuals in our community and across the country continues to widen. Government support will continue to diminish as government agencies are hamstrung by partisan politics and stagnating budgets. The new tax law will likely impact philanthropy and the role of government in ways we have yet to understand. Increasingly, corporate support is tied to quid pro quo agreements that Friends of Casco Bay does not always find agreeable. Yet, our community values our work, and there is capacity among individual donors, foundations, local businesses, and government agencies to support it.

We have detailed plans to continue to grow our individual and foundation income—and to buttress our government and corporate line items. The plans are donor-centered and focused on building long-term relationships, keeping in close contact with our supporters, and deepening their commitment to our work. In FY19, we will explore ways to grow volunteer involvement in our events, better involve new members in our mission, and build more connections to a younger demographic. In-depth conversations on these ideas and issues will be conducted with the Board's Community Engagement Committee.

t. Individual Giving

Even with changes to the tax law, individual giving has the highest potential for growth and will be a key factor for our long-term success. Our individual giving strategies are donor centered. We will reach our membership and individual giving goal through continuing to use renewal mailings, prospect lists, house parties, our Annual Fund, and through special appeals for specific programs and projects. We will renew members through mining our Raiser's Edge (i) (REi) database. We will update our renewal letters [and Thank You letters] and continue to personalize our asks. Our membership renewal process is heavily automated through REi. Our Annual Fund mailings will be sent in May and late October. New members will continue to be an important part of our base building.

In FY19, we will:

- Help find easy ways for Board members to take part in our individual giving efforts—for example, through signing renewal letters, penning notes on Annual Fund letters, inviting friends, family, and colleagues to our events, and offering gift memberships.

- Use our membership cycle to renew existing members, re-recruit lapsed members, and encourage lower level donors to become Calendar Islands Circle (monthly) donors. We may try an annual fund-style mailing to a specific set of donors to encourage them to become Calendar Islands Circle (monthly) donors.
- Encourage increased gifts and additional gifts through Annual Fund mailings and through Special Appeals for support.
- Gain new members through house parties and through targeted acquisition mailings. We will acquire lists through the Federal boat registration list and look into other possible government lists.
- Provide numerous opportunities to give to support our work, including toward program work, specific restricted funds, toward the new pumpout boat, and toward other specific needs
- Seek funds to support the purchase and operation of our new pumpout boat
- Host two house parties. Individualized plans for each of these events will be made in conjunction with the hosts. Host committees, food, drink, etc., will be tailored for the community that is hosting the event.
- Launch the Anchor Society, our planned giving circle.
- Explore ways to highlight how the new tax law may benefit those who have philanthropic intent, for example, by encouraging them to give to us through Donor Advised Funds, through multi-year pledges, or through doubling up every other year and designating two-year use of funds.
- Explore making our Donor Appreciation Event a more exclusive event with a return to the Cumberland Club.
- Explore cultivating new and longtime members through rebranding our Annual Meeting as a Friends appreciation event of some sort.
- Encourage individual giving through the Boat Donation Program, which exists in partnership with Maine Maritime Funding Association. While we cannot depend on this program for a steady stream of income, we can “make our luck” happen through:
 - Promoting our donation program on social media, our website and through our newsletter.
 - Sending at least one email to boat owners/pumpout customers about our boat donation program
 - Mailing to boat owners and marinas about our boat donation program
- Cultivate and steward our donors through personal visits, boat ride visits, emails, update mailings, invitations to follow us on social media, and through inviting them to our in-person events. Donors who give \$100 or more or who are Calendar Islands Circle Donors will receive a special update about our work. Our most generous Donors will be invited to our annual Donor Appreciation event.

u. Foundation Giving

We will develop boilerplate proposals for:

- General Operating Support (unrestricted)
- Baykeeping
- Continuous Monitoring Station and Water Quality Monitoring
- Volunteers for the Bay
- Citizen Stewards Color and Clarity Initiative
- ON Casco Bay: our Volunteer Observing Network
- Capital support (copier, computers, etc.)

- Others as appropriate (Casco Bay Matters, Storm Drain Stenciling, Curriculum, etc.).

We will meet all applicable deadlines, including reporting requirements, giving Cathy enough time to review proposals and budgets. We will send out more than 100 foundation proposals. We will attempt to meet with trustees of foundations when possible and appropriate. We will, when possible and appropriate, use photos in our proposals to make them more dynamic and to better tell our stories.

It is the nature of foundation fundraising that it is fickle. Very few foundations fund the same organizations with any regularity. Others will not consider proposals from an organization they have funded in the past year. We will review Maine Philanthropy Center's updated Foundation Directory and add new potential funders to our plans. We will meet all appropriate deadlines. When we meet deadlines—including the “long shots”—we garner some unexpected grants.

v. Corporate Donations

We have a corporate ask schedule much like our foundation plan. Our prospect list will include companies mined from our database, Board connections, other nonprofits' annual reports, MaineBiz's lists, and companies that use “Casco Bay” in their names. We will work to connect the health of the Bay with business interests in our region.

We will host our 11th Annual Wild & Scenic Film Festival, November 4, 2018. Through sponsorships, this event is an excellent way to leverage corporate support for Friends of Casco Bay. Because ticket sales cover most of the costs associated with the event, 100% of sponsorships can go to supporting all the ways we protect Casco Bay. This event will build on our past success. We will explore hosting a VIP reception similar to the pre-event event we hosted last year.

w. Government Grants and Contracts

Our Pumpout Program—supported by Maine DEP via US Fish and Wildlife Service funds—and the Casco Bay Estuary Partnership (CBEP)—supported by EPA funding—are at the heart of our government support. CBEP funding has declined considerably from past fiscal years. We will continue to work to remind CBEP of the importance of supporting our work on behalf of the Bay. We will also try to raise government funds through Maine Outdoor Heritage Fund (MOHF) grant proposals, South Portland Water Resource Protection, Portland Water District, EPA proposals, NOAA proposals, and other government opportunities.

x. Preparing for the quiet phase of a campaign to fund our work

As we prepare this Operating Plan, we recognize that the Board, with Staff input, is developing our new 5 Year Strategic Plan. It is likely that the Strategic Plan will call for the launch of a campaign to fund our science work and/or our “new” home. We will work to help create a case statement, budget, campaign design and strategy, and list of potential campaign supporters to support the new campaign. We will work in conjunction with a Board campaign group.

y. Leveraging our Science, Baykeeping, and Community Engagement efforts

Communications and Development staff will work collaboratively with our Program staff to help leverage community support for our efforts. This includes helping redesign and organize our annual Volunteer Appreciation Celebration, helping develop our Casco Bay Matters events, recruiting ambassadors for the Bay, and helping to develop, distribute, and utilize Bay Papers.

z. Organizational Memory: Tracking and Reporting

This FY we will upgrade our database from Raiser's Edge *i* to RE: NXT Pro. This upgrade will:

- Allow us to better track and manage Volunteers—especially as we launch two new volunteer initiatives
- Move our online giving and email capabilities to a mobile-friendly platform
- Streamline our membership renewal process
- Allow us to better manage events and track attendees, sponsors, and special guests
- Provide us with updated phone, email, and addresses as we compare our 25,000 constituent list with Blackbaud’s records
- Allow all of our staff to access the database rather than being limited to just three people at a time

We will continue to make our contact records thorough and reliable. We will track our contacts with donors and create accurate solicitation and results reports from RE: NXT Pro. We will work to harness the numerous capabilities of RE: NXT Pro and, where appropriate, train other staff members on using the database.

aa. Exploring new events and ideas

We will explore ideas to better involve new donors and Volunteers in our mission—we have considered, for example, hosting a “new member” and/or “new volunteer” orientation-style event. We may try targeted outreach to new donors, Volunteers, etc., as we plan Casco Bay Matters, our re-styled and re-branded annual meeting, and other events. We will explore ways we may build more connections to a younger demographic. In-depth conversations on these ideas and issues will be conducted with the Board’s Community Engagement Committee.

Should we find that we have the opportunity to move into new office space during this fiscal year, we will work to craft a fundraising strategy to help offset costs, identify in-kind opportunities for donors, and leverage the move as a great visibility opportunity for the organization.

bb. Remaining nimble

We will tackle opportunities as they present themselves. We will remain open to imaginative ideas, learn from mistakes, and build upon successes. We will revisit and evaluate this plan monthly. We will revise our development strategy and tactics as needed.

C. Technology and Capital Assets

In FY18, we:

- Continued upgrades in computer workstations, software, and other office tools
- Continued the redesign of our website and launched it in December 2017
- Acquired a new carrying case for our tri-fold “about us” display
- Procured staff shirts for use in the 2018 field season
- Continued to engage professional photographers to capture images for use in various media and outreach efforts
- Managed our Continuous Monitoring Station at Cousins Island for its second year, and began exploring the benefits of procuring a second PCO2 sensor and telemetry
- Maintained and refined the database for the quality assurance and management of sonde data
- Investigated a new photocopier

In FY19, we plan to:

- Replace our photocopier
- Continue upgrades in computer workstations, software, and other office tools
- Maintain the *R/V Payne*
- Replace our pumpout boat through the DEP’s federally funded grant program
- Upgrade our relationship management database from Raiser’s Edge *i* to RE: NXT Pro
- Invest in Secchi disks as needed to expand the Color and Clarity initiative as needed
- Explore the design and elements of a fundraising campaign, which likely would include various scientific instruments for continuous monitoring, improved data housing and lab/office space
- Keep our eyes open for new office space opportunities

We have learned that certain donors respond very favorably to making contributions for specific “hard assets,” and so to that end, we will engage in specific campaigns designed to support our ongoing capital needs. This makes not funding depreciation in our operating budget slightly more justifiable, knowing we likely can raise funds outside of normal operating revenue sources, for specific assets that help us do our work.

D. Management and Administration

7. Staff

Staff at the beginning of FY19, showing the year they came aboard:

Sara Biron, Design, Data, and Development Associate	2014
Mary Cerullo, Associate Director	1998
Mike Doan, Research Associate and Boat Captain	1997
Will Everitt, Communications and Development Director	2006, 2010
Jeff Fetterer, Office Manager	2007
Ivy Frignoca, Casco Baykeeper	2016
Sarah Lyman, Community Engagement Coordinator	2011
Cathy Ramsdell, CPA, CGMA, Executive Director	2003
Jim Splude, Pumpout Coordinator and Boat Captain	2010

We do not anticipate adding staff this year.

Staff roles shifted during FY18, with the departure of Peter Milholland at the beginning of the fiscal year, and with the decisions to have 2018 be our final season for our Citizen Steward Water Quality Monitoring Program and find new ways to engage community members in citizen science and observations. Since then, staff roles, responsibilities and job descriptions have been retooled accordingly, offering individuals new opportunities for growth and affording us the ability to remain lean.

That staff turnover is exceptionally low is invaluable, as we are able to maintain momentum as we deepen our abilities to work together. Staff members continue to excel at learning, deepening their individual skills, as we all continue to find new and ever-more effective ways to work together. Sometimes this means having hard conversations, as well as inviting dissent during program planning meetings, as we have learned that constructive dissent as we think together has inspired new ideas and made for better decision making.

We have assembled and retained this excellent team by maintaining a good benefits package and by running a fair and flexible workplace. In return, we expect high quality engagement, exchange, and discourse, along with collaboration, appreciation of the big picture and attention to detail. We provide professional development opportunities across the board, such as attending classes, workshops, trainings, seminars, and conferences. Staff members also provide teaching content on various subjects in a wide variety of contexts, from classes at SMCC and UMaine Law, to seminars at Bowdoin and the Maine Association of Nonprofits.

We update our emergency succession plans annually, for use in the (we hope unlikely) event of an unplanned temporary absence of Staff (the E.D. asks for updates during the annual staff review process). These plans identify the key roles and responsibilities of each staff person, particular staff members who would fill in on certain responsibilities in one's absence, and the activities so unique to that individual that the activity simply might not be attended to until their return.

We will continue conversations about nonemergency succession planning and continue to encourage the Board to engage in discussions and planning Board recruitment and Board leadership succession.

Compensation was frozen in the FY09 / FY10 / FY11 budgets, and when revenue goals were met, an accrued bonus that had been included in the budget was released and in two cases supplemented with additional funds. The FY12 budget contained a 3% increase in compensation integrated into the numbers, not accrued, and this was greatly appreciated by Staff. The FY13, FY14, and FY15 budgets each contained a 2% increase; in addition, a couple of modest adjustments were made during FY13 and FY15, for merit and for partial compensation in lieu of health insurance for those leaving the plan to join spousal coverage. The FY16 budget included a 3% increase. The FY17 and FY18 budgets contained a 2% increase, with a couple of modest base adjustments. The FY19 budget proposes a 3% increase, with some small adjustments to base pay. Overall, this seems like a wise and modest investment in our intellectual capital, given the continued performance of the Staff and by extension, the organization.

8. Office Space

We will expand our search for new office space. We will identify ways to potentially offset office related costs with campaign funding. Southern Maine Community College informed us in the fall of 2016 that our lease would not be renewed, and while they are in no hurry for us to leave, we are “at will” tenants. It was agreed at the 2/21/17 Board meeting that we will proceed with defining our needs and explore spaces.

9. Financial Stability

Friends of Casco Bay has a strong balance sheet, with plenty of working capital and virtually no debt (other than Accrued Vacation Liability), along with three dedicated funds used to support operations: the Baykeeping Fund, the Emeritus Fund for Advocacy, and the Boats Fund, all housed at the Maine Community Foundation. We will be exploring the creation of a new spendable fund, and a campaign to create it, that likely would provide capacity to expand our data collection and products capacity.

Monthly interim financial reports will continue to be prepared, emphasizing year-to-date budget versus actual performance, along with balance sheets and periodic invested funds updates.

10. Board

Friends of Casco Bay's Board of Directors meets monthly on the 3rd Tuesday, from September through May except for December. The Board's Community Engagement Committee meets monthly prior to each board meeting, and the Executive Committee meets as needed. The Board and Staff social traditionally is held on the 3rd Tuesday of June.

The Executive Director works with the Board President, and when appropriate, the Executive Committee, to develop agendas for these meetings. Staff provide logistical support for Board meetings, including scheduling space to meet, providing snacks, arranging a/v, and taking minutes. Staff will continue to engage Board members in building and maintaining community relationships, policy issues, program efforts and accomplishments, governance, events, and connections to resources – financial and otherwise.

We look forward to the completion of the new Strategic Plan and to exploring campaign ideas.

IV. FY19 Operating Plan Summary

Monitoring:

- Continuous Monitoring Station (CMS), with data sonde with a PCO2 sensor at Cousins Island, hourly data year round
- Monitoring by Land
 - Early spring to late fall, visit 13 sites and sample surface water quality, at least 10 sampling events
- Monitoring by Sea
 - Early spring to late fall, visit 9 sites by boat and sample water quality down through the water column, at least 10 sampling events
- Develop Color and Clarity data collection. Collect these data at our CMS, and develop Volunteer citizen science initiative for collecting data according to appropriate tide schedule
- Other episodic efforts in conjunction with others' work:
 - Eelgrass, nutrient sensor deployment and testing, collaborative cruise to look at carbonate chemistry around the Bay
- Monitor and track nuisance and harmful algal blooms
- Host a Casco Bay Matters event to educate the public about nitrogen and algal blooms, provide talking points, and conduct a training in How to Report What You See using the Water Reporter app or camera/computer to launch ON Casco Bay, an observation network.
- Continue to develop internal data handling protocols for ease of storage, quality assurance, and extraction for our analyses and for other scientists
- Continue to collaborate with DEP, PWD, EPA, Portland, and South Portland to understand conditions in the Fore River and other regions in Casco Bay

Baykeeping

- Continue to promote and build a shared sense of ownership of the Bay with our community, using robust communications approaches
- Continue working closely with key partners, including Waterkeeper Alliance, Casco Bay Estuary Partnership, Maine Ocean and Coastal Acidification Partnership, Environmental Priorities Coalition, Interlocal Stormwater Working Group, Waterfront Alliance, Portland Water Quality Stakeholders Group, and other ad hoc collaborations as they arise
- Track and work on key issues impacting the health of the Bay, continuing our multi-pronged approach to work with and within our community to find ways to reduce negative impacts of:
 - Climate change
 - Nitrogen pollution
 - Stormwater overflows, combined sewer overflows, and sanitary sewer overflows
 - Offshore drilling
 - Marine debris and microplastics
 - Oil spills
 - Dredging
 - Areas of impaired water quality
- Track Casco Bay-related bills in the legislature, supporting improvements to the health of coastal waters and fighting rollbacks
- Respond to “over the transom” issues and inquiries as they arise

- Monitor and comment on draft discharge permits
- Assess ways and timing for encouraging ordinances, in South Portland and Portland, to reduce, restrict or eliminate the use of fertilizers

Community Engagement

- Develop and launch 2 new Volunteer initiatives: Color and Clarity citizen science data collection initiative and ON Casco Bay for collecting observations on algal blooms
- Host at least two Casco Bay Matters events as the vehicle for rolling out these initiatives to engage the public
- Host interns
- Continue to offer **community projects**
 - Storm drain stenciling
 - Coastal clean ups
 - BayScaping socials and workshops
 - Conduct socials and workshops
 - Collaborate with communities exploring pesticide and fertilizer ordinances
 - *Casco Bay Curriculum* teacher workshop
 - Continue to explore best next iterations for delivering the Curriculum to teachers, by meeting with teacher experts on aligning to standards
 - Explore ways to protect or enhance Friends of Casco Bay's branding on the Curriculum
 - Conduct a workshop with follow up, the design of which will depend on explorations above

Pumpout Program

- Continue to offer pumpout services for 2018 season
- Acquire a new pumpout vessel by working with Maine DEP and 90% reimbursement grant and raise funds to support the 10% difference

Communications and Development

- Foster a storytelling culture
- Promote our stories in a wide variety of ways
- Launch our ON Casco Bay initiative
- Host 2 house parties, our annual film festival, annual donor appreciation event
- Host a launch event for the new Pumpout boat
- Explore a re-design of our volunteer and annual meeting event and make a plan for 2019
- Take part in community events
- Develop images and visuals that tell our stories
- Keep or new website up to date and continue to add new sections
- Update and add to our Bay Papers
- Continue to grow and deepen giving from individuals
- Continue to garner foundation, corporate and government support
- Take advantage of and create visibility and branding opportunities as they arise

Technology and Capital Assets

- Replace the photocopier
- Continue upgrades in computer workstations, software, and other office tools
- Replace our pumpout boat
- Continue to engage professional photographers to build our image bank
- Upgrade our relationship management database from Raiser's Edge *i* to RE: NXT Pro

Management and Administration

- Finish our new Strategic Plan in conjunction with the Board
- Maintain our staff, our financial stability and resiliency
- Explore new office space
- Explore the design and elements of a fundraising campaign, which likely would include various scientific instruments for continuous monitoring, improved data housing and lab/office space

V. FY19 Budget Highlights

The Operating Plan for FY19 describes our plan for improving and protecting Casco Bay for the year April 1, 2018, through March 31, 2019. The Operating Plan describes our work in four sections: Programs, Communications and Development, Technology and Capital Assets, and Management and Administration.

A budget is the identification of the resources we believe it will take to accomplish this Operating Plan. The budget represents a best guess at a point in time based on reasonable assumptions. Reality will prove to be different.

The FY19 Budget is presented as a two-page summary, with a 6-page Supplemental Schedule that includes a lot of historical financial data. These two documents are formed from a collection of detailed information, including a 400+ line item detailed budget, and other supporting detailed worksheets on such areas as compensation, benefits, and estimated funds transfer calculations.

To meet the goals of our FY19 Operating Plan, expenses are budgeted at \$877,080 which is 8% higher than this year's estimated actual operating and is 3 % less than this year's budgeted expenses. As usual, expenses include a \$12,000 contingency line item; if we do not have significant, unexpected expenditures, this expense line can help "absorb" some of the depreciation expense, a nonbudgeted, noncash item. In addition, we have added a special line item for this year, Special Contingency in Case of Office Relocation, in the amount of \$20,000 to help defray the costs of moving and additional occupancy costs in the event that we move this year.

The Budget identifies \$832,000 in operating revenue from a robust variety of sources. This is 2% higher than this year's expected revenue, estimated to total around \$813,000. We remain optimistic about continued strong growth in Individual giving, while we remain conservative about Corporate, Foundation, and Government sources.

We budget as conservatively as we can and hope to underestimate revenue and overestimate expenses, as realistically as possible. This budget results in a modest deficit of \$15k. In order to maintain a well-positioned and viable organization in financial terms, we must strive to break even in operations; this is a signal to funders that we live within our means, and it is essential if we are to contemplate a fundraising campaign in the months ahead. This requires us, from time to time, to consider using funds we have set aside, to supplement what we are able to raise from outside sources, to responsibly keep our organization and staff moving forward in a wholesome way.

So we must consider "gap filling" measures. The FY19 Budget contains a line item for Special use of funds as an Allowance Not to Exceed \$50k. In the past (FY09 – FY14 and again in FY18) this line item has reflected the potential use of accumulated surpluses from prior years and/or additional draws from our invested funds housed at Maine Community Foundation, to absorb an operating deficit, should one occur. Please see the end section O in the Supplemental Schedule for a more detailed treatment of resource considerations.

The good news is that even though we have budgeted this "gap filler" many times, in amounts ranging from \$26k to \$58k each year, we have yet to utilize it!

We propose a gap filler of \$50k to create a balanced budget, responsibly show how we will use new resources as well as resources we control, and to make provision for two contingencies. One contingency is that we may physically move our office this year if opportunity and/or necessity so dictate (see reference above to Special Contingency). The second contingency is that we do

not yet know the potential effect of the new tax laws on Individual giving, and should that line item experience a hit, we likely will not be able to detect that until well into January 2019.

These two contingencies combined with the budget deficit compel us to consider adopting, as part of this budget, the use of this Special Allowance Not to Exceed.

The beauty of having a fiscal year that ends on March 31 is that we can experience the results of calendar year-end giving, assess where we are in relation to where we thought we would be (an ongoing process, actually), and then together explore options to best meet our goals of delivering on our plan while striving to do better than break even.

The Budget to support the FY19 Operating Plan will be fodder for discussion at our upcoming March 6th Workshop, following our review of this Plan.

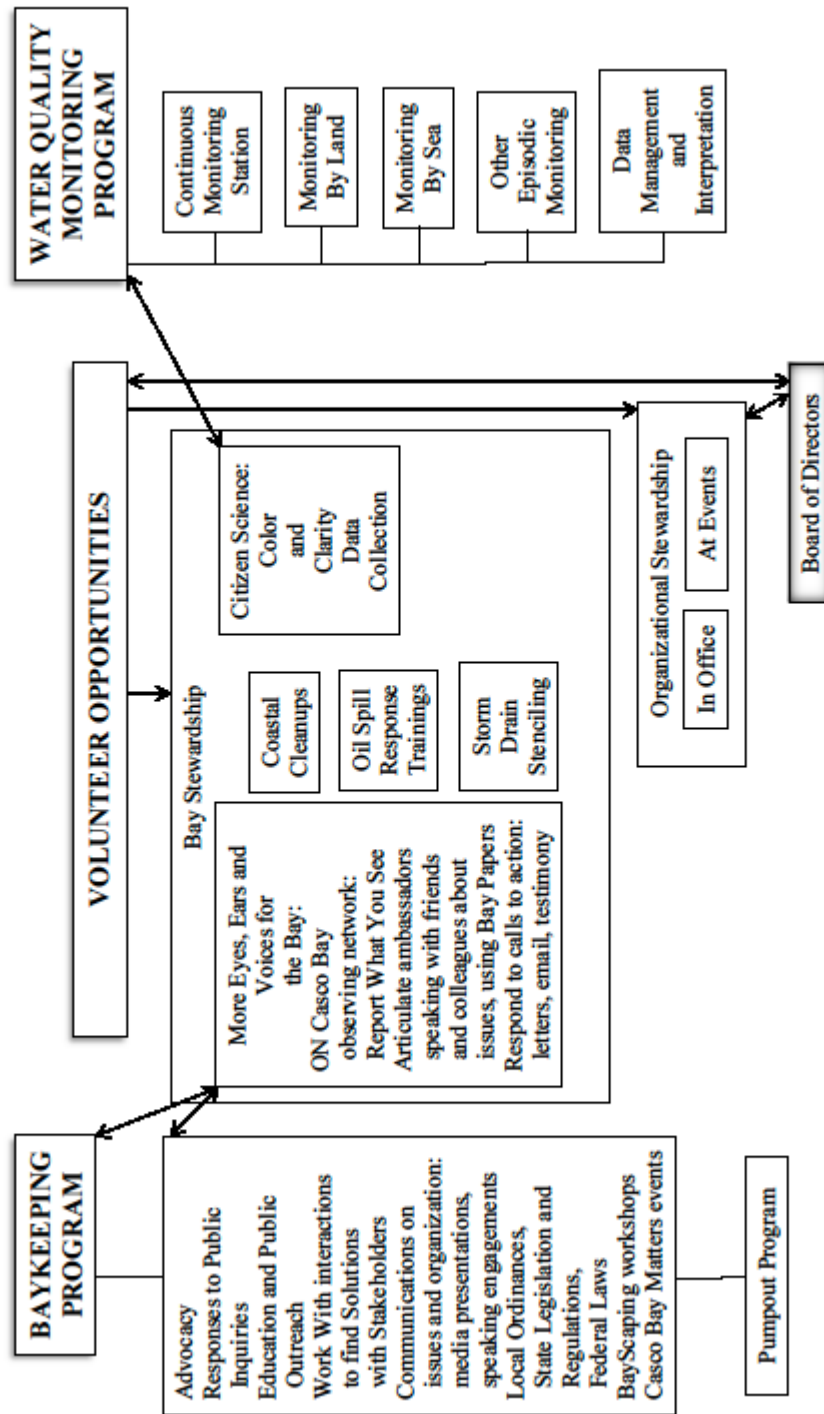
VI. APPENDICES

Appendix A – Program Matrix

Program	Science	Community Engagement	Advocacy
Water Quality and Other Environmental Monitoring	Continuous Monitoring Station Monitoring by Sea Monitoring by Land Stormwater Sampling Eelgrass Monitoring Pesticide Monitoring Microplastics Sampling Invasive species QAPP maintenance Laboratory and boat operations	Color & Clarity using Eye on Water Images, graphs, reports, etc. to the public about our science efforts	Encouraging more monitoring in CWA permits Championing monitoring by DEP MOCA and acidification monitoring efforts Nitrogen standards
Baykeeping: The Eyes, Ears, and Voice of Casco Bay	Advocacy is grounded in science Staying on top of Climate Change science Casco Baykeeper helps staff our WQM efforts Tracking algal blooms	ON Casco Bay: Observing Network using Water Reporter Volunteers as advocates and ambassadors who use Bay Papers to speak about issues and who respond to calls to action such as contacting their government representatives Casco Bay Matters series Public events Media events CBEP management committee	Climate change and Acidification Policy Maine Ocean and Coastal Acidification Partnership CWA discharge permits CSO remediation Dredge/CAD monitoring Oil Spill Preparedness Legislation/ ordinance tracking and testimony BayScaping ordinances Marine Debris Invasive species Preventing federal rollbacks Addressing threats as they arise
Public Education and Outreach	Translating science to the general public BayPapers Data behind <i>Casco Bay Curriculum</i>	BayScaping socials <i>Casco Bay Curriculum</i> Community speaking events Media releases Email communications Social Media Newsletter Tabling at community events	Action alerts BayPaper actions
Pumpout Program	Pumpout metrics	Ambassadorial work Pumpout service	Watchdogging pumpout stations around the Bay Advocating for more pumpout stations

Appendix B – Volunteer Opportunities in Relation Programs - 2018

Friends of Casco Bay Volunteer Opportunities in Relation to Programs - 2018



Appendix C – FY18 Media Report

April 1, 2017– February 19, 2018

Winter/Spring 2017 Maine Ties (MCF mag) Peter Dufour interview mentions Friends

March 7	The Forecaster(4 issues)	Portland panel send pesticides rules to CC
April 19	The Forecaster(4 issues)	SoPo help impaired streams (MDoan)
April 26	The Forecaster (4)	SoPo harbor site may store dredged (Ivy)
April 26	Portland Press Herald (PPH)	Site selected for dredged soil (FOCB)
May 2	PPH, Business	On the Move, Charmatz and Marsters on Board
May 15	Mainebiz	In Short, Charmatz and Marsters Bd appts
May15	UMaine Research	Improving Maine’s coastal infrastructure
May 19	Portland Press Herald	Panel unanimously rejects LePage Pesticides bill
May 23	PPH	On the Move, Charmatz and Marsters
June 1	Lewiston Sun Journal	Maine’s Climate already changing (Ivy quoted)
June 16	Scarborough Leader	Consider an organic lawn care approach
June 19	PPH	Dispatches: Dead bait fish litter shore
June 19	Working Waterfront	Are mussels really gone?
June 19	Working Waterfront	Estuary beat: CB pollution gets greater scrutiny
June 27	PPH	Pesticides ordinance opponents pressure city councilors
June 30	PPH	FOCB celebrates 25 years
July 2	PPH	Aaron Strong organizes ME water monitors for better ocean
July 7	Mainebiz	The Week in Review: The Bad: Green algae returns
July 6	Mainebiz	Return of Green slime threatens Gr. Ptld mudflats
July 7	MPBN	Green algae returns
July 9	MST	As environmental worries grow, Mainers volunteer (S Lyman)
July 9	As-it-happens	As environmental worries grow, Mainers volunteer http://www.pressherald.com/2017/07/09/volunteers-they-get-the-jobs-done/
July 10	Bangor Daily News (BDN)	Green algae returns

July 10 /11	WGME	Green algae returns http://wgme.com/news/local/algae-turns-maines-waters-green
July 17	The Working Waterfront	Estuary Beat: Casco Bay oil spill preparedness
July 18	PPH	Proposed task force ordinance is full of loopholes http://www.pressherald.com/2017/07/18/maine-voices-portland-task-force-pesticide-ordinance-is-full-of-loopholes/
July 20, 21	The Forecaster (4)	Mysterious algae blooms worry Casco Bay advocates http://www.theforecaster.net/mysterious-algae-blooms-worry-casco-bay-advocates/
July 30	ME Sunday Telegram, Scene and Heard	Friends of Casco Bay May 23 event
July 2017	Points East	Pumpout stations in Maine /PO boat
August 17	Bowdoin News	Emily Haggett/FOCB at Aquaculture on Chebeague http://community.bowdoin.edu/news/2017/08/hugh-cipparone-19-optimism-and-uncertainty-about-aquacultures-future/
October 18	As-it-happens	Film Festival
Oct 18	The Forecaster (4)	Cage of Science http://www.theforecaster.net/cage-of-science-captures-changing-quality-of-casco-bay/
Oct. 19	MECPA	Women to Watch
Oct 19	WKA	CWA remembered, Ivy quoted
Nov/Dec 17	Maine Boats, Homes & Harbors	FOCB ad on p.61
October 29	Maine Sunday Telegram	Wild & Scenic coming to a screen near you
Nov 1	The Forecaster Arts Calendar (4)	Film Festival
Nov 9	Seacoast (NH) Online	Ivy talk at Wells Reserve
Nov 13	Portland Press Herald (PPH)	Eddie Woodin Award, mentions FOCB http://www.pressherald.com/2017/11/13/conservationist-and-birder-eddie-woodin-to-be-honored-for-his-collection-of-bird-art/
Nov 17 Casco Bay	Highland Green Management Matters	Ecological ties that bind Highland Green and
Dec. 6	PPH	Seb Milardo on FOCB Board
Dec. 7	The Forecaster(4)	Falmouth panel hears So Portland experience with pesticide ban http://www.theforecaster.net/falmouth-panel-hears-about-south-portland-experience-with-pesticide-ban/
Dec. 8	WCSHCh 6	December algae blooms in Maine concern scientists
Dec. 11	WBLZ Ch 2	December algae blooms in Maine concern scientists http://www.wlbz2.com/news/december-algae-blooms-in-maine-concern-scientists/498632052

Dec 14	Bonnell Cove Fdn	Funding a grant for Citizens Science to FOCB
Dec 18	The Waterkeeper Weekly	Waterkeepers Around The World: Casco Baykeeper is concerned about an algal bloom along the coast of Maine this month that has closed shellfish harvesting in much of the bay.
Dec 19	PPH	Ptld. Council urged to OK restrictions on Pesticides
Dec 20	The Forecaster (4)	FOCB Exec Director receives award for financial mentoring http://www.theforecaster.net/people-business-dec-20/
December 2017	ME: CPA	CLR award https://www.mecpa.org/writable/news_items/document/mecpa_newsletter_12.14.17_003_copy1.pdf
January 7, 2018	Maine Sun. Telegram	Millions of Gallons of Raw Sewage: Ivy interviewed Scene and Heard: Cathy award ; Scene& Heard Film Festival
January 7	Lewiston Sun Journal	Millions of Gallons of Raw Sewage
January 8	Mainebiz In Short,	Newsworthy people and performances: Seb Milardo/ Cathy Ramsdell
Jan 23	Points East (online)	Volunteer recognition
Jan 26	The Working Waterfront	Portland pub owners recognized for Casco Bay advocacy http://www.islandinstitute.org/working-waterfront/portland-pub-owners-recognized-casco-bay-advocacy
Jan 28	MS Telegram	CB samples reveal tiny bits of trouble: microplastics https://www.pressherald.com/2018/01/28/casco-bay-survey-finds-microplastics-in-four-distinct-regions/
Jan. 29	USA Today	Survey of CB finds Microplastics in 4 distinct regions https://e-usatoday.com/maine-today-survey-of-casco-bay-finds-microplastics-in-four-distinct-regions/
February 2	SoPo/CE Sentry	Volunteers of Casco Bay recognized at banquet
February 19	The Waterkeeper Weekly	Protecting the Bay from Pesticides

Appendix D – Pumpout Metrics, 1999 – 2017

Year	Pumpout Coordinator	# of Pumpouts/ Service Calls	Gallons of Sewage Diverted	# of Pumpout Customers	# of Pumpouts in 20 Gallon Increments	# of Flushes	Total \$ Billed
2017	Splude	485	13,700	169	685	45	\$7,525
2016	Splude	543	15,320	159	766	48	\$7,655
2015	Splude	535	13,640	105	462	44	\$5,280
2014	Splude	570	18,000	115	622	64	\$7,180
2013	Splude	637	12,740	100	448	42	\$5,110
2012	Splude	340	6,810	106	532	47	\$6,055
2011	Splude	405	10,400	122	529	37	\$6,035
2010	Splude	294	8,280	120	417	38	\$4,335
2009	Mattsson & Linnell	213	4,260	78	213	27	\$2,565
2008	Mattsson & Linnell	332	7,160	100	335	34	\$2,185
2007	Mattsson & Linnell	155	5,100	88	212	29	\$1,485
2006	Mattsson & Linnell	203	4,060	73	203	40	\$2,380
2005	Adibi	116	3,425				
2004	Saas	471	7,347				
2003	Saas	659	10,300				
2002	Saas	754	10,425				
2001	Madeira	1,126	16,125				
2000	Madeira	771	15,400				
1999	McGivern	650	13,000				
1998	McGivern	289	5,780				
1997	Bertocci	215	4,300				
1996	Hackett	160	3,200				
1995	Hackett	51	1,020				
	# service calls:	9,974	209,792	gallons			

Appendix E – Where We Have Been – FY18

FY18		You may have seen us at these venues...		Speaking or Leading event	# in audience at speaking event	# at tabling event	Volunteers and Staff in attendance
04/22/17	Portland	Deering Neighborhood Fest	Tabling: Storm drain stenciling/ BayScaping			400	Mary Cerullo, Pat Ianni
04/26/17	Falmouth	TD Bank Eco-Fair	Tabling			50	Pat Ianni
04/26/17	South Portland	Impaired Urban Streams workshop	NN results and Tabling	Mike Doan	40	40	Mary Cerullo
04/29/17	Newington, NH	Gundalow Gathering	BayScaping	Mary Cerullo	17		
05/03/17	Bath	New Meadows Forum	WQ panel	Mike Doan	40		Ivy Frignoca
05/03/17	Lewiston	Bates College	Peter Milholland received award		N/A		Cathy Ramsdell Will Everitt
05/09/11	Portland	Storm Drain Stenciling	RBC	Sarah Lyman	8		Jack Thomas
05/11/17	Portland	Waterfront Alliance	CWA permits panel	Ivy Frignoca	15		
05/09/17	Portland	Casco Bay Lines	Waterfront Alliance Networking Cruise		N/A		Ivy, Cathy
05/11/17	Falmouth	Lillian Harris/Thornhurst neighborhd	BayScaping	Mary Cerullo	9		
05/13/17	Orr's Island	Bowdoin Coastal Studies Ctr	Curriculum intro for Brunswick teachers	Mary Cerullo	30		
05/22/17	South Portland	National Guard	Volunteer Oil Spill Preparedness Training/Orientation	Ivy	45		Mary Cerullo
05/23/17	Portland	Glickman Library, USM	22/25	Cathy Ramsdell, Mike Doan, Sarah Lyman	80		staff
5/26/17-5/27/17	Portland	WordCamp	Attending	N/A	N/A	N/A	Sarah Lyman
06/05/17	Portland	Coast Guard base	Risk Communications workshop	N/A			Ivy Frignoca, Cathy Ramsdell
06/05/17	Augusta	EPC Climate Change Communications	attending		N/A		Mary Cerullo
06/05/17	Falmouth	Conservation Commission	BayScaping	Mary Cerullo	12		
6/6-6/7/17	Portland	It Heritage Cntr	Oil Spill Exercise		150		Ivy Frignoca , Mary on Day 2
06/08/17	Augusta	MANP Workshop: effective Framing for Social Change	Attending		N/A	N/A	Mary, Cathy, Will, & Sarah
06/12/17	Portland	CBEP hosting EPA guests at RiRa					Ivy, Cathy
06/21/17	Portland	Portland City Hall	Pesticides Hearing	Cathy Ramsdell, Will Everitt	60		Mary
06/22/17	Portlan	Back Cove Cleanup	TD Bank Green Team West Falmout	Sarah Lyman	18		
06/24/17	Portland	Allagash	FOCB booth tabling			300	Dan Brazeau, Lori Thayer, Emily Haggett
06/28/17	Brunswick	Brunswick Town Hall	Rivers and Harbor Commission Meeting	Ivy Frignoca	12		also televised on community TV
06/28/17	Belfast	Hutchinson Center	Maine SeaGrant Policy Advisory Committee meeting		N/A		Cathy

FY18		You may have seen us at these venues...		Speaking or Leading event	# in audience at speaking event	# at tabling event	Volunteers and Staff in attendance
06/29/17	Portland	USM, Abromson Ctr	Future of Fisheries	Ivy Frignoca	125		Cathy
07/11/17	Boothbay	Bigelow Laboratory	Yellowing of the Gulf of Maine		125		Cathy, Mary
07/12/17	Portland	Bayside Bowl	Nonprofit Mixer				Will, Cathy
07/14/17	Wells	Wells High School	Maine NH Beaches Conference		150		Cathy
07/25/17	Hallowell	MANP	MANP Workshop on Strategic Planning		10		Cathy and Malcolm Poole
07/25/17	Boothbay	Bigelow Laboratory	Polar Algae and Climate		150		Cathy
07/26/17	Portland	City Hall	Sustainability & Transportation Committee workshop on Portland Pesticide Ordinance				Cathy
07/14/17	Portland	Oyster Room	MOCA followup to RARGOM mtg	Ivy Frignoca			
07/27/17	Portland	BCM Environmental Law	Open House		N/A		Ivy, Will, Cathy
07/30/17	Cheabegue Island	Aquaculturefest	FOCB Tabling		200		Emily Haggett
08/01/17	Boothbay	Bigelow Laboratory	lecture - get details from Cathy		125		Cathy
08/01/17	Portland	Maine Surfers Union	Surfboard raffle to benefit FOCB	Will Everitt	5		Sara Biron
08/08/17	Brunswick	Curtis Memorial Library	GMRI Sea Level Rise interactive workshop		14		Cathy
08/10/17	Portland	PWD	Portland Water Quality Stakeholders Group				Cathy
8/12/2017	Portland	Guster on the Bay concert	Concert tabling	Will Everitt		400	Will Everitt, Rebeca Fuquen
8/17/2017	Little Diamond Island	Peggy and Seb Milardo's LDI home	House Party	Cathy Ramsdell, Mike Doan	45		Will Everitt
08/23/17	Long Island	Community Center	BayScaping	Mary Cerullo	3		
08/24/17	Portland	Back Cove Cleanup	IDEXX Give Day	Sarah Lyman	11		
09/07/17	Portland	City Hall	Sustainability & Transportation Committee workshop on Portland Pesticide Ordinance				Cathy
09/09/17	South Portland	Bug Light Park	YELP	Sarah Lyman	14		Alix Malarky
09/11/17	Scarborough	Broadturn Farm	Scarborough Land Trust Dinner				Cathy, Mary, Dan Brazeau
09/12/17	Portland	GMRI	Waterfront Alliance				
09/13/17	Augusta	Maine Conservation Alliance	EPC Planning Team Meeting	Cathy			
09/13/17	Portland	Maine School of Law	lecture	Ivy Frignoca	20		
09/15/17	Brunswick	Bowdoin Common Good Day	Storm Drain stenciling	Mary Cerullo	25		
09/17/17	Portland	Save the Waves Film Festival	Benefit FOCB	Will Everitt	250		3 volunteers
09/18/17	Brunswick	WCME radio	Interview	Ivy Frignoca	3		Dan Devereux
09/20/17	Portland	City Hall	Sustainability & Transportation Committee workshop on Portland Pesticide Ordinance				Cathy

FY18		You may have seen us at these venues...		Speaking or Leading event	# in audience at speaking event	# at tabling event	Volunteers and Staff in attendance
09/21/17	Portland	Maine School of Law	Clean Water Act	Ivy Frignoca	15		
09/21/17	Portland	Storm Drain Stenciling	TD Bank Green Team West Falmouth	Sarah Lyman	22		
10/03/17	Portland	Coffee By Design	Friends of Eastern Prom Annual Meeting		45		Cathy
10/04/17	Topsham	Highland Green	BayScaping	Mary Cerullo	25		
10/06/17	Belfast	Island Teachers Conference	Casco Bay Curriculum	Mary Cerullo	9	128	
10/08/17	Portland	Guinness Oyster Fest	Benefit	Will Everitt		100	
10/10/17	Portland	GMRI	Waterfront Alliance				
10/18/17	Portland	UNE	Changing our WQM	Cathy, Mike, Sarah	30		Mary, Will
10/20/17	Freeport	Freeport Women's Club	FOCB	Ivy Frignoca	28		
10/23/17	Brunswick	Curtis Mem. Library	Changing our WQM	Cathy, Mike, Sarah	30		Will
11/04/17	Portland	Abromson Center, USM	Wild & Scenic Film Festival	Cathy Ramsdell			all staff
10/12/17	Portland	Portland City Hall	Pesticides Hearing	Cathy Ramsdell			
11/01/17	Portland	Maine School of Law	Clean Water Act, 2	Ivy Frignoca	15		
11/6-7/17	Portland and So Portland	Regional Waterkeeper Alliance retreat	hosted meeting and presented on FOCB	Ivy Frignoca	25		Cathy Ramsdell, Mary Cerullo, Will Everitt
11/12/17	North Yarmouth	Walnut Hill Garden Club	BayScaping	Mary Cerullo	9		Susan Gilpin
11/13/17	Portland	Casco Bay Estuary Partnership	Nutrient Council presentaion on our work	Ivy Frignoca	20		
11/28/17	Cumberland	Greeley HS	Global citizenship & Science	Ivy Fignoca	80		
11/30/17	Wells	Wells NERR	FOCB	Ivy Frignoca	30		
12/18/17	East Boothbay	Bigelow Laboratory	ME Ocean Coastal Acidification (MOCA)	Mike Doan, Ivy Frignoca	100		
12/05/17	Portland	Marginal Way	King Tides walk	Mary Cerullo		14	
12/18/17	Portland	City Council hearing	Testimony on Pesticides ordinance	Cathy Ramsdell	80		
01/18/18	Augusta	EPC Legislative Bkfast	Education on EPC priority bills	Ivy Frignoca	30		Mary Cerullo
01/18/18	Brunswick	Thornton Oaks	BayScaping	Mary Cerullo	35		
01/23/18	Portland	DiMillo's on the Water	Volunter Appreciation Celebration & Annual Members Meeting	Cathy, Sarah, Mike, Ivy, Dan Brazeau	125		staff
01/30/18	Cape Elizabeth	CE/SoPo Rotary	Baykeeping	Ivy Frignoca	40		
02/10/18	Freeport	Patagonia Outlet	Tabling: volunteer opportunities	Sandy Marsters, Seb Milardo		50	Sandy Marsters, Seb Milardo

Appendix F – FY19 Events We Anticipate Hosting

- ☆ Summer House Party, date and location to be determined (tbd)
- ☆ 2nd Summer House Party, date and location tbd
- ☆
- ☆ Casco Bay Matters event(s) focused on training community members to engage in citizen science by collecting Color and Clarity data using a Secchi disk and an app. A recommended schedule for data collection will dictate the optimal times for sampling. We have responded to a specific funding opportunity for one of these events, so if funded, one event would likely be held on July 28, 2018.
- ☆ Casco Bay Matters event with public presentation on Nitrogen and Algal Blooms, along with a workshop on talking points for volunteer advocates and a training to use an app and/or camera/computer to participate in ON Casco Bay, the observing network
- ☆ Host our 11th Wild & Scenic Film Festival On Tour, on Saturday, November 3, 2018
- ☆ Donor Appreciation event, likely returning to the Cumberland Club on weekday evening at the end of November or early December 2018.
- ☆ Launch event for new Pumpout boat, tbd
- ☆ Casco Bay Curriculum workshop, tbd
- ☆ Friends Appreciation Celebration and Annual Members Meeting, tbd sometime in 2019