

# Promoting stewardship



## FACTSHEET

Nearly 20 percent of Maine's population lives in the Casco Bay watershed, and those residents are connected to the Bay directly and indirectly. A dramatic oil spill like the 1996 *Julie N* spill clearly sends the message that human activity can harm the Bay. Less obvious threats stem from myriad individual actions, such as excessive or improper use of lawn fertilizers and pesticides or washing cars near storm drains. Yet small actions like those can add up to a big pollution problem for coastal waters.

### *Why is stewardship important?*

Members of the Casco Bay community who understand the effects of their everyday actions on the Bay and take actions based on that understanding can help protect and maintain the health of the estuary for future generations.

Responsible stewardship involves cultivating an awareness of one's connection to the health of natural resources like the Bay — an awareness that permeates daily activities like making purchases, running errands, casting ballots, caring for gardens and lawns, maintaining cars, and building houses.

### *What does stewardship look like around Casco Bay?*

All over the watershed, dozens of organizations, hundreds of volunteers, and thousands of individuals are engaged with the meaningful work of improving the quality of our environment.

Citizens collect data on the water quality and aquatic life of Casco Bay. Kids pick up after their dogs. Volunteers search for invasive aquatic plants in area lakes and streams. Towns hold festivals to celebrate and help preserve their aquatic heritage. Teachers incorporate watershed-based education into their curricula. Lobstermen continue to notch the tails of lobsters bearing eggs. Fishing enthusiasts survey culverts and dams to see whether they allow for passage of fish. Locally led conservation efforts have better than doubled the area of permanently protected land in the lower watershed – to more than 15,690 acres.

Such efforts demonstrate that all residents of the watershed – those whose roots go back generations and those who arrived recently – hold the future of the Bay and its watershed in their actions and choices. In the words of Wendell Berry: "The care of the Earth is our most ancient, and most worthy, and, after all, our most pleasing responsibility."

The work of the Casco Bay Estuary Partnership is guided by the *Casco Bay Plan*, which identifies five priorities for watershed protection:

1. *Minimize pollution loading from storm-water and combined sewer overflows*
2. *Open and protect shellfish beds and swimming beaches*
3. *Protect and restore habitat*
4. *Reduce toxic pollution*
5. **Promote responsible stewardship**



*(above right) The Presumpscot River Fest celebrates the value of the river to local communities. Attractions include music and hands-on activities for kids.*

*(right) The Presumpscot River Youth Conservation Corps restores a streambank.*

## CBEP's efforts to promote stewardship

Promoting stewardship activities in the watershed is a key goal outlined in the *Casco Bay Plan*, the document that guides CBEP's work. The Partnership encourages stewardship through a variety of efforts including education, volunteer water quality monitoring, community restoration grants, and information sharing.

### Education

Education is a central component of CBEP's stewardship efforts. The Partnership supports environmental education events for primary and secondary school children in the Casco Bay watershed, including successful events like the Southern Maine Children's Water Festival and the national Envirothon competition. In addition, CBEP funds outreach by the Cumberland County Soil and Water Conservation District to develop water-related curriculum materials, work with local teachers to adapt materials to their needs, and help deliver those materials to students in the classroom.

Together, our partners' environmental education efforts reach more than 1,000 students a year and help train future stewards of the Bay. Indirectly, they reach thousands of families in the watershed and help encourage a community-wide sense of stewardship for the Bay.

CBEP also supports education for the general public, especially efforts that promote household practices that improve the health of coastal waters. Such programs include Maine's YardScaping program, which promotes Bay-friendly lawn and garden care, as well as the statewide Think Blue campaign, a stormwater education program aimed at reducing domestic sources of water pollution.

### Water quality monitoring

To enhance understanding of water quality trends in the Bay and watershed, CBEP supports several volunteer-based monitoring programs. It continues to fund Friends of Casco Bay's Citizen Stewards Water Quality Monitoring Program, one of the best volunteer monitoring efforts in the nation. Volunteers monitor more than 30 sites around the Bay to measure parameters including temperature, pH, and nutrient concentrations. Data gathered through this program are analyzed and results are summarized in an annual water quality monitoring report, which is shared with communities around the Bay. In addition, CBEP funds freshwater monitoring efforts conducted by the Lakes Environmental Association and the Presumpscot River Watch.

Citizen science provides one of the most cost effective ways to collect good scientific data, while also fostering of an ethic of environmental stewardship among area residents. Citizen involvement with monitoring helps instill in participants and their families a sense of responsibility for the environment.



Jeff Varrichione

Volunteers plant trees and shrubs on an eroded riverbank.

School Year	Towns	Schools	Students Taught
2004 - 2005	8	11	617
2005-2006	8	11	551
2006-2007	8	17	747
2007-2008	10	14	776
2008-2009	11	18	1,159
<b>Total</b>			<b>3,850</b>

Cumberland County Soil and Water Conservation District educators, funded by CBEP and local municipalities, reached nearly 4,000 students with environmental education programs between 2004 and 2009.



Jack Vreeland

CBEP funded the creation of educational signs that provide a primer on the ecology and history of Casco Bay and encourage individuals to help protect water quality. These signs will be installed along Portland's waterfront.





### **Community restoration**

To help cultivate a sense of stewardship among residents of the watershed, CBEP supports community-based restoration activities with funding, technical advice and logistical assistance. Community restoration projects not only restore degraded habitat, but also engage communities with restoration and stewardship activities in their own backyards.

### **Sharing information through State of the Bay conferences**

Every five years, CBEP hosts a State of the Bay conference, designed to share information among diverse stakeholders about environmental management and science related to the Casco Bay watershed. The conferences foster ongoing dialogue and problem-solving, promote networking and new partnerships, allow technology transfer, and encourage further action to protect the Bay and its watershed.

## **Case Studies**

### **Casco Bay Youth Conservation Corps Collaborative**

The watershed benefits from the stewardship and leadership of local youth conservation corps (YCCs): teams of five high school students, a crew leader, and a technical director. YCCs work with private landowners, lake associations, municipalities, state and federal agencies, and others to implement water quality improvement projects, such as constructing low-impact development structures, planting riparian buffers and rain gardens, and stenciling storm drains. YCCs' greatest benefit may be in cultivating environmental stewardship among youth, who develop leadership skills while working in their local communities to protect water quality.

### **Portland Water District Education Programs**

The Portland Water District runs multiple education programs in the Casco Bay watershed, including Hydrologics, TroutKids, and Drop in the Bucket. Taking advantage of students' innate curiosity, PWD's educators actively seek to help children become stewards of their water resources. Over the span of the 2009-2010 school year, PWD educators reached more than 4,500 students with over 22,319 contact hours.

### **AquaKids: bringing a national TV show to Casco Bay**

In partnership with Friends of Casco Bay and other partners, CBEP brought *AquaKids*, a nationally syndicated television show for children focusing on marine and aquatic science and conservation, to Casco Bay. All *AquaKids* episodes focus on young people who dedicate their time and energy to protecting local ecology and natural resources. The show found no shortage of that enthusiasm in Casco Bay. The cameras followed local youngsters and the cast of the show as they explained the vessel pumpout boat in Portland Harbor, tested water quality, and monitored for lobsters and horseshoe crabs.



*Every five years, CBEP hosts State of the Bay conferences to share information about watershed science and management and foster dialog among Bay stakeholders.*

*Above, from top: CBEP Director Curtis Bohlen speaks about the state of Casco Bay at the 2010 conference. Susan Shaw, Founder/ Director of the Marine Environmental Research Institute, presents a keynote address on toxic contamination.*



*In 2008, CBEP and its partners brought the national TV program AquaKids to Casco Bay to film an episode. The episode featured lobster monitoring, water quality sampling, and other hands-on activities.*

## Stewardship strategies

CBEP established the following goal and objectives in order to promote stewardship in the Casco Bay watershed.

**Goal:** Promote responsible stewardship on the part of Casco Bay community members, to protect Casco Bay and its watershed

**Objectives:**

1. Support K-12 educational activities related to Casco Bay
2. Focus post-secondary educational programs on Casco Bay
3. Support educational campaigns to promote sound household practices
4. Hold "State of the Bay" conferences every five years to share information about environmental management and science related to Casco Bay and its watershed
5. Continue Friends of Casco Bay's successful volunteer water quality monitoring program

## Partners

As with all of CBEP's efforts, collaboration is critical to its work advancing stewardship for the Bay. Key stewardship partners include Bates College, Bowdoin College, Cumberland County Soil and Water Conservation District, the Casco Bay Interlocal Stormwater Working Group, Friends of Casco Bay, Maine Board of Pesticides Control, Maine Coastal Program in the State Planning Office, Maine Department of Environmental Protection, University of Maine Cooperative Extension, University of Maine Sea Grant Program, University of Southern Maine, U.S. Environmental Protection Agency, and the Wells National Estuarine Research Reserve.

## For more information

For more information about CBEP's grants and technical assistance programs, visit the website, or call 780-4820.

## How You Can Help

The US EPA defines environmental stewardship as a responsibility shared by all those whose actions affect the environment. Below are some simple ideas for how your everyday actions can help protect Casco Bay.

- Landscape with water quality in mind: Eliminate or minimize use of yard fertilizers and pesticides, which can wash into coastal waters. Plant trees and shrubs to absorb rainwater, especially along streambanks
- Reduce stormwater flowing off your property by installing a rain barrel, creating a rain garden, or planting water-loving trees and shrubs
- Use non-toxic household cleaners whenever possible
- Properly use, store, and dispose of all household chemicals like motor oil, batteries, and paint thinner
- Limit water use
- Recycle as much of your household waste as possible
- Volunteer with a local nonprofit to plant trees, clean up shorelines, or help with other projects to protect and restore local habitats

*Protecting & restoring the ecological integrity of the Casco Bay watershed*



The Casco Bay Estuary Partnership works to preserve the ecological integrity of Casco Bay and to ensure compatible human uses of the Bay's resources, through public stewardship and effective management.