



Operating Plan for FY12

April 1, 2011 – March 31, 2012

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MISSION

Improve and protect the environmental health of Casco Bay

STRATEGIC GOALS FROM THE FIVE-YEAR STRATEGIC PLAN 2008-2012

1. Work programmatically and responsively to address ongoing and emerging issues that impact the health of the Bay.
2. Build the organization's perceived value and visibility in the community.
3. Broaden and deepen sources of funding.
4. Build capacity in the Baykeeper program.
5. Maintain and replace capital assets critical to getting the work done, including boats, computers, and water quality monitoring equipment.
6. Continue to invest in the intellectual capital and capacity of the organization.
7. Develop web-based tools that provide information about Bay-related issues, water quality data, and the organization.

The Operating Plan outlined below spans the fiscal year April 1, 2011, through March 31, 2012, FY12. The format addresses the strategic goals in four sections: Programs, Technology and Capital Assets, Development, and Administration. The content lays out a plan for making progress toward goals over the next 12 months, while never losing sight of our mission to improve and protect the environmental health of the Bay. We will continue to be as responsive as possible to emerging issues, opportunities, and challenges, both environmental and economic, which may impact the Bay and the organization. The value of what we offer to the community is in continuing our programmatic work, making that work and its implications understandable and relevant to people in our community and our state, 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.

When we adopted our Strategic Plan in 2008, we were just beginning to see the first signs of the economic recession. While we have been able to "hold our own" financially speaking, we continue to plan and budget conservatively, pursuing perhaps a less aggressive path of growth than what may have seemed possible in earlier and different economic times. A series of personnel changes in the development office may have impeded our progress to some degree, but we will close FY11 having met most of our programmatic goals without using funds from our board designated Contingency Fund as was provided for in the FY11 budget.

Respectfully submitted to the Board and Staff,
– Cathy L Ramsdell, Executive Director

Outline of the Operating Plan

- I. Programs
 - A. Water Quality Monitoring
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 - D. Pumpout Program
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- II. Technology and Capital Assets
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I. Programs

The staff members at Friends of Casco Bay meet together regularly, both as an entire staff and in smaller groups, to address aspects of our programs and operations. 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.

The staff will continue to meet, in various configurations, throughout the year, to discuss aspects of our work, track progress, and assess potential opportunities. These themed meetings, sometimes involving collaborative partners from outside the organization, range from review of our water quality monitoring program and other scientific work, to content messaging, advocacy positioning, education and outreach efforts, event planning, scheduling publications and press releases, and web activity. The development of a shared sense of rationale and understanding about why we are engaging in certain activities (and not others) is essential for outreach and for fundraising purposes; we must continue to effectively and compellingly tell the story of what we are doing to improve and protect the Bay.

A. Water Quality Monitoring

This will be the 20th year of collecting data on the water quality of Casco Bay. As a result, we maintain one of the largest and most important long-term data sets on marine water quality in New England.

1. 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. Staff considered returning to once per day sampling, but analysis of data collected over the past 6 years in the morning and afternoon revealed significant diurnal variability in water quality, and the decision was made to continue sampling twice per day for at least one more year. The variability in water quality provides new and important insights into the health of the Bay.

2. This year we are making three significant changes in the volunteer monitoring program.
 - a. For the past six seasons, volunteers have collected Dissolved Inorganic Nitrogen (DIN) samples during both a.m. and p.m. sampling. This year, volunteers will no longer collect DIN samples. The staff has determined that the six-year data set is sufficient as a baseline. For comparison, periodic DIN sampling may occur again in the future. Other parameters will continue to be measured, as usual, including: water temperature, salinity, Secchi depth, dissolved oxygen (DO), and pH, as well as ancillary data on weather conditions, air temperature, and any unusual sightings. (DIN samples will continue to be collected by staff at other sites in other collection efforts described below).
 - b. Measuring the acidity at surface water sampling sites by our volunteers has been part of our program from the beginning. This year we are going to equip and train our volunteers to use **digital pH meters** to measure acidity levels. 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 (global warming), and as a result of the decay of organic matter in productive, nearshore waters. We have been measuring pH in Casco Bay for 19 years, using the colorimetric method, which is fussy and frustrating for our volunteers. While this method is scientifically credible, it is accurate only to 0.2 pH. A more refined level of pH measurement is necessary now in order to see if, over time, we can detect and track a shift in pH in Casco Bay. In order to more intensively monitor ocean acidification, we will provide highly accurate, handheld Hanna meters, accurate to 0.05 pH. The new meters are easier to use, provide more numerical certainty than the subjective color-oriented scale of the colorimeters, and will give us more refined temperature data, to boot.
 - c. We hope to increase the number of **surface sites** sampled by volunteers, from roughly 35 to 40 sites around the Bay. Our ability to do this will depend in large part on the number of new and returning citizen scientists. Recruitment efforts become more sophisticated each year, employing everything from local newspaper recruitment to internet links and survey monkey scheduling.
3. With an eye toward collecting data during the summer of 2011, we have started to investigate the feasibility of collecting data on the **pH levels of sediments** in clam flats around Casco Bay. Low pH is one of many factors that can inhibit the ability of clam spat to grow and prosper. We will collaborate with Dr. Mark Green at St. Joseph's College and Dr. Joe Salisbury at 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. Our goals are: (a) to gather baseline data from a selection of flats around the Bay, potentially to identify which flats may be good candidates for pH rehabilitation, a process of spreading ground clamshell hash over the flat to reduce its acidity and make it more hospitable to clam growth, (b) perhaps explain why some flats don't support spat growth, and (c) explore ways we may be able to work with groups, including clammers, to collect scientifically credible pH data on clamflats along the Maine coast.
4. All water quality data collected at Friends of Casco Bay is done in conformity with our U.S. Environmental Protection Agency (EPA) approved **Quality Assurance Project Plan (QAPP)**. Adherence to the QAPP ensures that our data is scientifically credible and can be used by the Maine Department of Environmental Protection (DEP), the EPA, and other scientists. A QAPP is written specific to the time and place in which its scientific methodologies will be applied; this document has to be updated every five years. We are in the process of writing Revision IV. We are always looking for ways to improve our techniques and the quality of data collected, and the revision gives us a chance to fold new protocols into our QAPP and receive review and approval from EPA. The major highlights in this revision will include: adding the use of the pH meters for pH and water temperature surface measurements in the volunteer monitoring program, and the substitution of

optical DO sensors in the data sondes instead of the membrane DO sensors; the sondes are used by staff to collect data at depth, and the optical DO sensors reach equilibrium faster and are more stable in various field situations.

5. In 2010, 57 returning Citizen Steward Water Quality **Volunteers** were recertified to sample during the 2010 season. In addition, 21 new folks joined the ranks. After the end of the season, one individual received a recognition award for 15 years of service. In 2011, returning volunteers will brush up their skills during the annual Quality Assurance testing in March; new recruits will begin training in April.
6. **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. If weather is an impediment, only three of the ten sites, sentinel sites, may be sampled (this is often true during the winter months). Parameters measured include temperature, salinity, Secchi depth, dissolved oxygen (DO), chlorophyll fluorescence, pH, DIN, and Total Nitrogen (TN). Data on acidity will be collected at surface and at bottom using both the data sonde and the hand held pH meters. During 2010, Mike Doan established protocols for using an optical sensor for measuring dissolved oxygen (DO), and from here on, use of this probe will replace use of the membrane sensor that used rapid pulse technology. As often as possible, students, other scientists, and volunteers will accompany staff on these trips.
7. Staff will continue to collect **Total Nitrogen** (TN) samples as a complete suite (TN, DIN, and chlorophyll *a*) all around Casco Bay. This effort, previously referred to as the “Grand Slam” and then the “Dirty Dozen,” is entering its fifth year. In 2011, sampling will expand to include 15 sites, samples will be collected in May, July and September, and the effort will be renamed SWAN for “Surface Water Ambient Nitrogen.” Other parameters to be measured, as usual, include: water temperature, salinity, Secchi depth, dissolved oxygen (DO), and pH.

Data collected through this effort is combined with data collected during the profiles of the water column; together, these present the largest and most complete nitrogen dataset in the state. This dataset will be used by the state of Maine in the effort to produce a nitrogen standard.

Background: In 2006, after an external analysis of Friends of Casco Bay water quality data showed higher nitrogen values around Portland Harbor, the decision was made to measure TN, DIN and other standard oceanographic parameters on a weekly basis at four sites around the harbor (the Grand Slam). This program has evolved based on results from each preceding season. In 2008 and 2009, the program was expanded to include six sites; the very low variability found in the 2007 data allowed sample collection to move from weekly to biweekly. In 2010, after data analysis from previous seasons revealed a significant trend of increasing nitrogen with proximity to land, the number of sites was increased from 6 to 13 (the Dirty Dozen) and included other parts of Casco Bay away from Portland Harbor. This change gives us a better look at nitrogen conditions around Casco Bay and provides comparison among the various regions in the Bay and also with conditions found “off-shore” during our water column profile cruises. Sampling has been reduced to three times a year (May, July and September).

8. During 2010, we sampled nitrogen and the other water quality parameters near four **sewage treatment outfalls**, in an attempt to determine nitrogen levels both inside and outside the mixing zone for each. Five treatment outfalls have been identified and include Portland, South Portland, Falmouth, Yarmouth, and Freeport. We sampled all but Falmouth in 2010 (made difficult by the inaccessibility of its discharge which is up a small creek in a marsh). During 2011, we will sample at all five outfalls at least once.
9. **Murphy Water Quality Database:** We have needed for some time a new platform for the water quality database, known as Murphy, written in DOS in 1994. During 2010 and 2011, the original

software designer, Sarah Rose Werner, redesigned the database platform in the relational database program Access. During FY12, she and Peter Milholland will continue to debug the new program to help us migrate the historical data into the new database.

10. In 2009, we entered into a collaborative project called the **Data Exchange Network**. The project is overseen by the Maine Department of Marine Resources (DMR) but is being managed by the Gulf of Maine Ocean Observing System, a nonprofit that merged into the Gulf of Maine Research Institute. The merger process has delayed work on the Data Exchange project, and funds that would have been released for Friends of Casco Bay to contribute our water quality data to the network are being carried over into FY12. DMR has just sent an amendment to the contract for this work, which should now be completed by December 31, 2011.
11. Friends of Casco Bay will continue to contribute to efforts to determine the viability 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; at times some of the bottom water in the embayment turns hypoxic. During the summer of 2010, a full profile of the water column in the embayment was conducted at four sites five different times, and two data sondes were deployed for up to four weeks in the lake and at the New Meadows Marina. For the 11th year, FOCB may, once again, deploy a sonde near the marina for a two to three week period during late June-early July when water quality tends to be at its worst. This has to be done by small boat and so entails special logistics “getting into the lake.” Staff members Mike Doan and Peter Milholland will continue to attend meetings of the New Meadows River Watershed Project to encourage continued focus on opening the causeway to restore circulation and thus improve water quality and habitat.
12. Friends of Casco Bay was approached late in the summer of 2010 by the Casco Bay Estuary Partnership with a request that we collect 73 **sediment samples** from specific sites around Casco Bay for toxics analysis. We entered into a contract, and due to delays on CBEP’s part, we began the field work long after the original planned completion date. About half of the sites were sampled before winter weather set in. The contract has been extended into early summer 2011 so that the sampling can be completed, and funds are being carried over accordingly. The data from the analysis of sediments from these sites will supplement data collected 10 years ago and 20 years ago from the same sites in Casco Bay. This is very important work.
13. During 2009, we had the opportunity to collaborate with regional **eelgrass** experts in two embayments in the Bay. We collected data (known as Tier II sampling) with them for a week, using our staff and boat. An additional aspect of this work, in collaboration with Bates College, involved the collection of eelgrass for analyzing the nitrogen isotope ratio (N14 to N15, which indicates whether nitrogen has originated from landside sources or ocean sources). During FY12, we will continue to collaborate with the Bates College scientists to learn more about the origins of the nitrogen in samples collected in 2009.

During 2010, Mike began investigating ways to assess the amount of **macroalgae**, or green slime, blanketing coves where nitrogen pollution is manifesting. The method involves spotting scopes, visual grids, and estimations of coverage. CBEP is interested in launching a volunteer program in this macroalgal assessment, and the DEP has recently become interested. Mike will spend some time during 2011, working out protocols with representatives from both CBEP and DEP. We will be looking to CBEP to fund this effort.
14. **Mapping and Statistics** (Geographic Information Systems (GIS) and JMP statistical analysis): Since 2008, Mike has continued to expand and deepen our GIS and statistical capability; this continues to be pivotal in making our data more accessible, understandable, and meaningful. The production of maps, graphs, and other visual presentations, displaying FOCB data, is an integral tool in our presentations, in our web-based outreach and education, and in our assessment of data to make decisions about program direction.

Mike used these statistical and mapping tools to analyze our water quality data in preparation for the CBEP's **State of the Bay** report and conference in October 2010. During 2011, he will continue to look at each of the datasets of the various water quality parameters we collect, to compare changes over time and geographical differences in water quality site-to-site and region to region in the Bay.

15. We will continue to provide our water quality data to the DEP, CBEP, and a variety of agencies, institutions, scientists, teachers, and citizens, and to provide program consultations to other groups.

B. Baykeeping

1. **Oil spill preparedness:** 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. Last year, 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. This year, we are working with federal and state officials and local businesses to ensure that we are implementing the lessons learned in that exercise and from the spill in the Gulf of Mexico.

For the sixth time, Casco Baykeeper Joe Payne moderated the Oil Spill Seminar, an annual convening of oil spill response professionals and industry representatives to update their skills, learn about new techniques, and discuss response problems. Held in March 2011 in Portsmouth, he convened experts from around the country to look at "Lessons Learned" from both the SONS exercise and the *Deep Water Horizon* Gulf oil spill.

Joe continues to serve (by gubernatorial appointment) on Maine's Oil Spill Advisory Committee (MOSAC), an influential platform to affect policies and programs for oil spill preparedness. While the relatively bureaucratic culture seems to be stymieing vision, he is hopeful that this year's efforts will result in something more substantive than this past year's lackluster results, and he intends to work toward that end.

Joe has catalyzed discussion of a fine scale circulation model for Casco Bay and is on the CBEP committee that is planning a circulation model workshop in May. Experts from around the country will be attending to help answer questions and help define the parameters of the work needed to achieve an excellent model for Casco Bay. This model will be useful in predicting oil spill trajectories as well as providing insight on pollution fates and larval transport. He has also convinced MOSAC to fund the next phase of the project, filling data gaps.

Joe has convinced the state to redo the Casco Bay maps of environmentally sensitive areas, used in oil spills. He will be participating in that effort in June along with state agency biologists and fishermen.

Through MOSAC, Joe and our colleague Wyman Briggs of the Coast Guard, have instigated on-water testing of the pre-planned booming strategies for Casco Bay. This vital activity to protect sensitive habitats will happen this summer and fall. Joe will observe and critique these deployments.

The Oil Spill Seminar planning committee, including Joe, will be working on next year's seminar. Joe will suggest environmental impacts and protections as next year's subject.

He will also approach the Coast Guard about funding for an oil spill module to be integrated into Mary Cerullo's Casco Bay Curriculum.

Joe and Peter will continue to serve, at the request of the Coast Guard Captain of the Port, on the Maine/New Hampshire Area Committee on Oil Spill Preparedness.

2. **Dredging:** The federal channel in Portland Harbor likely will be dredged in 2012. Joe is serving on the Portland Harbor Dredge Committee of the Waterfront Alliance. Friends of Casco Bay has

monitored the sediment sample analysis results to be assured that the dredged mud is suitable for disposal at sea. We continue to press for lobster relocation as a condition of the Dredge Permit, and we are hopeful that federal funds will come to the port to cover the costs. Joe instigated an analysis 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. Work on this will continue.

3. **CSO's and the City of Portland:** Friends of Casco Bay helped influence the DEP and the City of Portland to get serious about eliminating combined sewer overflows (CSO's), and helped get a \$61 million dollar bond passed by the City Council for Tier II of the CSO Abatement Program. We encouraged the City to have stakeholder meetings on CSO's. Consultants to the City on the design of Tier III have recently presented their plans, which include a 30-year time horizon; Joe has raised objections to this as being too long and will attend special meetings with the City to readdress the time frame for Tier III completion.

We continue to attend the quarterly meetings on CSO's to monitor the City's progress on its elimination plan. We will 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 re-engage the city to definitively determine 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. Joe is pushing for a serious look at a stormwater utility for Portland and has recently agreed to sit on a committee to plan a strategy for doing so. He is also lobbying CBEP for their 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.

4. **Nitrogen Standard:** A Legislative Resolve authored by Friends of Casco Bay and passed in 2007 by the Legislature called for the Maine DEP to create a plan for establishing nitrogen criteria and limits in coastal waters. The DEP's report to the Legislature was postponed, and thus so was our opportunity to present our vehement opposition to parts of the report. Meanwhile, we continue to collect and analyze data, consult with experts from around New England, search for sources of other nitrogen data in Maine, and build our case using examples from the literature. Mike Doan was contacted by the DEP to advise the DEP's consultants on methods of nitrogen sampling and analysis in other embayments down the coast of Maine. The consultants' report was a disappointment, even to the DEP.

In 2008, DEP effectively lost its only marine scientist. Due to a hiring freeze, the position was to remain vacant, jeopardizing all of our nitrogen regulation efforts to date. It would be impossible for the DEP to move forward on science-based nitrogen regulations without a staff person who, in fact, understands the science. In 2009, in negotiations with state officials, Friends of Casco Bay put its reputation and its social capital on the line, offering to raise \$100,000 *for the State of Maine* in order to reinstate a marine scientist on to the DEP's staff. The offer both shamed and inspired the Baldacci administration into releasing the Department from the hiring freeze for this specific position, and in 2010, the DEP hired Angie Dubois for the position. Given that all unfilled positions have now been eliminated from the state budget, the reinstatement of this position was a timely and critical victory.

Working through the 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. Concentrations above this level begin to degrade critical habitat.

5. The shift in the political climate has been extreme and has required an almost constant **monitoring of legislative initiatives**. Cathy will continue our involvement in the Environmental Priorities Coalition, monitor proposed bills and the Legislature's calendar, inform the Board and Staff about relevant topics, and work with Joe and Mary, either to provide written testimony and responses or to help Joe prepare for 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 the DEP and at the DMR. We will all be spending more time on "bad bills," and Joe will be spending more time in Augusta.

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

- a) Coal tar remediation effort in Portland Harbor
 - 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) Waterfront development projects, and other development proposals, such as the Great Diamond Island proposed development and the inadequacy of its proposed sewage treatment
 - d) Increases in the acres of closed clams flats in Casco Bay
 - e) Proposals for wind turbines in Casco Bay (Joe sits on a committee just forming, to look at the issues involved.)
6. We have been building **capacity** in the Baykeeper Program by dedicating more of Mary's time to assist Joe with this program. She will continue to help Joe and Cathy with research, writing, drafting position statements, responding to inquiries, helping culture constructive relationships with policy leaders, interacting with Waterkeeper Alliance on national issues and positions, continuing to oversee the research on such topics as snow dumping and various proposed developments, and coordinating volunteer assistance with Baykeeper issues. Mary continues to be invaluable in this role. As the time requirements of some of Mary's other activities abate (see sections below on Curriculum and on BayScaping), more of her time will be devoted to supporting the Baykeeper until such time as we are able to formally increase capacity and add staff.

We have begun to build **legal capacity** for access to legal counsel by having a dedicated fund for this purpose. In March 2011, the Board voted to designate \$6,000 from prior years' accumulated operating surpluses as a Legal Fund for Baykeeper support. This fund will be used solely for legal work on programmatic Baykeeper related topics and not for the purposes of other organizational issues, such as personnel or occupancy related topics.

7. 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. Joe will continue to invest time as a board member and vice chair of the board of the Waterkeeper Alliance. 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. We will weigh, with board and staff leadership, the import and impact of other emerging issues, and craft our response.
8. An issue in the Baykeeper Program and for all senior staff is the number of requests by other organizations and entities for advice, help, and mentoring. On any given day, Joe alone may receive four email requests and two in-person requests for assistance.

C. BayScaping and Stormwater Sampling Program

To ensure a solid scientific basis for our BayScaping Program, we sample stormwater and sediments at tributaries to Casco Bay, testing for the presence of the most commonly-used pesticides and for nitrogen, a component of fertilizer. Our collection methods are based on a quality assurance plan developed in conjunction with the Maine Board of Pesticides Control (MBPC).

1. **Stormwater and Sediment sampling:** Through our Stormwater Sampling Program, Mike has been collecting stormwater from pipe outfalls, catch basins, and small streams, for analysis of various fertilizer and pesticide compounds. This data is 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 six 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 and degrade marine water quality. 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 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 been collaborating with the MBPC and the University of Maine to do this work and will continue to collaborate with both. In 2009, working with MBPC, we sampled both stormwater and sediments: stormwater was taken at three locations and sediments were sampled at a total of nine locations (we assisted at six). In 2010, we sampled sediments at two sites for pyrethroids. We are exploring whether Mike will sample stormwater and/or sediments in conjunction with MBPC this year, or whether we will simply ask for MBPC to test for Weed N Feed chemicals in samples they plan to collect.

The 2009 data analysis is just becoming available from the lab for both the stormwater and the sediment samples. During 2011, we will add the results of all FOCB and MBPC sampling to our tables and maps. This presentation of data at BayScaping socials builds fast awareness among neighbors throughout our community and helps to motivate resistance to applying these compounds heedlessly.

2. **BayScaping:** Interactive neighborhood “socials” are the core of our BayScaping program. At these events, our staff and volunteers share our data with residents in our communities, explain the harmful effects of lawn care chemicals, 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 a compelling way to inspire behavioral change. As we connect one-on-one with residents through these events, we will also continue to reach out into the broader community by issuing timely media releases, emails, and newsletters.

In 2010 and early 2011, Mary delivered and /or coordinated 18 BayScaping programs for various audiences, including neighborhood associations, retirement communities, teachers, landscapers, and horticulture students. In addition, Pat Ianni, FOCB Board member and Master Gardener, worked with Mary on neighborhood programs and delivered workshops for several conservation commissions. Together, they reached approximately 700 people. As a result of their participation in panel discussions following showings of Paul Tukey’s film, *A Chemical Reaction*, about one Canadian town’s fight to ban pesticides, they became involved in a statewide effort to limit the use of pesticides and fertilizers for cosmetic purposes, starting with participating in a by-invitation-only Pesticides Summit in November 2010. They are now working with other citizens on supporting a bill to limit the use of pesticides on school grounds and day care centers. Mary is also sharing

information among residents of communities such as Scarborough, Portland, and Cumberland, who are working to enact local ordinances.

For the past couple of years, Mary has worked with the staff of the Portland Water District (PWD) to deliver programs about how household practices contribute pollutants to Casco Bay. This collaboration has led to her working with the PWD, Cumberland County Soil & Water Conservation District, and Project Learning Tree on a series of teacher workshops called “Over the Watershed,” which concludes with a field trip to Capisic Pond in May 2011.

Mary has participated in the planning of three *Go Green to Get Green* conferences, in 2009, 2010, and 2011, each of which attracted 100-175 landscapers and lawn care providers, and she developed and/or presented keynote addresses at each conference.

For FY12, Mary is scheduled to give BayScaping programs in the coming months and has arranged for a Master Gardener to assist with these presentations. She hopes that eventually she will be able to turn over presentation of these “neighborhood socials” to interested Master Gardeners, all of whom are trained in BayScaping/Yardscaping. Doing these presentations will help them fulfill the annual requirement that Master Gardeners have to perform volunteer service.

With the assistance of the MBPC and Peter Milholland’s artistic skills, we mounted an exhibit (literally) on the staircase of the Patagonia outlet in Freeport. Six BayScaping panels explained how to take care of your yard without using lawn chemicals. It remained on display during the height of the tourist season, from mid-June to mid-November 2010. The display was created from graphics created for the annual Portland Flower Show, an event we also assist with every year. We now have these panels at the office and are looking for other locations to display them in the coming year.

Mary continues to work with the MBPC and the Maine Landscape & Nursery Association to establish standards for the lawn care industry.

Over the coming year, we will:

- Map pesticide and fertilizer data for BayScaping presentations using GIS software
- Present at BayScaping socials or presentations in communities around Casco Bay
- Continue to collaborate with MBPC, the Portland Water District, and neighborhood associations to present workshops on the connections between lawn care practices and water quality
- Continue to spread the BayScaping ethic through strategic media releases, emails, and newsletters
- Explore ways to engage more Master Gardeners to give our BayScaping presentations in order to (eventually) free up more of Mary’s time for more support to the Baykeeping Program

D. Pumpout Program

Our **Pumpout Program** continues to play an essential role in the direct reduction of sewage discharges into the Bay, the education of boaters through the program’s ambassadorial function, and as liaison between the DEP and those marinas in out-of-service mode. During the 2010 season, our new pumpout coordinator, Jim Splude, proved to be an exceptional boat captain and ambassador on the Bay. 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. Jim will be returning for the 2011 season.

1. 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 will continue on the condition that it is financially self-sustaining and can be adequately staffed.

2. Thanks to our work, Casco Bay was awarded the first No Discharge Area status in Maine in 2006. Since then, a number of 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. 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. The DEP has been slow to attend to pumpout compliance issues in Casco Bay. Early in 2010, we re-engaged the DEP around the need to hire a mechanic to service pumpout pumps in Casco Bay and along the coast of Maine, to help get pumps back up and running in a more timely way. We will continue to monitor the DEP's commitment and progress in getting this much-needed service effectively underway.

E. Casco Bay Curriculum

We continue to work with teachers and educational administrators to disseminate the **Casco Bay Curriculum** in the community and continue to refine and update the working modules. In 2010, Mary launched our inaugural Summer Institute, to help 14 educators incorporate the *Casco Bay Curriculum* into their own curricula. We provided them with lessons and hands-on activities that incorporate real-world data about Casco Bay into their lesson plans and gave them continuing education credits through the University of Southern Maine's Professional Development Center.

Last year's project was so successful that Mary has prepared a Summer Institute for Ocean Literacy for June 2011. This will provide 20 teachers with the skills, materials, and expertise necessary to present their students with quality, science-based marine education. Literacy is an important focus of elementary school education and, increasingly, middle school. The Summer Institute highlights 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 also 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.

Mary continues to present Casco Bay Curriculum workshops and support to teachers. While the curriculum will require some updating this year, it will require less concentrated attention than in its development phase. After this summer's institute, we will assess whether an annual institute combined with on-line materials will be the best model for continuing to offer the curriculum in our community. If so, the time Mary would not be spending on presentations and workshops during the school year would be available for more support in the Baykeeper Program.

F. 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.

During 2010, in order to meet the pent-up volunteer demand we were hearing, we put together the information and supplies needed to conduct stenciling activities. We assembled "stenciling kits" with all the supplies needed to conduct a stenciling activity – including paint, stencils, and how-to guides.

During the Winter/Spring of 2010, we partnered with USM's Media Studies Program as three student film makers worked with us to create a film about the do's and don'ts of storm drain stenciling. We compiled a database of relevant ordinances and contact people in each town around the Bay to make it easier for folks to get permission to do stenciling, and we hosted several stenciling projects ourselves, including through the Summer Institute. We began to design door hangers that inform neighbors about the stenciling activity nearby and the need to not dump things down the drain; this process will continue this year.

During 2011, 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.

G. Volunteers

We will continue to recruit volunteers for the water quality monitoring program and for other field work, beach clean ups, office work, and events, using our word-of-mouth, website, posters, and Constant Contact outreach via email.

For the fourth year, we will collaborate with the Wells National Estuarine Research Reserve and students at Southern Maine Community College (SMCC) on a rapid assessment survey of marine invasive species. We will repeat a couple of experiments done in 2009 and 2010, such as using a modified lobster trap for settlement of invasive species.

H. Outreach and Events – Community Engagement with Our Work

As a community organization, people look to us to use the idea of protecting the Bay to bring people together. This gives us the opportunity to directly engage with people who care about the Bay and our work. Events that focus on specific groups have proven to be the most effective in delivering tailor-made messaging about our work and recruiting support as a result. The variety of events range from seminar-like presentations, neighborhood information and BayScaping socials, to house parties, our Volunteer Appreciation and Annual Meeting Evening for those who work the hardest for and with us, the Major Donor Appreciation party for our elite donors in an elite location, and the Wild & Scenic Film Festival open to anyone and everyone.

2011 marks Joe Payne's 20th anniversary as Casco Baykeeper, and we will fold recognition of that into our 2011 events programs.

1. **Speaking Engagements:** One of Friends of Casco Bay's strengths is making scientific data understandable as a motivator for people to change their habits in ways that will have positive impacts on the health of the Bay. People want to do the right thing. Events give us the opportunity to bring our data and science into the community in a personal and easily understandable form. This builds knowledge about the issues, informs people about what they should and shouldn't do that can protect the health of the Bay, strengthens our relationship with attendees, and increases the credibility, visibility, and relevance of the organization.

There is increasing demand for us to make presentations in the community. 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, and civic organizations. We will explore, with each opportunity, whether we will be reimbursed for travel, receive an honorarium, solicit for membership, and/or recruit volunteers, though these will by no means be "deal breakers" for engaging.

Topics for our speaking engagements include water quality, nitrogen pollution, stormwater, storm drain stenciling, Bay keeping, BayScaping, the Casco Bay curriculum, beach cleanups, boater education, ocean acidification, oil spills, and the organization.

We will be making presentations at our house parties and similar events. We will explore setting up two speaking engagements by invitation: one in Portland for local policy makers and one in Augusta for Legislators and DEP/DMR personnel. We will continue to keep a log of all presentations given, along with the number of attendees.

2. **Conferences:** Friends of Casco Bay will be involved in a number of conferences, in a variety of roles, including, at least, the annual Waterkeeper Conference in Chicago in June.
3. **House Parties:** We will host two **house party** events in 2011, one on Peaks Island in August, and another at the Harraseeket Yacht Club in September.
4. **Sponsored events:** Sponsored events bring a tremendous return, from leveraging board relationships with corporate and media sponsors that we otherwise could not access, to providing visibility with the general public while raising much needed revenue and promoting our core message and mission.

On Saturday, November 5, 2011, we plan to host, for the fourth time, the **Wild & Scenic Environmental Film Festival** at USM's Abromson Center. We will work with the Board to secure sponsors, starting with media sponsors, and including in-kind sponsors, as well as items for the raffle. We will fold recognition of Joe's 20th anniversary as Casco Baykeeper both into the sponsorship packages and into the program for the day; we are exploring use of part of the afternoon for a special recognition of his service to our community.

As in the past three years, we will also explore sponsorships and in-kind donations for our other events.

5. **Major Donor Appreciation Event:** This December event at the Cumberland Club each of the past three years has been so successful that we will repeat this in December 2011.
6. **Volunteer Appreciation and Annual Meeting Evening:** Because of the shift in timing of the film festival from October to November last year, we shifted the Annual Meeting event to late January 2011. This event gives us the opportunity to thank those who roll up their sleeves and work the hardest alongside us all year, including our Board, our water quality monitors, other volunteers, and our community partners. Cole Haan headquarters has worked well geographically and as a venue for each of the last three years; we will explore its availability again, but with Cole Haan vacating the building, we may have to relocate this event. Our Board vice president has offered space at Pierce Atwood's soon-to-be new home on Commercial Street for an event, so we may move the Volunteer Appreciation and Annual Meeting Evening there if need be.

I. Media and Public Relations

We continue to build on the already excellent record we have with getting our message out to various media connections. We will continue to find opportunities to run feature stories on our work, staff, board, and volunteers. We will continue issuing press releases on everything newsworthy, from the appointment of new board and staff members, to program initiatives, funding successes, crucial partnerships, interesting or unusual collaborations, and volunteer accomplishments.

We will keep our **website** dynamic and refreshed with substantive and easily understandable information about our work and Casco Bay. We will add more video content to the site as we continue to find creative ways to tell our story. We will continue to track visitor statistics, make use of links that serve our issues, programs, initiatives, and events.

Our use of Constant Contact to deliver email communications has proven to be very effective. Our "e" newsletters have been well received and have helped reduce our printing budget (we still produce two hardcopy newsletters a year).

We will continue to increase our Facebook active user base and explore best ways to engage users on our Facebook page to encourage viral dissemination of our messages and to guide community members to our website.

Print media: We will continue to generate 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 on-line media, which is cheaper, has the ability to go viral, and reaches a different audience.

We will endeavor to get a full featured article in one of the monthly glossy magazines (Maine Boats Homes & Harbors, Down East, Maine Magazine), and we'll continue to submit op-eds and letters to the editor to the local papers.

A new group of USM Media Studies students is already hard at work on a new film project, this time focusing on Joe's service as Baykeeper, a "this is your life" series of testimonials from friends and colleagues.

We will explore engaging in another sponsorship campaign with Maine Public Broadcasting Network, explore launching a print ad campaign, and work to continue our Film Festival promotion on WCLZ and through the Portland Press Herald.

II. Technology and Capital Assets

During 2010, we decided to launch the Baykeeper Boat Fund Campaign. The goal is to raise \$485,000 in cash, pledges, and in kind gifts in order to replace and upgrade the Baykeeper boat and to have a fund to support maintenance of the fleet (which consists of the 26' Baykeeper boat, the 21' pumpout boat, a 13' whaler, two skiffs, and two inflatables). We will continue to work with board and staff on visits to major donors for in-person asks, to develop a mailing effort for later in the campaign, and to construct proposals for foundation support.

{{By the end of 2011, we will need to replace our network server. We need more capacity and reliability than the one in use, which we acquired in December 2006.}} ***This was discussed during our Budget Workshop on April 5th. There is a \$15,000 provision in the draft of the FY12 Budget for a new network server. As the result of our discussion, we are now planning to have a technology audit performed, with an eye toward moving to cloud computing. It is very likely that the cost of the technology audit, along with the transition to cloud computing away from using an on-site server, and the ongoing monthly cost of keeping our shared files accessible "in the cloud" will collectively be significantly less than \$15k in FY12.***

We will begin exploring options for upgrading the software we use in the Development Office. We will not be making any transitions during this fiscal year, but we will be gathering information to make a plan and a budget for the future transition.

Other upgrades in office equipment will continue. We regularly cycle new computer workstations and printers through the office to keep up with technological improvements and speed.

Upgrading our water quality database, Murphy, has been and continues to be a priority, as described above at I A (9).

Our water quality monitoring equipment is in good shape. That being said, we have two water quality related infrastructure wishes. We will be on the lookout for opportunities to fund acquisition of a data sonde with telemetry, an acoustic Doppler current profiler, and a weather station that can be installed on the SMCC dock. Our efforts to catalyze the design and funding of a much-needed circulation study for

Casco Bay is beginning to be realized through work we insinuated into the Casco Bay Estuary Partnership agenda.

III. Development

The mission of the Development Office is to ensure Friends of Casco Bay's long-term success through developing and sustaining diverse sources of funding. To broaden and deepen support, we will continue working to increase Friends of Casco Bay's name recognition while cultivating donors' understanding and appreciation of our work.

2008 marked the first year of full capacity in the Development office, with both a Development Director and a full time Assistant on board. By the end of the 2009 calendar year, we began a transition in the Development office, which continued throughout 2010 into 2011, and has only just settled down.¹

During FY12, we will endeavor to broaden and deepen all sources of funding. Development efforts will include the following:

- All solicitations for membership renewals and annual fund 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.
- We will raise money for both operations and for the Baykeeper Boat fund.
- The database will continue to be mined for special solicitation opportunities. Special appeals will again be designed as part of the Annual Fund appeal, to tailor asks to interests.
- We will continue to develop our corporate solicitation plan, including improvements in working with the Board to solicit more sponsorships for events.
- We will continue our boat donation program which will shift over from Block Island Maritime Funding to the newly formed affiliate, Maine Maritime Funding Alliance, a Maine-based nonprofit established to handle boat donations for the benefit of five marine-related nonprofits in Maine (Friends of Casco Bay, Maine Island Trail Association, Maine Maritime Museum, Penobscot Marine Museum, and The Apprenticeshop).
- We will be investigating suitable development software for a future upgrade and transition.
- We will continue to set up visits with major donors, as well as with corporate and foundation representatives. We will contact the Board, as visits are set up, to garner intelligence and to see if and when Board members can accompany us. Many of these visits during 2011 and 2012 will be related to both annual gift and boat fund gift opportunities.
- We will draft our gift acceptance policy and lay the groundwork for a planned giving society.

¹ Development Director Will Everitt left in December 2009 to run the League of Young Voters. Development Assistant Kristel Sheesley was given a graduate scholarship to the Muskie School and so worked very part-time from January to June 2010. Development and Communications Assistant Megan McEwan worked from late January through February 2010, then left for a job in Colorado for which she had applied the prior November. Sam Heck worked as Development Director from February to September 2010. Will Everitt returned as Development Director in November 2010. Jesse Baines began work as Development and Communications Director in May 2010 and left in February 2011. Sarah Lyman began work as Development and Communications Assistant in March 2011.

- We will design and host a variety of events (see section above on events).
- 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.

IV. Administration

- A. **Staff:** Over the past eight years, Friends of Casco Bay has carefully restructured its staff, ultimately adding only half a position, by redefining job descriptions and hiring accordingly when there has been attrition. The staff consists of eight full time professionals, a seasonal pumpout ambassador, and by agreement with SMCC, an occasional paid intern. We have a number of unpaid interns in and out through the year and during the summer, every year.

Compensation was frozen in the FY09 / FY10 / FY11 budgets; if revenue goals were met, an accrued bonus that was included in the budget was to be released. Given the continued surplus and/or break even results, the Board has agreed annually to release this accrual and supplement it with additional funds as a bonus to the staff.

The FY12 budget contains a 3% increase in compensation integrated into the numbers, not accrued. Our benefits package includes health and dental insurance, life and disability insurance, and a retirement plan. These investments in the intellectual capital of our organization are central to attracting and retaining our excellent staff, and we need to protect this investment and make every effort to maintain levels of compensation and benefits to sustain the staff. The transition has just been made from HMO health insurance to Health Savings Accounts, a plan with a lower premium rate and a high deductible and some cost offsetting for the staff by Friends of Casco Bay for the initial transition year.

- B. **Financial Stability:** The economy, domestically and internationally, continues to be in a recession.

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, and for each year ending March 31 since, in 2009, 2010, and soon-to-be 2011, we will have ended each fiscal year 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 of the last two years) but we have not had to use a dime. The budget for FY12 will make the same request, and with skill, luck, and hard work, we hope we will not have to utilize any of the BDCF.

Monthly **financial** reports will continue to be prepared. Special attention will be paid to budget versus actual figures for any signs of revenue faltering so that assessments can be made and appropriate measures can be taken, if and as necessary. We will assess the resources we have at our disposal as we move forward each quarter, and we will continue to explore contingency plans, options, tradeoffs, implications, and opportunities.

- C. 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. 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/or 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.
- D. We will have special quarterly meetings, akin to the New Era Planning meetings that occurred during 2009 and 2010, to discuss the shifts in the political winds.

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