

# Gulf of Maine Council on the Marine Environment

Work Plan  
January 2007 to July 2008  
(Dependent on funding being available)



December 2006

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***Goal 1 – Coastal and marine habitats are in a healthy, productive and resilient condition***

***1.1 Continue to offer competitive Habitat Restoration Grant Program.***

**(Habitat Restoration Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Impaired regionally significant coastal habitats (RSCH) are restored to support the desired functions and values of those habitats.
- ❖ Mid-term –
  - Partners leverage and invest funds in restoration of identified RSCH.
  - Non-governmental organizations increase funding for restoration.
  - Practitioners implement regional restoration monitoring standards.
  - Government agencies (e.g., States, provinces & federal) incorporate RSCH priorities into restoration plans.
  - Local communities are more involved in RSCH restoration.
  - Public agencies and non-governmental organizations have better technical and financial capacity to undertake restoration.
- ❖ Short-term –
  - Local, non-profit and businesses are aware of the need to increase funding for the restoration of regionally significant coastal habitats on public and private lands.

***Background and Context for Activity***

The GOMC/NOAA Habitat Restoration Partnership has awarded \$1.5 million for habitat restoration in all 5 jurisdictions of the Gulf, which has leveraged significant matching funds. The activity will continue under the 3-year regional partnership agreement with NOAA provided funding is continued.

Activity Narrative

This activity will include development of an RFP, assistance to potential grant applicants, review of letters of intent and applications, and grant management. This program has historically provided \$385,000 per year for restoration grants, including barrier removal and fish passage, salt marsh restoration as well as planning, feasibility, and monitoring.



Council Role/Niche

Lead for continuing restoration partnership. (A-1)

Activity Leads and Prospective Partners

Lead: Restoration Subcommittee and NOAA Restoration Center

Prospective Partners: Non-profit organizations, municipalities, state/provincial agencies

Crosscutting Services

Outreach -- press releases, fact sheets, web-based documents and other products (10 hrs./mo)

***Activity Measures***

Deliverables

- Funded restoration projects in the Gulf -- January each year

Measures

- Statistics of habitat restored, etc., compiled by the Habitat Restoration Coordinator for each year of grants
- Assessment of updating needs over time

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Assistance to grantees	In-kind	\$0
Develop RFP and award grants	Contractual	385,000
Manage outstanding grants	In-kind	0
Total		\$385,000

Sources of Funding

Secured sources and amounts:

- NOAA regional restoration partnership funds -- \$385,000

Prospective sources and amounts:

- Non-profit organizations, municipalities, federal agencies to providing matching funds



***1.2 Improve the Habitat Restoration Web Portal and increase users visiting the site.***

**(Habitat Restoration Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Impaired regionally significant coastal habitats (RSCH) are restored to support the desired functions and values of those habitats.
- ❖ Mid-term –
  - Partners leverage and invest funds in restoration of identified RSCH.
  - Non-governmental organizations increase funding for restoration.
  - Practitioners implement regional restoration monitoring standards.
  - Government agencies (e.g., States, provinces & federal) incorporate RSCH priorities into restoration plans.
  - Local communities are more involved in RSCH restoration.
  - Public agencies and non-governmental organizations have better technical and financial capacity to undertake restoration.
- ❖ Short-term –
  - Local, non-profit and businesses are aware of the need to increase funding for the restoration of regionally significant coastal habitats on public and private lands.
  - Non-profit organizations working to conserve coastal lands have an increased understanding of the need to restore and monitor regionally significant coastal habitats.

***Background and Context for Activity***

The GOM Restoration Web Portal provides information on restoration projects, techniques, and mapping. There is currently an on-going effort to provide enhanced information over the web.

Activity Narrative

This activity will support a contractor that will further develop the capacity and content of the web portal. The Restoration Subcommittee will assist with providing database information including web-based mapping and project descriptions. The subcommittee will also work with the GOM Times and use the NGO Directory to notify people about the site.

Council Role/Niche

This is a unique role for the Council. (A-1)



Activity Leads and Prospective Partners

Lead: Restoration Subcommittee

Prospective Partners: NOAA Restoration Center, and Coastal Services Center, Science Translators; PEPC

Crosscutting Services

Outreach -- offer advice on effective outreach methods to bring people to the site. (I/A)

Web services -- post content to the site and make site improvements (4 hrs/week x 18 months).

***Activity Measures***

Major Tasks with Completion Dates

- Updated web portal -- June 2008
- Strategy to maintain the site and for on-going updates -- March 2008

Deliverables

- Accessible and complete web portal

Measures

- Use statistics from website
- Assessment of updating needs over time

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Update web portal (Technical Services)	Contractor	\$15,000
Total		\$15,000

Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts:

- NOAA program line item/budget





***1.3 Complete production of report from 2006 barrier removal monitoring workshop; develop dissemination strategy to include limited hard copies and web-based access to report.***

**(Habitat Restoration Subcommittee)**

### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Impaired regionally significant coastal habitats (RSCH) are restored to support the desired functions and values of those habitats.
- ❖ Mid-term –
  - Practitioners implement regional restoration monitoring standards.
  - Public agencies and non-governmental organizations have better technical and financial capacity to undertake restoration.
- ❖ Short-term –
  - Non-profit organizations working to conserve coastal lands have an increased understanding of the need to restore and monitor regionally significant coastal habitats.

### ***Background and Context for Activity***

The Restoration Subcommittee is currently working on synthesizing the results of a workshop held in June 2006 to develop standardized monitoring protocols for river barrier removals (dams, culverts, etc.) for the Gulf of Maine. This work will include a final document that provides guidance on monitoring removals in the Gulf.

#### Activity Narrative

While the synthesis of information and document drafting is already underway and funded, monies will be needed to print and disseminate a limited number of hardcopies. It is anticipated that dissemination will include web-based access and outreach about the availability and usefulness of the monitoring standards for river barrier removal projects.

#### Council Role/Niche

The Council has a unique regional role in assembling the protocols. (A-1)

#### Activity Leads and Prospective Partners

Lead: Restoration Subcommittee



Prospective Partners: NOAA Restoration Center; Science Translators; Outreach, list of barrier removal workshop participants including academia, private consulting, agencies, and NGOs

Crosscutting Services

Outreach -- advisory support will be provided on outreach methods (I/A)

Web services -- minor web support is needed (I/A)

***Activity Measures***

Major Tasks with Completion Dates

- Prepare draft guidance document -- January 2007
- Complete final guidance document -- June 2007
- Complete outreach strategy -- December 2007

Deliverables

- Final barriers protocols

Measures

- Document is in the hands of restoration practitioners and is being applied

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Report printing (hard copy, CD-ROM, and web)	Printing and publications	\$5,000
Report dissemination and outreach	Contractor	3,500
	Postage	1,500
Total		\$10,000

Sources of Funding

Secured sources and amounts:

Prospective sources and amounts:



## ***1.4 Collaborate with foundation community to support local restoration activities***

**(Habitat Restoration Subcommittee)**

### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Impaired regionally significant coastal habitats (RSCH) support the desired functions and values of those habitats.
- ❖ Mid-term –
  - Partners leverage and invest funds in restoration of identified RSCH.
  - Non-governmental organizations increase funding for restoration.
  - Local communities are more involved in RSCH restoration.
  - Public agencies and non-government organizations have better technical and financial capacity to undertake restoration.
- ❖ Short-term –
  - Local, non-profit and businesses are aware of the need to increase funding for the restoration of regionally significant coastal habitats on public and private lands.

### ***Background and Context for Activity***

The Council and leaders of the foundation community in the region that have an interest in habitat restoration and community involvement initiated discussions about how to augment funding to support restoration at the local level. It is timely to accelerate those discussions and to build the capacity of local interests to pursue restoration in their “back-yard”.

#### Activity Narrative

The Restoration Subcommittee will update the foundation community about the recent successes and remaining habitat restoration challenges. It will convene a working meeting to develop a strategy for accelerating the engagement of local interests, in collaboration with the foundation community, in habitat restoration. One result is that non-profit foundations could leverage a considerable amount of federal funds for restoration since their support provides non-federal match.

#### Council Role/Niche

The Council will take a lead in developing a working relationship with foundations. (A-2)

#### Activity Leads and Prospective Partners

Lead: Restoration Subcommittee



Prospective Partners: NOAA Restoration Center, Foundation community

Crosscutting Services

Outreach services -- assistance with outreach materials related to the meeting/workshop (I/A)

***Activity Measures***

Deliverables

- Meeting with foundations -- March 2007
- Strategy for connecting foundations with habitat restoration -- September 2007

Measures

- Increase in knowledge about GOM restoration by foundations
- Amount of funds and in-kind support offered by foundations

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Meeting with foundations	Internal in-kind	\$0
Strategy for leveraging foundation funds for restoration	Internal in-kind	0
Total		\$0

Sources of Funding

Secured sources and amounts: n/a

Prospective sources and amounts: n/a



***1.5 Prepare regional criteria to identify coastal habitats at risk from sea level rise, extreme precipitation and other climate change impacts and integrate into restoration decision-making***

**(Climate Change Network)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Impaired regionally significant coastal habitats (RSCH) are restored to support the desired functions and values of those habitats.
- ❖ Mid-term –
  - Practitioners implement regional restoration monitoring standards.
  - Government agencies (e.g., States, provinces & federal) incorporate RSCH priorities into restoration plans.
  - Public agencies and non-government organizations have better technical and financial capacity to undertake restoration.
- ❖ Short-term –
  - Non-profit organizations working to conserve coastal lands have an increased understanding of the need to restore and monitor regionally significant coastal habitats.

***Background and Context for Activity***

Traditionally, decisions on restoring coastal habitats and watersheds in the Gulf of Maine depend on an assumption that future climates would support the same ecological functions as before they were degraded. Knowing what sort of ecological functions can be supported in the future will increase non-profit organization awareness and provide better information for decision-making as to whether restoration is worthwhile in the long term or not.

Activity Narrative

Regional criteria to identify coastal habitats at risk from sea level rise, extreme precipitation and other climate change impacts will be prepared. The results will then be presented to decision makers responsible for coastal habitat restoration as one way to increase their knowledge about the need to restore and monitor coastal habitats.

Council Role/Niche

This is a high priority activity affecting the entire Gulf of Maine coastline, which the Council needs to initiate.



### Activity Leads and Prospective Partners

Lead: Climate Change Network

Prospective Partners: HCSC, HRSC, NBDE, GOMMI, EPA, EC

### Crosscutting Services

Science translation -- assistance in framing the issues will be needed to explain those habitats at risk to decision makers. (I/A)

### ***Activity Measures***

#### Major Tasks with Completion Dates

- Consult with Restoration Committee to access and identify restoration plans. – February 2007.
- Research existing restoration plans for degraded coastal habitats and watersheds in the Gulf of Maine and estimate cost -- February 2007
- Estimate whether restored habitat will be viable for short, medium, or long term -- November 2007
- Compare cost against viability to identify highest priority restoration projects -- December 2007
- Develop criteria for coastal habitats at risk – March 2008
- Habitat Restoration Subcommittee members to work with decision makers in all jurisdictions to incorporate these criteria into their restoration decision making process -- June 2008

#### Deliverables

- Criteria for identifying coastal habitats at risk
- Methodology for evaluating climate change risk and restoration difficulty
- Lists and/or maps of priority restoration projects
- Outreach strategy and subsequent presentations to decision makers on issue

#### Measures

- Use of methodology by decision makers in several jurisdictions



***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Conduct research	Contractor	\$10,000
	GIS services	2,000
Prepare maps	Contractor	1,500
	GIS services	1,000
	Printing	500
Convene meetings/workshops	Contractors	7,000
	Travel/lodging/meals	9,000
	Facility rental	1,000
Total		\$32,000

Sources of Funding

Secured sources and amounts: \$10,000 (EC)

Prospective sources and amounts: \$20-30K USD Environment Canada (Apr 07-Apr 08) for CCN Coordinator position.



## ***1.6 Compile and disseminate information on coastal habitats and watersheds at risk due to climate change***

**(Climate Change Network)**

### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Adverse effect of invasive species on the coastal environment is minimized.
  - Impaired regionally significant coastal habitats (RSCH) are restored to support the desired functions and values of those habitats.
- ❖ Mid-term –
  - Coastal policy makers enact effective regional policies and programs to minimize adverse effects.
  - Public agencies and non-government organizations have better technical and financial capacity to undertake restoration.
- ❖ Short-term –
  - Coastal lawmakers have an increased understanding of the threat posed by marine invasive species and the options for reducing the threat.
  - Non-profit organizations working to conserve coastal lands have an increased understanding of the need to restore and monitor regionally significant coastal habitats.

### ***Background and Context for Activity***

Coastal habitats and watersheds in the Gulf of Maine may be at risk from climate change induced sea level rise, coastal erosion, increased flooding, introduction of invasives, changes in temperature and precipitation, etc. Information on those impacts will be generated and disseminated to Provincial and State lawmakers and non-profit organizations requiring up-to-date knowledge.

### **Activity Narrative**

The Climate Change Network Coordinator will identify existing research on significant habitats and watersheds and climate change impacts. The Coordinator will work with expertise from other Committees (and engage contractors) to map those impacts, bringing them together using geographic information systems (GIS). An outreach strategy will then be developed and implemented to convey this information to provincial and state lawmakers and non-profit organizations.





### Council Role/Niche

This is a high priority activity affecting the entire Gulf of Maine coastline, which the Council needs to initiate.

### Activity Leads and Prospective Partners

Lead: Climate Change Network

Prospective Partners: EC, EPA, NOAA, NBDNR, GOMMI, HCSC, HMSC, and HRSC, Sewage Subcommittee

### Crosscutting Services

Web services -- facilitate communication among various groups undertaking activity (I/A)

Outreach – work with the Network to develop the outreach strategy (24 hrs)

### ***Activity Measures***

#### Major Tasks with Completion Dates

- Identify significant coastal habitats and watersheds around the Gulf of Maine -- March 2007
- Superimpose risk maps for the various impacts of climate change -- August 2007
- Evaluate overall level of risk for each location based on sensitivity to individual impacts and likelihood or severity of such impacts -- September 2007
- Produce risk maps -- October 2007
- Communicate results to decision makers -- April 2008

#### Deliverables

- List of significant coastal habitats and watersheds
- Maps of areas at risk from climate change
- Outreach strategy

#### Measures

- Lawmakers are more aware and managers of important coastal habitats and watersheds incorporate climate change impacts into their management and protection plans



***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Conduct research and compile data	CC Contractor*	\$10,000
	Contractor (GIS services)	2,000
Complete maps	CC Contractor	2,500
	GIS services	1,000
	Printing	500
Total		\$16,000

Sources of Funding

Secured sources and amounts: : \* Already accounted for. \$ 10,000 USD Environment Canada (Jan-Mar 07) for CCN Coordinator position. (see “Initiate Climate Change Network...”)

Prospective sources and amounts: \$20-30K USD Environment Canada (Apr 07-Apr 08) for CCN Coordinator position.



***1.7 Identify coastal and marine policies and programs and their role in enabling an ecosystem-based approach; including an evaluation of the cumulative effects that these programs and policies have on ecosystem services***

**(Habitat Committee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Regionally significant marine habitats are managed in a way that maintains ecological integrity.
- ❖ Mid-term –
  - Managers and regulators implement effective marine management initiatives and programs.
- ❖ Short-term –
  - Increase understanding of coastal lawmakers, decision-makers and managers working at the Gulf of Maine scale about how to apply ecosystem-based management to conserve and protect Gulf of Maine habitats and resources.

***Background/Context for Activity***

The Pew and US Ocean Commissions (and subsequent Ocean Action Plans in both countries) recognized that ecosystem-based management involves regulating human activities affecting the ecosystem as well as the implications of changing ecosystem dynamics on how those human activities are conducted. Further, they acknowledged that management of our coasts and oceans entails integrated consideration of the commonly conflicting demands that our society places on the ecosystem. It is evident that agency mandates both within and among various levels of government currently lack a shared vision to conserve the breadth of services that humans want and need from our coastal and marine ecosystems. Just within the US federal government there are over 140 ocean and coastal-related laws.

Existing management programs and policies were instituted “one at a time”. Further, no one entity currently possesses the mandate to see that the various pieces of management across sectors fit together or to look at the interactions among activities with respect to the overall impact on ecosystem services. Ecosystem-based management principles, goals and policies can be found throughout our laws and programs, however they are not applied systematically. Mechanisms are needed for agencies to integrate management across sectors and to work together for joint, ecosystem-based solutions. Existing sectoral planning processes can provide some of the building blocks of a nested framework for integrated management.



### Activity Narrative

The Council, in partnership with other interests, will identify selected federal and/or state/provincial statutes governing the marine environment at the GOM scale where coastal managers have struggled to address conflicting societal objectives and collaboratively develop region specific mechanisms that enable an ecosystem-based approach. A starting point is an assessment of existing mechanisms (e.g., FERC, NEPA, NPDES, Federal Consistency, Regional Dredging Teams, National Estuary Programs/ACAP, USF&W Coordination Act, Regional Sediment Management, etc.) that can be adapted to better manage the full suite of ecosystem services. We will assemble legal scholars and coastal managers in a workshop to discuss the options (e.g., amendments to federal and/or state laws, Memorandums of Understanding, Cooperative Agreements, etc.), to develop the mechanisms and to identify implementation plans for the regions involved.

### Council Role/Niche

The Council will serve as a convener of interested parties. (A-1)

### Activity Leads and Prospective Partners

Lead: Workshop co-chairs, Council Ad-hoc Oceans Group

Prospective Partners: Non-profit organizations, federal agencies,

### Crosscutting Services

Gulf of Maine Times -- Articles before and after the workshop will be prepared

Web services -- A web page for the workshop will be organized and hosted by the Council (I/A)

Policy and Development (8-16 hrs/week x 1 year)

### ***Activity Measures***

#### Major Milestones

- Workshop steering committee formed, goals and objectives established -- November 2007
- Workshop convened -- March 2008
- Workshop report and recommendations -- May 2008
- Presentation to Council -- June 2008

#### Deliverables

- Workshop report and recommendations
- Presentation to Council

#### Measures

- The diversity and commitment of workshop organizers to making the event successful
- Specific and actionable workshop recommendations



***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Assess state/provincial and federal statutes, identify conflicts and options	Contractor	\$30,000
Organize and convene workshop	Contractor	7,000
	Travel	5,000
	Other (meals & breaks)	2,000
Workshop report and recommendations	Contractor	3,000
	Printing	1,000
Total		\$48,000

**Sources of Funding**

Secured sources and amounts: \$0

Prospective sources and amounts:

- Competitive federal grants -- \$50,000
- Non-profit partners -- \$10,000
- GoMC -- \$5,000
- Council jurisdictions/agencies -- \$5,000



## ***1.8 Implement the Council's Strategy for GOM Ecosystem Indicators and State of the Environment Report***

**(Ecosystem Indicator Partnership Committee [ESIP])**

*NOTE: The work performed by the Ecosystem Indicator Partnership Committee (ESIP) address two of the Council's five-year goals and will support a series of cross-cutting tasks that engage multiple GOMC subcommittees.*

### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - The impact of land-based activities on regionally significant coastal habitats is minimized. (1.3)
  - Regionally significant marine habitats are managed in a way that maintains ecological integrity. (1.4)
  - Environmental conditions of the marine environment improve as contaminant releases are reduced. (2.)
- ❖ Mid-term –
  - Watershed residents and businesses seek to minimize the effect of their land use decisions on the coastal environment. (1.3)
  - Managers and regulators implement effective marine management initiatives and programs (1.4)
  - Watershed residents demonstrate increased stewardship of the marine environment. (1.4)
  - Coastal lawmakers enact consistent standards and guidelines to reduce contaminant releases. (2)
- ❖ Short-term –
  - Increase coastal lawmakers knowledge about how to minimize adverse effects of land-based activities on the coastal environment. (1.3)
  - Increase understanding of coastal lawmakers, decision-makers and managers working at the Gulf of Maine scale about how to apply ecosystem-based management to conserve and protect GOM habitats and resources
  - Coastal lawmakers have increased knowledge about the need to reduce releases of priority pollutants that may affect the Gulf of Maine.

### ***Background/Context for Activity***

During the past five years important work by the Global Programme of Action Committee, the Council and other ESIP partners has provided the basis for the region to develop meaningful indicators of ecosystem health. This is described in the Council's *Strategy for GOM Ecosystem Indicators and State of the Environment Report* (2006) and supporting materials from the 2005-06 listening sessions and extensive interviews with the target audiences.



### Activity Narrative

Given the cross-cutting nature of this task there are multiple activities including:

- Support existing subcommittees and work with required focus groups to develop indicators.
- Support data discovery and web-based display/analysis of nutrient, pathogens and chemical contaminant data. (The Council, in partnership with the Gulf of Maine Ocean Observing System, received funding from GeoConnections. The US Association now has a funding Agreement in place that describes the specific activities that will be accomplished between September 2006 and October 2007)
- Support the Council's habitat web tool, currently under development, and accelerate the capability of reporting on habitat indicators.
- Develop indicators of climate change to be applied to habitats monitored by ESIP and other organizations. These indicators will increase understanding of how climate change is impacting local habitats.

### Council Role/Niche

The development of scientifically rigorous indicators that managers can use requires or significantly benefits from a regional approach. The Council, through ESIP, is a vital partner. (A-1 and A-2)

### Activity Leads

Lead: Ray Konisky (ESIP contractor), Tom Shyka & Eric Bridger (GoMOOS)

Prospective Partners: ESIP Steering Committee (co-chairs) Susan Russell-Robinson (USGS), Charlie Strobel (EPA), Jason Naug (DFO), Gary Matlock/Elizabeth Mills/Suzanne Bricker (NOAA), GoMC Climate Change Network, RARGOM, Hilary Neckles (USGS), Land ad-hoc group, Environment Canada (individual TBD), NPA, Natural Resource Council (ME), CA Council of Ministers of the Environmental (EC is Secretariat)

### Crosscutting Services

Science Translation -- ESIP will consult with the Science Translator on effective ways to communicate scientific information in an accessible manner. (I/A)

Gulf of Maine Times -- ESIP will work the Times to produce articles on the process of creating indicators, their value in coastal decision-making, and implementation vignettes that provide a glimpse of how indicators will be used.

### ***Activity Measures***

#### Major Milestones

Task #1 -- Create and support Indicator Focus Groups

- Work with existing Subcommittees (Contaminants Monitoring, Habitat Monitoring, Climate Change) to pursue development of indicators
- Assist in the formation of Indicator Focus Groups for nutrients, fisheries and coastal development.
- Focus groups decide on priority indicators for regional reporting - June 30, 2007



- ESIP publishes framework for regional reporting of indicators - January 1, 2008

#### Task #2 -- Climate Change

- Identify current habitats of interest and relevant indicators in each -- March 2007
- Meet (work) with other ESIP Working Groups to identify priority climate change indicators for each WG (workshop hosted by Climate Change Network) -- June 2007
- Develop suite of priority climate change indicators and determine trends on a regional and local scale. - November 2007

#### Task #3 -- GeoConnections Initiative

- Complete data discovery, user requirements, web tools development RFP -- March 31, 2007
- Register metadata, data services, report on sensor web enablement -- June 30, 2007
- Web tool development and testing -- September 30, 2007
- Data registration documentation -- October 31, 2007
- Final report, presentations to user community, press releases -- October 31, 2007

#### Task #4 -- Habitat

- Habitat monitoring subcommittee decides on priority indicators for regional reporting within a tiered monitoring framework -- June 30, 2007
- Populate the habitat monitoring web tool with existing data on salt marsh and seagrass vegetation indicators -- December 31, 2007
- Expand the habitat monitoring web tool to include additional indicators of habitat integrity within select, Tier 3 index sites -- June 30, 2008
- Expand the habitat monitoring web tool to include Tier 1 (remote sensing/mapping scale) and Tier 2 (rapid assessment) indicators -- June 30, 2008
- Publish framework for regional reporting of habitat and climate change indicators -- June 1, 2008

### Deliverables

#### Task #1 -- Focus Groups

- Formalization of ESIP focus groups
- List of priority regional indicators for the six groups
- Published framework for regional reporting

#### Task #2 -- Climate change

- List of indicators to track
- List of priority indicators related to key environmental indicators (from workshop)
- Preliminary report on indicator trends

#### Task #3 -- GeoConnections Initiative

- Registered metadata and data sets with documented procedures
- Web tools for display of synthesized nutrient and contaminant data for select programs

#### Task #4 -- Habitat Indicators

- On-line web tool with existing data on salt marsh and seagrass vegetation indicators





Measures in Knowledge and Skill Changes:

- Regional resource managers will learn about trends in the six focus group areas
- ESIP/GoMC will be recognized as a clearing house for regional indicator development
- Select monitoring data providers will know how to register metadata and datasets
- Web services will be recognized as the means for exchange and synthesis of GoM data

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
<u>Indicator Support</u>		
ESIP contractor support to groups (July 07-June 08)	Contractor	\$57,600
<u>Climate Change</u>		
Ongoing climate change indicator work	Contractor	\$10,000*
<u>GeoConnections</u>		
Phase 1: build project management web, hold meeting, write RFP	Contractor Travel	19,227
Phase 2: discover data, develop user reqs, write RFP	Contractor	36,700
Phase 3: register metadata/sets, begin tool development	Contractors	47,066
Phase 4: develop, test, and deploy tool	Contractor	42,849
Phase 5: write registration document	Contractor	4,517
Phase 6: write final report, press release, present results	Contractor	<u>56,635</u>
		\$206,994
<u>Habitat Indicators</u>		
Expand the habitat monitoring web tool to include Tier 3 index sites	Contractor	25,000
Expand the habitat monitoring web tool to include Tier 1 (remote sensing/mapping scale) and Tier 2 (rapid assessment) indicators	Contractor	<u>25,000</u> \$50,000

Sources of Funding

Secured sources and amounts:

- GeoConnections -- \$134,404
- GOMC -- \$56,997

Prospective sources and amounts:

- ODP/National Information Exchange

Note: The secured sources of funds began to be expended on July 1, 2006. Not shown above are \$88,096 in in-kind match from GoMOOS and ESIP work groups.

\*Cost of CCN Coordinator already accounted for in Network Initiation



***1.9 Identify and assess the long-term economic, social and ecological implications of projected coastal development patterns in the region.***

**(Habitat Committee and Ad-Hoc Lands Advisory Group)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - The impact of land-based activities on regionally significant coastal habitats is minimized.
- ❖ Mid-term –
  - Coastal lawmakers enact, implement and evaluate legislation that minimizes the adverse effects of land-based activities on the coastal environment.
  - Municipal governments are continuously improving local planning tools and making infrastructure investments that minimize adverse impacts on the coastal environment.
  - Watershed residents and businesses seek to minimize the effect of their land use decisions on the coastal environment.
- ❖ Short-term –
  - Increase coastal lawmakers about how to minimize adverse effects of land-based activities on the coastal environment.

***Background/Context for Activity***

The rate of land consumption for development purposes and inefficient patterns of development are two priority issues that were identified in the Council's on-line 2006 Action Plan survey. Together the region's governments and the public are vitally concerned about the sustainability of the Gulf's future landscape.

Further, the Council's 2004 *Tides of Change Across the Gulf of Maine* identifies the targets for this activity: current development patterns and fragmentation of large blocks of land required by large mammals, fresh and marine water contamination from coastal development, increases in impervious surfaces impacting the vitality of coastal watersheds, and habitat degradation (e.g., loss of wetlands, land conversion, species at risk, etc.).

Activity Narrative

This activity will bring together the region's public land managers and non-profit interests (e.g., land trusts, smart growth coalitions, etc.) to document the long-term economic, social and ecological implications of projected coastal development patterns in the region. It will build on the fine land use projection work described in the *Tides of Change* and present a cogent picture of the consequences of "business as usual".



The product will be meaningful stories and messages that resonate with provincial and state lawmakers, municipal governments and watershed residents. Recommendations will include a diffusion strategy that successfully communicates the consequences of projected development patterns and alternatives the region can consider.

#### Council Role/Niche

The Council will serve as a regional convener and draw on the agencies participating in the Council.  
(A-2)

#### Activity Leads and Prospective Partners

Lead: Ad-hoc Lands Advisory Group (to be formed)

Prospective Partners: Council habitat subcommittees, public land management agencies, smart growth coalitions, etc.

#### Crosscutting services

Outreach -- Counsel on effective communication strategies (I/A) & diffusion strategy (8 hrs)

Gulf of Maine Times -- Articles that effectively communicate the issue

Policy and Development -- Organize and support Land Advisory Group (4 hrs/week x 1 year)

### ***Activity Measures***

#### Major Milestones

- Ad-hoc Lands Advisory Group formed -- March 2007
- Work Plan presented for Council action -- June 2007
- Campaign begins -- March 2008
- Final report and recommendations to Council -- June 2008

#### Deliverables

- 12-month work plan approved by Council
- Campaign messages

#### Measures

- The region's public and non-profit land managers organize to work collaboratively
- Development and routine diffusion of key messages about the economic, social and ecological implications of projected coastal development patterns in the region



### *Activity Financing*

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Organize, convene, and support Lands Advisory Group	Contractor	\$10,000
Document long-term economic, social and ecological implications of projected coastal development patterns in the region.	Contractor	20,000
Develop key messages and diffusion strategy targeted at provincial and state lawmakers, municipal governments, and watershed residents	Contractors(s)	5,000
Total		\$35,000

### Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts:

- Competitive, federal government “smart growth” grants
- Non-profit organizations focusing on land use



***1.10 Develop framework for ecosystem characterization that integrates existing chemical, physical and biological knowledge as well as human use activities. Integrate sub-regional efforts and commence in 2007 with a region-wide workshop.***

**(Habitat Committee and Workshop Steering Committee)**

### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Regionally significant marine habitats are managed in a way that maintains ecological integrity.
- ❖ Mid-term –
  - Managers and regulators implement effective marine management initiatives and programs.
- ❖ Short-term –
  - Increase awareness of coastal lawmakers, decision-makers, and managers working at the Gulf of Maine scale about how ecosystem-based management can be applied to conserve and protect Gulf of Maine habitats and resources.

### ***Background/Context for Activity***

The region needs to develop the framework for a user-driven (e.g., coastal decision-makers, stakeholders, scientists, etc.) ecosystem characterization that integrates existing chemical, physical, and biological knowledge as well as human use activities. In December 2005 the Council received and accepted the recommendations of its ad-hoc Ocean Task. At its June 2006 meeting it approved a letter to the co-chairs of the NE Regional Ocean Council/Ocean Working Committee and a letter to the co-chairs of the Subcommittee on Integrated Management of Ocean Resources. These letters requested they participate in a workshop steering committee that will design and oversee a EBM workshop in 2007.

### **Activity Narrative**

In 2007 the Gulf of Maine Council on the Marine Environment, in collaboration with public and non-profit partners, will convene a regional ecosystem characterization workshop. Possible issues to be discussed include:

- What research, data and information exists and what is needed to move toward an ecosystem-based management approach, what are the priority gaps that need to be filled in the near-term and how might the region proceed in addressing these needs? Possible elements include:
  - a. Region-wide benthic habitat mapping;
  - b. Identification of special management areas or marine managed areas;



- c. Long-term/sustained environmental monitoring and observing (e.g., species, habitats, & media – air, land, water, etc.);
- d. Development of models and other forecasting tools that assist decision-makers manage human activities in the marine environment;
- e. A human use atlas that describes spatial and temporal patterns; and
- What are the data and information management systems that managers need and how can current efforts (e.g., Ocean Data Partnership, GoMOOS, Census for Marine Life, GOMMI, etc.) can be accelerated?
- How can indicators of ecosystem health and state of the environment reporting be used to track progress in achieving our goals? and
- How can the region develop a multi-year strategy that contains implementation phases, estimated costs and funding sources to commence this work?

### Council Role/Niche

The Council is the sole government-to-government organization whose mandate is specific to the GOM and to the conservation of the marine environment. In this capacity it will partner with other public and non-profit organizations.

### Activity Leads and Prospective Partners

Lead: Workshop Co-chairs, Ad-hoc Oceans Group

Prospective Partners: members of the Council's Habitat Committee, Environmental Law Institute, COMPASS, NROC, MOPF, SIMOR, NOAA, DFO

### Crosscutting Services

Outreach -- Workshop organizers will want to engage the Outreach staff in publicizing the event.  
(I/A)

Gulf of Maine Times -- produce pre and post-workshop articles.

Web services -- Organizers will want to use the Council's web site and create a page for the event  
(I/A)

Policy and Development -- serve as workshop coordinator (10 hrs/week x 1 year)

### ***Activity Measures***

#### Major Milestones:

- Workshop Objectives and Agenda completed -- January 2007
- Workshop convened -- March 2007
- Report and recommendations completed -- June 2007

#### Deliverables

- Workshop proceedings document including recommendations



Measures

- The diversity and commitment of workshop organizers to making the event successful
- Specific and actionable workshop recommendations

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Workshop organizers	Contractor COMPASS	In-kind
	Contractor	\$10,000
Logistics support	Partner In-kind Support	In-kind
Workshop papers	Contributions	In-kind
	Contractor(s)	20,000
Workshop logistics	Meals & Facility (\$10K)	In-kind
Travel for participants (need-based)	Travel (\$50K)	In-kind
Electronic workshop proceedings document including recommendations	Contractor	In-kind
Total		\$30,000

Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts:

- SIMOR -- \$15,000
- DFO -- \$20,000
- COMPASS -- \$60,000 (In-kind)
- GoMC -- \$5,000



***1.11 Complete documentation (e.g., identify habitats and associated pieces) of existing coastal/marine managed areas in the Canadian portion of the Gulf of Maine that builds on existing inventories.***

**(Habitat Conservation Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Regionally significant marine habitats are managed in a way that maintains ecological integrity.
- ❖ Mid-term –
  - Managers and regulators implement effective marine management initiatives and programs.
  - Watershed residents demonstrate increased stewardship of the marine environment.
- ❖ Short-term –
  - Increase understanding of coastal lawmakers, decision-makers, and managers working at the Gulf of Maine scale about how to apply ecosystem-based management to conserve and protect Gulf of Maine habitats and resources.

***Background and Context for Activity***

Various inventories have compiled information about existing marine managed areas in the U.S. and Canada, but there are still several gaps in the Canadian portion of the Gulf of Maine. Together these materials will describe the role of marine managed areas in ecosystem-based approaches to management.

Activity Narrative

The Habitat Conservation Subcommittee will bring together existing information, researching areas not currently inventoried (focusing particularly on the Canadian portion of the Gulf of Maine, which is currently underrepresented), and develop a comprehensive manual of marine managed areas. The target audience is public and non-profit decision-makers working at the Gulf of Maine scale to protect marine habitats.

A contractor will research existing but not yet inventoried managed areas (through literature review, agency and researcher interviews, etc.), compile or develop narrative and spatial information on the location and ecological features of these managed areas, and draft a report that describes managed areas in the Gulf of Maine.





Council Role/Niche

The Council will be a regional convener. It will serve to fill gaps in current inventories and make this information available, but will not duplicate the efforts of lead organizations, like NOAA’s MPA Center that has already made great progress on an inventory for the U.S. portions of the Gulf of Maine. (A-2)

Activity Leads and Prospective Partners

Lead: Habitat Conservation Subcommittee  
Prospective Partners: NOAA; DFO

Crosscutting Services

Science Translation -- require assistance in compiling the final product (80 hrs)  
Outreach -- Once the document is published, there will be a need for distribution and publicity (20/hrs)

***Activity Measures***

Major Tasks with Completion Dates

- Create and distribute a manual of Canadian marine managed areas and habitats, including maps. -- March 2008
- Create and implement a dissemination plan – June 2008

Deliverables

- Manual and maps

Measures

- Survey public and non-profit decision-makers to determine how the marine managed area manual is being used.

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Research and draft manual of existing coastal and marine managed areas	Contractor(s)	\$20,000
Print manual of existing coastal/marine managed areas	Printing/publication	15,000
Total		\$35,000



Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts:

DFO



## ***1.12 Support the mapping of priority areas identified in the Gulf of Maine Mapping Initiative's 2-year work plan***

**(Gulf of Maine Mapping Initiative Subcommittee)**

### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Regionally significant marine habitats are managed in a way that maintains ecological integrity.
- ❖ Mid-term –
  - Managers and regulators implement effective marine management initiatives and programs.
- ❖ Short-term –
  - Increase understanding of coastal lawmakers, decision-makers, and managers working at the Gulf of Maine scale about how to apply ecosystem-based management to conserve and protect Gulf of Maine habitats and resources.

### ***Background and Context for Activity***

An important step in increasing awareness of public and non-profit decision-makers working at the Gulf of Maine scale about how ecosystem-based management can be applied to conserve and protect Gulf of Maine habitats and resources is the production of seafloor maps. Currently the distribution, types, and quality of subtidal marine habitats are largely unknown in the waters throughout the Gulf of Maine. Effective management requires knowing where distinct habitats occur so that productive and sensitive habitats can be protected or restored.

GOMMI's top mapping priority is to complete a pilot project that began in 2005 when \$1 million of NOAA support led to collection of acoustic imagery on Cashes Ledge, Platts Bank, Fippennies Ledge and surrounding areas. UNH's Center for Coastal and Ocean Mapping & Joint Hydrographic Center have finished processing the acoustic data, producing maps of contoured topography and backscatter. Geological & biological data are now required for ground-truthing and production of benthic habitat maps.

Additional coastal and offshore priority areas, Casco Bay and northern Georges Bank, respectively, were identified by managers and stakeholders at GOMMI's 2004 User Needs Workshop and our 2006 Planning Workshop. Mapping these areas will require collecting acoustic, geological and biological data.



### Activity Narrative

GOMMI must build partnerships, identify support, and coordinate efforts to map these priority areas. Logistical and financial support must be secured for fieldwork, data analyses, production of maps and reports, and public outreach re availability and applications of mapping products. Some fieldwork will be conducted during this two-year period, with our main focus on Cashes Ledge and Platts Bank. GOMMI will also continue its outreach and education activities.

### Council Role/Niche

The Council is a partner in a larger initiative. The funds required to fully support this work (roughly estimated at \$2.8 million) are considerably more than the Council can provide. However the Council may be able to help secure logistical and financial support through its endorsement of GOMMI, and through crosscutting services such as web hosting and maintenance.

### Activity Leads and Prospective Partners

Lead: GOMMI

Prospective Partners: Massachusetts CZM, Northeast Fisheries Science Center, US Geological Survey, Geological Survey of Canada, UNH Center for Coastal and Ocean Mapping/JHC, NOAA's National Ocean Service, Gulf of Maine Research Institute, University of Ulster

### Crosscutting Services

Web services -- for data storage and access, coverage map, communications (80 hrs./yr & 30 hrs. ME3)

Development -- Grant research and writing (scaleable # of hours)

### ***Activity Measures***

#### Major Tasks with Completion Dates

- Seafloor mapping outreach and education -- January 2007-June 2008
- Produce semi annual e-newsletter on regional mapping activities -- January, June, January, June
- Conduct groundtruthing field work on Cashes Ledge -- pilot work started summer 2006
- Create educational seafloor mapping kiosks; in progress -- install early 2007
- Additional field work Cashes Ledge and Platts Bank -- Summer 2007
- Data analysis, map production -- Fall/Winter 2007/2008
- Press releases, announcements re ongoing work and availability of new maps -- Spring 2008
- Workshops on applications and limitations of new benthic habitat maps -- Spring 2008
- GOM habitat mapping coverage map posted on web -- Spring 2008

#### Deliverables

- E-newsletters, press releases
- Groundtruthing and map production
- Kiosks
- Workshops



- Web site additions

Measures

- Amount of logistical and financial support applied to benthic habitat mapping in GOM
- Percent of GOM for which benthic habitat maps exist (measured using interactive coverage map)

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Education and outreach (presentations, meetings, workshops, web site updates, written materials)	Contractor	\$30,000
	Travel	4,000
	Lodging	2,000
	Meals	1,500
	Printing	1,500
Write and distribute semi-annual GOMMI e-newsletters (4 in 2yrs)	Contractor	4,000
Create, install, and publicize educational kiosk re: seafloor mapping	Contractors	3,000
	Printing	3,000
GOMMI administration: conference calls, planning, reporting	Contractor	20,000
Cashes Ledge & Platts Bank field work, data analysis, reports, maps	Contractual	500,000
Coordinate mapping projects	Contractor	25,000
Update and maintain web site	Web hosting/ maintenance	6,000
Total		\$600,000

Sources of Funding

Secured sources and amounts:

- NOAA grant to NEFSC (mapping kiosk) -- \$6,000
- Davis Conservation Foundation -- \$15,000 (ground-truth Cashes Ledge & coordinator support)

Prospective sources and amounts:

- GOMC -- \$20,000
- National Ocean Partnership Program -- TBD
- Alfred Sloan Foundation – TBD



***1.13 Facilitate communication about sub-tidal habitat classification methodologies in the Gulf of Maine and work toward a consistent approach and communicate with decision-makers***

**(Habitat Conservation Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Regionally significant marine habitats are managed in a way that maintains ecological integrity.
- ❖ Mid-term –
  - Managers and regulators implement effective marine management initiatives and programs.
- ❖ Short-term –
  - Increase understanding of coastal lawmakers, decision-makers, and managers working at the Gulf of Maine scale about how to apply ecosystem-based management to conserve and protect Gulf of Maine habitats and resources.

***Background and Context for Activity***

The Conservation Subcommittee is engaged in a multi-year project to describe Gulf of Maine nearshore habitats and to facilitate discussions with its partners toward adoption of regional approaches to understanding and conserving marine habitats. One of the tools for maintaining ecological integrity of nearshore habitats is a methodology for classification of those habitats.

The Massachusetts Office of Coastal Zone Management conducted a feasibility study of classification methodologies that might be relevant to Massachusetts. Maine also prepared a benthic habitat classification scheme that may be relevant. In Canada several activities are underway, leading to classification. Work is also underway in Long Island Sound to assess classification methodologies.

Given these initiatives the best opportunities to contribute to the development of a methodology that could gain support within the Gulf of Maine is to identify sources of on-going research and document the approach in language accessible to a large cross section of stakeholders. Then developers of methodologies and managers could be assembled to: identify the critical information requirements for classification; discuss and learn from lessons-learned in applying the methods; obtain clarification and possibly consensus on the intent and usage of classification; and discuss how to use the methods most effectively for good management.



### Activity Narrative

The Habitat Conservation Subcommittee will hire a contractor to describe classification methodologies that are currently in development and have not yet appeared in the scientific literature. The contractor may also identify classification methodologies outside of the Gulf of Maine that may still have utility to researchers and decision-makers here. The Subcommittee will convene experts to discuss the various classification schemes in progress and build toward consensus on which methodology (or combination of methodologies) is preferred for the Gulf of Maine. The Subcommittee will then convey the results to the larger Gulf of Maine community for discussion on developing a consistent approach throughout GOM. There are a number of communication/ education pieces to augment the public's understanding of habitats and their value that will also be produced.

### Council Role/Niche

The Council will serve as a convener of regional efforts. (A-2)

### Activity Leads and Prospective Partners

Lead: Habitat Conservation Subcommittee; Other WG members: Kate Killerlain-Morrison, Ann Rodney

Prospective Partners: GOMMI, Mass CZM, DFO, universities, and other research institutions, EPA, TNC, COMPASS, and Ocean Conservancy, NatureServe, ACZISC

### Crosscutting Services

Outreach -- distribution of forum results to the larger stakeholder group and to the experts. (I/A)

Web services -- conveying information on forums and other meetings to participants. (I/A)

Gulf of Maine Times -- news piece

### ***Activity Measures***

#### Major Tasks with Completion Dates

- Identify emerging classification methodologies in addition to those described in the Massachusetts CZM report, draft descriptions on all methodologies -- March 2007
- Convene experts to approach consensus on a preferred methodology for Gulf of Maine-wide nearshore use, identify variables that are most essential for decision-makers, and determine what minimum information must be available for the preferred classification methodology to be implemented -- October 2007
- Complete proceedings from expert meeting, make available on-line, and publicize outcomes to decision-makers and agencies-- December 2007
- Public outreach on methodologies -- Spring 2008

#### Deliverables

- Workshop proceedings
- Materials in the Gulf of Maine Times



Measures

- Survey public and non-profit decision-makers prior to the expert meeting to see how many are aware of habitat classification projects in their jurisdictions and how they might be used to improve management.
- Survey public and non-profit decision-makers to see how many had accessed the proceedings and considered ways to use products from the preferred habitat classification methodologies in their decision-making and planning.

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Prepare description of methodologies/ preliminary assessment	Contractor	\$4,000
Convene expert meeting	Travel, meals & logistics	8,000
Convey concepts to larger stakeholder community	Contractor	8,000
Total		\$20,000

Sources of Funding

Secured sources and amounts:

- HCS budget -- \$1,000

Prospective Sources:





***1.14 Develop and implement a social marketing campaign on the benefits of habitat restoration.***

**(Habitat Restoration Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Impaired regionally significant coastal habitats (RSCH) are restored to support the desired functions and values of those habitats.
- ❖ Mid-term –
  - Partners leverage and invest funds in restoration of identified RSCH.
  - Non-governmental organizations increase funding for restoration.
  - Government agencies (e.g., States, provinces & federal) incorporate RSCH priorities into restoration plans.
  - Local communities are more involved in RSCH restoration.
  - Public agencies and non-governmental organizations have better technical and financial capacity to undertake restoration of RSCH is increased.
- ❖ Short-term –
  - Non-profit organizations working to conserve coastal lands have an increased understanding of the need to restore and monitor regionally significant coastal habitats.
  - Local, non-profit and businesses are aware of the need to increase funding for the restoration of regionally significant coastal habitats on public and private lands.

***Background/Context for Activity***

Although the GOMC has supported five years of habitat restoration efforts, it is evident that knowledge of the benefits of habitat restoration that supports native species in the Gulf remains limited to practitioners and academics rather than the general public.

Activity Narrative

This activity will include the development of a social marketing campaign that will focus on the benefits of habitat restoration to the Gulf. This should include environmental, social and economic benefits of functioning native habitats that can support biota, recreation and economic returns. The GOMC has undertaken similar social marketing work as it relates to general knowledge of the Gulf.

Council Role/Niche

Council is the lead for developing and implementing social marketing campaign. (A-2)



Activity Leads and Prospective Partners

Lead: Restoration Subcommittee

Prospective Partners: NOAA Restoration Center

Crosscutting Services

Outreach -- design of social marketing, outreach materials, forums, etc. (20 hrs x 4 months)

***Activity Measures***

Deliverables

- Social marketing strategy -- June 2007
- Materials and outreach to begin implementation -- December 2007

Measures in Knowledge and Skill Changes

- Use of materials and feedback from region-wide interests

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Develop social marketing strategy for restoration	In-kind	\$0
Implement outreach and marketing materials	In-kind	10,000
Total		\$10,000

Sources of Funding

Secured sources and amounts:

Prospective sources and amounts:



***1.15 Investigate options for a technical assistance program for voluntary private landowner restoration.***

**(Habitat Restoration Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Impaired regionally significant coastal habitats (RSCH) are restored to support the desired functions and values of those habitats.
- ❖ Mid-term –
  - Partners leverage and invest funds in restoration of identified RSCH.
  - Non-government organizations increase funding for restoration funds.
  - Local communities are more involved in RSCH restoration.
  - The technical and financial capacity of public agencies and NGOs to undertake restoration of RSCH is increased.
- ❖ Short-term –
  - Local, non-profit and businesses are aware of the need to increase funding for the restoration of regionally significant coastal habitats on public and private lands.

***Background and Context for Activity***

Restoration activities by the Council and its partners have focused on public lands that provide improved access as part of the restoration project. Private landowners have not been a target for restoration efforts in the GOM and this activity would develop a program for such efforts and provide technical assistance to landowners.

Activity Narrative

The Council will engage public and private interests to conduct a feasibility analysis of how a landowner assistance program could be created in the Gulf of Maine watershed that accelerates habitat restoration on private lands. This initiative will explore successful models elsewhere, identify the costs and possible program structures, and substantively engage private landowners (e.g., via a survey, focus groups or other outreach mechanisms) to assess the real potential for landowner participation in the program.

Council Role/Niche

The Council would be a partner in exploring and implementing this concept. (A-3)



Activity Leads and Prospective Partners

Lead: Restoration Subcommittee

Prospective Partners: NOAA Restoration Center; NB Department of Environment (outreach materials), EC-CWS, citizen scientists'/community groups, Island Foundation

Crosscutting services

Policy and Development -- to conduct feasibility work (80 hrs)

***Activity Measures***

Major Tasks with Completion Dates

- Draft feasibility and recommendations -- June 2007 (need details on smaller steps to determine feasibility)
- Workshop to inform, finalize feasibility and engage private landowners -- December 2007
- Final feasibility and recommendations by June 2008

Deliverables

- Final report with recommendations

Measures

- Survey of private landowners to gauge interest and knowledge of habitat restoration topics
- Number of private landowners willing to engage

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Prepare feasibility and present recommendations	Contractor	\$4,000
Convene workshop and assess results	Workshop costs	\$2,000
Total		\$6,000

Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts:

- NH Charitable Foundation, (Seacoast community fund), Island Foundation



## ***1.16 Educate about the importance and value of salt marshes and American eels***

**(Habitat Restoration Subcommittee)**

### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Impaired regionally significant coastal habitats (RSCH) are restored to support the desired functions and values of those habitats.
- ❖ Mid-term –
  - Partners leverage and invest funds in restoration of identified RSCH.
  - Non-government organizations increase funding for restoration.
  - Government agencies (e.g., States, provinces & federal) incorporate RSCH priorities into restoration plans.
  - Local communities are more involved in RSCH restoration.
  - Public agencies and non-governmental organizations have better technical and financial capacity to undertake restoration.
- ❖ Short-term –
  - Non-profit organizations working to conserve coastal lands have an increased understanding of the need to restore and monitor regionally significant coastal habitats.
  - Local, non-profit and businesses are aware of the need to increase funding for the restoration of regionally significant coastal habitats on public and private lands.

### ***Background and Context for Activity***

Two topics identified by the Restoration Subcommittee were determined to be important since one deals with a resource that is undergoing considerable restoration effort in the Gulf (salt marshes) and another that has been petitioned to be added to threatened species status in the US (American Eel). Work is now required to increase awareness about salt marshes and eels so that restoration work (and increased funding) can focus on these areas and specie.

#### Activity Narrative

The Restoration Subcommittee is currently working on two 30-page primers on salt marsh restoration and monitoring as well as American Eel management concerns. In addition, the subcommittee is preparing 4-page brochures extracted from the primers for an abbreviated overview of both topics. It is timely to refine the target audience and develop outreach campaigns to reach them. The fact sheets will then be disseminated to the target audience.



Council Role/Niche

The Council is a partner in a larger initiative. It is providing leadership in the development and printing effort. (A-2)

Activity Leads and Prospective Partners

Lead: Restoration Subcommittee  
Prospective Partners: NOAA Restoration Center

Crosscutting services

Outreach -- assistance is needed in designing the outreach strategy (20 hrs)  
Science translation -- assistance is needed in finalizing the primers (30 hrs)

***Activity Measures***

Major tasks with completion dates

- Identify target audience, develop campaign strategy and finalize documents -- January 2007
- Printing -- February 2007
- Dissemination and distribution of final products -- June 2007

Deliverables

- Final primers and fact sheets for salt marshes and eels
- Distribution/campaign strategy to increase awareness and funding

Measures

- Completed primers and fact sheets.
- Number of target audience receives primers and fact sheets

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Complete primers and fact sheets	Contractor	\$3,000
Document printing	Printing and Publications	7,000
Document dissemination and outreach	Outreach contractor/postage	3,000
Total		\$13,000

Sources of Funding

Secured sources and amounts:

- GOMC internal grants for printing -- \$3,000

Prospective sources and amounts:

- TNC, MCP, Maine Sea Grant -- \$6,000



***1.17 Conduct risk analysis and prioritize the vectors and understand the effects of climate change on invasive species and disseminate information.***

**(Northeast Aquatic Nuisance Species Panel [NEANS] and Climate Change Network)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Adverse effect of invasive species on the coastal environment is minimized.
- ❖ Mid-term –
  - Coastal policy makers enact effective regional policies and programs to minimize adverse effects.
  - Regulators implement legal instruments to minimize adverse impacts of marine invasive species.
- ❖ Short-term –
  - Coastal lawmakers have an increased understanding of the threat posed by marine invasives and options for reducing the threat.

***Background and Context for Activity***

Many people are aware of the potential threat of invasive species to the Gulf of Maine. Unfortunately invasive species are assumed to arrive only by artificial means (e.g. by ship) and are limited in lifespan by inhospitable climate. As our climate warms, species may more frequently be able to migrate into the Gulf of Maine on their own and survive indefinitely. Consequently it is important to identify the most significant vectors for invasive plant and animal species as well as better understand how to mitigate their affect on the marine environment.

Activity Narrative

Assessing the impacts of climate change on invasive species requires specialized knowledge of both climate change and biology. Therefore it is important to bring experts from both disciplines together to understand each other's area of expertise and how their own is related before this activity can be completed. The latter can likely be found among organizations such as the Northeast Aquatic Nuisance Species Panel, so it will be the role of the Climate Change Network Coordinator to connect these people with Climate Change Network members.

Council Role/Niche

This is a shared activity, with which the Council will only play a minor role. The Council, through the Climate Change Network, will encourage those assessing the risk of marine invasive species to consider how a changing climate will affect the future spread of such species. (A-3)



Activity Leads and Prospective Partners

Lead: Climate Change Network members; Northeast Aquatic Nuisance Species Panel  
Prospective Partners:

Crosscutting Services

Gulf of Maine Times -- may be required to promote the concept to those undertaking assessments  
Science translation -- may be required to explain to decision makers and/or public the relationship between invasive species and climate change. (TBD)

***Activity Measures***

Major Tasks with Completion Dates

- Prepare a background document on the relationship of climate change to invasive species, explaining how a changing climate will allow some species to migrate faster and thrive better -- February 2007
- Present this material to those undertaking risk assessments of invasive species -- July 2007
- Hold workshops with these groups to discuss more specifically how climate change will impact the species they've already identified and identify potential species that would not invade otherwise -- March 2007
- Use risk assessment techniques to identify priority invasive species under a changing climate -- August 2007

Deliverables

- Background document on impacts of climate change on invasive species
- Presentations to, meetings/workshops with those undertaking invasive species assessments
- List of priority invasive species

Measures

- Follow up with assessors regarding their understanding of the issue
- Invasive species assessments address climate change issue

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Background document	CC Contractor*	\$2,500
	Printing/postage	500
Presentations, meetings, workshops	CC Contractor	2,500
	Travel/lodging/meals	3,000
	Facility rental	1,500
Total		\$10,000





### Sources of Funding

Secured sources and amounts: \* Already accounted for.

- \$10,000 USD Environment Canada (Jan-Mar 07) for CCN Coordinator position. (see “Initiate Climate Change Network...”)

Prospective sources and amounts:

- \$20-30K USD Environment Canada (Apr 07-Apr 08) for CCN Coordinator position.



***1.18 Convene regional workshops to discover, introduce, and promote mitigative and adaptive strategies for dealing with sea level rise and water quality effects of extreme precipitation.***

**(Climate Change Network)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - The impact of land-based activities on regionally significant coastal habitats is minimized.
- ❖ Mid-term –
  - Coastal lawmakers enact, implement and evaluate legislation that minimizes the adverse effects of land-based activities on the coastal environment.
  - Municipal governments are continuously improving local planning tools and making infrastructure investments that minimize adverse impacts on the coastal environment.
  - Watershed residents and businesses seek to minimize the effect of their land use decisions on the coastal environment.
- ❖ Short-term –
  - Increase coastal lawmaker knowledge about how to minimize adverse effects of land-based activities on the coastal environment.

***Background and Context for Activity***

The coastal and marine environments of all jurisdictions in the Gulf of Maine are susceptible to the impacts of climate change to varying degrees. New reports from the Union of Concerned Scientists and GOMC indicate that sea level rise and extreme precipitation are likely to have considerable impact on the watershed and region. In order for local jurisdictions to deal effectively with these impacts and their effects on water quality, government officials at all levels need to be aware of the nature and extent of these issues.

In 2001 the New England Governors Conference produced their Climate Change Action Plan (Action Item 7: The Reduction and/or Adaptation of Negative Social, Economic and Environmental Impacts of Climate Change) and in 2004 convened an adaptation strategy workshop. The Council will build on these and other regional efforts (e.g., Environment Canada, EPA, state coastal programs, etc.)

Activity Narrative

Task #1: Compile and assess existing reports and documents.



Task #2: To assist in the creation of individual adaptation plans by local experts, the Climate Change Network will convene experts and stakeholders in two separate one-day workshops to address sea level rise and extreme precipitation and discuss and detail ways of addressing threats to freshwater, storm water and waste treatment systems, and clean water.

#### Council Role/Niche

The Council is a partner with other organization concerned about climate change and adaptation strategies.

#### Activity Leads and Prospective Partners

Lead: Climate Change Network/members; Provincial/State/municipal agencies  
Prospective Partners: US EPA, Environment Canada, RARGOM, BoFEP

#### Crosscutting Services

Science translation -- will be needed to communicate the concept of adaptation and the need for strategies to the jurisdictions. (I/A)

### ***Activity Measures***

#### Major Tasks with Completion Dates

- Determine knowledge and needs of state and provincial lawmakers & compile existing information -- March 2008
- Convene workshops -- May 2008
- Administer post survey and evaluate events -- June 2008

#### Deliverables

- Workshops convened
- Adaptation strategies identified and education materials produced for state & provincial lawmakers
- Pre and post workshop surveys

#### Measures

- Better understanding of sea-level rise and water quality vulnerabilities and measures to protect water quality within the Gulf of Maine watershed.
- (this connects to M-T) Higher profile of climate change network among local officials



***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Compile workshop materials & recruit experts	Contractor	\$2,000
Convene meetings/workshops & prepare post workshop materials	Contractor	4,000
	Travel/lodging/meals	8,000
	Facility rental	1,500
Total		\$15,500

Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts:



***1.19 Support and enable the interaction of existing programs that are implementing elements of an ecosystem-based approach through professional development, agreements, and capacity building.***

**(Habitat Committee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Regionally significant marine habitats are managed in a way that maintains ecological integrity.
- ❖ Mid-term –
  - Managers and regulators implement effective marine management initiatives and programs.
- ❖ Short-term –
  - Increase awareness of coastal lawmakers, decision-makers, and managers working at the Gulf of Maine scale about how ecosystem-based management can be applied to conserve and protect Gulf of Maine habitats and resources.

***Background/Context for Activity***

By working together in a regional forum the states, provinces and federal agencies are learning from each other, trying new approaches and as a result are better stewards of the resources they are legally responsible for.

There are numerous local, regional, state/provincial, and federal programs that are embracing an integrated, ecosystem-based approach to managing ocean and coastal resources. However there are no ongoing, explicit mechanisms that maximize synergies amongst these programs and extend the benefit of creative approaches to other areas.

Activity Narrative

The Council will facilitate inter-program discussions amongst the state coastal zone and fisheries management agencies, Provincial Ocean Networks, Atlantic Coastal Action Program, National Estuary Program, Research Reserves, etc. and recommend mechanisms that provide technical assistance, workshops, training, matching funds, to program practitioners. These recommendations will be presented to Council in June 2007.



Council Role/Niche

By working together in a regional forum the states, provinces and federal agencies are learning from each other, trying new approaches and as a result are better stewards of the resources they are legally responsible for.

Activity Leads and Prospective Partners

Lead Co-chairs -- Environment Canada and Environmental Protection Agency

Prospective Partners: members of existing ecosystem-based efforts in the Gulf of Maine (see roster from 9/05 EBM meeting at GMRI)

Crosscutting Services

Outreach -- assist in the development of materials and marketing strategies (I/A)

Gulf of Maine Times -- prepare articles that share knowledge

***Activity Measures***

Major Milestones

- Form ad-hoc group co-chaired by Environment Canada and Environmental Protection Agency - February 2007
- Present recommendations & implementation strategy to Council -- May, 2007

Deliverables

- Recommendations & implementation strategy

Measures

- Program practitioners are engaged in the development of the recommendations & are supportive of the implementation strategy

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Organize and convene ad-hoc group	Contractor	\$15,000
Total		\$15,000

Sources of funding:

Secured sources and amounts: NA

Prospective sources and amounts:



***1.20 Enhance climate change knowledgebase (compile programs, best practices, etc.).***

**(Climate Change Network)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - The impact of land-based activities on regionally significant coastal habitats is minimized.
- ❖ Mid-term –
  - Coastal lawmakers enact, implement and evaluate legislation that minimizes the adverse effects of land-based activities from adversely affecting the coastal environment.
  - Municipal governments are continuously improving local planning tools and making infrastructure investments that minimize adverse impacts on the coastal environment.
  - Watershed residents and businesses seek to minimize the effect of their land use decisions on the coastal environment.
- ❖ Short-term –
  - Increase coastal lawmaker knowledge about how to minimize adverse effects of land-based activities on the coastal environment.

***Background and Context for Activity***

Many land-based activities may be adversely affecting coastal habitat by contributing to climate change through greenhouse gas emissions and by increasing vulnerability to impacts of climate change. Other activities may be lessening emissions and reducing impacts and vulnerability. The latter need to be identified and shared.

Activity Narrative

Much of this activity involves compiling and sharing existing knowledge rather than generating new knowledge. An initial survey of stakeholders could identify existing best practices and knowledge gaps. Further research can locate additional best practices, which can then in turn be promoted among stakeholders through a workshop or similar format. Standard climate change education programs can be delivered to stakeholders through the same workshop.

As this approach could be very costly and time consuming to implement all across the Gulf of Maine, a pilot study approach would be best. One community could be chosen and if successful the results could be duplicated in other communities as resources permit or entirely by other organizations or network members.



Council Role/Niche

This is a regional activity, which is relevant to the entire Gulf of Maine Region. The Council needs to partner with other organizations to accomplish this.

Activity Leads and Prospective Partners

Lead: Climate Change Network

Prospective Partners:

Crosscutting Services

Web services -- will be needed to maintain and expand the Knowledge-base (I/A)

***Activity Measures***

Major Tasks with Completion Dates

- Choose a community for pilot study -- January 2007
- Survey stakeholders in community -- September 2007
- Assess existing resources and good practices by surveying stakeholders in community -- November 2007
- Further research good practices and knowledge elsewhere that is applicable -- January 2008
- Compile information and disseminate to stakeholders by workshop -- March 2008

Deliverables

- Inventory of existing resources and good practices
- Inventory of other resources and good practices
- Compilation of all relevant resources and good practices

Measures

- Identification of previously unknown resources and good practices
- Increased use of resources and good practices

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Research/survey	Contractor*	\$9,000
	Printing/ mailing	1,500
Production of compilation	Contractor	3,000
	Printing	
Organize meetings/workshops	Contractors	7,000
	Travel/lodging/meals	8,000
	Facility rental	1,000
Total		\$30,000





Sources of Funding

Secured sources and amounts:

Prospective sources and amounts:

- \*\$15K USD Environment Canada (Apr 07-Apr 08) for CCN Coordinator position



***1.21 Investigate and propose regional climate change adaptation strategies.***

**(Climate Change Network)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - The impact of land-based activities on regionally significant coastal habitats is minimized.
- ❖ Mid-term –
  - Coastal lawmakers enact, implement and evaluate legislation that minimizes the adverse effects of land-based activities on the coastal environment.
  - Municipal governments are continuously improving local planning tools and making infrastructure investments that minimize adverse impacts on the coastal environment.
  - Watershed residents and businesses seek to minimize the effect of their land use decisions on the coastal environment.
- ❖ Short-term –
  - Increase coastal lawmaker knowledge about how to minimize adverse effects of land-based activities on the coastal environment.

***Background and Context for Activity***

The coastal and marine environments of all jurisdictions in the Gulf of Maine are susceptible to the impacts of climate change to varying degrees. Individual adaptation plans need to be prepared in each jurisdiction by local experts.

Activity Narrative

A pilot study location will be chosen based on an analysis of vulnerability assessed in preceding tasks. Using a workshop format, an adaptation strategy could be developed with stakeholders in the targeted community. The results could then be promoted to other communities to encourage them to undertake similar efforts.

Council Role/Niche

This is a common activity, which can be implemented on a jurisdiction by jurisdiction basis. The Council only needs to play a minor role.

Activity Leads and Prospective Partners

Lead: Climate Change Network/members; Provincial/State agencies  
Prospective Partners: Marine-dependent industries, NEGC/ECP



Crosscutting Services

Outreach -- offer advice (I/A)

Science translation -- to communicate the concept of adaptation and the need for strategies to the jurisdictions (I/A)

***Activity Measures***

Major Tasks with Completion Dates

- Choose a location for a pilot study -- November 2007
- Run a workshop with stakeholders to develop specific adaptation strategies -- January 2008
- Meet with planning officials in each jurisdiction to present results of workshop and encourage them to undertake similar exercises -- May 2008

Deliverables

- General list of vulnerabilities
- Examples of adaptation strategies elsewhere
- Presentations to government agencies

Measures

- Better understanding of different vulnerabilities around the Gulf
- Production and implementation of adaptation strategies at state, provincial, and local levels

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Conduct research	Contractor	\$2,000
Convene meetings/workshops	Contractor	4,000
	Travel/lodging/meals	3,500
	Facility rental	500
Total		\$10,000

Sources of Funding

Secured sources and amounts: \$10,000

Prospective sources and amounts:

- Leads and prospective partners CCNTF member agencies



## ***1.22 Initiate the Climate Change Network and Coordinate Climate Change Action Plan Activities for Year 1 & 2.***

**(Climate Change Network)**

### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - The impact of land-based activities on regionally significant coastal habitats is minimized.
- ❖ Mid-term –
  - Coastal lawmakers enact, implement and evaluate legislation that minimizes the adverse effects of land-based activities on the coastal environment.
  - Municipal governments are continuously improving local planning tools and making infrastructure investments that minimize adverse impacts on the coastal environment.
  - Watershed residents and businesses seek to minimize the effect of their land use decisions on the coastal environment.
- ❖ Short-term –
  - Increase coastal lawmaker knowledge about how to minimize adverse effects of land-based activities on the coastal environment.

### ***Background and Context for Activity***

A network of climate change experts and professionals whose work is affected by climate change is needed to promote and distribute information on climate impacts and strategies for mitigation and adaptation. Of unique importance is the provision of information to Provincial and State lawmakers on climate change impacts and the Gulf of Maine marine environment.

#### Activity Narrative

A list of individuals who need or who can provide accurate, timely information about climate change and mitigation and adaptation strategies in the Gulf of Maine region will be a critical first step to establish the climate change network envisioned in the Mach 2006 meeting in Dartmouth, Nova Scotia. In order to most effectively develop the list and inaugurate the network, a network coordinator should be hired early in this activity. The coordinator will take over and/or supervise the climate change activities being conducted by contractors up until this point. The coordinator position is envisioned to last the duration of the five year work plan.

#### Council Role/Niche

This task builds the capacity of the Council to interact with Climate Change stakeholders.



Activity Leads and Prospective Partners

Lead: Climate Change Task Force

Prospective Partners: Working Groups

Crosscutting Services

NA

***Activity Measures***

Major Tasks with Completion Dates

- Hire a climate change network coordinator -- January 2007
- Research network participants -- March 2007
- Create lists according to need and verify participation/interest -- March 2007
- Coordinate delivery of climate change related tasks identified under Action Plan for period January 2007 to March 2008.

Deliverables

- Email contact lists, divided by areas of need and expertise
- ‘Snail mail’ contact lists, divided by areas of need and expertise
- Listserve for network

Measures

- ‘buy-in’ from key individuals
- participation in Council activities by individuals
- increases awareness of measures, strategies, impacts by Council
- increased awareness of measures, strategies, impacts by key stakeholders in region
- potential for more effective outreach/communications and events

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Hire Coordinator for 18-months	Contractor	\$50,000
Research and compile lists	Contractor	0
Create list-serve	Contractor	2,500
Total		\$52,500



Sources of Funding

Secured sources and amounts:

- \$10,000 USD Environment Canada (Jan-Mar 07) for CCN Coordinator position.

Prospective sources and amounts:

- \$20-30K USD Environment Canada (Apr 07-Apr 08) for CCN Coordinator position.



***1.23 Document scientific thresholds and metrics for maintaining nearshore and coastal marine habitat integrity.***

**(Habitat Conservation Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Regionally significant marine habitats are managed in a way that maintains ecological integrity.
- ❖ Mid-term –
  - Managers and regulators implement effective marine management initiatives and programs.
  - Watershed residents demonstrate increased stewardship of the marine environment.
- ❖ Short-term –
  - Increase understanding of coastal lawmakers, decision-makers, and managers working at the Gulf of Maine scale about how to apply ecosystem-based management to conserve and protect Gulf of Maine habitats and resources.

***Background and Context for Activity***

In the fall of 2005, the HCS convened a workshop with The Nature Conservancy to identify management strategies to address human impacts to nearshore habitats. One of the recommendations was to address cumulative impacts to habitats. This activity would identify the thresholds habitats can tolerate before their integrity is threatened, in effect, the cumulative impact level.

Activity Narrative

During 2007-2008 a discussion paper will be prepared that identifies the purpose of identifying scientific thresholds, how thresholds would be utilized, cumulative impacts methodologies, and the critical components for maintaining habitat integrity. This will provide the background for moving ahead. This work should build on the efforts of the Ecosystem Indicators Partnership and the Habitat Monitoring Subcommittee, translating those efforts so decision-makers can avoid habitat degradation resulting from cumulative impacts.

Council Role/Niche

The Council will serve as a convener. (A-2)



Activity Leads and Prospective Partners

Lead: Habitat Conservation Subcommittee; Scientific Advisory Team of HCS; Larry Hildebrand, Ann Rodney, Peter Wells

Prospective Partners: Ecosystem Indicators Partnership; Habitat Monitoring Subcommittee; RARGOM, GoMOOS, National Programme of Action

Crosscutting Services

Science translation -- The paper would require some editing assistance (20 hrs.)

Web services -- a site is needed to house the paper (I/A)

***Activity Measures***

Major Tasks with Completion Dates

- Discussion paper -- spring 2008

Deliverables

- Discussion paper

Measures

- Survey public and non-profit decision makers to assess their knowledge of cumulative impacts prior to distribution of discussion paper.
- Survey public and non-profit decision-makers to assess their knowledge of cumulative impacts, willingness to incorporate science-based thresholds into their decision-making processes, and interest in participating in future efforts to determine and implement thresholds (may serve as a future invitee list, group for pilot project deployment, etc. in activities beyond year 2)

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Prepare discussion paper	Contractor	\$5,000
Total		\$5,000

Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts: NOAA, DFO





***1.24 Accelerate regional cooperation on invasive species, minimization, prevention, and rapid response.***

**(Habitat Committee and Northeast Aquatic Nuisance Species Panel)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - The adverse effect of marine invasive species on the coastal environment is minimized.
- ❖ Mid-term –
  - Coastal policy makers enact effective regional policies and programs to minimize adverse effects.
  - Regulators develop and implement legal instruments to minimize adverse impacts.
- ❖ Short-term –
  - Coastal lawmakers have an increased understanding of the threat posed by marine invasive species and options for reducing the threat.

***Background/Context for Activity***

The NEANS Panel's mission is to protect the marine and freshwater resources of the Northeast from invasive aquatic nuisance species through commitment and cohesive coordinated action. Although all of the member states and provinces have contributed significant amounts of time to pursuing coordinated action over the years – regional efforts could be better coordinated and more quickly advanced with the help of a full-time regional coordinator whose primary focus would be on marine invasive species.

Activity Narrative

Hiring a full-time regional coordinator will accelerate regional cooperation on invasive species, minimization, prevention, and rapid response by capitalizing on the time volunteered by member groups. Currently member groups are responsible for coordinating regional efforts, however their time is limited. Hiring a marine invasive species regional coordinator would ensure consistency in achieving specific tasks and provide a consistent and coherent approach to prevention and management of invasive species that will benefit the Gulf of Maine. The regional coordinator would create, disseminate and track educational materials to lawmakers, vector groups, and recreational users of the marine environment including developing rapid response options for eradicating new introductions or introductions to new regions.



### Council Role/Niche

The Council would have a substantive role in the joint effort by providing the funding for a contractor whose position description would be to advance regional cooperation of marine invasive species issues. This is a regional effort and requires significant collaboration because marine invasive species do not respect political boundaries and only a cooperative effort between governments can effectively address this issue. (A-3)

### Activity Leads and Prospective Partners

Lead: NEANS Panel Co-chairs (2); currently: Jim Straub, MA Dept. of Conservation & Recreation, Judy Pederson, MIT Sea Grant

Prospective Partners: NEANS Panel committee chairs (8); agencies within the states of Massachusetts, Maine, and New Hampshire, and within the provinces of New Brunswick and Nova Scotia plus others

### Crosscutting Services

NA

### ***Activity Measures***

#### Deliverables

- Regional coordinator hired -- January 2007
- Assessment of currently available (or in progress) educational materials in the region and identify gaps and identify potential candidates for rapid response in marine ecosystems -- March 2007
- Coordinate efforts to establish a rapid response pilot project for marine invasive species in the Gulf of Maine, e.g. what efforts are needed for removal of Codium, Didemnum or other species from a specific location including regulations, use of chemical or mechanical treatments, etc. -- February 2007 through June 2007
- With appropriate experts determine the feasibility and costs of implementing a rapid response/eradication project -- August 2007
- Pre-survey of group to determine their awareness and perspective on importance of marine invasive species and distribute and distribute education materials -- May 2007 through October 2007
- Synthesize rapid response efforts and prepare written Best Management Practices document
- Develop survey to test the effectiveness of educational materials and distribute and collect -- November 2007
- Analyze results -- December 2007

#### Measures in Knowledge and Skill Changes

- Survey of educational material recipients (lawmakers, vector groups, and recreational users) to determine if/how the information changed or influenced their behavior.
- The regional coordinator will organize the writing of a Rapid Response Best Management Practices document that will outline how regional cooperation can be improved to more



effectively combat marine invasive species. This document will be posted on the NEANS Panel website and made available to state and provincial agencies that manage marine invasive species.

### ***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Hire NEANS Panel regional coordinator on contract – including expenses for attending meetings throughout the region	Contractor Travel/lodging/meals	\$50,000 5,000
Print educational materials for vector groups	Printing and publications	4,000
Distribute educational materials	Postage	1,000
Conduct survey of educational material recipients	Printing and postage	500
Total		\$60,500

### Sources of Funding

Secured sources and amounts: None

Prospective sources and amounts:

- GOMC



***1.25 Support activities proposed for the Gulf of Maine by NEANS Panel or its members.***

**(Habitat Committee and Northeast Aquatic Nuisance Species Panel)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - The adverse effect of marine invasive species on the coastal environment is minimized.
- ❖ Mid-term –
  - Coastal policy makers enact effective regional policies and programs to minimize adverse effects.
  - Regulators implement legal instruments to minimize adverse impacts. Commercial and recreational users of the coastal environment adopt best practices (observe, report, etc.) to minimize adverse impacts of invasive species.
- ❖ Short-term –
  - Coastal lawmakers have an increased understanding of the threat posed by marine invasive species and options for reducing the threat.

***Background and Context for Activity***

Identification and tracking of marine invaders has been challenging because they are out of sight and therefore out of mind to users and managers. Several efforts are underway to increase awareness, e.g. surveys, citizen monitoring efforts, training of divers, preparation of outreach materials etc.

Activity Narrative

The Panel will support new or ongoing efforts to increase effectiveness and awareness, to evaluate current efforts, and to support development of materials directly beneficial to managers.

Financial resources provided by the GOMC would allow the Panel to evaluate efforts and provide funding to projects that would meet agreed upon criteria, but at a minimum would lead to development of materials directly beneficial to managers. In addition, the Panel maintain the marine invasive species data base (Marine Invader Tracking Information System) that serves NEANS, Massachusetts and others currently maintained by MIT Sea Grant.

Council Role/Niche

The council would have a supporting role in these efforts by providing funding to expand the scope of already planned projects. NEANS would recommend projects for funding through a review process.



Activity Leads and Prospective Partners

Lead: NEANS Panel Co-chairs (2); currently: Jim Straub, MA Dept. of Conservation & Recreation, Judy Pederson, MIT Sea Grant  
Prospective Partners: NEANS Panel

Crosscutting Services

NA

***Activity Measures***

Deliverables

- NEANS Steering Committee develop criteria for evaluating proposals -- January
- Review and recommend awarding funds -- February 2007
- Annual reports -- February 2008
- Continued data entry into MITIS, data entry, update of program, web-based GIS maps, immediate feedback to citizens and others who enter data.

Measures

- MITIS data entry and updates.
- Present project results of at NEANS Panel meeting and/or GOM Working Group Meeting

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
MITIS support	Contract to MIT	\$5,000
Funds to support marine invasive species activities	Contract	20,000
Total		\$25,000

Sources of Funding

Secured sources and amounts:

- MIT Sea Grant -- \$5,000

Prospective sources and amounts:

- GOMC -- \$20,000



***Goal 2: Improve environmental conditions in the Gulf of Maine to support ecosystem and human health***

***2.1 Develop and disseminate tools for managers to use Gulfwatch data and analyses through partnerships with other regional efforts.***

**(Gulfwatch Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Environmental conditions of the marine environment improve as contaminant releases are reduced.
- ❖ Mid-term –
  - Coastal lawmakers enact consistent standards and guidelines to reduce contaminant releases.
- ❖ Short-term –
  - Coastal lawmakers have increased knowledge about the need to reduce releases of priority pollutants that may affect the Gulf of Maine.

***Background/Context for Activity***

The Gulf of Maine Council has funded the Gulfwatch Program since 1993 to document the status and trends of contaminants (in blue mussels) in the Gulf of Maine. In 2004 the Council worked in collaboration with the Gulf of Maine Ocean Observing System (GoMOOS) to move ten years of Gulfwatch data from paper files to a relational database ([www.gomoos.org/chameleon/gulfwatch/](http://www.gomoos.org/chameleon/gulfwatch/)). This web-based mapping tool allows managers to plot and create maps of contaminants. In 2007 the Council is supporting a peer review of the data that may call for program design & direction changes.

Activity Narrative

Task #1 Document user needs to Gulfwatch data and analysis -- A contractor will conduct 40-50 phone interviews, working from a list of the target audience provided by the Working Group, to:

- Document awareness of the Gulfwatch Program and the data that is available data (Expect a range of limited knowledge to modest awareness of the data and how to access it.)
- Record how they have used the data;
- Describe additional data applicable to Gulfwatch type monitoring that would be a priority to the managers (Note: this information will be of value to GW peer review too.);
- Describe the daily management responsibilities of these managers that relate to the application of Gulfwatch data to their work;



- Identify possible tools, products and services that the Council might provide to the managers (e.g., local assessments of environmental conditions based on Gulfwatch data, web-based graphing & mapping, etc.) as well as communications materials to make them known to the intended users;
- Describe how these tools, products and services could be used by managers;

Task #2 Commence work on priority tools, products and services – Based on managers input a contractor team (e.g., science, web development, communications, etc.) will commence work on those priority tools, products and services.

### Council Role/Niche

This is a Council program and hence no other organization will lead this effort.. (A-1)

### Activity Leads and Prospective Partners

Lead: Co-chairs of the Gulfwatch subcommittee

Prospective Partners: Monitoring Coordinator, members of the Gulfwatch subcommittee, Working Group representatives

### Crosscutting Services

GOM Times -- A contractor will work with the Times staff to produce 2-3 articles on the Gulfwatch program and possible applications for coastal managers.

Outreach & Science Translation -- The co-chairs will collaborate with the Outreach & Science Translation staff on innovative ways to reach the target audience, including an enhanced web presence. (I/A)

Policy and Development – Option -- Assess and report on users needs (task #1) (120 hrs)

### ***Activity Measures***

#### Major Milestones

- Secure funds to support effort -- February 2007
- Hire contractor, identify audience and conduct interviews -- May 2007
- Report results to WG and Council -- June 2007
- Produce 2-3 priority products/services -- March 2008

#### Deliverables

- A report that documents the needs of coastal managers for Gulfwatch data/analysis
- 2-3 priority products/services

#### Measures in Knowledge and Skills Changes

- Documentation of users needs
- Anecdotes on applications of Gulfwatch data/analysis by coastal managers



***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Organize and conduct user documentation of need	Contractor	\$6,000
Production of products/services	Contractor	10,000
Total		\$16,000

Sources of Funding

Secured sources and amounts:

Prospective sources and amounts:

- GOMC -- \$6,000
- Federal agencies -- \$10,000





***2.2 Based on recommendations from the scientific review, continue to conduct the Gulfwatch Program (& provide staff support to the Habitat Monitoring Subcommittee) and disseminate results.***

**(Gulfwatch Subcommittee)**

### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Environmental conditions of the marine environment improve as contaminant releases are reduced.
- ❖ Mid-term –
  - Coastal lawmakers enact consistent standards and guidelines to reduce contaminant releases.
- ❖ Short-term –
  - Coastal lawmakers have increased knowledge about the need to reduce releases of priority pollutants that may affect the Gulf of Maine.

### ***Background/Context for Activity***

In 1991 the Council adopted an Environmental Quality Monitoring Plan and chose to pursue Gulfwatch as a pilot program to demonstrate environmental monitoring could be conducted in a transboundary context with multiple partners.

The presence of potentially toxic contaminants in the Gulf of Maine is a Gulf-wide issue with many poorly understood ramifications. Gulfwatch uses blue mussels as a sentinel species for biological exposure to organic and inorganic contaminants. It has assessed exposure to a wide range of contaminants at sites throughout the Gulf since its inception in 1993. The long-term goal of the Gulfwatch program is to track the presence and effects of toxic contaminants and provide long-term data on contaminant exposure for the whole Gulf of Maine.

The GOMC can use this Program to elevate not only the awareness of lawmakers and contribute to the attainment of the goal stated above but also to ensure the information is used by managers with water quality responsibilities.

### **Activity Narrative**

Task #1 Conduct the Gulfwatch program -- Coordinate the collection, transportation, sample processing, and arrange for laboratory analysis of the blue mussels. The Program Coordinator, in cooperation with the Gulfwatch Subcommittee, will:

- Summarize and integrate all field and laboratory procedures used;



- Coordinate with other related research and monitoring programs;
- Compile data and store on GOMC web site;
- Oversee the contract negotiations and analysis of QA/QC data from analytical labs;
- Coordinate annual data report writing (oversee preparation of data for analysis, supervise contract writer, edit drafts, print final version, and archiving of Gulfwatch reports and data);
- Work to make Gulfwatch data, reports and papers more accessible to managers, scientists and the public.
- Write scientific abstracts and papers for meeting proceedings.
- Participate as needed in GOMC Working Group and Council meetings, and in GOMC-sponsored and related workshops and meetings.
- Write Gulfwatch progress reports and briefing documents.

Task #2 Prepare and present response to independent Gulfwatch Program Review – The relevant committees will discuss the Program Review, outline a 12-year Gulfwatch monitoring program and develop recommendations to the GOMC.

Task#3 Enable the Contaminants Committee, its subcommittees and the Habitat Monitoring Subcommittee to be successful -- The Council's Environmental Monitoring Coordinator will:

- Coordinate the Contaminants Committee (and subcommittee) and Habitat Monitoring Subcommittee assisting the co-chairs in setting agendas, networking with committee members, organizing meetings, and taking and distributing minutes;
- Provide technical support via annual reports, information gathering at regional monitoring workshops and transferring data and reports to the GOMC website;
- Manage the integration and coordination of the Council's monitoring-related activities;
- Assist with writing proposals relevant to contaminant and habitat monitoring; and
- Contribute to the Council's indicator and State of the Gulf efforts.

Task #4 Synthesize and Communicate Monitoring Results -- The Council's Environmental Monitoring and Outreach Coordinators will:

- Prepare outreach materials for target audiences (e.g., fact sheets, information posters, PowerPoint slides etc.) for use in regional settings;
- Manage the writing of peer-reviewed technical papers authored by Committee and Subcommittee members.

### Council Role/Niche

Gulfwatch is a signature program of the Council. (A-1)

### Activity Leads and Prospective Partners

Lead: Co-chairs of the Gulfwatch Subcommittee

Prospective Partners: state/provincial environmental agencies, EPA, EC, DFO

### Crosscutting Services

GOM Times -- Articles summarizing findings from the first 11 years; Gulfwatch Program review and program development.



Web Services -- To maintain an active Gulfwatch and Contaminants page with key links. (I/A)

***Activity Measures***

Major Milestones

- Present recommendations to the Council for a modified monitoring program (2007-2016) -- October 2007
- Collect and analyze Gulfwatch samples -- Winter 2007
- Publish 2006 data report -- May 2007
- Publish 2007 data report -- May 2008

Deliverables

- Gulfwatch annual data reports 2006 and 2007
- 2007-2016 Program Recommendations to the Council
- Published peer review papers

Measures of knowledge and skill changes

- Educational programs and materials presented to lawmakers
- Gulfwatch data is frequently used in setting new policies

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Support Gulfwatch Program Coordinator	Contractor	\$27,580
	Travel	750
Report Writer		15,000
Support Environmental & Habitat Monitoring Coordinator	Contractor	74,538
	Travel	5,100
Laboratory analysis of Gulfwatch samples	Contractor(s)	111,000
	Postage	600
Peer review	Contractor	7,000
Total		\$241,568

Sources of Funding

Project covered for FY07:

Funds needed for FY08: \$ 59,206



***2.3 Convene experts to describe baseline of chemical contaminants in marine and estuarine ecosystems.***

**(Contaminants Monitoring Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Environmental conditions of the marine environment improve as contaminant releases are reduced.
- ❖ Mid-term –
  - Coastal lawmakers enact consistent standards and guidelines to reduce contaminant releases.
- ❖ Short-term –
  - Coastal lawmaker have increased knowledge about the need to reduce releases of priority pollutants that may affect the Gulf of Maine.

***Background/Context for Activity***

The Council's 1991 Environmental Quality Monitoring Plan and the subsequent Implementation Strategy (Turgeon) is premised on an understanding of chemical contaminants in the Gulf's marine and estuarine systems. Based on preparatory work by GPAC the Council's 2001-2006 Action Plan established three priority classes of contaminants to focus on – nutrients, mercury and sewage. Significant work in the past 3-5 years (e.g., Managing Nitrogen Impacts in the GOM – 2001, Coastal Monitoring Workshop - 2002, Sewage Management – 2002, etc.) provides the basis to reassess current knowledge about chemical contaminants in the Gulf's ecosystem.

Activity Narrative

The Council will work collaboratively with the Bay of Fundy Ecosystem Partnership, the Regional Association for Research in the GOM, the region's Sea Grant Programs and other partners to convene a workshop of invited experts. Project activities include formation of a workshop steering committee, clear statement of goals and desired outcomes, solicitation and development of key background papers about the known and unknown levels and effects of selected existing and new chemicals in the environmental compartments of air, water, sediments and tissues throughout the Gulf of Maine (including synopsis paper on impacts of sewage discharge to human and environmental health), the effects of these levels on human health, distillation of workshop discourse and consensus, development of a prioritized list of actions and strategies to increase state/provincial lawmaker awareness.



### Council Role/Niche

The Council's bi-lateral perspective and mandate uniquely positions it to organize this workshop and to develop recommendations in collaboration with others for the region. (A-2)

### Activity Leads and Prospective Partners

Lead – Dr. Peter Wells, Dalhousie University

Prospective Partners –

### Crosscutting services

GOM Times -- March 2008 article that distills the workshops results, the partnerships developed and the Council's action to proceed with a 6-month implementation strategy.

Web Services -- develop and maintain a web page for the workshop (pre and post). (I/A)

### ***Activity Measures***

#### Major Milestones

- Workshop Steering Committee formed & experts selected to write papers -- January 2007
- Agenda approved by Working Group -- March 2007
- Workshop/technical session convened in association with the Halifax Aquatic Toxicity Workshop -- October 2007
- Final report presented to Council -- December 2007
- GOM Times article published -- March 2008
- Progress Report on actions -- June 2008

#### Deliverables

- Workshop proceedings including recommendations
- Synopsis paper on impacts of sewage discharge to human and environmental health
- Follow-up paper on the implications of long-term chemical contamination in the GOM/BoF
- GOM Times article
- Progress Report on actions to move workshop recommendations forward

#### Measures of knowledge and skill changes

- A consensus document that presents an integrated baseline description of chemical contaminants in marine and estuarine ecosystems
- Progress in moving selected elements of the 6-month Implementation Strategy forward.



### *Activity Financing*

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Support steering committee and organize workshop	Monitoring Contractor Honorarium for selected papers	see elsewhere \$10,000
Convene workshop	Monitoring Contractor Participant travel Meals and breaks	see elsewhere 5,000 3,000
Produce proceedings and recommendations	Monitoring Contractor	see elsewhere
Pursue recommendations	Monitoring Contractor	see elsewhere
Total		\$18,000

### Sources of Funding

Secured sources and amounts:

- Council support for the monitoring contractor is presently budgeted for in the current NOAA budget.

Prospective sources and amounts:

- The subcommittee will work with its partners and agencies to secure funds for the honorariums, participant travel, and the cost of meals and breaks. (Environment Canada, energy companies needing baseline data, agencies with technical staff offer their time to write papers, etc.)



***2.4 Develop and implement an outreach campaign for lawmakers and general public targeting priority contaminants (nutrients, mercury and sewage) and how lifestyle choices affect the condition of the marine environment.***

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Environmental conditions of the marine environment improve as contaminant releases are reduced.
- ❖ Mid-term –
  - Coastal lawmakers enact consistent standards and guidelines to reduce contaminant releases.
- ❖ Short-term –
  - Coastal lawmakers have increased knowledge about the need to reduce releases of priority pollutants that may affect the Gulf of Maine.

***Background/Context for Activity***

People living throughout the watershed have an important and lasting impact on the Gulf of Maine. For example, the lifestyle choices that they make affect the type and amount of solid waste they generate, their use of household chemicals, their choices of daily transportation options and resulting emissions and patterns of development, and the way they attend to their lawns and yards. Increasing their awareness is an important step in reducing the cumulative effects of their activities on the Gulf of Maine.

One of the most serious impacts on ocean and coastal areas is the increasing amount of polluted runoff from urban, suburban, and agricultural areas, which is exacerbated by increases in impervious surfaces, such as roads, parking lots, sidewalks, and rooftops. Contaminants from these non-point sources combine with point sources and atmospheric deposition. Together the cumulative impacts are well documented.

Activity Narrative

Task #1 -- Identify and assess applicable existing water pollution outreach campaigns in the region and those elsewhere to learn about effective methods that could be applied in the GOM. Determine the most significant contaminants related to lifestyle choices and high leverage points to influence behaviors of coastal residents. Identify how to augment/accelerate existing efforts and what critical gaps there are. Examples include:



- implement home and lawn care approaches that minimize NPS impacts;
- reduce and recycle pesticides, paints and solvents;
- have the septic tank pumped every 2-3 years;

Year 2-5 – Using the principles of community-based social marketing, create strong partnerships that support existing efforts and/or develop and deploy a demonstration project that focuses on a region within the GOM and on a particular demographic audience.

#### Council Role/Niche

This project requires a regional approach and for the Council to serve as a catalyst that brings together people and resources. It can be an important partner with other interests. (B-2)

#### Activity Leads and Prospective Partners

Lead: Outreach Committee

Prospective Partners: Co-chairs of the Contaminants Monitoring subcommittee (or designees) and Climate Change Network, EC, EPA, Sea Grant, NEMO, ACAP, CCNB

#### Crosscutting Services

Outreach -- The Outreach Committee can provide counsel in the assessment phase and can assist with implementation in the out-years. (I/A)

### ***Activity Measures***

#### Major Milestones

- Create effective partnerships and secure funding -- May 2007
- Complete assessment of existing programs -- July 2007
- Present recommendations to Council on how to augment/accelerate existing efforts and what critical gaps there are -- April 2008

#### Deliverables

- Assessment of existing programs and significant opportunities to change behavior
- Web page for on-site sewage disposal with links to other sites
- Recommendations to Council

#### Measures of Knowledge and Skill Changes

- Identification of effective and realistic methods for the region to pursue that address non-point sources of pollution





### *Activity Financing*

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Build effective partnerships. Identify and assess applicable existing water pollution outreach campaigns in the region and those elsewhere to learn about effective communication methods. Determine the most significant non-point sources related contaminants related to lifestyle choices and high leverage points to influence behaviors. Identify how to augment/ accelerate existing efforts and identify critical gaps.	Contractor	\$50,000
Total		\$50,000

### Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts:

- U.S. and Canadian water quality agencies (Federal, provincial and state)
- Foundations with a focus on water quality impairment/degradation and land use



***2.5 Raise awareness of requirements, best management practices, and innovative technologies in sewage management and on-site residential septic systems.***

**(Sewage Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Environmental conditions of the marine environment improve as contaminant releases are reduced.
- ❖ Mid-term –
  - The Gulf's residents implement voluntary lifestyle actions to reduce their use and release of contaminants.
- ❖ Short-term –
  - Adults living in coastal communities rimming the Gulf of Maine are aware of how lifestyle choices affect the condition of the marine environment.

***Background and Context for Activity***

The GOMC sponsored a Sewage Management Workshop in April 2002 at the Bedford Institute of Oceanography.

Activity Narrative

A workshop/session could be convened in Halifax in October 2007 in conjunction with the Aquatic Toxicity Workshop, to share information on best management practices, innovative technologies in wastewater and stormwater management, and to identify emerging issues for future investigation and research. Use case studies to describe the socio-economic, environmental, and human health benefits derived from the use/application of innovative technologies/approaches.

Council Role/Niche

The GOMC provides a forum to raise awareness of GOM/Bay of Fundy issues and promote the sharing of information among member agencies and jurisdictions.

Activity Leads and Prospective Partners

Lead: Pat Hinch, Serge Theriault, Peter Wells

Prospective Partners: Sewage Subcommittee, NEWPCC, North Atlantic Chapter of Society of Environmental Toxicology and Chemistry, state nonpoint source pollution control programs, NEMO



Crosscutting Services

Outreach -- Advertise workshop to regulatory agencies responsible for sewage management, technology development sector, and interested public throughout the GOM. (I/A)  
Web -- services for placement of the workshop proceedings on the GOMC website. (I/A)

***Activity Measures***

Major Tasks with Completion Dates

- Collection of case study information -- July 2007
- Organize and convene workshop -- 2008
- Workshop proceedings produced with follow-up recommendations -- March 2008

Deliverables

- Workshop proceedings including an inventory of government programs & recommendations of participants.

Measures of Knowledge and Skill Changes

- Online survey of workshop participants sent electronically 3 months after the workshop to determine how useful/relevant the workshop had been, how the information had been used/applied, has influenced perception/approaches, informed management/policy decisions, identified emerging issues/topics/concerns for future investigation and research.

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Organize workshop	Contractor	\$5,000
Conference facility rental & meals	Facility rental	3,750
Proceedings preparation	Contractor	3,000
Invitational travel	Travel	2,000
Online survey design	Contractor	1,000
Total		\$14,750

Sources of Funding

Secured sources and amounts: \$

Prospective sources and amounts:

- In-kind support of Sewage Subcommittee -- \$5,000 (in-kind)



***Goal 3: Gulf of Maine coastal communities are vibrant and have marine-dependent industries that are healthy and globally competitive***

***3.1 Develop options for greater industry participation and implementing the most favorable options.***

**(Sustainable Industries and Communities Committee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Coastal communities are supportive of marine-dependent industries, and the industries are implementing innovative, sustainable best practices that position them favorably for the future.
  - Marine-dependent industries are sustainable and competitive in global markets.
- ❖ Mid-term –
  - Marine-dependent industries are utilizing renewable and non-renewable resources in ways that maintain ecosystem integrity.
  - Marine-dependent industries accelerate the adoption of practices to become even more sustainable
  - Government and marine-dependent industries are working collaboratively to address social, cultural, environmental and economic concerns
- ❖ Short-term –
  - The level of participation in Council activities by marine-dependent industry representatives is increased.

***Background/Context for Activity***

In 2005 the Council supported a contractor to conduct an industry engagement assessment and to report back on ways to strengthen Council – industry interaction. The Council views marine-dependent industries as key decision-makers in ensuring a healthy and productive Gulf of Maine. Thus it needs their active participation in Council subcommittees, forums, periodic web-based inquiries and other activities to develop effective regional initiatives.

Activity Narrative

This project will articulate the benefits and impediments to the Council and industry to engage industry participation in Council affairs, including a review of industries' roles in similar



organizations, effective methods of engagement, expectations and responsibilities, options for Council, and anticipated results.

### Council Role/Niche

The Council will champion this work, which will be lead by SICC. Council needs to clearly articulate policies re: industry from the outset, so the Council's relationship with industry is clear and not ambiguous. (A-2)

### Activity Leads and Prospective Partners

Lead: SICC Chairs, Justin Huston NSFA and Liz Hertz MESPO  
Prospective Partners: NBDF, MEDMR, NHF&G, DFO, NSFA

### Crosscutting Services

Council Coordinator and Policy & Development Coordinator -- Expertise and services in regard to internal and external Council policy (I/A)

Outreach -- develop and disseminate communications and marketing materials (e.g. social marketing messaging) (40 hrs/yr)

Web Producer -- information on website, web-based surveys, etc. (I/A)

### ***Activity Measures***

#### Major Milestones

- Report to Council: role of industry in similar organizations/initiatives, effective methods of engagement, expectations and responsibilities, options for Council and anticipated results -- draft to WG September 2007, report to Council December 2007

#### Deliverables

- Report to Council
- Council strategy -- possible elements MAY include:
  - ▶ Development and implementation of "industry lens" to facilitate engagement and participation of industry on activities, committees, etc. of all three goals
  - ▶ Mid-term analysis of industry participation in Council activities, committees, etc.
  - ▶ Industry focused articles in GoM Times editions

#### Measures of Knowledge and Skill Changes

- Active industry participation in the creation of the report.
- Industry engagement across the three goals.



***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Report to Council: convene SIC and write report	Contractor	\$20,000
Total		\$20,000

Sources of Funding

Secured sources and amounts: None

Prospective sources and amounts:

- GOMC
- ETF

Key Partners:

- National Marine Sanctuary Program
- Joint Ocean Commission
- WWF- Canada (fishing industry)
- State/provincial business associations



### ***3.2 Support industry sustainability awards program.***

**(Sustainable Industries and Communities Committee)**

#### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Coastal communities are supportive of marine-dependent industries, and the industries are implementing innovative, sustainable best practices that position them favorably for the future.
  - Marine-dependent industries are sustainable and competitive in global markets
- ❖ Mid-term –
  - Marine-dependent industries are utilizing renewable and non-renewable resources in ways that maintain ecosystem integrity.
  - Marine-dependent industries accelerate the adoption of practices to become even more sustainable.
  - Government and marine-dependent industries are working collaboratively to address social, cultural, environmental and economic concerns.
- ❖ Short-term –
  - The level of participation in Council activities by marine-dependent industry representatives is increased.

#### ***Background/Context for Activity***

One of the recommendations from the 2005 industry assessment was to recognize progressive actions by marine-based industries in the Gulf of Maine. An awards program was one such mechanism.

#### Activity Narrative

The Council will develop (e.g. criteria) and award annual Gulf of Maine Council Sustainability Awards for marine-based industries that demonstrate commitment to sustainability in the way that they do business. Work with industry to determine criteria used to nominate industries. Determine how the Council defines a “sustainable marine industry.”

#### Council Role/Niche

The Council will champion this work, which will be lead by SICC. (A-1)



Activity Leads and Prospective Partners

Lead: SIC Chairs, Justin Huston at NSFA and Liz Hertz at MESPO

Prospective Partners: NBDF, MEDMR, NHF&G, NSFA, NSDEL, (Bay of Fundy Sustainability Award program)

Crosscutting Services

Outreach -- develop and disseminate communications, marketing materials, press releases (30 hrs)

Web Producer -- information on website, etc. (I/A)

Gulf of Maine Times -- disseminate information

***Activity Measures***

Major Milestones

- Program details (including criteria) presented to WG and Council for approval -- June 2007
- Call for nominations -- Fall 2007
- Awards granted -- December 2007
- Call for nominations -- March 2008
- Awards granted -- June 2008

Deliverables

- Development and awarding of Sustainability Awards

Measures

- One Sustainability Award per state/province awarded annually
- Number of nominations/applications increases by 10% annually for the first 5 years

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Development of Sustainability Awards	In-kind	\$0
Development of media kit, advertising and call for nominations	Outreach Contractor	2,000
Award development	Other	500
Media kit	Contractor	2,000
Travel for recipients	Travel	2,000
Total		\$6,500

Sources of Funding

Secured sources and amounts: None

Prospective sources and amounts: Council





### ***3.3 Assess working waterfront awareness (Baseline work).***

**(Sustainable Industries and Communities Committee)**

(Survey – baseline research and assessment)

#### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Coastal communities are supportive of marine-dependent industries, and the industries are implementing innovative, sustainable best practices that position them favorably for the future.
  - Marine-dependent industries are sustainable and competitive in global markets.
- ❖ Mid-term –
  - Government and marine-dependent industries are working collaboratively to address social, cultural, environmental and economic concerns.
  - Marine-dependent industries accelerate the adoption of practices to become even more sustainable.
  - Marine dependent industries are sustainable and competitive in global markets.
- ❖ Short-term –
  - Coastal lawmakers have increased awareness of creative approaches to protecting and managing the working waterfront infrastructure that marine-dependent industries require to remain competitive.

#### ***Background/Context for Activity***

The Gulf's working waterfronts consist of sites or facilities that provide physical access to the sea for commercial use, as well as related infrastructure and services. These areas are essential to our marine-dependent industries and often define the character of coastal communities. Provincial and state lawmakers, local officials (town councilors, selectmen, municipal, local service district representatives, etc.) and planning authorities are often searching for creative ways to protect and maintain these working fronts to support current and future maritime needs.

#### **Activity Narrative**

As a first step, the Council will identify a representative sample of coastal lawmakers. It will then organize, deploy and tabulate a survey that measures their awareness of the importance of working waterfronts, the threats to these areas and tools that are needed to enhance their management.



Council Role/Niche

The Council will champion the regional aspect of this work, which will be lead by the SIC Committee.

Activity Leads and Prospective Partners

Lead: SIC Committee

Prospective Partners: NBDF, MEDMR, MESPO, NHF&G, NSFA, ACOA, DFO SCH, NSOED, Island Institute, Maine Working Waterfront Coalition

Crosscutting Services

Council Coordinator and Policy & Development Coordinator -- Expertise and services in regard to internal and external Council policy (I/A)

Outreach -- develop and disseminate communications and marketing materials (40 hrs)

Web Producer -- information on website, web-based surveys, etc. (I/A)

***Activity Measures***

Major Milestones

- Survey results

Deliverables

- Survey Results and Analysis

Measures of Knowledge and Skill Changes

- Number of survey participants from various jurisdictions

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Develop and implement survey	Contractor	\$5,000
Write survey report	Contractor	1,000
Total		\$6,000

Sources of Funding

Secured sources and amounts: None

Prospective sources and amounts:

- Relevant state, provincial and federal agencies
- NGOs
- community groups



NOTE: Each jurisdiction could be responsible for collecting information on representative municipalities with WW bylaws to play into a regional white paper.

#### Products

- Sharing information on model bylaws for potential transfer
- Information that may show: What's the value of a wharf in your community?, What's the value of access?, /How many communities have "maritime zones"?

#### Audience

- State, provincial and municipal authorities with regulatory authority over waterfront bylaws/ordinances

#### Partners

- Maine Working Waterfront Coalition
- Nova Scotia Coastal Community Network (economic analysis shows need)



***3.4 Conduct best management practices survey of the tourism sector  
(Baseline work).***

**(Sustainable Tourism Subcommittee)**

***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Coastal communities are supportive of marine-dependent industries, and the industries are implementing innovative, sustainable best practices that position them favorably for the future.
  - Marine-dependent industries are sustainable and competitive in global markets.
- ❖ Mid-term –
  - Marine-dependent industries are utilizing renewable and non-renewable resources in ways that maintain ecosystem integrity.
  - The public is willing to pay a fair price for marine products and services that are produced using sustainable practices.
  - Marine-dependent industries accelerate the adoption of practices to become even more sustainable.
- ❖ Short-term –
  - Gulf-wide industry specific collaboration results in greater awareness of applicable best practices.

***Background/Context for Activity***

There is a need to identify the level of interest in and knowledge of sustainable best management practices within the tourism business sector.

Activity Narrative

The Subcommittee will survey regional tourism linked businesses to determine their interest in or knowledge of best management practices related to the implementation of certifiable sustainable tourism practices. Pilot surveys will be first done in Maine and New Brunswick. The year-one goal would be to survey 100 tourism businesses in both Maine and New Brunswick. (In the out-years the subcommittee will complete 100 surveys in each of the other three jurisdictions.) This information will then be used to determine the education and marketing necessary to encourage businesses to adopt sustainable tourism ethics and guidelines for their industry. (Subcommittee will determine two industry sectors (i.e. accommodations and experience-based).



Council Role/Niche

The Council will be a partner in this effort to support the development, distribution and analysis of the survey with the goal to determine next steps for implementing BMPs. (B-2)

Activity Leads and Prospective Partners

Lead: Sustainable Tourism Subcommittee

Prospective Partners: Tourism representatives and industry organizations

Crosscutting Services

Web services -- Consider web survey and create a web page to retain data (I/A)

***Activity Measures***

Major tasks with completion dates

- Complete 100 surveys of tourism businesses in both Maine and in New Brunswick -- June 2008

Deliverables

- 200 completed surveys & report tabulating results with synthesis

Measures

- High survey response rates by industry representatives

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Survey design	Contractor	\$5,000
Conduct surveys	Contractor	15,000
Review survey data and assessing results	Contractors	5,000
Total		\$25,000

Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts:

- GOMC



Notes:

Survey – start where we have tools in place.

Survey design: consider developing unique surveys for different sectors.

Use CSC survey design manual to develop draft – cut down on costs.

Sustainable Tourism Subcomm needs to be regrouped – build capacity. Have 40+ person email list.

Needs to be more representative of working group. Low on the Canadian side and industry (Task 1)

Identify smaller, community-based projects that are currently ongoing.

Identify 3-5 priority partners:

NB – Buctouche – have certification up and running – use their knowledge.

Contact provincial/state tourism councils for contacts.

Restaurant and hotel associations.

Tourism Industry Assoc of NS (TIANS) (sustainable coastal tourism strategy)

NS Dept of Tourism Culture & Heritage

Technical partner:

NOAA Coastal Services Center for survey assistance.



### ***3.5 Tracking national standards for sustainable tourism certification***

**(Sustainable Tourism Subcommittee)**

#### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Coastal communities are supportive of marine-dependent industries, and the industries are implementing innovative, sustainable best practices that position them favorably for the future.
  - Marine-dependent industries are sustainable and competitive in global markets.
- ❖ Mid-term –
  - Marine-dependent industries are utilizing renewable and non-renewable resources in ways that maintain ecosystem integrity.
  - Increase in the public's awareness of products and services developed with alternate energy sources or fuels.
  - Marine-dependent industries accelerate the adoption of practices to become even more sustainable.
- ❖ Short-term –
  - The level of participation in Council activities by marine-dependent industry representatives is increased.
  - Gulf-wide industry specific collaboration results in greater awareness of applicable best practices.

#### ***Background/Context for Activity***

There are a number of international certification programs that can be used as models to promote these practices in the Gulf of Maine. Currently organizations such as The International Ecotourism Society are investigating setting up national (both US and Canadian) certification standards. This was recently unveiled at the first National Ecotourism Conference.

#### Activity Narrative

The Sustainable Tourism Committee will maintain a working relationship with regional and national/international certification initiatives that promote quality certification within each of their jurisdictions. It will monitor this work and bring the results back to operators in the region. (This may require hosting a workshop.)



Council Role/Niche

The Council has two different roles in this project. The first is as partner in monitoring the larger certification initiative. The second is facilitating discussions and helping to translate the broader concepts to tourism operators in the region. (B-2)

Activity Leads

Lead: Sustainable Tourism Subcommittee

Prospective Partners: Bay of Fundy Partnership, Maine Tourism, etc.

Crosscutting Services

NA

***Activity Measures***

Major tasks with completion dates

- Periodic reports to the Working Group -- quarterly

Deliverables

- Outreach materials to industry representatives (web-based, printed, workshop, etc.)

Measures of Knowledge and Skill Changes

- NA

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Build internal committee capacity and communicate with industry representatives	SIC Contractor	\$5,000
Total		\$5,000

Sources of Funding

Secured sources and amounts: \$0

Prospective sources and amounts: n/a

Notes:

Placeholder activity.

Not measurable, but report back to WG.

Identify 3-5 priority partners: International board





### ***3.6 Assessing natural capital awareness (Baseline work)***

**(Sustainable Industries and Communities Committee)**

#### ***Applicable Outcomes from 2007-2012 GOMC Action Plan***

- ❖ Long-term –
  - Coastal communities are supportive of marine-dependent industries, and the industries are implementing innovative, sustainable best practices that position them favorably for the future.
  - Marine-dependent industries are sustainable and competitive in global markets.
- ❖ Mid-term –
  - Government and marine-dependent industries are working collaboratively to address social, cultural, environmental and economic concerns.
  - The value of open landscapes and functioning ecosystems are incorporated into federal and provincial/state decision-making via laws, policies and programs.
- ❖ Short-term –
  - Coastal lawmakers have an increased understanding of the relevance of incorporating natural capital concepts in coastal decision-making.

#### ***Background/Context for Activity***

The term natural capital describes the natural system that provides space, substratum, and renewable and non-renewable resources that support and regulate the physical, biological, and chemical processes in the coastal zone. Many suggest that the wide-scale substitution of physical capital for natural capital that is taking place in the Gulf's coastal zone is not sustainable. The value of open landscapes and functioning ecosystems is not adequately captured in traditional economic valuation and decision-making. A way to begin addressing this issue is by working to incorporate concepts of natural capital valuation into provincial and state statutes, policies and programs.

#### **Activity Narrative**

The Council will identify a representative sample of provincial and state elected lawmakers. It will then organize, deploy and tabulate a survey that measures their awareness.



Council Role/Niche

The Council will champion the regional aspect of this work, which will be lead by the SIC Committee (B-2)

Activity Leads and Prospective Partners

Lead: SIC Committee

Prospective Partners: COMPASS

Crosscutting Services:

NA

***Activity Measures***

Major Milestones

- Survey results

Deliverables

- Survey Results and Analysis

Measures of Knowledge and Skill Changes

- Number of survey participants from various jurisdictions

***Activity Financing***

<u>Tasks</u>	<u>Cost Category</u>	<u>Amount (US\$)</u>
Develop and implement survey	Contractor	\$5,000
Prepare survey report	Contractor	1,000
Total		6,000

Sources of Funding

Secured sources and amounts: None

Prospective sources and amounts:

- Relevant state, provincial and federal agencies
- NGOs
- community groups, etc.