

Goal 3

Foster resilient communities and their connections to Casco Bay

The Casco Bay watershed faces some of Maine’s more intense growth and development pressure, which threatens to diminish the region’s natural beauty and abundance. Casco Bay is a major regional asset, yet its importance as an economic driver is undervalued. Casco Bay Estuary Partnership (CBEP) can play a significant role in the coming years through public outreach and collaborative initiatives that illuminate the region’s ecological and economic interconnections, celebrate the Bay’s multiple values, and help citizens and leaders prepare for climate disruptions.

Strategy 3.1: Strengthen appreciation for the cultural, ecological and economic values of Casco Bay

Watershed residents who appreciate the many assets that Casco Bay provides and enjoy a strong sense of place are more likely to adopt practices that benefit the Bay and undertake work on its behalf. Greater comprehension of the interconnections between ecological and economic health can build support for protecting the Bay’s well-being. Taking a collaborative approach to public outreach that engages members of the business and creative communities, CBEP will shape a campaign that encourages people to reflect on how the Bay enhances their lives and what public actions are needed to sustain its values.

Strategy 3.2: Improve local policies and practices to better protect the Bay

Municipalities need assistance assembling and applying the best available science to develop, enact and enforce ordinances that foster healthy water quality and ecosystems in Casco Bay. CBEP will support municipalities by providing resources, models, inspiration, technical guidance and moral support. Through its newsletter, publications, website, and networks, CBEP is well-situated to showcase model projects—inspiring broader adoption of best practices.

Strategy 3.3: Help communities prepare for climate change impacts and resulting economic, cultural and ecological disruptions

Climate disruptions will further tax the capacities and resources of municipalities within the Casco Bay watershed. CBEP can provide information to help communities anticipate and prepare for change.

Highlight Casco Bay's Economic Importance

Goal 3: Foster resilient communities and their connections to Casco Bay

Strategy 3.1: Strengthen appreciation for the cultural, ecological and economic values of Casco Bay

Purpose

Communicate findings through creative channels on the economic values of Casco Bay (e.g., from recreation, tourism, shipping, marine trades and marine harvests) and the economic savings associated with climate preparedness

Timeline

Begin in 2016 and develop outreach materials in 2017

Other Cooperators

- Island Institute
- Greater Portland Council of Governments
- Manomet Center for Conservation Sciences
- Center for Business and Economic Research, University of Southern Maine
- Muskie School of Public Service, University of Southern Maine
- Economists at other Maine colleges and universities
- Creative Portland
- Portland Regional Chamber of Commerce

Description

Economic information can be a powerful motivator for those making decisions that affect the Bay. Yet few individuals, business leaders or municipal representatives have a sense for how much Casco Bay contributes to the regional economy owing to minimal data being available on a regional scale. (National Oceanic and Atmospheric Administration creates county-level assessments of the marine economy, and Maine Department of Marine Resources offers statistics on marine harvests, but these are not adequate proxies for calculating the local significance of marine-related industries.)

Even fewer data are available for assessing the economic impacts that coastal changes may bring to the region—in terms of sea level rise (one past study has been done), marine ecosystem disruptions (such as ocean acidification, altered water quality, or effects of invasive marine species), and changing precipitation patterns.

Casco Bay Estuary Partnership (CBEP) will commission an assessment of the economic importance of Bay-related industries and of the potential costs that could result from declines in Bay health and inundation of critical habitat and infrastructure. This assessment will gather information on the market values, jobs, and wages associated with Bay-dependent industries. If resources permit, a further study may be completed that looks at the services (benefits to humans) provided by the Bay ecosystem.

Results of this assessment will be shared broadly through a collaborative outreach effort that engages the region's business and creative communities. Building on past charrettes organized by the Portland Society of Architecture and the U.S. Green Building Council's Maine Chapter, CBEP and others will host forums for the business community to share research findings in coordination with a team of business and arts representatives that collectively reviews study

results and collaboratively plans an outreach strategy.

Resources

CBEP will select a contractor with relevant expertise to conduct the economic analyses, the cost of which will depend on their scope and sophistication (ranging from \$20,000 up to many times that). CBEP will have to invest minimal staff time to manage that contract, but moderate staff effort will be needed to create and conduct outreach.

Outputs

- Report on the economic significance of Casco Bay and economic threats to its productivity
- Outreach program broadly sharing report findings

Outcomes

- Short-term
 - Increased understanding of the scope and characteristics of the marine-dependent coastal economy of Casco Bay
- Medium-term
 - Broader understanding of the importance of Casco Bay to the well-being of Casco Bay communities
- Long-term
 - Community support for policies and decisions that protect and restore the Bay

Metrics and Targets

Metric	Target
Completion and distribution of report on economic significance and threats	By end of 2017
Presentations to groups of business owners, neighborhood associations and municipal finance representatives	per year 2018–2019

Expand and Publicize Volunteer Opportunities

Goal 3: Foster resilient communities and their connections to Casco Bay

Strategy 3.1: Strengthen appreciation for the cultural, ecological and economic values of Casco Bay

Purpose

Foster widespread citizen engagement and community service on Bay-related projects by helping catalog, publicize and expand volunteer programs

Timeline

Compile existing listings and baseline figures in 2016, and begin distributing listings and profiles in 2017

Key Alliances

- Volunteer water quality monitoring programs (e.g., Presumpscot River Watch, Friends of Casco Bay, Maine’s Volunteer River Monitoring Program, Maine’s Volunteer Lake Monitoring Program)
- Land trust stewardship programs
- Watershed groups
- Other nonprofit organizations (such as Maine Island Trail Association, Maine Audubon and Rippleffect)
- University of Southern Maine, University of New England, Southern Maine Community College

Other Cooperators

- Municipalities
- Businesses
- AmeriCorps

Description

Many valuable marine-related education and citizen science programs exist in the Casco Bay region, but their base of support is confined primarily to a limited pool of nonprofit organization members. Currently there is no cohesive regional system to help expand the potential volunteer base of an engagement pyramid (tiered to allow many levels of commitment—from tracking of organizational activities, to one-time participation in an event on up to ongoing stewardship, monitoring or other responsibilities). Volunteers typically begin at the base (observing what others are doing) and work their way up to become progressively more engaged, contributing more time and providing greater leadership. Contact with the base level of volunteers occurs primarily through websites, social networks, e-mail and e-newsletters.

Casco Bay Estuary Partnership (CBEP) can play an important role expanding the number of individuals who are aware of and interested in Bay-related activities. By cataloging, profiling and publicizing volunteer opportunities, CBEP can boost support for existing projects and help locate the volunteers needed to take on new initiatives. To ensure that its efforts are effective, CBEP will establish baseline levels of current Bay-related volunteer activity and monitor growth in numbers over the coming five years.

Resources

Significant CBEP or other staff time (the program need not be housed at CBEP) will be needed to compile information on current volunteer programs, assess needs for increased volunteer service, and establish baseline figures for current participation. Consistent ongoing effort will be needed to routinely update listing information, share project and volunteer profiles, and highlight new opportunities as they arise.

Outputs

- Newsletter content, social media postings, website content
- Volunteer needs summary (including baseline figures of current activity)
- Creation of new volunteer programs designed to implement a targeted need

Outcomes

- Short-term
 - Broader public awareness about volunteer opportunities
 - Wider range of opportunities, attracting a larger pool of prospective volunteers
- Medium-term
 - Increased volunteerism on Bay-related activities
- Long-term
 - Widespread citizen engagement and stewardship on behalf of the Bay and watershed

Metrics and Targets

<i>Metric</i>	<i>Target</i>
Number of volunteer profiles and opportunity notices distributed annually	12 annually, starting in 2017
Number of volunteer opportunities publicized in annually updated summary	5% increase annually starting in 2017
Number of volunteer hours per year recorded by partner organizations	5% increase annually starting in 2017

Encourage Experiential Learning Programs to Engage Students With Casco Bay

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Strategy 3.1: Strengthen appreciation for the cultural, ecological and economic values of Casco Bay

Purpose

Foster ties to Casco Bay among youth engaged in experiential or expeditionary learning programs

Timeline

Begin research in 2016 with initial projects in 2016-2017 academic year

Key Alliances

- University of Southern Maine
- Expeditionary learning institutions
- Cumberland County Soil and Water Conservation District
- Friends of Casco Bay
- Gulf of Maine Research Institute
- Portland Water District
- Marine researchers

Other Cooperators

- Gulf of Maine Marine Education Association
- Maine Environmental Education Association
- Wells National Estuarine Research Reserve
- Land trusts
- Municipalities, businesses, nongovernmental organizations

Description

Students actively engaged in Bay-related research and stewardship efforts can serve as important emissaries to the larger community and cultivate an environmental ethic that informs their future decision making. The Casco Bay region has a wealth of schools committed to expeditionary/experiential learning with a strong focus on science, technology, engineering and math (STEM)—including King Middle School, Casco Bay High School, Baxter Academy for Technology and Science, Waynflete School’s and Chewonki’s Sustainable Ocean Studies summer program, Coastal Studies for Girls, and Harpswell Coastal Academy—as well as University of Southern Maine (USM) Metropolitan University initiative. Programs run by the Cumberland County Soil and Water Conservation District, Portland Water District, Gulf of Maine Research Institute, Rippleffect and others provide additional experiential learning opportunities.

Casco Bay Estuary Partnership (CBEP) will encourage existing programs to engage in Bay-related study by helping match schools with Casco Bay projects that could benefit from student engagement. After surveying opportunities for marine-related projects and “expeditions,” the Partnership (along with USM faculty and representatives of other interested organizations such as the Gulf of Maine Marine Education Association, Cumberland County Soil and Water Conservation District and Friends of Casco Bay) will meet with representatives of schools and other educational programs to review opportunities, learn more about student needs, and identify what further supports are necessary. CBEP also will help schools receive broader media coverage for Bay-focused educational projects and presentations.

Resources

Significant CBEP staff time will be needed initially to catalog existing opportunities for Bay-focused projects, reach out to schools and other organizations, and identify shared needs and interests. Modest financial support will help facilitate participation by schools (by covering transportation and materials costs associated with Bay-related projects). The ongoing staff commitment will depend on the number of Bay-focused units and expeditions that occur. If the level of school engagement grows substantially, external grant funding will be required.

Outputs

- Report on existing opportunities for Bay-related education projects
- Stronger relationships with regional experiential learning schools and organizations
- Events and media coverage that highlight youth engagement with, and stewardship of, Casco Bay

Outcomes

- Short-term
 - Stronger collaboration between marine science and education communities
 - Greater understanding among youth about Bay ecosystems and health
- Medium-term
 - Youth develop an ethic of Bay stewardship
 - Bay science and stewardship benefit from youth contributions
- Long-term
 - Stronger community support for actions that protect the Bay
 - Bay-focused learning fully assimilated into educational institutions of communities around Casco Bay

Metrics and Targets

Metric	Target
Number of classes participating annually in Bay-focused units or expeditions	1–2 in the 2016–2017 school year, increasing to 5–6 by 2020–2021
Number of Bay-focused experiential learning presentations or events geared toward a general audience	2–3 per year, beginning in 2017

Offer Small Grants for Community-based Projects

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Purpose

Support locally led activities that effectively strengthen community ties to Casco Bay, encouraging greater appreciation for its values and actions to improve its health

Timeline

Ongoing with annual grant cycle

Key Alliances

- Land trusts
- Nongovernmental and civic groups
- Municipalities
- Schools

Other Cooperators

- Businesses
- State agencies

Description

In addition to its Habitat Protection Fund (Action 1.1.A), Casco Bay Estuary Partnership (CBEP) has in the past offered small grants (less than \$5,000) to support community-based environmental stewardship activities that enhance aquatic habitats. CBEP is now expanding the scope of this second grants program to encourage new partnerships and a broad array of innovative projects designed to engage communities with Casco Bay. Environmental restoration and habitat enhancement projects will still be eligible, but CBEP will consider support for school-based marine education projects, citizen science and stewardship initiatives, storytelling and art projects (such as further expansion of the Casco Bay Stories project that CBEP launched in 2014), and other activities that demonstrably build greater public appreciation for Casco Bay.

Grant applications will be accepted annually, typically in winter, so that proposal review can be completed in time to support spring and summer projects.

Resources

Minimal CBEP staff time will be required to develop the Request for Proposals, manage annual grants competitions, promote media coverage, and manage reporting requirements. Core CBEP funds allocated to this Action will vary between \$5,000 and \$10,000 annually, depending on other funding needs. CBEP will seek additional funding to expand this program.

Outputs

- Annual RFP and grant awards
- Projects completed

Outcomes

- Short-term
 - Local groups envision creative approaches to engaging people in environmental improvement projects
 - Local groups implement projects that encourage people to steward the Bay and watershed
 - Support for local efforts to address environmental and community needs
 - Media coverage of environmental stewardship projects
- Medium-term
 - Building of new relationships and partnerships; cultivation of new approaches to environmental stewardship
- Support for local people and groups to better steward and advocate for the environment
- Long-term
 - Community support for projects, policies and decisions that protect and restore the Bay and watershed

Metrics and Targets

Metric	Target
Number of grants funded per year	1–3
Number of grant-related media stories generated per year	2–4

Provide Technical Assistance to Casco Bay Communities

Goal 3: Foster resilient communities and their connections to Casco Bay

Strategy 3.2: Improve local policies and practices to better protect the Bay

Purpose

Provide technical assistance on marine and coastal issues to coastal communities, fostering stronger information sharing with municipal staff and volunteers

Timeline

Begin by 2018

Key Alliances

Maine Sea Grant

Other Cooperators

Coastal municipalities and other coastal stakeholders

Description

Maine Sea Grant and University of Maine Cooperative Extension manage a coast-wide network of marine extension professionals who work in designated regions to provide assistance and training on marine science and policy issues of local concern (e.g., coastal resilience, impacts of development on water quality, control of invasive species, and aquaculture). Historically, Casco Bay has not been served by a marine extension team member, despite its large population and economic and ecological significance. This marine extension role, or an equivalent position, is greatly needed.

Casco Bay Estuary Partnership (CBEP) will work with Maine's Marine Extension Team to provide marine extension services to communities on Casco Bay, increasing CBEP's capacity to respond to issues of local concern. Initially, the extension responsibilities could be part of a CBEP staff position, but would best be fulfilled—as additional funding is found—through a dedicated, full-time position.

Resources

Funding will come from a combination of core CBEP funds and other sources, raised in part with the assistance of Maine Sea Grant. Marine extension services would contribute directly to many Actions in the *Casco Bay Plan*.

Outputs

Coastal municipalities and other coastal stakeholders

Outcomes

- Short-term
 - Improved relationships with municipalities and greater awareness of CBEP
 - Better municipal access to information regarding local coastal concerns (including climate change and resilience)
- Medium-term
 - Improved local decision making
- Long-term
 - More resilient coastal communities
 - Improved health of Casco Bay

Metrics and Targets

<i>Metric</i>	<i>Target</i>
Number of towns provided with marine extension services	8 in 2017–2019, increasing to 16 by 2021

Create and Promote a Municipal Self-Assessment Tool to Encourage Adoption of Local Policies That Protect Casco Bay

Goal 3: Foster resilient communities and their connections to Casco Bay

Strategy 3.2: Improve local policies and practices to better protect the Bay

Purpose

Help municipalities identify and implement policies to improve local water quality and foster the vitality of Casco Bay

Timeline

Prepare draft matrix and model materials by early 2018

Key Alliances

- Local municipalities
- Greater Portland Council of Governments
- Maine Coastal Program/ Department of Agriculture, Conservation and Forestry

Other Cooperators

- University of Southern Maine/Muskie Institute for Public Service
- Manomet Center for Conservation Sciences

Description

Local policies in areas such as watershed planning, land use, stormwater management, road construction and maintenance, and shoreland zoning can profoundly affect local water quality. This Action will help municipalities evaluate and track their progress toward implementing Bay-friendly municipal policies and practices.

Municipal policies and comprehensive plans have been surveyed and catalogued, in efforts to assess their environmental impacts, through numerous past projects: the *Community Strategies to Improve the Bay* report co-produced by Casco Bay Estuary Partnership (CBEP) and Friends of Casco Bay in 2002; a Manomet Center for Conservation Sciences climate adaptation study in the upper watershed; a *Casco Bay Environmental Planning Assessment* by the Greater Portland Council of Governments; and data collected by University of Southern Maine researchers as part of the Sustainable Solutions Initiative. CBEP will gather information from prior studies and update it as needed to develop (1) a matrix of municipal actions that communities could use to gauge past progress and identify next steps; and (2) an online resource library (routinely updated) of model policies, ordinances and recommended protocols designed to improve water quality and foster climate resilience.

Municipal staff members and boards can use the self-assessment matrix to systematically review policies and practices affecting local waters and climate preparedness such as climate risk assessments; allocation of municipal funds to support land conservation and management of town-owned lands; enforcement of key rules and policies; zoning provisions (e.g., setbacks, density, and limits set on industrial and commercial zones); ordinances (e.g., limiting use of pesticides and fertilizers); sea level rise adaptation measures; and support for septic assessments and shoreline surveys.

To assist municipalities that identify opportunities for improved policies and practices, CBEP will provide the following: access to an online resource library of model measures; technical assistance (Action 3.2.A) and trainings related to stormwater management (Actions 2.2.B and 2.4.A); and support for climate preparedness (Action 3.3.A). In coordination with the Maine Coastal Program and other allied organizations, it may also offer a “Bay-wise Planners Field Academy,” helping improve their understanding of land use impacts on Casco Bay.

CBEP staff members (and any contractor hired) will work collaboratively with a group of municipal and regional planning entities to identify the most effective structure for the self-assessment matrix and the model materials. CBEP plans to seek alliances with organizations like Greater Portland Council of Governments that are eligible for Maine Coastal Program’s Coastal Community Grants.

Resources

Funds will be needed for CBEP to hire a contractor to conduct the initial review of local policies, draft the matrix of recommended policies and practices, and develop the online library of model measures. CBEP staff time will be needed thereafter to provide technical assistance (Action 3.2.A) and periodic trainings.

Outputs

- Compilation of local policies and practices that would benefit the Bay
- Review of current municipal policies
- Resource library of model policies and practices

Outcomes

- Short-term
 - Better understanding of current policies and their impacts on the Bay
- Medium-term
 - Adoption of local policies that strengthen Bay protection
- Long-term
 - Protection the water quality, habitats, and ecosystem integrity of Casco Bay, and strengthening of the climate resilience of communities along the Bay

Metrics and Targets

Metric	Target
Compilation of current municipal policies completed	2017
Preparation of draft municipal self-assessment	2018
Completion of resource library of model measures	2019

Help Portland Create a Solution for Dredged Material Disposal

Goal 3: Foster resilient communities and their connections to Casco Bay

Strategy 3.2: Improve local policies and practices to better protect the Bay

Purpose

Help Portland identify an environmentally responsible disposal solution for material dredged from private and public berthing areas

Timeline

Ongoing

Key Alliances

- City of Portland
- City of South Portland
- Portland Harbor Commission
- Waterfront Alliance
- Maine Department of Environmental Protection
- U.S. Army Corps of Engineers

Other Cooperators

- Waterfront business owners
- Maine Coastal Program/ Department of Agriculture, Conservation and Forestry

Description

An economically vibrant waterfront economy is an important asset of Casco Bay. Waterfront businesses depend on periodic dredging both of Portland Harbor’s Federal Navigation Channel and of the waters adjoining private piers.

Dredging is expensive, particularly if the contaminants present in dredged materials trigger requirements for environmentally sound disposal. The potential toxicity of sediments by Portland’s public and private piers is problematic because current owners are expected to cover the costs of testing and removing dredged material even though they bear little responsibility for the contaminants it contains (which are thought to derive primarily from industrial and commercial activities in the 1800s and early 1900s, sewer effluents and stormwater runoff).

To explore possible solutions, Portland recently established a “Non-Federal Dredge Working Group” that is identifying disposal options, and raising funds for the feasibility studies and engineering needed to establish a “Confined Aquatic Disposal” (CAD) facility for Portland Harbor.

Casco Bay Estuary Partnership (CBEP) will continue to participate in the Working Group, assisting with efforts to find an environmentally responsible and economically affordable approach to disposing of potentially toxic sediment excavated from Portland Harbor.

Resources

CBEP has only a minimal time investment in this process, as the principal responsibility lies with the cities of Portland and South Portland, the Portland Harbor Commission and local pier owners.

Outputs

CAD disposal facility for Casco Bay

Outcomes

- Short-term
 - Partnerships with public and private entities looking to achieve reduced toxic exposure to the environment from contaminated sediments
- Medium-term
 - Safe removal and disposal of potentially toxic materials dredged from Portland Harbor
 - Dredging of private berthing areas
 - Improved business opportunities for pier owners, facilitating long-term maintenance of piers that support traditional and emerging marine industries

- Long-term
 - A viable and economically vibrant waterfront economy
 - A waterfront community with the financial resources necessary to respond to rising seas

Metrics and Targets

Metric	Target
Completion of CAD disposal facility	By end of 2018, pending funding
401 water quality certificate issued	To be determined
401 water quality certificate completed	Before dredging begins

Foster Climate Preparedness among Local Decision Makers

Goal 3: Foster resilient communities and their connections to Casco Bay

Strategy 3.3: Help communities prepare for climate change impacts and resulting economic, cultural and ecological disruptions

Purpose

Help targeted audiences within regional municipalities become better equipped to manage climate disruptions

Timeline

Begin work with allied organizations in 2016, with annual trainings planned through 2021

Key Alliances

- New England Environmental Finance Center
- Maine Geological Survey
- Maine Coastal Program/Department of Agriculture, Conservation & Forestry
- Maine Department of Environmental Protection
- Greater Portland Council of Governments

Other Cooperators

- Maine Sea Grant/University of Maine Cooperative Extension
- University of Maine Climate Change Institute
- University of Southern Maine
- Businesses
- Portland Regional Chamber of Commerce
- Wells National Estuarine Research Reserve
- Maine Audubon
- National Oceanic and Atmospheric Administration Coastal Services Center
- Maine Department of Transportation

Description

The Casco Bay region is vulnerable to a wide range of climate disturbances, yet preparedness efforts to date have been minimal and scattered. Casco Bay Estuary Partnership (CBEP) will work to convene municipal and other community leaders from around the watershed for focused trainings that improve their capacity to strengthen climate resilience.

Based on needs expressed by municipal officials and adaptation specialists working in the region, CBEP plans to organize, co-host or co-sponsor a series of skill-building, no- or low-fee trainings over the next five years. These activities might include:

- Encourage completion of sea level rise vulnerability assessments (in conjunction with Maine Geological Survey) in Casco Bay communities that have not yet undertaken these studies;
- Train public works directors, engineers and utility staff members in how to interpret and apply Intensity-Duration-Frequency curves, which concisely capture information on magnitude of rainfall, to enhance preparedness for extreme precipitation;
- Introduce realtors to the National Flood Insurance Program and help them identify characteristics of flood-prone and resilient properties;
- Invite leaders of the New Hampshire Coastal Adaptation Workgroup, Great Bay National Estuarine Research Reserve (NERR) and Wells NERR to present on ways that municipalities and regions can take an integrated approach to

climate adaptation and mitigation that fosters sustainability across all sectors; and

- Collaborate with the New England Environmental Finance Center and University of Maryland’s Environmental Finance Center to offer Casco Bay leaders “Environmental Finance Boot Camp” trainings that enhance both economic and climate resilience.

Resources

Minimal CBEP staff time will be required to coordinate the trainings. Costs of the trainings will depend on factors such as speaker location and fees; availability of donated space; and in-kind contributions by allied organizations. Grant funding or business sponsorships could be sought for the more expensive trainings.

CBEP will explore the possibility of helping to support an Island Institute Fellow charged with advancing local climate adaptation planning on one or two Casco Bay islands. This focused effort could serve as a model for other communities trying to take an integrated and effective approach to climate challenges that cross sectors.

Outputs

At least five training events and associated outreach and guidance materials

Outcomes

- Short-term
 - More than 100 individuals in the watershed will receive specialized training that they can share with colleagues to enhance community preparedness
- Medium-term
 - Municipalities increase their capacity for anticipatory climate adaptation
- Long-term
 - Municipalities minimize destructive climate impacts and associated costs through enhanced preparedness

Metrics and Targets

Metric	Target
Specialized trainings to strengthen community preparedness	5 trainings by 2021
Number of people participating in trainings	100 participants by 2021

Promote Climate Adaptation Best Practices That Incorporate Sound Climate Science

Goal 3: Foster resilient communities and their connections to Casco Bay

Strategy 3.3: Help communities prepare for climate change impacts and resulting economic, cultural and ecological disruptions

Purpose

Provide current, scientifically sound guidance on climate preparedness measures so that communities can readily and cost-effectively institute changes

Timeline

Circulate research findings in 2016 and conduct further outreach in subsequent years

Key Alliances

- Maine Geological Survey
- Maine Coastal Program/Department of Agriculture, Conservation and Forestry
- Greater Portland Council of Governments

Other Cooperators

- New England Environmental Finance Center
- Cumberland County Emergency Management Agency
- University of Maine Climate Change Institute
- Cumberland County Soil and Water Conservation District
- Maine Department of Transportation
- Professionals in the creative economy (photographers, advertising copywriters, graphic designers, videographers, etc.)

Description

Many of the climate stressors that will have a significant regional impact—like sea level rise and ocean acidification—are only beginning to manifest. To encourage communities to engage in anticipatory adaptation, Casco Bay Estuary Partnership (CBEP) plans to share recent research on climate impacts and to work collaboratively with allied organizations providing clear and consistent guidance on what actions communities can take.

This action builds on an Advisory Services report (prepared by the Urban Land Institute during a 2014 resiliency assessment of the Portland and South Portland waterfronts) that advocates for a credible data source on which communities can depend for planning. CBEP compiled a peer-reviewed summary in 2015, and will update and publicize it as needed so that planners have a reliable benchmark as conditions and scientific findings change.

Tasks to fulfill this action will be developed collaboratively with allied organizations, but could include:

- Publicize findings from CBEP’s summary on climate stressors (*Climate Trends in the Casco Bay Region*) through diverse and creative channels to ensure that decision makers in many sectors (from public health and emergency management to marine trades and tourism) begin anticipating impacts of these stressors;
- Prepare a handout of resources on flooding, shoreline stabilization and actions for increased coastal resilience for municipalities to distribute to shorefront property owners;

- Create one or more interpretive panels on sea level rise and other climate change impacts at Buoy Park in Portland where CBEP has existing educational displays;
- Assemble case studies of small communities outside Maine that are successfully tackling climate adaptation in an integrated manner and share those (online and through presentations) with Casco Bay communities;
- Create and widely disseminate information on the benefits/cost savings of climate preparedness, and deliver those messages and resources efficiently through creative venues (Actions 3.1.A and 4.1.A); and
- Include current climate science data and climate preparedness measures in upcoming revisions to the *Cumberland County Hazard Mitigation Plan*.

Resources

Moderate CBEP staff time will be required during the initial focus in 2016 (with funding in part through the Environmental Protection Agency’s Climate Ready Estuaries program). Subsequent efforts will be supported primarily via grant funding, or by implementing collaborative efforts with other organizations.

Outputs

Climate Trends in the Casco Bay Region and other publications produced and distributed in print and online

Outcomes

- Short-term
 - Local decision makers better understand climate impacts likely to shape the Casco Bay region in coming decades
- Medium-term
 - Local decision makers recognize the need for more accelerated and integrated approaches to climate adaptation
- Long-term
 - Municipalities minimize destructive climate impacts and associated costs through enhanced preparedness

Metrics and Targets

Metric	Target
Climate stressor research findings appear in at least 25 organizational newsletters, several traditional media outlets and on social media	Distribution to at least 10,000 e-news recipients by 2017