DRAFT August 19, 2011

Executive Summary

The Governors and Premiers of Massachusetts, New Hampshire, Maine, New Brunswick, and Nova Scotia—the five states and provinces bordering the Gulf of Maine—established the Gulf of Maine Council on the Marine Environment in 1989 as a regional entity with a mission to maintain and enhance environmental quality in the Gulf of Maine and to allow for sustainable resource use by existing and future generations.

The Gulf of Maine Council on the Marine Environment Action Plan 2012–2017 presents the Goals, Outcomes, and Activities that the Council will pursue through its Committees in this five-year period. Some Activities may be implemented in collaboration with partner organizations. The Action Plan addresses issues that require or benefit significantly from regional collaboration and have been identified as priorities by Council members representing federal, state, and provincial governments, non-government organizations, and business interests.

The Council has defined a Vision Statement that guides its efforts: We envision a healthy and resilient Gulf of Maine where people and aquatic life thrive. Through the Action Plan, the Council will work toward three long-range Goals that contribute to the Vision:

- Goal 1: Restored and Conserved Habitats
 Habitats in the ocean and along the coast, including the rivers that flow to the ocean, are healthy, productive, and resilient. They support rich aquatic life and a vibrant, sustainable ocean economy.
- Goals 2: Environmental and Human Health Environmental conditions support the health of people and the ecosystem.
- Goal 3: Sustainable Communities
 People who live and work in communities around the Gulf of Maine have information needed to adapt to the changing environment.

The Council is committed to these long-term Goals, recognizing that it will take decades to fully realize them. For each Goal, the Council has identified two or three Outcomes, which are measurable changes to be accomplished from 2012 to 2017 and which contribute toward the Goal. For each Outcome, the Council has defined one or more Activities, which are projects or programs that contributed toward the Outcome. The Council will prepare annual Work Plans for implementing the Activities. The Work Plans will be posted on the Council's website: www.gulfofmaine.org.

The Council developed this Action Plan to reflect input from partner organizations and the public, to incorporate the recommendations of relevant studies, reports, and workshops, and to address policy developments and regional priorities. This Action Plan builds on the results of the Council's previous five-year Action Plan for 2007–2012 and three earlier Action Plans.

DRAFT August 19, 2011

Action Plan Structure

The Action Plan includes a Vision, three Goals, two or three Outcomes per Goal, and one or more Activities for each Outcome. This figure defines these terms and shows the relationship between them.

THE **VISION** IS A DESCRIPTION OF THE DESIRED FUTURE CONDITIONS.

GOAL

A **Goal** is a long-term result that the Gulf of Maine Council and other organizations are working to achieve over a period of decades and that contributes toward the Vision.

Outcome

An **Outcome** is a measurable change that the Gulf of Maine Council and other organizations seek to accomplish in the next five years and that contributes toward the Goal.

ACTIVITIES OF THE GULF OF MAINE COUNCIL

(May be conducted in partnership with other organizations.)

An **Activity** is a project or program during the period of this Action Plan (2012-2017) that contributes toward the Outcome.

Ongoing or New Commitments:

 Ongoing or New Commitments are Activities that the Gulf of Maine Council and/or other organizations already are implementing or have committed financial resources to implement.

Pending:

 Pending Activities have been identified as priorities by the Gulf of Maine Council and/or other organizations but are still in planning stages and/or do not yet have funding.

Note to AP Draft reviewers: On the Action Plan website, each Activity will have a link to its Work Plan, if a Work Plan is available. Work Plans will contain Tasks to implement the Activity. For example, if the Activity is an environmental monitoring program, some of the Tasks might include defining monitoring protocols, collecting

DRAFT August 19, 2011

samples, and communicating findings to coastal decision-makers.

GOAL 1

GOAL 1

Restored and Conserved Habitats

Habitats in the ocean and along the coast, including the rivers that flow to the Gulf, are healthy, productive, and resilient. They support rich aquatic life and a vibrant, sustainable ocean economy.

OUTCOME 1

Water Quality Protection

Coastal decision-makers receive up-to-date, accurate, relevant information needed to improve and protect marine water quality for current and future generations.

ACTIVITIES OF THE GULF OF MAINE COUNCIL (May be conducted in partnership with other organizations.)

Ongoing or New Commitments:

N/A

Pending:

 1.1.1 Disseminate information about ways to improve and protect the region's marine and estuarine water quality.

OUTCOME 1.2

Habitat Restoration

Habitat restoration practitioners and community-based organizations receive information, funding, and technical assistance for restoring degraded coastal ecosystems and habitats.

ACTIVITIES OF THE GULF OF MAINE COUNCIL (May be conducted in partnership with other organizations.)

Ongoing or New Commitments:

- 1.2.1 Provide Gulf of Maine habitat restoration grants and technical assistance that result in restored coastal ecosystems.
- 1.2.2 Facilitate the exchange of information among the region's habitat restoration practitioners.

Pending:

 1.2.3 Promote greater public understanding of the importance and effects of stream barrier removal.

OUTCOME 1.3

Habitat Conservation

Coastal decision-makers have the data and information required to conserve coastal and marine habitats in a time of intensifying human uses and a changing climate.

ACTIVITIES OF THE GULF OF MAINE COUNCIL

(May be conducted in partnership with other organizations.)

Ongoing or New Commitments:

- 1.3.1 Support the regionwide exchange of information on observed and predicted effects of climate change on the people living in the region and its coastal and marine habitats.
- 1.3.2 Advance the bi-national acquisition and use of seafloor mapping products and services for resource and management decisions.

Pending:

- 1.3.3 Promote the exchange of information among decision-makers about ecosystem-based approaches to managing coastal and ocean habitats.
- 1.3.4 Strengthen linkages between U.S. and Canadian coastal and marine spatial planning efforts.
- * Ongoing or New Commitments are activities that the Gulf of Maine Council and/or other organizations already are implementing or have committed financial resources to implement.

 Pending activities have been identified as priorities by the Gulf of Maine Council and/or other organizations but are still in planning stages and/or do not yet have funding.

BOX (to appear on Goal 1 page):

DRAFT August 19, 2011

The Need for Regional Action: Goal 1

In spite of its amazing natural beauty and historical abundance of marine resources, the Gulf of Maine is a highly stressed ecosystem in urgent need of attention. Hundreds of years of inadequate wastewater and stormwater infrastructure, tremendous pressures on natural resources, coastal development, climate change, and the dumping of toxics have taken an enormous toll on the health of the environment and impaired its economic outputs. Raw sewage and polluted stormwater routinely wash into coastal waters from Cape Cod to Nova Scotia. Thousands of miles of migratory fish habitat along rivers and streams are blocked by obsolete dams and poorly engineered road crossings. Invasive species are crowding out native species and disrupting natural cycles. Sea level rise is threatening coastal habitats and human development alike. New solutions and scientific data to address these issues are being generated constantly. However, often this information does not reach coastal decision-makers around the Gulf of Maine who could put the solutions into action.

Goal 1 activities address the region's need for data, information, and partnerships to restore and conserve marine and coastal habitats.

Note to AP Draft reviewers: On the Action Plan website, each Activity will have a link to its Work Plan, if a Work Plan is available. Work Plans will contain Tasks to implement the Activity. For example, if the Activity is an environmental monitoring program, some of the Tasks might include defining monitoring protocols, collecting samples, and communicating findings to coastal decision-makers.

DRAFT August 19, 2011

GOAL 2

GOAL 2

Environmental and Human Health

Environmental conditions support the health of people and the ecosystem.

OUTCOME 2:

Environmental Monitoring

Scientists and coastal decisionmakers have access to data for assessing environmental conditions in the ocean and along the coast.

ACTIVITIES OF THE GULF OF MAINE COUNCIL

(May be conducted in partnership with other organizations.)

Ongoing or New Commitments:

 2.1.1 Continue the Gulfwatch contaminants-monitoring program and integrate it with other monitoring programs.

Pending:

- 2.1.2 Facilitate the compilation, sharing, and management applications of data from aquatic monitoring programs in the region.
- 2.1.3 Foster region-wide communication about existing monitoring activities, perceived gaps, and partnership opportunities.

OUTCOME 2.2

Environmental Indicators and Reporting

Managers receive understandable, useful, reliable information about environmental conditions and trends in the region.

ACTIVITIES OF THE GULF OF MAINE COUNCIL

(May be conducted in partnership with other organizations.)

Ongoing or New Commitments:

- 2.2.1 Produce and disseminate ecosystem indicator products that respond to managers' needs.
- 2.2.2 Identify and assess new and emerging environmental issues in the Gulf of Maine.
- 2.2.3 Communicate about environmental conditions through the State of the Gulf of Maine reporting products and services.

OUTCOME 2.3

Climate Adaptation

Decision-makers receive up-to-date information about the impacts of climate change on coastal and ocean areas and approaches for adapting.

ACTIVITIES OF THE GULF OF MAINE COUNCIL

(May be conducted in partnership with other organizations.)

Ongoing or New Commitments:

- 2.3.1 Provide decisionmakers with information to understand and prepare for sea-level rise, increased storm activity, and other climate-related impacts.
- 2.3.2 Facilitate information exchange about strategies for adapting to a changing climate in the region.

Pending:

N/A

Pending:

• N/A

Ongoing or New Commitments are activities that the Gulf of Maine Council and/or other organizations already are
implementing or have committed financial resources to implement.
 Pending activities have been identified as priorities by the Gulf of Maine Council and/or other organizations but are still
in planning stages and/or do not yet have funding.

BOX (to appear on Goal 2 page):

The Need for Regional Action: Goal 2

Each day in the Gulf of Maine, decision-makers at the local, state, provincial, and federal levels such as businessmen, city planners, mayors, legislators, resource managers, and environmental regulators require information to sustain human communities and to preserve ecological integrity. They must sift through information about the environment, the impacts of human activities, and the changes in conditions brought by climate, toxic contamination, and other

DRAFT August 19, 2011

factors. They need to make decisions quickly, trying to access and then apply information from numerous sources. The geography of the Gulf of Maine, which is bordered by two countries, three states, and two provinces, adds to the complexity of their decision-making processes. As climate change continues to affect the Gulf of Maine ecosystem, it becomes ever more important to have easy access to reliable, up-to-date, understandable information and analysis, including regional ecosystem indicators, on which to base management and policy decisions.

Goal 2 activities address the region's need for data, information, and partnerships to ensure that environmental conditions support the health of people and the ecosystem.

DRAFT August 19, 2011

GOAL 3

GOAL 3

Sustainable Communities

People who live and work in communities around the Gulf of Maine have information needed to adapt to the changing environment.

Outcome 3.1

Understanding of How People Use the Gulf of Maine

Coastal decision-makers have the information they need to understand the ways that people use and affect the Gulf of Maine.

ACTIVITIES OF THE GULF OF MAINE COUNCIL

(May be conducted in partnership with other organizations.)

Ongoing or New Commitments:

• N/A

Pending:

 3.1.1 Support region-wide exchange of information about human uses and values of the Gulf of Maine.

Outcome 3.2

Community Stewardship

Community leaders around the Gulf of Maine have access to the information they need about sustainable approaches to using natural resources.

ACTIVITIES OF THE GULF OF MAINE COUNCIL

(May be conducted in partnership with other organizations.)

Ongoing or New Commitments:

• N/A

Pending:

 3.2.1 Engage community-level partners and facilitate regionwide information exchanges about sustainable practices.

* Ongoing or New Commitments are activities that the Gulf of Maine Council and/or other organizations already are implementing or have committed financial resources to implement.
Pending activities have been identified as priorities by the Gulf of Maine Council and/or other organizations but are still in planning stages and/or do not yet have funding.

BOX (to appear on Goal 3 page):

The Need for Regional Action: Goal 3

Millions of people live and work in the towns and cities surrounding the Gulf of Maine in Massachusetts, New Hampshire, Maine, New Brunswick, and Nova Scotia. Their economic prosperity and quality of life are tied directly and indirectly to the region's ocean and coastal resources. Fishermen, beachside hotel owners, whalewatch operators, and offshore wind investors are only a few examples of the many people whose livelihoods depend on continued access to and sustainable use of the Gulf's natural capital. Achieving sustainability is especially important and challenging as people use the ocean in a growing multitude of ways and as climatic conditions change. Community members and coastal decision-makers in the states and

DRAFT August 19, 2011

provinces bordering the Gulf of Maine require accurate, relevant, and easy-to-use information in order to adapt successfully to these changes.

Goal 3 activities address the region's need for data, information, and partnerships to adapt to the changing environment.

DRAFT August 19, 2011

Crosscutting Themes

The Gulf of Maine Council's Action Plan 2012–2017 is organized around three long-term Goals that focus on improving and sustaining the ecological and socioeconomic health of the Gulf of Maine region. However, the Activities in the Action Plan also address several important themes that span across the three Goals.

The Crosscutting Themes are described below. To see Activities related to a Crosscutting Theme, click the link under the description.

Climate Change

Climate change is a major regional issue that is already affecting the Gulf of Maine, and the impacts are expected to intensify in coming years. The Gulf of Maine Council is playing an active role in increasing understanding of the impacts and building regional capacity for adaptation.

Related Activities

Coastal and Marine Spatial Planning

The Canadian and U.S. governments are implementing coastal and marine spatial planning (CMSP) as a framework for sustainable use and efficient management of ocean resources. Many Activities of the Gulf of Maine Council contribute to the implementation of CMSP in the region. Related Activities

Communication and Knowledge Sharing

The Gulf of Maine Council's primary function is to serve as a regional body for communication and knowledge sharing among people engaged in coastal and marine management. This function is particularly important because in the Gulf of Maine region management responsibility is divided among numerous government agencies in two countries, three states, and two provinces. Many of the Council's Activities are designed to promote regional communication and knowledge sharing on key issues. Related Activities

Data Management

A large number of government agencies and non-government organizations engage in research and monitoring in the Gulf of Maine, but the data are often distributed among many sources and may be difficult to access. To facilitate regional integration and management application of the data, the Council conducts targeted efforts to compile, manage, and disseminate regional-scale datasets related to the Council's priorities. Related Activities

Ecosystem Indicators

The Council is leading a collaborative, regional program to develop, deploy, and communicate science-based, management-relevant indicators for the Gulf of Maine ecosystem. The ecosystem indicators will enhance the effectiveness and efficiency of management efforts at regional, sub-regional, and local scales. <u>Related Activities</u>

DRAFT August 19, 2011

Ecosystem-Based Management

The Council supports collaborative management that integrates economic, social, and ecological values and objectives, emphasizing natural rather than political boundaries. Many of the Council's Activities contribute to advancing ecosystem-based management (EBM) in the Gulf of Maine. Related Activities

Environmental Monitoring

Scientific monitoring of environmental conditions in the Gulf of Maine is required for effective management in the region. The Council conducts a contaminants monitoring program, supports monitoring initiatives, and provides management-relevant information based on monitoring data. Related Activities

BOX:

Council Watch List

In addition to the issues that are specifically highlighted and addressed in the Goals and Crosscutting Themes of the Action Plan, the Gulf of Maine Council actively monitors other issues relevant to its mission. When appropriate, the Council takes action, conducts information gathering, and facilitates communication and knowledge sharing on these related issues. Examples of issues on the Council's Watch List:

- Ocean acidification
- Endocrine-disrupting pollutants
- Ocean energy production
- Invasive species

DRAFT August 19, 2011

About the Council

A U.S./Canada Partnership

The Gulf of Maine Council on the Marine Environment is a U.S./Canada partnership of government agencies, non-government organizations, and business interests. The Council's mission is to maintain and enhance environmental quality in the Gulf of Maine and to allow for sustainable resource use by existing and future generations. The Council organizes conferences and workshops on priority issues; conducts integrated environmental monitoring and data synthesis; performs policy analyses; provides grants and awards; accelerates the transfer of science to management; raises awareness about the Gulf; and connects people, organizations, data, and information in the region.

The Governors and Premiers of the five states and provinces that border the Gulf of Maine—Massachusetts, New Hampshire, Maine, New Brunswick, and Nova Scotia—created the Council in 1989 as a regional forum to exchange information and engage in long-term planning. The Councilors are leaders of state, provincial, and federal agencies; nongovernment organizations; and the private sector. The Council fosters consensus-based decision-making and collaboration among a wide range of parties with an interest in the Gulf. Its meetings are open to the public, and its five-year Action Plans incorporate diverse public input.

Representatives of government agencies, academia, businesses, and non-government organizations participate in the Council's Committees. On an annual rotating basis, one of the five states and provinces serves as the Secretariat and coordinates the Council's work. Contract staff located around the region work with the Council and its committees to help accomplish its goals. The Council is administered by non-profit associations in the United States and Canada.

Guiding Principles

Four principles guide the Council and participating agencies in their decisions involving the Gulf of Maine ecosystem. The principles are congruent with other international protocols, as well as state, provincial, and national legislation in Canada and the United States.

1. Ecologically sustainable development

The Council seeks to meet the region's current social, cultural, and environmental needs without compromising the needs of future generations. Working in partnership with others, it strives to sustain ecological processes and enhance the region's quality of life.

2. Ecosystem-based planning and management

The Council supports collaborative management that integrates economic, social, and ecological values and objectives, emphasizing natural rather than political boundaries.

3. Environmental protection through precaution

The Council supports conservation of the coastal and marine environment, and urges its members to proceed with caution to avoid environmental degradation.

DRAFT August 19, 2011

4. Public information and participation

The Council is committed to a participatory process that informs and engages the public in setting priorities.

Audiences of the Gulf of Maine Council

Premiers and GovernorsThe region's Governors and Premiers, their staff, and regional organizations that

they have formed.

Coastal lawmakers Legislators and elected officials at the federal, state, and provincial levels who

have financial and legislative responsibility for coastal and marine issues.

Coastal decision-makers Senior management in agencies, non-government organizations, and businesses.

Coastal managers Policy and science representatives in government agencies, non-government

organizations, and businesses.

Academics University scientists and other scholarly researchers.

Gulf residents and visitors People who live, work, and play in the Gulf of Maine region.

Marine-dependent industries Businesses, individuals, and organizations that derive most of their income from

activities tied to the marine environment.

Science community Individuals and organizations involved in research, monitoring, ocean observing,

and assessment.

Role and Sphere of Influence

- As a transboundary organization, the Council is uniquely positioned to focus on issues that require or benefit significantly from regional collaboration.
- The Council's work often involves collaboration at municipal, state, provincial, national, and bi-national levels.
- While the Council does not have direct regulatory or policy-making authority of its own, its Goals and objectives are congruent with state, provincial, and federal priorities. The Council promotes progress toward common goals.
- The Council's work focuses on complex natural and socioeconomic systems, making it a challenge to attribute particular outcomes to the organization's efforts. However, assessing results is essential for continued success.
- A strength of the Council is that it is a coalition of people from many groups. However, this organizational structure can result in the Council's role being camouflaged, as initiatives may occur under the banners of member and partner organizations.
- The Council reports on regional progress toward the goals in this Action Plan. This recognition will identify the lead organizations, including direct activities of the Council, its partners, and the work of others.

Vision for the Future

The Council was formed in recognition of the need for natural resource management spanning political and bureaucratic boundaries. In the next five years, as outlined in this Action Plan, the

DRAFT August 19, 2011

Council will advance ecosystem-based approaches to management. Building on its past accomplishments, the Council intends to continue supporting region-wide information gathering and sharing (e.g., seafloor mapping, environmental monitoring, science translation to management, indicators, state-of-the-environment reporting), public outreach and education, habitat restoration, and addressing key science and policy gaps.

The Council will continue to foster innovative approaches to sharing information and enhancing collaboration. By working together in a regional forum, the states, provinces, and federal agencies learn from each other, try new approaches, and coordinate their efforts. As a result, they become better stewards of the resources for which they are responsible.

The Council will continue to nurture strong partnerships among local, regional, and national organizations that are responsive to issues of regional concern. Wherever appropriate, the Council will participate and assist these groups, often seeking to build their capacity by creating strategic alliances.

DRAFT August 19, 2011

Major Accomplishments: 2007–2012

The Gulf of Maine Council's Action Plan for 2012 to 2017 represents a continuation of the Council's long-term, sustained focus on the issues of habitat conservation and restoration, environmental and human health, and sustainable communities. The Council's work from 2012 to 2017 builds on its accomplishments under its previous five-year Action Plan and three earlier Action Plans. Summarized below are selected accomplishments of the Council, through its Committees and Subcommittees, from 2007 to 2012.

Goal 1 (2007–2012): Coastal habitats are in a healthy, productive, and resilient condition.

The Council funded 94 habitat restoration projects that together re-opened access to 144 miles of rivers and streams for river herring, Atlantic salmon, and American eel; re-established access to 2,400 acres of alewife spawning habitat; and rehabilitated over 500 acres of salt marsh. The Council released and promoted a regional framework for science-based monitoring of the ecological outcomes of dam removal and other types of stream barrier removal. The Council's Gulf of Maine Mapping Initiative (GOMMI) identified regional priorities for mapping of seafloor habitats, and it helped to address these priorities by supporting mapping fieldwork and organizing major workshops. The Council completed documentation of coastal and marine managed areas in the Canadian portion of the Gulf of Maine. Through numerous publications, workshops, and web-based resources, the Council facilitated regional communication and information sharing on habitat restoration, habitat conservation, habitat monitoring, and seafloor mapping.

Goal 2 (2007–2012): Environmental conditions in the Gulf of Maine support environmental and human health.

The Council's long-running Gulfwatch Program monitored contamination of coastal waters at sites around the Gulf of Maine, provided the data and findings to the states and provinces, and facilitated pollution control within a regional context. The Council established the Climate Change Network to build regional capacity for proactive management and adaptation to the impacts of climate change. The Council's Ecosystem Indicator Partnership (ESIP) defined a regional framework for ecological indicators, began obtaining data for indicator reporting, and produced web-based interactive maps.

Goal 3 (2007–2012): Gulf of Maine coastal communities are vibrant and have marine-dependent industries that are healthy and globally competitive.

The Council organized and presented the Sustainable Industry Awards, which is the only regional-scale recognition program for businesses that demonstrate innovation and leadership in efforts to improve the well-being of the Gulf of Maine ecosystem and the communities that call it home.

DRAFT August 19, 2011

BOX (to appear on Major Accomplishments page):

Selected Council Publications, Online Tools, and Communication Products: 2007–2012

Note to reviewers: On the AP web page, each title in this list will be linked to the product web page.

- American Eels: Restoring a Vanishing Resource in the Gulf of Maine
- Aquaculture in the Gulf of Maine
- Climate Change in the Gulf of Maine
- Climate Change Bibliography for the Gulf of Maine
- Ecosystem Indicator Reporting Tool
- Ecosystem Monitoring Map
- Gulf of Maine Ecosystem-Based Management (EBM) Toolkit Survey Report
- Gulf of Maine Habitat Classification Workshop: Mapping for Decision Making
- Gulf of Maine KnowledgeBase
- Gulf of Maine Mapping Initiative Priority Mapping Areas Report
- Gulf of Maine Times
- Habitat Classification in the Gulf of Maine: A Review of Schemes and a Discussion of Related Regional Issues
- Habitat Restoration Inventory
- Habitat Restoration Web Portal
- Identifying Coastal Habitats at Risk from Climate Change Impacts
- Identifying the Possible Effects of Extreme Precipitation and Other Climate Change Impacts on Streamflow and Water Quality in the Gulf of Maine
- Identifying the Possible Effects of Climate Change on Invasive Species in the Gulf of Maine
- Integrating Seafloor Mapping and Benthic Ecology into Fisheries Managment in the Gulf of Maine
- Regional Habitat Monitoring Data System
- Report on a Survey of Selected Major Marine Industries in the Gulf of Maine:
 Sustainability, Priorities, and the Council
- Salt Marshes in the Gulf of Maine: Human Impacts, Habitat Restoration, and Long-Term Change Analysis
- Seascapes: Getting to Know the Sea Around Us. A Guide to Characterizing Marine and Coastal Areas
- State of the Gulf of Maine Report
 - o The Gulf of Maine in Context
 - Climate Change and Its Effects on Humans
 - Climate Change and its Effects on Ecosystems, Habitats and Biota
 - o Coastal Ecosystems and Habitats
 - Marine Invasive Species
 - Emerging Issues
- Stream Barrier Removal Monitoring Guide

DRAFT August 19, 2011

■ 14 journal publications