



**Friends of Casco Bay**  
**Casco BAYKEEPER®**

**Operating Plan**  
**for**  
**Friends of Casco Bay**  
**FY15**

April 1, 2014 – March 31, 2015

**FOR INTERNAL USE ONLY**

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# I. Introduction

This document contains Friends of Casco Bay's **FY15 Operating Plan**, a summary of the **FY15 budget highlights**, and some of the **metrics** being developed to measure our progress. The **Table of Contents** will help you navigate this document.

These elements support our **Strategic Plan 2013-2017**, which identifies 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 are summarized below.

The **Operating Plan** is a document for internal use, which contains detailed narrative generated by staff teams, specifically laying out the activities in which we will engage this year, April 1, 2014 to March 31, 2015, to make progress on the goals outlined in the Strategic Plan. The Operating Plan is in four sections: Program, Development, Technology and Capital Assets, and Administration. The contents of this plan are open for discussion among Board and Staff.

The next section is a summary of the FY15 Budget highlights. **The FY15 Budget and a Supplemental Schedule to support it are separate documents and have been sent to you along with this plan.** The FY15 Budget is built to support this plan.

The last section of this document addresses some of the **metric measurements** we are developing. We will continue to roll out drafts of groups of measurements to present at committee and board meetings as appropriate throughout the year.

Our mission is to improve and protect the environmental health of the Bay and is supported by efforts in science, education, and advocacy – the three legs of the stool, so to speak. We are privileged to have, at our core and in our midst, one of the seven founding members of Waterkeeper Alliance, the Casco Baykeeper, and while he acts as the eyes, ears, and voice for our waterbody, Casco Bay, 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, and as the Baykeeper says, “With every privilege comes a responsibility.”

The value of what we offer to the community is in our continuing programmatic work, making that work and its implications understandable and relevant to people in our community and our state, empowering members of our community 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, and running our organization responsibly. We strive to be an organization that is both leading and learning.

In summary, in FY15, we will be tackling our goals in the following ways:

1. Advocating for standards and for behaviors that protect the health of the Bay, particularly in the areas of nitrogen pollution, coastal acidification, oil spill preparedness, and dredge disposal site selection issues.
2. Communicating science through credible data collection and accessible presentations to educate our community, using various forms of outreach: presentations, events, meetings, print, special reports and especially our Bay Papers and the report *A Changing Casco Bay*, along with web postings, e blasts, tweets, television, radio, and press conferences.

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, other water groups, Bay “users,” and other members of the public.
4. Building and maintaining our ability and operating capacity to realize our operating plan, while responding to issues, threats, requests, and opportunities, as they arise, effectively and timely.
5. Growing funding resources to better deliver our mission.

While the Strategic Plan is elegant in its brevity – 3 pages, the Operating Plan is just the opposite – many pages; the devil, as they say, is in the details. The beauty of this detail for us at the Staff and Board levels is that the plan makes our intentions transparent, and we can all be on the same page in our messaging. This also helps coordinate our use of resources, and it makes the fundraising process markedly more straightforward.

Many thanks to the Staff for your contributions – 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 discussion 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

**[Please see the Strategic Plan in its three-page entirety for more detail] informational**

### 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 focus 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.

### III. FY15 Operating Plan

#### A. Programs

The employees of Friends of Casco Bay meet together regularly, throughout the year, to discuss our work, track progress, and assess opportunities. The sharing of expertise, experience, and inspiration are essential to setting direction together, whether staying the course in certain areas, shifting our focus, or deciding to launch new initiatives.

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

#### 1. Water Quality and other Environmental Monitoring

This will be the 23<sup>rd</sup> year of collecting data on the water quality 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.

##### a. Citizen Stewards Monitoring Program

Our volunteer citizen scientists are trained to collect data in surface water, whereas staff profiles, described below, focus on collecting data down through the water column. The Citizen Stewards Monitoring Program will continue, on 10 sampling Saturdays between April and October, with data collection twice each day, in the morning and afternoon (at 7 a.m. and 3 p.m.) on those sampling dates, resulting in 20 sampling events. During our fall water quality program review meetings in 2010 and again in the fall of 2012, staff considered having volunteers revert to sampling once per day, but analysis of the data collected in the morning and afternoon over 7 sampling seasons, has revealed significant diurnal variability in water quality; sampling twice per day will continue for the 2014 season (FY15). Staff agreed we will likely continue this sampling regime for the next couple of years, then review the data to again assess whether the program needs modification. We will also begin exploratory conversations about the utility of various data sets, as well as scenario planning around the vulnerability of funding, particularly governmental funding received from the federal Environmental Protection Agency (EPA) through the Casco Bay Estuary Partnership (CBEP) for the Citizen Stewards program.

(1) **Data** to be collected: Volunteers will continue to measure water temperature, salinity, Secchi depth, dissolved oxygen (DO), and pH, as well as ancillary data on weather conditions, air temperature, and any unusual sightings. Volunteers are trained according to our Quality Assurance Project Plan (QAPP) approved by EPA, which makes their data, after quality assurance checks by staff, scientifically defensible.

(2) Measuring the acidity at **surface water sampling** sites by our volunteers has been part of our program from the beginning. Acidity levels in ocean water are changing as a result of the absorption of atmospheric carbon dioxide at the surface, an effect of greater carbon loading in the atmosphere (ocean acidification), and as a result of the decay of organic matter in productive, nearshore waters (coastal acidification), and acidity is likely further exacerbated by reductions in populations of calcifiers and of eelgrass due to green crab foraging.

In 2011, we equipped and trained our volunteers to use **digital pH meters** to measure acidity levels. Most of the meters purchased in the spring of 2011 were replaced in the spring of 2013. We will monitor and **replace pH electrodes and batteries** in the volunteers' meters as needed in order to ensure the highest levels of precision of these instruments as well as the accuracy of the data collected.

(3) In 2013, our volunteers sampled surface water quality at 36 sites around the Bay. This year, we will try to **increase the number of volunteer sites to 40**. Our ability to do this depends on the number of new and returning citizen scientists, as well as on their geographic locations. Recruitment efforts become more sophisticated each year, employing everything from word of mouth and local newspaper recruitment to internet links, our *Raisers Edge* integrated e mail marketing tool, Net Community (replacing Constant Contact emails), use of social media, and Survey Monkey scheduling.

In 2013, 57 returning Citizen Steward Water Quality Volunteers were recertified to sample during the 2013 season. In addition, 22 new folks joined the ranks. After the end of the season, two individuals, Robert Michael Doan and Joan Greene received recognition for 20 years of service, Roberta Brezinski received recognition for her 15 years of service, and Nan Bragg, Sarah Coburn, Charlotte Rosenthal and Jeanie Wester each received recognition for five years of service.

In 2014, returning volunteers will brush up their skills during the annual Quality Assurance testing in March; new recruits will begin training in April.

#### **b. Profiles of the water column**

Profile sampling down through the water column at ten stations around the Bay will continue monthly throughout the year, led by staff using a data sonde aboard the Baykeeper boat. As often as possible, students, other scientists, and volunteers will accompany staff on these trips. If weather is an impediment, only three of the ten sites, sentinel sites, may be sampled (this is often true during the winter months, though we are noticing informally that wind and rough seas have become more of an inhibiting factor year round, not just in winter). Parameters measured in the profiles include temperature, salinity, Secchi depth, dissolved oxygen (DO), chlorophyll fluorescence, pH, DIN, and Total Nitrogen (TN). TN samples will be collected at the surface at all 10 profile sites only on a quarterly basis; the decision to switch to quarterly sampling from monthly sampling was made due to the very low annual variability exhibited in the analyses of profile TN data. Data is collected in accordance with our QAPP.

### c. **Unattended Sonde Data Collection**

This project will look at both the carbonate conditions in seawater and the feasibility of unattended data collection in Casco Bay. This project has two goals: first, to better understand existing conditions and seasonal changes in carbonate chemistry and acidification in seawater in Casco Bay, and second, to explore the utility of data collection using an unattended sonde.

Analyses of twenty years of various aspects of our water quality profile data reveal that long-term trends are difficult to determine through a “once a month” collection protocol. This is due to the very significant variability inherent in coastal embayments and estuaries. This variability is evident in our Citizen Steward diurnal data set. Deploying a sonde unattended would provide us with far more data, which will be more powerful statistically.

**Work Plan:** We will deploy one sonde at one pier in the region of the port, from May through October, location to be determined. The sonde will run unattended, collecting measurements hourly. Measured parameters will include Water Temperature, Salinity, Dissolved Oxygen Concentration and Percent Saturation, pH and Chlorophyll. Once a week, the sonde will be checked for fouling and the data collected will be uploaded. A water sample for Total Alkalinity analysis will be collected at that time. On a rotating basis, every other week, the deployed sonde will be replaced by a clean, fully charged and calibrated sonde. This rotation will continue for the entire deployment. The sonde will be chained and locked to a float at a depth of 0.2 meters. Prior to deployment, we will meet with private pier owners and with the Coast Guard to determine which side of the port will be our deployment location.

Katahdin Analytical Services will analyze the alkalinity samples, using Standard Method 2320-B. Additionally, a LaMotte alkalinity test kit will be used on replicate water samples to determine the accuracy and resolution of the kit. The alkalinity data will be used with the pH data from the sonde to calculate Dissolved Inorganic Carbon, Partial Pressure of Carbon Dioxide, and Aragonite Saturation State. These five parameters will provide us with a much greater look into the carbonate chemistry of Casco Bay, and the current level of acidification and how that varies with water temperature, salinity, and dissolved oxygen.

A weekly secchi depth measurement will be taken, and filtered water samples will be collected for dissolved inorganic nutrient analysis.

Analysis of the sonde data will seek the optimal frequency intervals for measurements, by comparing data sets collected at two-hour and four-hour intervals with to those from one-hour intervals.

### d. **Mud pH**

Our concerns about ocean acidification, inshore nitrogen pollution creating conditions for coastal acidification, and reports about “death by dissolution” of baby mollusks unable to survive in low pH conditions led us, in 2011, to begin looking closely at how to assess the **pH levels of sediments in clam flats in Casco Bay**.



During the summer of 2011, we investigated the feasibility of various methods for collecting data on the pH levels of sediments in clam flats. Low pH is one of many factors that can inhibit the ability of clam spat to grow and prosper. We collaborated with Dr. Mark Green at St. Joseph's College and Dr. Joe Salisbury at the University of New Hampshire (UNH), experts on the effects of ocean acidification on calcifiers' ability to develop, or not, in acidic conditions, to design a simple protocol for data collection. The development of this protocol turned out not to be simple, as it took most of the summer of 2011 for us to get the bugs out of the protocol before we could finally use it to collect data in a consistent manner from flat to flat.

In 2012, we improved the protocol by upgrading our pH electrode to an Accumet AP 115, which allowed us to take measurements directly on the mud surface. We identified 30 flats to be sampled and collected data on sediment pH, seawater pH, water temperature, and sediment oxidation reduction potential (ORP); we are saying that nitrogen pollution has a cascading effect eventually resulting in lowering the pH of marine sediments, so measuring ORP provides some indication of the degree of eutrophication or organic enrichment in the area.

We also collected sediment samples to be analyzed for percent carbon, percent nitrogen, and surface area, to be analyzed by Dr. Larry Mayer of the University of Maine Darling Center. ORP, percent carbon and percent nitrogen, together, can be used to determine the extent of organic enrichment of the sediment, which is important as we continue to investigate whether nitrogen pollution is the cause of coastal acidification.

Data was grouped by productive clam flats (actively being clammed) and flats which were not or were no longer productive. The data showed that average pH was lower at the sites located on nonproductive flats, and organic carbon and nitrogen concentrations were higher at sites located on nonproductive flats. We view this as evidence of the effects of nitrogen pollution on the flats.

In 2013, we began to assess the critical question of whether or not measuring the pH of mud is the most efficacious way to measure the mud's acidity. A low carbonate saturation state is what actually drives the dissolution of calcifiers, and pH has been used as an affordable and relatively easy proxy for saturation state. To test the correlation between pH and carbonate saturation state, we measured both parameters concomitantly during the 2013 field work. We also improved our understanding of sediment pH temporal and spatial variability by focusing on just one clam flat ("site") but collecting much more data, visiting the flat seven times between June and September and sampling at a number of places throughout the intertidal zone. Recompence Cove clam flat in Freeport was selected as the study site. The stations were determined prior to the first monitoring event and marked with wooden stakes. Water temperature and salinity were measured, then sediment data was collected along two parallel transects running perpendicular to the waterline from the high intertidal to the low intertidal. These two transects were 5 meters apart and included 5 sampling points ("stations") each, with the samples and measurements being collected at the waterline edge of the outgoing tide. The stations were about 30 meters apart. Each station included 10 rounds of sediment measurements, including sediment pH, sediment temperature, and 3 rounds of sediment ORP. Sediment

samples were collected at each site and analyzed for carbonate saturation state. Sampling frequency was twice per month in June, July, August, and once in September. Dr. Green and Dr. Joe Salisbury of the University of New Hampshire are collaborating with us on this component of the project, and the laboratory analysis was done at no cost to Friends of Casco Bay.

In addition, we deployed live clam spat (baby clams) to assess the effect of low pH in the mud and to try to obtain visual evidence. The spat were provided by Dr. Brian Beal's shellfish hatchery at the Downeast Institute in Machias. We developed and tested a clam spat exposure bioassay, using the hatchery-reared spat, deployed in mesh-covered PVC tubes on different parts of the flat, left on site for varying lengths of time (1, 3, and 7 days). After retrieval, the clam spat were examined and photographed using the Bowdoin College Scanning Electron Microscope to determine the extent of dissolution.

As of March 2014, we are still awaiting results from one of our collaborative partners on the project, on the aragonite saturation state analysis, but generally, pH was higher in the productive region of the flat and lower in the unproductive region. pH levels were similar between transects, and also showed a negative correlation with sediment temperature; higher sediment temperatures resulted in lower pH values. The clam spat bioassay was incomplete, but did provide us with a good protocol to work with as well as a few images of "pitted" clams, indicating that dissolution was taking place at the study site.

In both 2012 and 2013, we had summer interns from Bowdoin College, Jessie Turner and Courtney Payne, working on this project, partially funded through the Psi Upsilon Fellowship. In 2014, we will once again work with Bowdoin to place another intern with us to focus on this effort.

Our plan for 2014 involves refining our protocol for deploying clam spat, and finding two or three sites to set up another round of spat deployment experiments. Two-millimeter spat will be purchased from the Beal hatchery in Machias, and a series of deployments of varying lengths (1 day, 3 days, and 7 days) will be run at a reference site (high pH) and a test site (low pH). Spat will be retrieved after the appropriate time period(s) by removal of the sediment and sieving with a one millimeter sieve. Measurements of sediment pH and temperature will be taken during both deployment and retrieval. Spat will be cleaned and mounted at Bowdoin College, and then photographed with the Bowdoin Scanning Electron Microscope. Our goal for 2014 is to collect strong visual evidence that clam dissolution is occurring in the sediment of Casco Bay.

#### **e. Sampling Runoff on the Bay**

In order to document the presence and amount of **pollutants in stormwater runoff**, we will collect water samples in the Presumpscot River plume (near the Fort Gorges profile site) during a major rain event. The reason for this effort is to assess and make public the evidence of the contents of runoff water on the Bay, water we characterize as "anything but fresh."

The sampling event should take place after a period of dry weather to provide a look at worst-case conditions. Pollutants to be analyzed for may include bacteria, metals, organics, pesticides, nutrients, suspended solids, and perhaps other, emerging compounds. The samples will be analyzed by Katahdin Analytical. We will also use a data sonde to measure water temperature, salinity, dissolved oxygen, pH, and perhaps chlorophyll or turbidity. These measurements will be made at the surface and then every meter throughout the water column to the bottom.

**f. Stormwater and Sediment sampling**

Through our historical Stormwater Sampling Program, Mike has collected stormwater from pipe outfalls, catch basins, and small streams, for analysis of various fertilizer and pesticide compounds. This data has been instrumental in effecting behavioral changes in residents of neighborhoods in which these compounds have been detected in the runoff.

We have eight years of stormwater sampling results from 22 sites all around Casco Bay. We detected the presence of specific pesticides, including fungicides and herbicides that have been linked to cancer, reproductive problems, and birth defects. Our sampling has also revealed the presence of nitrogen and phosphorous, components of fertilizers, at all of the sampled sites; these nutrients can pollute drinking water wells and when washed downstream can cause algal blooms, degrade marine water quality, and create conditions that worsen coastal acidification. Once they reach the Bay, certain pesticides (pyrethroids) can settle out in the sediment and threaten the health of marine life. As Gary Fish, of the Maine Board of Pesticide Control (MBPC) and recipient of a Friend of Casco Bay Award says, “A pesticide that will kill a bug can kill lobsters and crabs.”

We have collaborated with the MBPC and the University of Maine to do this work. In 2009, working with MBPC, samples were taken of both stormwater (at three locations) and sediments (at nine locations). In 2010, we sampled sediments at two sites for pyrethroids. In 2010, MBPC did sediment sampling. During 2014, we will add the results of the most recent MBPC sampling to our tables and maps plotting FOCB and MBPC data. The presentation of these data at BayScaping socials builds fast awareness among neighbors throughout our community and motivates resistance toward applying these compounds heedlessly.

In 2014, Friends of Casco Bay will assist MBPC in their efforts to analyze coastal sediments for **pyrethroid compounds**. These compounds are used in ornamental lawn care and for flea, tick and mosquito control; however, once in the environment, they can negatively impact marine species, including larval lobsters. In the spring, we will work with MBPC to determine possible site locations and appropriate protocols for sediment collection. In early summer, we will assist MBPC with the sample collecting. This will be a one day event that will not require the use of a boat.

**g. New Meadows Region**

The water quality of the New Meadows region of Casco Bay is severely degraded. Since 1999, Friends of Casco Bay has been involved in the New Meadows River Watershed Partnership, a coalition of citizens, nonprofit organizations, and municipal,

state, and federal officials concerned with the health of the New Meadows River. From 2009 to 2011, Friends of Casco Bay participated in an effort to determine the feasibility of removing or modifying the causeway that impedes tidal flow between the New Meadows Lake and the upper New Meadows estuary, **one of the least healthy areas of Casco Bay**. Due to strong opposition from local quahog harvesters and abutting land owners for removing or modifying the causeway, the effort to restore tidal flow was put on hold. In addition, significant changes in leadership in the coalition, and the lack of a clear direction caused the coalition to meet very infrequently. In spite of these setbacks, Friends of Casco Bay continued to monitor the health of this embayment each year through our volunteer program and occasional staff led projects. We have historically deployed an unattended sonde to collect data for a three-week period in July each year at the upper New Meadows, but after 13 years of collecting data we have decided to discontinue this component of the New Meadows work. In early 2014, it looks as though there is renewed interest in meeting as a coalition to discuss options, despite agreement among many that replacing the causeway with a bridge will be the most effective – albeit expensive – option to optimize flow. Since the quahogs have been harvested out to a large degree, there is less opposition from the harvesters, and there is the possibility that water quality will continue to decline from the lack of the filtering by the quahogs; one bad episode of a heat wave combined with the resulting low dissolved oxygen in the water and we may see another pogie die-off this summer. We will continue to participate in the coalition meetings.

#### **h. Data Management:**

**Murphy Water Quality Database:** The platform for our water quality database, known as Murphy, written in DOS in 1994, has needed upgrading for some time. During 2010 and 2011, the original software designer, Sarah Rose Werner, redesigned the database platform in the relational database program Access. During 2012-13, she and Peter Milholland continued to debug the new program and migrated much of the historical data into the new database. Our goal now is to complete the migration of all water quality data, including the TN and DIN data, into one dataset as soon as possible, thereby improving our ability to analyze the data in a more efficient and timely manner. This database is more user friendly by being windows-based. The migration to this new platform enables us to have multiple users working on data at the same time, and enables export to other users and data access portals thereby enhancing our collaborative efforts. We will continue to make our water quality data available to the DEP, CBEP, and a variety of agencies, institutions, scientists, teachers, and citizens, and to provide program consultations to other groups.

**Mapping and statistics** (Geographic Information Systems (GIS) and JMP statistical analysis): Mike continues to expand and deepen our GIS and statistical capabilities. This is crucial for analyzing our data and for making our data more accessible, understandable, and meaningful. During 2014, Mike will continue to look at the datasets of the various water quality parameters we collect, to compare changes over time and contrast geographical differences in water quality site-to-site and region to region in the Bay.

Mike spent a considerable amount of time during 2013, analyzing data sets and reviewing those analyses with staff, to determine what to use in the health of the Bay report, which will be released later this spring. During that process, we continued to add to the list of ways we would like to review data sets, beyond what we are including in the report, in order to determine not only what the data have to tell us, but also what data sets may provide the most utility going forward. Our exploratory conversations will continue, and in the meantime, Mike will maintain updates of the Casco Bay Health Indices which will appear in the report, as well as produce the other data analyses and briefings.

Maps, tables, graphs, and other visual depictions are fundamental to the effectiveness of our presentations, our web-based outreach and education, and our assessment of data for making decisions about the direction of our programs. We benefitted greatly during 2013 from the assistance of graphic design services, and we will continue to avail ourselves of these services as we identify the products that could most benefit (maps, charts, and graphs excerpted from the report *A Changing Casco Bay*, as well as a poster we are considering).

## **2. Baykeeping**

### **a. Oil spill preparedness**

Despite our earlier successful collaborations, described below, we continue to be concerned about a decrease in the preparedness of the Port of Portland to deal with an oil spill. Less oil is coming into the port, which results in less funding generated from each barrel of oil going into the Surface Fund for oil spill preparedness, training, equipment, and response. As oil terminals downsize their staff and people retire, there are fewer people left with institutional memory, experience, and long term training. Because of cost, all the terminals, except Portland Pipeline, have pulled out of membership with the Marine Spill Response Corporation (MSRC), an Oil Spill Response Organization (OSRO). They have instead joined a less expensive OSRO, National Response Corporation (NRC), which has fewer resources at its disposal locally with which to tackle a spill. We worry that MSRC and their *Maine Responder* oil spill response vessel may be sent to a more active port.

Casco Baykeeper Joe Payne approached the Coast Guard with this concern, and they agreed to organize a presentation by NRC to the oil spill response community to explain their capabilities. OSRO determined that NRC does meet all the requirements to comply with regulations regarding response capabilities, i.e. being able to have equipment on site within six hours after a spill. Even so, that would represent a decrease in our current capability, should the Maine Responder be relocated to Boston.

In addition, the Maine Department of Environmental Protection (DEP) has had staff turnover in its oil spill response division, with an irreplaceable loss in expertise and institutional memory. The head of the division was replaced with a good candidate, albeit one far less experienced. Both the Maine Department of Marine Resources (DMR) and Department of Inland Fisheries & Wildlife (IF&W) have lost staffers who acted as liaisons and natural resource trustees in oil spills. We continue to monitor those agencies to assure that they perform as needed.

The Coast Guard has stepped up its efforts over the past year by hiring oil spill response expert Wyman Briggs. The current Captain of the Port has an interest in maintaining oil spill response readiness. At this time, the agency seems to be balancing its responsibilities for oil spill preparedness with its Homeland Security mission.

The port of Portland has a strong history of oil spill preparedness for response, and it would be tragic to lose that capability. In the wake of the *Deep Water Horizon* crisis, the importance of preparing for a possible oil spill in Portland Harbor has never been clearer. In March 2010, we participated in the Coast Guard's simulated Spill of National Significance (SONS) exercise to determine our region's readiness for a major oil spill. Joe and Citizen Stewards Coordinator Peter Milholland worked in the Command Center throughout the exercise, representing us as the only nonprofit invited into the center of the action. Since then, we have been working with federal and state officials and local businesses to ensure that locally we are implementing the lessons learned in that exercise and from the spill in the Gulf of Mexico.

In 2014, Joe will continue to re-energize the Coast Guard and other key partners about local oil spill preparedness. Joe continues to serve, at the request of the Coast Guard Captain of the Port, on the Maine/New Hampshire Area Committee on Oil Spill Preparedness and the Local Spill Management Team. Joe's term as a Governor's appointee to the Maine Oil Spill Advisory Committee (MOSAC) runs through the end of 2014; there is as yet no indication whether or not he will be re-appointed.

In 2014, the Area Contingency Plan (ACP) will be rewritten and digitized, a significant improvement that will incorporate hot links to provide responders with greater information and resources much more efficiently.

On March 4, 2014, Casco Baykeeper Joe Payne moderated the **Oil Spill Seminar** for the ninth time, an annual convening of oil spill response professionals and industry representatives to update their skills, learn about new techniques, and discuss response problems. The focus was on a topic that Joe had recommended: *Sinking Oils*. Because the Coast Guard has designated less funding for a regional oil spill seminar, the 2014 Oil Spill training was one day in length instead of two. It was held at the New Hampshire Department of Environmental Services in Newington, NH.

Despite the fact that there is critical need for a fine scale **circulation model** for Casco Bay, there is no funding available from MOSAC or the Casco Bay Estuary Partnership (CBEP). This model would be useful in predicting oil spill trajectories, as well as providing insight on the fate of other pollutants and larval transport. This remains one of the most important data needs for our work. Joe continues to build support from other organizations, including CBEP and US Fish & Wildlife, but the cost of such work is out of reach of potential funders at this time. We will follow up on a lead that a scientist at Bigelow Laboratory for Ocean Sciences has expressed interest in pursuing this.

**b. Heavy oils transport, including diluted bitumen (tar sands oil), through the Port of Portland**

Locally, many different terms are being used to refer to tar sands products. Some oil sands products are known as dilbit or diluted bitumen, a heavy oil that has been diluted to make it flow more easily. Depending on several variables, including the temperature and salinity of the water, some dilbits could sink. When crude oil is exposed to sediments or other particles in the water column, the oil becomes more susceptible to sinking. If dilbit oil sinks, either immediately or in several days, we will be dealing with a problem that we have *never* dealt with here.

We have met with representatives of Portland Pipe Line (PPL), and national and local representatives of Sierra Club, Natural Resources Council of Maine, National Resources Defense Council, and local citizens, about the possibility of one of PPL's pipelines reversing to bring tar sands oil into the port.

We have stated that our three primary concerns are 1) the possible release of invasive species in ballast water discharges 2) the lack of equipment and know-how to clean up heavy oil if it spills and 3) the continued no-leak integrity of the pipeline itself.

We will continue working with the Coast Guard to ensure that the Oil Spill Contingency Plans addresses heavy oil clean-up and that equipment is available in the port. We will continue to work with national and international experts to identify and recommend best management practices for pipelines transporting tar sands oil, and we will continue to monitor national and international law on ballast water.

Additionally, we will continue to dialog with PPL on all of these issues, expecting cooperation and good decisions. Because our office overlooks two piers where tankers deliver oil to the pipeline to Canada, we can see firsthand that deliveries of oil by ship have decreased dramatically. PPL expects this downward trend to continue. Their staff of 39 may well face layoffs. We are concerned that PPL, with a smaller work force and less day-to-day activity to maintain their skills, may not be able to keep to the high standards of safety and environmental protection as it has in the past.

Last November, the citizens of South Portland narrowly defeated a proposed ordinance, which effectively would have prohibited the transport of tar sands oil through their community. The City Council created a three-person task force to draft a new ordinance over the next six months. Friends of Casco Bay was asked to serve as an advisor to the task force, so Joe will serve in that role.

Our primary concerns are the impact on Casco Bay of an oil spill and the threat of invasive species from ballast water discharges *if* dilbit is transported through the port. We are determined to ensure that actions are taken to prevent a worst-case scenario by posing questions to the oil industry and to environmental experts:

How do oil sands products react if spilled into Casco Bay?

- Would dilbit sink in Casco Bay if a spill occurred in February?
- Would dilbit sink in Casco Bay if a spill occurred in July?
- How much would the copious amounts of plankton and organic material suspended in Maine coastal waters increase the probability of sinking?

- If oil sinks, how can it be detected below the surface?
- Can sunken oil be cleaned up effectively? If so, how?

How will tanker operators prevent invasive species from being released into Maine waters?

How will regulators ensure that contingency plans are updated and oil spill response equipment is in place before oil sands products are transported through the region?

What additional pipeline safety measures will be taken to lessen the potential for a spill?

Friends of Casco Bay is advocating that authorities need to assess the potential threat of a dilbit spill from **all** the ways that it may be transported: by ship, pipeline, or rail.

Joe and Mary are finalizing a position paper describing our issues with tar sands and other heavy oils, including Bunker C, any oil mixed with sediments, and other oils that have the potential to sink.

### c. **Dredging**

The **federal channel** in Portland Harbor is being dredged through the winter of 2014, under a permit from the Army Corps of Engineers that requires that dredging be completed by March 31, though an extension may extend that. Joe serves on the Portland Harbor Dredge Committee of the Waterfront Alliance.

**Lobster relocation** is a condition of the dredge permit, and Joe worked closely with the Department of Marine Resources (DMR) to advise on their procedures. Joe pointed out some problems with the plan for the proposed dredging project. He convinced Bureau Director Linda Mercer that the mesh size they planned to use for their traps was too large; it would allow many sub-legals to escape. At Joe's recommendation, another lobster boat was to be added to retrieve traps ahead of the dredge. Dredging is not allowed to begin until fishing has reduced the population density to ½ lobster/trap/set. Joe's recommendations were put into the permit protocols.

We continue to monitor the lobster relocation effort. To date, very few lobsters have been caught, while about thirty thousand green crabs have been trapped. Joe is concerned that problems in executing the harvesting protocols could account for the low numbers of lobsters captured.

Of growing concern is a discussion to create a **dredge disposal site** within Casco Bay, an idea being pushed forward by some members of the Dredge Committee. This is called a 404 site, named for the section of the Clean Water Act that allows such sites. Some envision this as an inexpensive option for disposing of contaminated dredge materials from around the privately-owned piers. Maine has no specific requirements for locating a dredge disposal site, and federal law is more permissive inshore than it is offshore. Friends of Casco Bay hired an environmental attorney to look at this. Pierce Atwood attorney Bill Taylor wrote a paper for us on Dredging



Issues in Casco Bay, pointing out that locating a dredge site in Casco Bay will be neither quick nor cheap, contrary to what proponents have claimed.

Several years ago, Joe instigated an analysis of the feasibility of a **Confined Aquatic Disposal** (CAD) site in Portland Harbor for the contaminated sediments at the privately owned piers. A sub-bottom survey in November 2008, confirmed suitable depth to bedrock to accommodate a deep hole in the harbor in which to isolate contaminated sediments. The projected cost of a CAD cell, \$8-11 million, could be funded in part by a Transportation bond approved by Maine voters and by federal funds. We will continue to work with all stakeholders as the idea of a CAD cell finally gains traction around the waterfront.

Joe and Bill Taylor had planned to meet with the pier owners and other interested parties to discuss a CAD cell. However, Bill Needelman, the new Waterfront Coordinator for the City of Portland, has established a “non-federal dredge committee” to work on a plan for excavating sediment around the pier. Joe will serve on that committee.

Joe plans to keep **lobstermen** informed about the implications of digging a hole near the shipping channel, an area where there are many traps throughout the harvesting season. Lobstermen have expressed their concerns to Joe about this possibility, as well as the impact of ocean acidification and the green crab population boom, on lobster resources.

Another concern of lobstermen that we are following up on is the potential link between mosquito spraying and lobster shell disease. Several years ago, the correlation had been dismissed as a contributing factor in the collapse of the Long Island Sound lobster fishery. Now, new evidence suggests that pyrethroids, which inhibit exoskeleton formation in mosquitoes, could impact crustaceans. In 2014, we will collaborate on a new research project with the Maine Board of Pesticides Control to look at this in Maine waters.

#### **d. Nitrogen Standard and Coastal Acidification**

A Legislative Resolve authored by Friends of Casco Bay and passed in 2007 by the Legislature called for DEP to create a plan for establishing nitrogen criteria and limits in coastal waters. Mike Doan was asked by DEP to advise DEP’s consultants on methods of nitrogen sampling and analysis for other embayments down the coast of Maine. The consultants’ report was a disappointment, even to DEP. DEP’s report to the Legislature was postponed, and consequently, so was our opportunity to present our intense opposition to parts of the report. We have continued to collect and analyze data, consult with experts from around New England, search for other sources of nitrogen data in Maine, and build our case using examples from the literature.

Working through DEP’s administrative processes, we need to convince DEP regulators to set the standard at a protective level, which to us means 0.38 – 0.40 milligrams of Total Nitrogen per liter of seawater. This limit is realistic and reasonable, and concentrations above this level begin to degrade critical habitat. In February 2012, DEP disclosed to us that they planned to postpone submitting their

recommendations for a standard until 2015. We vehemently opposed the delay, but the atmosphere in Augusta under the current administration has stymied any progress.

The Department is now scheduled to issue its recommendations in a report to the Legislature in 2015. We are quite concerned that the deadline will be extended once again so that DEP can “seek more data.” In anticipation, we are considering our options, such as drafting another bill, filing a law suit, and/or rallying public pressure to force DEP to respond--or persuade the Legislature to force it to respond. As we consider the options, we seek legal counsel to answer the question, “What is the recourse if a state agency is directed by the Legislature to take an action and doesn’t do it?”

This nitrogen standard is a critical element of our campaign to limit **coastal acidification**. Excess nitrogen runoff triggers algae blooms. Once these marine plants die, decomposition releases carbon dioxide, making the water and mud more acidic. Acidic conditions make it difficult for clams and other shellfish to build and maintain their shells.

#### e. **CSO’s and the City of Portland**

Friends of Casco Bay helped influence DEP and the City of Portland to get serious about eliminating combined sewer overflows (CSO’s), and we helped get a \$61 million dollar bond commitment passed by the City Council to fund Tier II of the CSO Abatement Program. We encouraged the City to have stakeholder meetings on CSO’s. During FY12, consultants to the City on the design of Tier III recommended a 30-year time horizon. Action by FOCB staff, members, and supporters convinced the City Council to vote instead for a 15-year timeframe, instead of a 25-30 year period.

Tier II, which focused on separating stormwater from sewage, was completed at the end of 2013. We are now in Tier III, for which the City has allocated \$169 million. This is the final push to meet the City’s obligations to comply with a court order to do CSO remediation. Tier III focuses on creating storage and pump facilities to hold runoff during a heavy storm until it can be pumped to treatment facilities once the threat of overflow has subsided.

It is worth noting that when this phase of the work is completed in 2029, there will still be 12 CSOs in operation.

We (Joe, Cathy Ramsdell, and sometimes Mary Cerullo) continue to attend quarterly meetings with the City on CSO’s to monitor the City’s progress on its CSO abatement plan. We continue to make it clear to the City that not making deadlines will cause a reaction from us, up to and including legal action. We continue to pressure the city to determine definitively the source of hypodermic needles that end up in the intertidal zone and that seem to be coming through storm drains.

We will continue to cite the need to reduce the amount of stormwater runoff coming into the Bay by encouraging transitions to more porous surfaces and infiltration/percolation systems. We were recently told “off the record,” that due to our efforts, every City of Portland project will now have a “green” element to reduce

runoff. Joe and Cathy sat on a committee to plan a strategy for implementing an equitable stormwater utility fee to spread the costs of improvements beyond water rate-payers to all stormwater system users. While the committee has two more important decisions to vote on, their recommendations so far have been sent to the City Council's Finance Committee. The City is also encouraging CBEP's stormwater committee to fund an education campaign around stormwater utilities; a consultant experienced in successful and failed attempts to initiate stormwater utilities has advised that education is the critical step.

We will continue to push the City to implement more low impact development (LID) practices throughout Portland. We will work directly with City officials, as well as independently, to conduct outreach efforts to encourage residents to reduce nitrogen pollution.

In 2013, Cathy served on task forces to consider how to eliminate the use of expanded polystyrene and reduce the use of disposable bags (both plastic and paper), which represent significant insults to the marine environment (not to mention city streets and parks, and storm drains). In 2014, she will continue to participate in **Green Packaging** efforts, and we will support a campaign spearheaded by Portland Water District to educate consumers that "disposable wipes" are not in fact flushable. The City regularly removes staggering amounts of baby wipes and similar products from clogged sewer pipes and sewage treatment facilities.

#### **f. Cousins Island Wyman Station Power Plant license renewal**

In 2013, we contracted the law firm of Reed Super, an expert Clean Water Act attorney formerly with Waterkeeper Alliance, to help us look at issues regarding the license renewal for Florida Light & Power's (FPL) Cousins Island generating plant. He and his staff drafted a comment letter to DEP regarding the re-licensing of discharge waters from Wyman Generating Station. The comment letter stated that the draft permit does not address the temperature of heated discharge water (Section 316A of the Clean Water Act) or impingement and entrainment of aquatic life (Section 316B). In fact, as a result of legal research for this letter, it was discovered that the state and the regional EPA have *never* included compliance with Sections 316a and 316b of the Clean Water Act in any water discharge permits. This means that both FPL, the owner of Wyman Station, and DEP are in violation of the Clean Water Act.

Complicating the issues is the specter that the plant may be sold or mothballed. We will wait to see what the next step in the plant's future may be, and we may enlist the services of the Super Law Group once again, if necessary.

Comments in the letter also expressed concern about mercury levels and pH levels in the proposed discharge water.

The only other group to submit comments was Conservation Law Foundation, whose letter referenced our long-term temperature data for that area.

A spokesman from DEP told Joe that in spite the comments we raised, the Department can ignore them and not take any action by simply continuing the existing license for another five years. Whatever the action—or inaction—by DEP, we will continue to press our concerns, and we will consider bringing public attention to the situation.

#### **g. Legislation**

The shift in the political climate has been extreme and has required vigilant **monitoring of legislative initiatives**. Cathy and Mary will continue our involvement in the Environmental Priorities Coalition, monitor proposed bills and the Legislature’s calendar, and inform the Board and Staff about relevant topics. Joe and Mary will provide written testimony when needed. Joe will, with research help from Mary, give testimony at appropriate legislative committee hearings. We will continue to encourage Board and Staff to establish and maintain relationships with regional Senators and Representatives, as well as key colleagues at DEP and DMR.

We will continue to keep an eye and an ear on such activities as:

- a) Any coal tar remediation efforts in Portland Harbor especially with the development of the West Commercial Street Property that is the source of the remaining coal tar.
- b) Bills that are introduced in the Legislature that may have an impact on the health of Casco Bay, from snow dumping to overboard discharge elimination to combined sewer overflow abatement.
- c) Weakening of snow dumping rules. A DEP proposal to make it easier for municipalities to get a permit to dump snow directly into the ocean was opposed by Joe at a public meeting early in 2014. He submitted oral and written testimony and is awaiting agency response. He will continue to try to keep DEP from amending its policy to issue a blanket permit that would apply to all applicants.
- d) Increases in the acres of closed clams flats in Casco Bay.
- e) Pesticide activity, including bans on synthetic pesticide use on public property, especially school and municipal playing fields, as well as increased mosquito spraying due to threat of West Nile Virus and EEE .
- f) Proposals for recycling medical wastes, i.e. sharps.
- g) Coal tar pavement sealant.
- h) Dozens of other issues that come in “over the transom.

#### **h. Capacity Issues**

It has become apparent in recent years that our credibility depends not only on standing on solid scientific ground, but also, in many cases, on standing on solid legal grounds, as well.

We have built **legal capacity** by funding access to legal counsel through a dedicated fund for this purpose. This fund is to be used solely for legal work on programmatic Baykeeper-related topics and not for legal counsel on other organizational issues. In March 2011, the Board voted to designate \$6,000 from prior years' accumulated operating surpluses as a Legal Fund for Baykeeper support. This was later supplemented with another \$14,000.

The fund enabled us to hire expert legal counsel to address two important issues: the implications of establishing a dredge spoils disposal site in Casco Bay, and the submission of comments on a discharge permit for Florida Power and Light's Wyman Station power plant, which broke new ground by finding that the state and the regional EPA have never included compliance with section 316 of the Clean Water Act in their water discharge permits.

Near the end of FY14, the original funds designated from accumulated surpluses and used in the Legal fund were replaced by funds from the Baykeeper Fund at Maine Community Foundation, a strategic use of some of the accumulated earnings in the fund, and additional funds replenished and repositioned the Legal capacity fund. We now have \$30k at the ready, and our unrestricted, undesignated net assets balance has been restored.

We have built some **staff capacity** in the Baykeeper Program by dedicating some of Mary's time to assist Joe with this program, by seeking legal counsel on key Baykeeping issues, and by delegating to staff other than Joe whenever possible, such things as responses to public inquiries. When Joe is unavailable to attend certain meetings, Cathy and as appropriate other staff attend in Joe's stead. Mary continues to be instrumental and invaluable in helping with research, drafting position statements and elevator speeches (Bay Papers, described below), responding to inquiries, interacting with Waterkeeper Alliance on national issues and positions, overseeing research on such topics as snow dumping and various proposed developments, and coordinating volunteer assistance with Baykeeper issues. Cathy and Mary also help culture constructive relationships with policy leaders and collaborative partners.

Attendance at **meetings and conferences** as diverse as the Waterfront Alliance (Portland) and the Waterkeeper Alliance (international) continue to be important to bringing our work to our peers and community, while learning about what else is going on. All staff members attend meetings to increase our visibility, learn new things, make new partners, support current partners, collaborate on problem solving, and insinuate our agenda into other groups' activities.

An issue in the Baykeeper Program and for all senior staff is the number of requests by other organizations and citizens for advice, help, and mentoring. On any given day, Joe alone may receive several requests for assistance, and Cathy will continue to seek every opportunity to delegate our response or participation to involve someone on staff other than Joe whenever possible.

Thanks to modern technology, Joe can remain connected to his workstation in the office even while out on the bay on the new boat, so we hope the summer of 2014

sees the R/V Joseph E. Payne docked at many different sites throughout the summer as Joe works remotely.

For more specific plans on looking at capacity in the Baykeeping Program, please see the section on Staffing below.

### 3. BayScaping

With nitrogen and ocean acidification identified as critical threats to the health of Casco Bay, our BayScaping messaging is as important as ever.

Interactive **neighborhood socials** are the core of our BayScaping program and at the core of our messaging. BayScaping presentations now incorporate the dynamic relationship between nitrogen pollution from fertilizer runoff and coastal acidification. At these socials, our staff and volunteers share our data with residents in our communities, explain the harmful effects of lawn care chemicals, describe the dynamics of nitrogen pollution, and suggest Bay-friendly alternatives. We have found that providing evidence of pesticide use in a particular neighborhood (the results of stormwater and sediment collection and analysis) is one of the most compelling ways to inspire behavioral change.

Our BayScaping program relies heavily on peer pressure. Whenever possible, we take photographs of the neighborhood before the social to incorporate photos of “best practices” in yard care to use in the PowerPoint presentation. Participants immediately recognize the positive steps that their neighbors are taking, actions they can emulate.

As we connect one-on-one with residents through these events, we continue to reach out into the broader community by issuing timely media releases, emails, social media releases, and newsletters.

Since 2000, we have delivered more than **85 BayScaping “neighborhood socials”** and other presentations for coastal and island community residents throughout Casco Bay and beyond. From 1999 through 2013, we **staffed booths at 60 community events** and flower shows, including an extended display at the Patagonia Outlet in Freeport, we offered 4 courses for Master Gardeners, and we targeted 400 professional landscapers at 3 *Go Green to Get Green!* workshops in conjunction with the Maine Board of Pesticides Control (MBPC). The BayScaping message also has been delivered in TV, newspaper, film, and radio interviews.

Mary developed and/or presented keynote addresses for three *Go Green to Get Green* conferences, in 2009, 2010, and 2011, each of which attracted 100-175 landscapers and lawn care providers. That conference was not held in 2013, nor did we assist the MBPC at the 2013 Portland Flower Show; this was the first time since 1999 that the MBPC did not host a YardScaping/BayScaping booth.

During FY14, we updated our scientifically-accurate text and hired a professional designer to develop two **BayScaping Fact Sheets**, for downloading and as handouts. One set offers seasonal easy-to-follow, ecological lawn care guidelines for the do-it-yourself home gardener. The other offers questions that a homeowner should ask a professional yard care provider about his/her ecological lawn care practices before hiring. We had received dedicated funding from the Maine Outdoor Heritage Fund to produce and

disseminate these materials, and we worked closely with the MBPC, our state agency partner in this project, to ensure that these materials are accurate and effective.

Joe Payne was interviewed about BayScaping for *Baymen*, a film on how to protect clamming resources in Freeport, commissioned by the Freeport Shellfish Committee. It aired on Freeport Community TV, was premiered at Freeport High School Performing Arts Center on June 15 (at which Mary represented FOCB), and was featured in FOCB's 6<sup>th</sup> Annual Wild & Scenic Film Festival.

During calendar year 2013, Mary, assisted by volunteers and Board members, **educated more than 3,000 people** about BayScaping at **presentations and exhibits** at community events all around Casco Bay:

- April 5, 2013: Booth at Patagonia film night to benefit FOCB at Frontier Café, Brunswick
- April 6: Booth at Maine Garden Day, Lewiston, annual gathering of Master Gardeners and other plant lovers
- April 20: Staffed a BayScaping booth and conducted family activities at the Green Neighbor Family Fest, Portland
- April 21: Presented a BayScaping program and provided materials at Foreside Community Church, Falmouth
- May 23: Booth at RBC Wealth Management/Alexandra Dawson ocean campaign at Ocean Gateway, Portland
- May 31: Booth at Environmental Fair, Small School, South Portland
- July 14: Booth at Willard Fest, South Portland
- July 16: Presented a workshop to the Trefethen-Evergreen Improvement Association in response to concerns about high nitrogen levels found in runoff on Peaks Island
- August 31: Booth at MITA's 25<sup>th</sup> Anniversary and Small Boat Festival
- Oct 5: Presented family activities and distributed BayScaping materials aboard *Casablanca* Portland Harbor tour boat for Blessing of the Bay by St. Mary's Church, Falmouth
- Nov. 9: *Baymen*, featured BayScaping at FOCB's Wild & Scenic Film Festival
- December 3: Presented BayScaping class for Horticulture majors at SMCC for Turf Management course, South Portland
- December 5: Presented workshop for librarians with Cornerstones of Science, USM, Portland
- All year long: Distributed BayScaping materials at all our events and at other staff presentations

We continued to spread the BayScaping ethic through strategic media releases, social media, emails, and newsletters.

During **FY15**, we will:

- **Promote our new BayScaping fact sheets**, starting in early spring, as people start to think about their lawns.
- **Expand involvement of Master Gardeners** in spreading the message with a Lunch'n'Learn for Cumberland County Master Gardeners on April 29, 2014. By further training Master Gardeners about how fertilizers and pesticides impact the

marine environment, we will continue to work to more deeply integrate our nitrogen pollution and coastal acidification messages into our own BayScaping presentations and pass those on to the Master Gardeners. Eventually, this will build a larger cadre of Champions of the Bay to carry the messages of BayScaping and Bay-caring deeper into the community (see section in Outreach re Champions of the Bay).

- **Promote BayScaping presentations** along with our other Speakers Series offerings.
- Offer free presentations and/or BayScaping displays and materials **at garden centers** such as Skillins, O'Donals, Estabrooks .
- Investigate receptivity of **L.L. Bean Discovery Center** to an informal presentation to guests.
- **Map pesticide and fertilizer data** for BayScaping presentations using GIS software, integrating our sampling results with efforts by others such as MBPC.
- **Promote BayScaping principles to educators** through several curriculum activities designed around BayScaping steps (now listed in our Presentations offerings).
- We will seek additional partners for **expanding our BayScaping outreach efforts**. We will continue to collaborate with MBPC, Portland Water District, grassroots (no pun intended) citizens for green communities groups (such as in Scarborough and Yarmouth), and neighborhood associations, to deepen the connections between lawn care practices and water quality in the Bay. We will leverage our monitoring data to **support efforts by anti-pesticide groups**, such as Toxics Action Center and Beyond Pesticides, as they educate homeowners, landscapers, and municipal and state officials about the effects of pesticides.
- Continue to share information with residents of communities who are working to enact **local ordinances to limit the use of lawn chemicals on public properties** (Harpwell, Portland, Cumberland, Scarborough, and others). When such an ordinance was passed in Scarborough, proponents said their campaign had been inspired by data presented by Friends of Casco Bay.
- Continue to utilize our close working relationship with **Cornerstones of Science**, a decade-old initiative to bring science into communities through local libraries.
- Continue to spread the BayScaping ethic through **strategic media releases, social media, emails, newsletters, and television opportunities**, if and when possible.

#### 4. Casco Bay Curriculum

We continue to work with teachers and educational administrators to disseminate the *Casco Bay Curriculum* in the community, and we continue to refine and update the working modules. 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.

**Background:** Since 2010, Mary has conducted 3 Summer Institutes to help educators incorporate the *Casco Bay Curriculum* into their own curricula. The Summer Institutes highlighted strategies for linking literacy and science education, an effective way to engage these teachers in strengthening their science curriculum. Incorporating literacy into the Summer Institute makes elementary school teachers more comfortable with the *Casco Bay Curriculum* as they tend to have a stronger background in teaching reading than in teaching science. We provided them with lessons and hands-on activities that incorporate real-world data about Casco Bay into their lesson plans, and we provided recertification credits through certificates of completion or the opportunity to purchase “official” CEU transcripts through the University of Southern Maine’s Professional Development Center. Together, these 3 three-day intensive workshops have **immersed 51 area educators** in the Casco Bay Curriculum.

Mary has presented elements of the course and curriculum to educators at conferences of the Maine Science Teachers Association, Cornerstones of Science, and the Gulf of Maine Marine Education Association, **reaching another 85 educators and school librarians**. She also participated in educational events with the Freeport High School Earth Club, Waynflete School’s State of the Oceans Event, and Willard Fest.

We did not offer the institute in 2013. This stemmed in part from lower attendance at the June 2012 Summer Institute (16 vs. 21 teachers the year before). We were sensing there may have been funding fatigue in the foundation community, and that many funders were reluctant to continue this on an on-going basis (instead preferring “the shiny new thing”).

For nearly 3 months prior to the course, we expend considerable staff time preparing activities, arranging for guest speakers and field trips, purchasing and collating materials, and advertising and recruiting teachers for the Summer Institute. Although the course receives rave reviews from participants every year, we were finding it more difficult to fill the three-day workshop, perhaps because many teachers no longer seem to have the liberty to choose their own professional development courses. For all those reasons, we suspended the course for 2013, to explore other options for delivering the curriculum to the education community.

In FY14, we:

- Reviewed the curriculum to identify 3-4 of the most impactful activities to deliver to teachers through conferences and in-house workshops.
- Evaluated the 40 existing activities by consulting with the Gulf of Maine Marine Education Association, to help us see if important issues are missing or if some activities are no longer relevant.
- Combined elements of BayScaping and storm drain stenciling activities with other Casco Bay Curriculum activities to be able to offer a cross curricular program for Master Gardeners, informal educators, and classroom teachers.
- Selected some of the most dynamic, hands-on activities from the curriculum to offer as part of our Friends of Casco Bay Speaker Series, to be presented at libraries or community events.

In **FY15**, we will:

- Work on a **Climate Change Curriculum**, a revision and refinement of part of our current curriculum, adding new activities to make it more relevant to our core issues of Ocean & Coastal Acidification and Nitrogen Pollution. Like our other curriculum, it will use our data and hands-on activities in the classroom. We will incorporate service learning aspects of BayScaping and storm drain stenciling. Content will continue to be specific to Casco Bay, and the concepts will be broad enough to apply to the entire Gulf of Maine region.
- Offer at least **two teacher workshops** in Spring 2014, to Peaks Island School and to Portland schools.
- Develop a **plan for a new teacher course for June 2015**, possibly two days long instead of three, to focus on climate change issues rather than on science and children's literature.
- **Investigate the content and design of a poster** focusing on dynamic concepts that influence the health of Casco Bay. We may use some of the graphics developed for the report *A Changing Casco Bay*. We likely would gear this toward middle school students, and we would hope its conceptual appeal would extend way beyond this age group. The poster would be accompanied by a few curriculum activities that reinforce the subject of the poster. We would engage a graphic designer, once we have conceptually identified the content.

## 5. Storm Drain Stenciling

Unfortunately, storm drains are a tempting place for residents to dump dangerous pollutants. Substances commonly thrown down our storm drains include used motor oil, antifreeze, hypodermic needles, cigarette butts, pet waste, and yard waste. We launched our **storm drain stenciling** as a creative, hands-on way to create greater awareness about the need to reduce pollution in our communities. The program inspires volunteers to “take to the streets” to paint “do not dump” messages next to storm drains in towns around the Bay. We provide stenciling kits and easy-to-use instructions to help neighborhood groups organize stenciling events to educate their communities about their connection to the Bay and help reduce the amount of pollution and waste dumped into storm drains.

There are a number of benefits from this low-cost, easy-to-manage volunteer recruitment activity:

- community engagement
- hands-on activities that help the health of the Bay
- team building activities
- educational components

This community service activity offers a number of benefits, besides helping to keep pollutants out of the Bay.

- It is a repetitive activity that the same groups can do every year as paint wears off over the winter.

- The stenciled drains are something volunteers can point to: “I did that!”
- The activity is educational for participating groups (“Surfer Steve” video, curriculum activities, design own door hangers).
- The activity is educational for others: door hangers inform neighbors about what they can do.
- It is a unique activity that makes it appealing as a different kind of Day of Service.
- Although FOCB staff did assist at a number of these activities by resupplying teams with paint and stencils and water for thirsty volunteers, it can be done with minimal staff involvement.

There are challenges, however. Team leaders must coordinate with town officials, public services or police departments, to ensure safety and coordinate streets to be stenciled by other groups. It cannot be done in cold/wet weather (not below 50° F), and due to traffic safety concerns, it is safer for older kids and adults.

Storm drain stenciling is one of our major ambassadorial programs. **Audiences** for this activity include schools and after-school programs, neighborhood groups, Scouts, Summer Camps, and somewhat surprisingly, Corporate Days of Service.

In 2012, there were stenciling events in Cumberland, South Freeport, and Peaks Island, and although there were more requests in 2012, the weather hampered many of the scheduled attempts. From May through October 2013, **113 volunteers stenciled 463 storm drains in our region**, primarily in Portland and South Portland.

Groups that used our kits were

- Peaks Environmental Action Team, led by Island Institute’s Island Fellow, who is directing a team of teenagers to stencil storm drains on Peaks Island (2 dates so far)
- Mill Creek, South Portland branch of Key Bank for “Neighbors Make a Difference Day”
- Girl Scout Troops #174 and #1979
- Portland Take Action and West End Neighborhood Association
- Fluid Imaging Technology
- RBC Wealth Management
- Friends School
- Southern Maine Community College (SMCC)

Because of the competitive spirit generated by this activity among corporate groups, we had to **purchase additional stencils** when we found that corporate teams were moving between storm drains so fast that the paint on the stencils didn’t have time to dry!

We also **promoted our storm drain stenciling kits** at: Patagonia film night to benefit FOCB at Frontier Café, Brunswick; Green Neighbor Family Fest, Portland; Environmental Fair, Small School, South Portland; Willard Fest, South Portland; MITA’s 25<sup>th</sup> anniversary event; Green Drinks; Cornerstones of Sciences conference for librarians. The activity was referenced at other community and outreach events.

Our participation in the 2013 Green Neighbor Family Fest in April required that we not only staff a booth but offer a family-friendly activity. We provided templates for kids to create their own door hangers to alert neighbors about the importance of keeping household and yard pollutants from going down storm drains. We repeated this activity at our booth at Maine Island Trail Association's 25<sup>th</sup> Anniversary event over Labor Day weekend.

In **FY15**, we will:

- Maintain the readiness of the **stenciling kits**, continue to explore ways to engage school groups and community members in adopting their neighborhood storm drains, and use these events as media attractors whenever possible. We are considering putting together more kits to meet demand. Currently we have 5 kits; each stencil kit serves 3-5 people.
- Coordinate with our **municipal partners** in Portland and South Portland to encourage neighborhood groups and schools to undertake storm drain stenciling projects in their neighborhoods. This effort renews our collaboration with the Stormwater Coordinators of both cities, who often receive requests for community service projects.
- Continue to promote this activity, especially to **corporate groups**. We will recognize the competitive nature of the activity by awarding a prize, perhaps *The Drain Cup* for effectively achieving "soft" challenges, such as the most drains stenciled, or the most drains stenciled per capita participant, the most in the fastest time, etc.
- **Increase promotion of the kits** through ideas such as taking a photo of a group holding a white board with a message like "100 storm drains stenciled in 3 hours!" along with our banner "Casco Bay belongs to all of us!" to be used on social media, in company newsletters, and for newspaper press releases.
- **Contact other potential kit users**, such as summer day camps, municipal summer recreation programs, and scouting groups (The Girls Scouts who borrowed kits last year told us of their badge WOW for Wonders of Water; we will investigate whether or not the Boy Scouts and Sea Scouts have something similar).

## 6. Pumpout Program

Our **Pumpout Program** continues to play essential roles – in the direct reduction of sewage discharges into the Bay, the education of boaters through the program's ambassadorial function, and as 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 boat captain and ambassador on the Bay, will return in 2014, his fifth season with us.

- The Pumpout Program breaks even because of reimbursements and dedicated funding. The DEP reimburses us for 75% of the costs of running the program, fees for service contribute some support, and the City of South Portland Water

Resources Division and the Portland Water District through CBEP make modest contributions to support the program. [During 2008, the Board concluded that the program should continue on the condition that it is financially self-sustaining and can be adequately staffed.]

- 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 accessible at all tides and operational. We will continue to notify DEP when stations are nonoperational.

## **7. Volunteers**

We will continue to recruit volunteers for a wide variety of activities, most notably, the Citizen Stewards Water Quality Monitoring Program, as well as for other field work, beach clean ups, office tasks, and events, using word-of-mouth, website, posters, and our *Raisers Edge* integrated e mail marketing tool, Net Community.

**Volunteer Appreciation and Members Annual Meeting Event:** Each year we celebrate the work of all of our volunteers, including our Board, and take care of the legal business of Annual Meeting as expeditiously as possible. See section below on Outreach and Events for a description of the event.

**Summer Internships:** We are accepting applications from college and high school students for our limited summer internship positions. We typically invite two bright students to work with us during the summer in non-paid summer internships. The positions vary between 20 and 40 hours per week for roughly 8-10 weeks, beginning in late May and ending mid-August. Our philosophy is to engage these students in all aspects of our operations at Friends of Casco Bay. Our goal is for them to best understand how a small non-profit environmental organization works in the larger arena of environmental advocacy, hands-on science, and community engagement.

**Psi U Summer Internship:** The Community Matters in Maine Psi Upsilon and Logan Environmental Fellowship Program, through Bowdoin College, places students who have an interest in pursuing an environmental career through stipended summer internships with Maine non-profit organizations and governmental agencies. The Environmental Studies Program at Bowdoin College coordinates the 10-week internships. In 2012, and 2013, through a very competitive process, Friends of Casco Bay was awarded the opportunity to host a student to work with us on our experimental clam flat pH sediment work. These students, Jessie Turner and Courtney Payne, were invaluable in the development of our project. Jessie conducted numerous hours collecting field data on flats at over 30 sites in Casco Bay in 2012, and in 2013, Courtney refined Jessie's work by focusing efforts on one critical flat in Freeport. We have again been awarded the opportunity to host a Psi U student in 2014, who will build on the ground-breaking work from the last two summers and help further refine this summer's acidification work, as described in section above on pH of sediments on clam flats in the Bay.

**Blue Mussel Surveys:** The objective for the 2013 Blue Mussel (*Mytilus edulis*) Survey in Casco Bay was to engage volunteers in hands on field research to determine presence or absence of Blue Mussel beds and relative percent cover of existing beds as identified by the Maine Department of Marine Resources (DMR). This project evolved from discussions with FOCB members who stated that they had been noticing a complete loss of blue mussel beds from areas that were historically abundant. Of the 70 mussel beds identified by the DMR to exist in Casco Bay only 21 were visited in 2013. Of the 21 sites only seven had mussels and what were identified were sparsely covered.

In 2014, we plan to continue this effort by soliciting volunteers from FOCB and the Maine Island Trail Association (MITA) to help ground truth the remaining 49 mussel beds. This project will be coordinated by FOCB Board member Ann Thayer as part of her Master Naturalist program. Ann will be the primary contact and will keep track of areas mapped by volunteers.

## **8. Outreach, Events, Public Relations: Community-based Educational Outreach**

In addition to research and advocacy, educational outreach is our third tool for achieving our mission to improve and protect the environmental health of Casco Bay. When our community members have access to credible information and are given the right tools, they make behavioral changes that will have a positive effect on the Bay's environmental health. Over the years, our staff and board have been able to translate complex scientific data into simple terms, interpret it for the public, and provide people with information, tools, and options for taking action.

This year marks Friends of Casco Bay's 25<sup>th</sup> anniversary. We will mark this auspicious occasion by celebrating and acknowledging this anniversary at all of our events and through our many publications and outreach tools.

### **a. A Changing Casco Bay report**

This report on the health of the Bay will be our most important publication of the year. We have drafted the report and are working currently with a local design and marketing firm, 19 Oaks, to publish and release the report in May. We are planning a press conference, media interviews, and a separate public meeting to share the information in this report and to call the community to action to protect our waters. We view the release of this report as a critical component of the community engagement work we will undertake this year.

### **b. Champions for the Bay and Bay Papers**

The Bay Paper concept began as elevator speeches we developed to help board members better articulate our positions on issues we are working on. The board has since encouraged us to share them with the public at large. Bay Papers have evolved to become accessible primers that help our community understand specific issues at a glance and offer ways we can all take action to reduce negative impacts on our coastal waters. In FY14, we partnered with 19 Oaks develop a graphic template for these primers. More than mere fact sheets, Bay Papers are a way to both inspire and train our supporters on how to speak about an issue with their peers. To date, 4 Bay Papers have been completed [Combined Sewer Over Flows, Ocean and Coastal Acidification, Nitrogen, and Snow Dumping] and 4 more in are in the pipeline for this

fiscal year. We will create a timeline and defined process for producing the Bay Papers to facilitate getting more of them completed. We will also bring the Bay Papers to the big(gish)screen. In 2014, a team of USM Media Studies Practicum students will develop a presentation that explains our nitrogen and coastal acidification papers.

The goal of developing these Bay Papers is to inspire residents to be Champions of the Bay. At all of our events throughout the year, we will challenge attendees to be active ambassadors in their community, share information, data, and actions with their networks to reach more local residents, businesses, and decision makers. Some of the actions we will ask our Champions to take are personal or lifestyle-oriented [being good stewards themselves or signing up as oil spill volunteers] while others are geared toward collective action [encouraging community support for town and cities to clean up our sewer overflows or for regulations that will help curb nitrogen pollution].

As an organization, we strive to both lead and learn. We intend to solicit feedback to better reach these populations. One idea is to use Board Members to help organize a couple of small, informal focus groups—for example, having boaters meet with us—to test specific messages. Another idea is to utilize online surveys to accomplish this goal.

**c. Casco Bay at Risk: A Community Forum**

On July 23, 2014, we will host a forum about some of the largest threats the health of Bay faces. Four presenters, including Casco Baykeeper Joe Payne, will talk about an aspect of the Bay's water quality and habitat which is changing and is of concern, along with a call to action for how the public can help. This is a serious event with gravitas. The presenters will table at the event and will be available to attendees for further conversation during the reception following the event. We will leverage this event to raise our visibility and to raise funds. We will challenge attendees to become *Friends* of the Bay and to be Champions for our efforts. We will also use this event to mark our 25<sup>th</sup> anniversary.

**d. 7<sup>th</sup> Annual Wild & Scenic Film Festival**

Last year's film festival sold out, as it often does. In November 2014, we will once again host this event at USM's Abromson Center. The festival provides ways to leverage board relationships with corporate and media sponsors whom we otherwise could not access. It also provides visibility with the general public while raising revenue and promoting mission and core messaging. Staff secures media sponsors, in-kind sponsors, and cash sponsors, as well as items for the raffle. Board members also assist with these tasks and act as ambassadors for our organization on the evening of the event.

**e. House Parties**

House parties are crucial for garnering new members and for helping us deepen relationships with donors. These also lead to many of our speaking engagements. We plan to have a party at Orr's Bailey Yacht Club on a Thursday summer evening. We may explore an additional house party on Peaks Island or along the shipping channel

in South Portland or Cape Elizabeth. We continually track possible venues for use in the future and evaluate all opportunities as they arise.

**f. Donor Appreciation Event**

This December event at the Cumberland Club is for our most supportive donors; it has been such a successful and enjoyable event each of the past five years. This is one of our favorite events of the year.

**g. Volunteer Appreciation and Members Annual Meeting Event**

This event provides the opportunity for us to thank those who roll up their sleeves and work the hardest for the Bay alongside us, including our Board, our water quality volunteers, other volunteers, and our community partners. We will plan to hold our 2015 Volunteer Appreciation and Members Annual Meeting Event in February 2015 at a new venue—a place that is “warmer” and allows for more interaction than Abromson Auditorium (where we held our 2014 event).

**h. Baykeeper Speakers Bureau**

We launched the Baykeeper Speakers Bureau as our official program for marketing our talks. We will continue to work to expand the schedule for our staff and affiliates to speak. Staff and Board continue to identify sectors, groups and venues, such as land trusts, yacht clubs, civic organizations, neighborhood groups, libraries, and other nonprofits. Titles for our speaking engagements include:

- *Defending Clean Water: Waterkeeping in Casco Bay and Beyond*
- *Save the Steamers! How Excess Nitrogen and Coastal Acidification Are Killing Our Clams*
- *The Health of Casco Bay: The Good, the Bad, and the Ugly*
- *Casco Bay Begins in Your Backyard: How to Have a Green Yard and a Blue Bay*
- *A Changing Casco Bay: Professional Development for Educators*
- *Community Service to Help Casco Bay: Storm Drain Stenciling*

**FY15** Baykeeping Speakers Bureau events already scheduled:

- April 29, Cumberland County Master Gardeners Lunch and Learn
- May 16, Film event at Frontier Cafe hosted by Patagonia to benefit Friends of Casco Bay
- March 17, 2015 BayScaping, Bath Garden Club
- We will also make presentations at our house parties and similar events. We continue to keep a log of all presentations given, along with the number of attendees.

**i. Media Outreach—“Earned Media”**

In addition to events, earning a place in the spotlight via news articles, op-eds, and TV and radio interviews is an important way to get our message out to a broad audience. Our most intensive media work will be done in conjunction with the release of the report *A Changing Casco Bay* and our event *Casco Bay at Risk*. Our other media outreach plans include:

- Place Joe and Cathy on television and radio programs such as *207, Maine Things*



### *Considered, Mainewatch*

- Submit op-eds that appeal to readers' emotions, such as Joe's impassioned essay "The Bay is brown, the Bay is hurt," taking advantage of events such as the effects of polluted runoff from heavy rains, to evoke a visceral connection to the Bay. We will look for topics that people respond to and, as much as possible, have drafts of op-eds ready for submission at the appropriate opportunity, such as the toxic shock from spring snowmelt, smelly CSOs after a heavy rainstorm, and green slime appearing after a hot spell in summer. We will reference our Bay Papers and use strong photographs as the basis of these emotional pieces. For example a photo of an osprey carrying a fish could be the visual for a piece on how the food supply of our coastal waters is changing dramatically and in unexpected ways.
- Cultivate reporters at major publications for exclusive issue-oriented interviews. This 25<sup>th</sup> anniversary year would seem to provide a compelling "angle" to interest a high-profile "glossy magazine."
- *Grand Tour*: We will explore opportunities to showcase the new Baykeeper vessel throughout Casco Bay. We will arrange for the boat to be highly visible at events such as the lobster boat races in Portland and Harpswell, MS Regatta, and yacht club events. We will explore using Twitter, Facebook, and email to alert coastal residents—and the news media—that the boat is coming to their neighborhood.
- We will endeavor to get a full featured article in one of the monthly glossy magazines (*Maine Boats Homes & Harbors*, *Down East*, *Maine Magazine*).
- We have had good success getting pro bono ads placed in such publications as Maine Today Media, *Ocean Navigator*, and the program for Greater Freeport Community Chorus Christmas Concerts.

### **j. Email communication**

We use NetCommunity, the mass email program in Raiser's Edge (REi), our new development software/management system, to engage with our members and friends. We send e-blasts to report our successes, inspire action when appropriate, and encourage online giving. Our specific objectives for this fiscal year will be to:

- Seek opportunities to tailor emails for particular groups and purposes – especially our volunteers (help Peter use email as a recruitment and communication tool) to improve open rates
- Schedule email updates throughout the year (maintain flexibility to send alerts and news when they are timely)
- Use emails to promote our events, especially Casco Bay at Risk and the Film Festival
- Continue to create substantive, visually appealing and interactive emails, providing lots of links to donate and to our website
- Make a concerted effort to acquire email addresses (consider sign-up perks or special benefits such as a contest, provide opportunities to join all over our website and material, or an online petition)
- Evaluate the effectiveness of our email renewal ask. This includes a link so that recipients can donate via the website immediately. The email is sent just after 2<sup>nd</sup> renewals.

- Expand our network by asking Board to suggest email addresses of possible interested people and contact to ask if they'd like to be on our e-blast list
- Develop an email message that asks people who contact us for other reasons, or news media, if they'd like to be on our list.

**k. Facebook**

Our goal is to use Facebook as a tool for engaging our current and potential supporters, especially in the greater Portland area. Specific objectives this year:

- Create at least two posts a week.
- Use Facebook to drive users to the website.
- Continue to use Facebook as a method to get information out, recruit volunteers and promote events.
- Look for appropriate opportunities to promote directed actions, like petitions, on Facebook, because they can be very effective.
- Consider using Facebook ads for the Film Festival.
- Examine ways to capture user's contact information. Example: Consider creating a contest where users must give contact information to participate or an online petition.

**l. Twitter and other Social Media content**

In FY14, Friends of Casco Bay launched a Twitter feed and created a Social Media Guiding Document to focus our efforts and guide our online efforts. While our Twitter account allows us to connect with all of our constituents, we see this as an important tool for reaching the media. Reporters and bloggers monitor Twitter for story ideas, news, and sources. We will supplement our press releases with tweets to get our stories out to the media.

**m. Website**

The goal of our website is to present information about our organization in a way that is substantive, visually appealing, and interactive, in order to engage the support of our current and potential *friends*. We will keep our website dynamic and refreshed with substantive and easily understandable information about our work and Casco Bay, maintaining consistency with our fundraising efforts. We will continue to track visitor statistics, make use of links that serve our issues, programs, initiatives, and events. Specific website objectives this year:

- In late Spring/early Summer, we will examine the menu system of our website to identify a better menu that will guide site visitors to the information they are looking for more quickly. We will add a small section to the side panels of the content pages of our website to promote the search function to help people find what they are looking for.
- We will develop content and language that matches and or complements our development proposals and newsletters.
- To celebrate our 25th Anniversary, we will post on the website a list of our best accomplishments over the past 25 years.
- Make our data and maps available (working with Mike and Peter).
- Examine visits and experiment with how to drive people to the website at times other than Film Festival and special events.

- We will work with Peter to meet website needs he has for the Citizen Stewards Water Quality Monitoring program.
- Consider developing a FAQ section of commonly asked questions about us and Casco Bay, such as “What do we sample for?” and “How long have we been around?”
- Add any video content created throughout FY15 to the site.
- Where there are appropriate opportunities, we will use the website to ask people to petition for action, and we will promote the petition using E-blast, Facebook and other social media.
- We will remain open to new ideas about how to use our website more effectively to “get our message out.”

**n. Publications**

We will continue to generate two print newsletters, the Annual Report, the film festival program, and other program-related display materials. Whenever and wherever possible, we will continue to weigh the trade-offs between cost and such things as the durability and portability of mailed print media, versus the less expensive but more ethereal online media, which is cheaper, has the ability to go viral, and reaches a different audience. We will work to incorporate the status reports to funders written by the Development Office into the theme of the next Annual Report. We will seek to create other outreach opportunities to describe our progress on many of the issues we are confronting through advocacy, research, and outreach.

**o. Help leverage Water Quality, Baykeeping, and Communication Efforts**

Development and communications staff will work collaboratively with program staff to leverage community support for our efforts. This will include efforts such as: releasing the report *A Changing Casco Bay* (mentioned above), encouraging activism (e.g., signing a petition), recruiting Champions for the Bay, and developing and distributing Bay Papers.

**p. Service to other organizations**

Staff members work closely with a number of other organizations, serving on boards and advisory committees or volunteering at events and conferences. Among the many are the Environmental Priorities Coalition, Maine Conservation Alliance, Maine Association of Nonprofits, Casco Bay Estuary Partnership, Waterfront Alliance, Take Action Portland, Cornerstones of Science, and the Gulf of Maine Marine Education Association. These efforts forward our mission and lead to greater visibility for the organization.

## **B. 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. Key to this effort is the effectiveness with which we engage our community about issues impacting the Bay. Through cultivating our donors’ appreciation and understanding of our work and increasing Friends of Casco Bay’s name recognition in the community, our goal is to broaden the breadth and deepen the depth of our support. Relationship building is crucial to our work. We have identified two demographics: those who support our work and those who do not know that

they will support our work.

We recognize that our organization continues to operate in a challenging economic environment. While corporate support is picking up from its post-recession low (and this category of support will likely have a banner year in FY15, given a \$50,000 one-time gift from Nestle Waters North America), it is likely that government support will continue to decline. The gap in income inequality among individuals in our community and across the country continues to widen.

Yet, as the Baykeeper Boats Fund shows, there is perceived value in our work and capacity in the community to support it. Our balance sheet remains very strong, with plenty of working capital, no long term debt, and two robust funds housed at Maine Community Foundation, which support our Baykeeping Program and our boat expenses. Earnings in the Baykeeper Fund gave us the strategic capability to both replace and replenish funds designated by the Board for Legal Investigations of Baykeeping Issues in FY14.

Development staff, including the Executive Director, will continue to seek input and focus by collaborating with program staff, engaging the Board's Development/PR Committee, and conducting regular internal development meetings.

During FY15, we will endeavor to broaden and deepen our sources of funding. In order to meet our fundraising goals, we will implement the following plan:

- All solicitations (for membership renewals, annual fund appeals, Boats Fund requests and other special appeals) will continue to be sent with hand-written notes, as is our standard policy and practice. We will continue to work with the Board on penning notes on all Annual Fund appeal letters and, as we began to do more frequently in FY14, our renewal letters.
- We will raise money for both operating and capital needs. We will solicit unrestricted and restricted support for specific projects and events that are in this operating plan.
- We will continue to harness the power of our new Raiser's Edge database (REi), refining our reports and using the program to mine our contacts for prospects. We will develop an easy reporting method to reconcile the database's records with our organizational accounting records.
- Development staff will work closely with the rest of the staff to ensure that our data is up-to-date in the database. We will purchase a new user license for REi so that our Citizen Stewards Volunteer Coordinator (and other staff) can utilize the database more frequently and manage our volunteers from the program.
- We will launch a campaign to recruit smaller donors to become monthly donors, joining the Calendar Islands Circle of Friends of Casco Bay, a program that we began in FY14.
- Special appeals will again be designed as part of the Annual Fund appeal, to tailor asks to interests.
- We will work with our outreach staff and our Board to improve our art of storytelling. We will continue to improve the way we are speaking to specific audiences who already have

a strong relationship with the Bay, for example, boaters, anglers, islanders, business owners that depend upon the Bay.

- We will continue to develop our corporate solicitation plan, including improvements in working with the Board to solicit more sponsorships for events, including our 25<sup>th</sup> Anniversary Casco Bay Forum event and our 7<sup>th</sup> annual Wild & Scenic Film Festival.
- We will continue our boat donation program with Maritime Funding Association of Maine, which was established to handle boat donations for the benefit of marine-related nonprofits in the state.
- We will continue to set up visits with major donors, as well as with corporate and foundation representatives. We will use our new Baykeeper boat as a tool in our donor relations, inviting our top donors to our organization and the Boats Fund, on tours of the Bay with staff. We will contact the Board, as visits are set up, to garner intelligence and to see if and when Board members can accompany us.
- We will design and host a variety of events (see section on events).
- Our Film Festival will continue to be one of our signature events. Much of the solicitation of sponsorships has shifted from being done by the Board to being done by staff. We will continue to evaluate the plusses and minuses of the event.
- We will continue working with individual board members to find the best ways to leverage their social capital and engage them in friend and resource building with us. Our data show that sending personal solicitation letters, hosting house parties, and inviting friends, colleagues, and family members to our events are excellent ways to garner new members and deepen relationships with existing donors.
- We will draft our gift acceptance policy.
- We will continue to lay the groundwork for a planned giving society. In FY14, working with the Board, we developed a name for this society: the Anchor Society.
- We will continue to track key Development metrics. We will look at Development metrics quarterly to see how we compare to last FY.

## **C. Technology and Capital Assets**

From FY11 through FY14, we invested in a number of organizational strengthening and capacity building activities:

- Completed the Baykeeper Boats Fund Campaign, resulting in the launch last September of the R/V Joseph E. Payne and the establishment of the Boats Fund at Maine Community Foundation to support the operations of the fleet.
- Constructed a new Strategic Plan 2013 – 2017
- Transitioned to the development management system in the cloud, The Raiser's Edge (REi) by Blackbaud.
- Installed a new network server, new website platform, and upgraded accounting system.

- Transitioned our 403(b) retirement plan to Principal, saving significant fees for the participants and significant time and aggravation for administration.
- Updated the emergency succession plan, now part of the annual process of personnel reviews.

As a result of these efforts, we have seen marked efficiency improvements across the organization.

During **FY15**, we will:

- Continue the process of aligning the new **accounting** system, as we will now have comparative data for FY14 to use in our FY15 interim reporting.
- Continue the process of getting the **water quality database** completely populated with data and getting it functional.
- Continue upgrades in **computer workstations** and software.
- Investigate the options and costs of a new **phone system** for the office (the FY15 budget will not include an amount for this – we will investigate this year with an eye to purchase in the next budget cycle and/or special funding opportunities).
- Investigate new options in **sonde technology** for water quality monitoring, including the use of telemetry for data transmission; this will be the beginning of considering the pros and cons of a shift toward more-automated data collection as part of our water quality program.
- Continue to understand the operations of the new boat.

## **D. Administration**

### **1. Staff**

Over the past eleven years, Friends of Casco Bay has restructured its staff carefully, ultimately adding only half a position, by redefining job descriptions and hiring accordingly when there has been attrition or opportunity. The staff consists of eight full time professionals and a seasonal pumpout ambassador. The staff turnover rate continues to be exceptionally low – our most recent hire is now in her 4<sup>th</sup> year with us. We have a number of unpaid interns throughout the year, especially during summer, as well as other volunteers.

We have assembled and retained an excellent team by maintaining a good benefits package and by running a fair and flexible workplace. In return, we expect a high quality of engagement, appreciation of the big picture and attention to detail. We provide professional development opportunities across the board, such as attending classes, workshops, seminars, and conferences.

Compensation was frozen in the FY09 / FY10 / FY11 budgets; 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. Given the continued surplus and/or break even results, and the need to bump up the base, the FY12 budget contained a 3% increase in compensation integrated into the numbers, not accrued, and this was greatly appreciated by staff. The FY13 and FY14 budgets each contained a 2% increase; in addition, a couple of modest adjustments were made during FY13, for merit and for partial compensation in lieu of health insurance for those leaving the plan to join spousal coverage.

During FY15, the Executive Director Cathy and Casco Baykeeper Joe will, along with Board President Malcolm Poole and the Executive Committee, deepen and focus conversations about capacity in the Baykeeping program and defined succession planning. As part of putting together a succession plan and considering ways to meet capacity needs, the Executive Director will study elements of the Baykeeping Program intensively. She will work with Joe to identify the various roles, responsibilities, and relationships that he maintains, and will consider the re-assignment of roles to help further relieve Joe of a workload that is, at times, overwhelming him, as she contemplates options. The exact nature and timing of the assignment and reassignment of responsibilities and staffing to meet the need for greater capacity remain undefined at this time, and may hinge in large part on the results of the defined succession planning conversations, but the budget contains an amount of identified financial resource to be used if necessary in meeting capacity needs, making use of the Baykeeper Fund at Maine Community Foundation.

For FY15, a 2% increase in base pay is included in the proposed budget, along with maintenance of the benefits package, and a small allowance for a couple of modest adjustments for merit. In addition, there is the capacity placeholder for the Baykeeping Program to be funded through the Baykeeper Fund at Maine Community Endowment.

## **2. Financial Stability**

Friends of Casco Bay underwent a change in fiscal year end after 2008, the year the recession hit. We had a short, 3-month year January 1 – March 31, 2009, and for each year ending March 31 since, in 2009, 2010, 2011, 2012, and 2013, we have ended each fiscal year with operations at break even or better. Each budget has contained a provision to utilize up to a certain amount of the Board Designated Contingency Fund (BDCF) (\$45,000 each year in FY10, FY11, FY12, and \$26,000 in FY13). Not only have we not used a dime of the BDCF, we have added cash to the coffers by breaking even or better and to the extent that we have recorded depreciation, a noncash expense. As of the writing of this plan, projections show that FY14 will be at or very close to break-even before depreciation expense.

The FY15 budget draws on many sources of revenue and does not contain a request to utilize some of the BDCF in order to balance the budget to support the FY15 operating plan. This is primarily due to two relatively unusual circumstances: a \$50k corporate gift already in hand and the strategic utilization of accumulated earnings in the Baykeeper Endowment Fund should we need to tap it for capacity building in the Baykeeping Program. With skill, hard work, and luck, we hope we will, once again, find we can break even in operations.

Monthly interim financial reports will continue to be prepared, and budget versus actual figures will be closely monitored with timing versus permanent differences addressed in the narrative.

### 3. Collaborations

All members of the staff are engaged throughout the community and much of the state in a variety of ways, attending a myriad of meetings and conferences with a wide diversity of partners. While this gives the organization a great deal of visibility, it also provides our staff the **opportunity** to hear about what is happening with other organizations and issues. We will continue to share data and resources where appropriate, and to seek opportunities to collaborate on projects and funding opportunities. We will be alert to the opportunity to pick up important pieces of work and, whenever possible, associated funding streams, that may be abandoned by other groups in these difficult times. We will explore with the Board any merger or merger-like opportunities that may arise.

We will track our current alliances, collaborations and partnerships as one of our Strategic Plan metrics.

We update our emergency succession plan, for use in the (we hope unlikely) event of an unplanned temporary absence of staff. We have a first rough draft, compiled last year, which will be updated this year during staff reviews. This plan identifies the key roles and responsibilities of each staff person, the particular staff members who would fill in on certain responsibilities in their absence, and the activities so unique to that individual that in their temporary absence likely would just not be attended to. We will also continue conversations about nonemergency succession planning.

We will continue to engage **Board** members around policy issues, Bay Paper content, program efforts and accomplishments, board governance, events, and community connections to resources, financial and otherwise.



## IV. FY15 Budget Highlights

The Operating Plan for FY15 describes our plan for improving and protecting the Bay for the year April 1, 2014, through March 31, 2015. The Operating Plan describes the work and the rationale for our efforts in four sections: Programs, Development, Technology and Capital Assets, and Administration.

A budget is the identification of the resources it will take to accomplish our Operating Plan, and it is a best guess at a point in time based on reasonable assumptions. Reality will prove to be different. The FY15 Budget is presented as a two-page summary with a Supplemental Schedule. These two documents are formed from a collection of detailed information, including a 10-page, 450 line item detailed budget, and detailed worksheets on such areas as compensation, benefits, and estimated endowment transfer calculations.

To meet the goals of our FY15 Operating Plan, expenses are budgeted at \$838,620, an 11% increase over the prior year. As usual, expenses include a \$12,000 contingency line item; if we do not have significant, unexpected expenditures, this expense line will help “absorb” some of the depreciation expense. The Budget identifies \$839,950 in operating revenue from a robust variety of sources, an 11% increase over the prior year. The significant jump in revenue is attributable to two items: a one time large corporate gift already committed in support of the Water Quality Monitoring Program (Nestle Waters North America) and the possible use of a transfer from the Baykeeper Endowment Fund to support capacity building in the Baykeeper Program.

This budget does not contain a line item Budgeted Contingency Transfer to Operations Not to Exceed. In the past this has reflected the potential use of accumulated surpluses from prior years, located in the Net Asset section of the Balance Sheet in the Board Designated Contingency Fund, to absorb an operating deficit, should one occur. The good news is that over that past 5 years, this “gap filler” in the Budget has ranged from \$26,000 to \$45,000 each year and we have never had to utilize it.

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 FY15 Operating Plan will be fodder for discussion at our upcoming April 7<sup>th</sup> Budget Workshop. The FY15 Budget highlights:

- Increase in base compensation, maintenance of benefits, and an allocation for staff capacity building
- Increases in Program expenses, notably to cover the release of the report *A Changing Casco Bay*, the event *Casco Bay at Risk*, design work, and additional sampling and analysis costs
- Increases in rent, fuel costs, monthly technical support costs for the network and for the development system
- 5% transfer from the Baykeeper Endowment at Maine Community Foundation as the annual allotment in support of the Baykeeping Program.
- Use of \$10k of the Boats Fund, about 10% of the value of the fund, to defray the costs of operating and maintaining the fleet, budgeted at \$12k.

## V. Metrics

Metrics help us monitor progress toward key goals in strategic areas. We also use them to:

- quantify how we are doing over time
- provide information from which we can see trends and make decisions
- build credibility
- increase awareness of our organization
- inspire ongoing interest in our mission and our organization
- create relationships within our community
- raise money

Our financial reporting is one of the most consistent metrics we use to measure progress and gauge how we are doing – compared with our budget and compared with prior years. Other metrics now in development will enrich everyone's sense of the many dimensions of our work. Metric information is widely available across the organization.

Below are some of the highlights from FY14. In the weeks and months ahead, these will be “contextualized” meaning that we will build tables and the like to better present the quantitative aspects comparatively. In addition, other metrics will be presented, notably in Development and Water Quality Monitoring.

### Some FY14 Metric Highlights

#### **Baykeeping**

Requests for support (as, letters of support, sign-on to petitions and letters, participation in press conferences, hearings, etc.)

#### **Request to emcee events other than those of Friends of Casco Bay**

Annual Oil Spill Conference

Friends of Casco Bay asked to serve as a resource for three-member tar sands ordinance advisory committee – Joe is serving in that capacity

#### **Interviews, press conferences**

BayScaping: Film Baymen

3 press conferences: CSO remediation, Beaches report, Butt Stops Here campaign

Baykeeping/use of new boat: Harpswell Anchor, AP

#### **Meetings attended by type/issue**

Tar sands ordinance; South Portland Community Forum:

OA: Fishermen's Forum, Willard Beach Neighborhood Association, Island Inst.

Fishermen's Climate Roundtable, UNH Stormwater Conference, Pierce Atwood,

Oil: ME/NH Area Comm. Oil Spill Seminar

Dredging: Waterfront Alliance

Baykeeping: Yale alums tour, house parties, presentation at Waterkeeper Alliance

**New legislation, BMPs, regulatory changes, as a result of our work (outcomes yet to be decided)**

- Snow dumping permit change
- Wyman plant discharge permit letter
- OA bill
- Federal channel dredging
- Portland Piers dredging
- Dredge disposal site location in Casco Bay

**Detrimental actions halted or changed due to our input**

- South Portland Tar sands ordinance
- Stopped Portland City Council from approving 30 year timetable for completing Tier III CSO remediation

**Beneficial actions catalyzed by our influence**

- Coast Guard stepped up its engagement in oil spill preparedness
- Coast Guard required new oil spill responders to meet with responders
- Joe persuaded planners of 2014 oil spill conference to focus on *Sinking Oils*
- Improved protocols for relocating lobsters for federal channel dredge
- Concessions agreed upon by Portland Pipe Line if it goes forward with reversing pipeline
- Confined Aquatic Disposal (CAD) site concept moving forward
- Portland CSO project moving forward in 15 years
- Stormwater Utilities fee ideas moving forward
- Green packaging consideration for Portland moving forward

**BayScaping**

- 2 new fact sheets produced, printed, and posted on line
- Summer 2013 display at the Patagonia Outlet in Freeport seen by thousands
- In 2013, educated more than 3,000 people at 12 presentations and exhibits at community events, not including FOCB sponsored events
- To be done on April 29, 2014: Master Gardeners training in BayScaping

**Storm drain stenciling**

- 463 Storm drains stenciled, 113 participants, in 4 communities (Portland, South Portland, Peaks Island, Falmouth)
- 8 Requests for kits, some did not follow through because of weather or timing
- Cooperation with stormwater coordinators in South Portland and Portland
- Collaboration with other nonprofits and community groups: Take Action Portland, Peaks Island Action Team, West End Neighborhood Association, Girl Scouts, SMCC, Friends School, Small School, CCS&WCD, MITA

**Curriculum**

- 85 educators and school librarians reached through presentations at conferences of the Maine Science Teachers Association, Cornerstones of Science, and Gulf of Maine Marine Education Association

Participated in 4 other educational events with the Freeport High School Earth Club, Waynflete School's State of the Oceans Event, GOMMEA, and Willard Fest  
8 Requests from teachers for curriculum, school visits, or training

## **Publicity**

68 news stories, with many features about our new Baykeeper vessel

Pro bono media assistance: Film Festival promotion through WCLZ radio's \$20,000 promotion donation ads, resulting in at least 290 pro bono promos, print ads in Portland Daily Sun

Bon-ton promotional materials  
Greater Freeport Community Chorus  
At least 10 reporters contacted us for interviews or for background info  
11 Press releases, not including personally directed emails to reporters  
6 TV appearances

## **Publications**

# printed and distributed: 2 print and 2 emailed newsletters, annual report, Boats Fund Donors brochure, 2 BayScaping fact sheets, Film Festival program

## **Pumpout Boat**

12,740 gallons pumped out in 2013 for 637 customers (includes repeats) in 20 gallon increments