



**Gulf of Maine
Council on the
Marine Environment**

Working Group Briefing Packet

Version 1

Portland, Maine • June 7-8, 2010



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Working Group Agenda

Monday, June 7, 2010 (Eastland Park Hotel, 157 High Street in Portland Maine)

8:30 AM	<p>Welcome, introductions, and overview and objectives for the meeting <i>Ted Diers, Coastal Program, NH Department of Environmental Services and Working Group Chair</i></p>
8:35 AM (PAGE 4)	<p>Accept consent agenda</p> <ul style="list-style-type: none"> ▪ Accept March 2010 WG meeting summary ▪ Committee and Subcommittee reports ▪ Partial list of Funds/in-kind Services Donated to the Gulf of Maine Council on the Marine Environment and Wish List for Funds/in-kind Services ▪ 2009 – 2010 Fund Development Report ▪ Progress and results from the Council's Habitat Restoration Grant Program ▪ TAPAS (Tracking Action Plan Activities System)
8:38 AM (PAGE 13)	<p>GOM Habitat Restoration and Conservation Initiative <i>Theresa Torrent-Ellis, ME State Planning Office Coastal Program; Ted Diers; and Peter Alexander, Talking Conservation</i></p> <p>Background: The Working Group March 2010 recommendations to the Council were presented and accepted on their May 6, 2010 Councilor call. These recommendations will be presented for action at the June Council meeting. Since the March WG meeting important developments have occurred (e.g., June 2, 2009 Steering Committee meeting, draft chapters scoped, contracting team hired, Canadian consideration of a Provincial approach, etc.).</p> <p>Outcome/Desired Action: Affirmation of the March WG recommendations to Council, increased understanding of the products and timelines for the GOM Plan.</p>
9:30 AM (PAGE 18)	<p>2010-2011 Gulf Maine Council budget <i>Ted Diers and Cindy Krum, Association of US Delegates to the Gulf of Maine Council on the Marine Environment</i></p> <p>Background: This discussion will focus on the decision to recommend to the Council an annual contractor Scopes of Service and budget.</p> <p>Outcome/Desired Action: Working Group recommendation on submittal of 2010-2011 budget to the Council for its approval at the June meeting.</p>
10:30 AM	Break
10:15 AM (PAGE 20)	<p>Action Plan: guidance for the future and engaging the Council's membership in implementation <i>Theresa Torrent-Ellis, ME State Planning Office</i></p> <p>Background: The Working Group had a productive session in March where agencies shared their priorities and reviewed those in the Council's current Action Plan. The resulting matrix, presented at this meeting, summarizes and provides a basis to analyze the intersection of these priorities and how it can help the Working Group form recommendation to the Council.</p> <p>Outcome/Desired Action: Working Group recommendations to the Council that describe:</p> <ul style="list-style-type: none"> ▪ How the Plan is for the Council first and foremost with less focus on a Plan for the Gulf; ▪ How the WG proposes to evaluate and describe Action Plan results of the past four years; ▪ How the logic model process in the current Plan will be modified in the new Plan; ▪ The update vs. whole-sale revision approach; ▪ How GOMC committees, partners, agencies, and the public will engage in Plan development; and ▪ Gulf priorities that will engage its membership for implementation.
12:00 PM	<p>Lunch on your own in hotel or downtown Portland <i>Discount coupons for the Top of the East available</i></p>
1:30 PM	Action Plan (continued)



2:30 PM (PAGE 25)	<p>New England-Canadian Maritime Collaboration and Planning Initiative: GOMC participation <i>Theresa Torrent-Ellis</i></p> <p>Background: Regional organizations, extending from Long Island Sound to the Gulf of Maine including the Canadian Maritimes, that have a shared interest in our oceans and coasts are collaborating to identify the most pressing issues and to determine the policy, planning, and management responses that the participating organizations may take. In the fall of 2010, the ten organizations will then convene a Partners Summit to agree on what policy, planning, and management projects they will jointly act on.</p> <p>Outcome/Desired Action: The Working Group will</p> <ul style="list-style-type: none"> ▪ Resolve how the GOMC will review the products and recommended projects that flow from the four meetings and how it will develop recommendations on the Council's response to those materials (e.g., identify from the list provided what the Council's top priority projects are, etc.) and ▪ Identify the three representatives the Council will send to fall Partners meeting.
3:15 PM	Time for items removed from Consent Agenda or unfinished business
3:30 PM	Recess for the day
4:00 - 5:30 PM	Reception for our <i>Oceans For Life – World Oceans Day</i> student art show
6:30 PM	Meet in Eastland Park Hotel lobby for group supper at RiRá

Tuesday, June 8, 2010 (Eastland Park Hotel, 157 High Street in Portland Maine)

8:30 AM	<p>Marine Resource Planning <i>Russell Henry, NB Department of Fisheries and the Department of Agriculture and Aquaculture</i></p> <p>Background: The MRP initiative is about creating a better awareness of government decision processes relative approval of activities and the allocation of marine space in the NB portion of the Southwestern Bay of Fundy. Governments are working with a committee of local stakeholders to clarify the need for and defining the role of a proposed Marine Advisory Council. A focus of the initiative is to ensure community values are reflected in the decision-making processes and an improved communication strategy is implemented to enhance the accountability of decision makers.</p> <p>Outcome/Desired Action: Informational</p>
8:45 AM (PAGE 25)	<p>State of Environment and Wall of Achievements preview <i>Jay Walmsley, Department of Fisheries and Oceans and Julia Knisel, MA Office of Coastal Zone Management</i></p> <p>Background: Two great efforts have been working for our June meeting and anniversary. The State of the Environment report part 1 for release during the Council meeting and an upgrade of our 2004 Summit Wall of Achievement into a visual slide show with accompanying guide.</p> <p>Outcome/Desired Action: Working Group will be our "test run" for both the Gala presentation and Council press conference.</p>
9:45 AM (PAGE 26)	<p>Climate Change: contribute to emerging project funding proposals <i>Susan Russell-Robinson, Julia Knisel, Adrienne Harrison, Gary Lines, and David Keeley</i></p> <p>Background: For six months, the Council's Climate Change Network and NROC's Coastal Hazards Committee have worked together to engage regional climate change experts in defining priority regional tasks that can be used in government and foundation funding proposals. They will share the priority tasks and solicit feedback on the content and potential partners.</p> <p>Outcome/Desired Action: This working session will engage people in refining the project concepts and identifying regional partners that should be engaged in the proposals.</p>
10:15 AM	<p>Working Group member roundtable Working Group members will share information to increase the GOMC's role as a valuable coordinating and convening organization.</p>
11:15 AM	Time for unfinished business or items removed from consent agenda



11:30 AM	Meeting adjourns for lunch on your own
1:00 - 3:00 PM	Casco Bay Tour – WG and Council celebrating World Ocean Day
6:00 - 7:00 PM	Reception with cash bar
7:00 - 10:30 PM	Gala dinner, presentations, and dancing

Consent Agenda March 2010 Working Group Meeting Summary

Gulf of Maine Council on the Marine Environment Working Group
Meeting DRAFT Summary
Portsmouth, NH
March 24-25, 2009

Working Group members present

Rob Capozzi, NB Department of Environment; Paul Currier, NH Department of Environmental Services; Ted Diers, NH Department of Environmental Services; Tim Hall, Department of Fisheries and Oceans; Adrienne Harrison, National Oceanic and Atmospheric Administration; Larry Hildebrand, Environment Canada; Justin Huston, NS Department of Agriculture and Aquaculture; Julia Knisel, MA Office of Coastal Zone Management; Gary Lines, Environment Canada; Ann Rodney, US Environmental Protection Agency; Susan Russell-Robinson, US Geological Service, Department of Interior; Jack Schwartz, MA Division of Fisheries; Theresa Torrent-Ellis, ME State Planning Office; and Peter Wells, Dalhousie University.

Working Group members present via telephone

Tracey Barbrick, NS Department of Environment and Betsy Nicholson, National Oceanic and Atmospheric Administration

Others present

Peter Alexander, Talking Conservation; David Keeley, Development Coordinator; Cindy Krum, US Gulf of Maine Association; Mary Power, NH Coastal Program; Michele L. Tremblay, Council Coordinator; and Matt Wood, GOMC Administrative Assistant from NH Department of Environmental Services.

Others present via telephone

Sophia Foley, NS Department of Environment

Consent Agenda

Justin requested that the “wish list” be pulled off of the Consent Agenda. Michele explained to the group that the “wish list” was an attempt to provide a mechanism for constituents to visualize what is needed by the Council. With the current budgetary constraints throughout various organizations, having this list may offer an alternative approach to contribute funds directly to the Council as opposed to paying dues. This document can be sent out as needed with other meeting documents.

Action: Michele will add a total cost of all the “Wish List” items at the bottom of the document.

Action: Michele will send out the “Wish List” document quarterly, as part of the Working Group briefing document..

Action: Ted will present the list of services donated and the Gulf of Maine Times contributes to the Council at the June 9, 2010 meeting.

Action: The GOMC-NROC Memorandum of Agreement was tabled

Decision: The Working Group accepted the consent agenda.

GOMC June Meeting and World Oceans Day final planning and Wall of Achievements

Theresa presented an overview of the June Working Group and Council meeting, which tentatively includes the following:

Council 20th Anniversary and World Oceans • Day Revised Schedule	
Monday, June 7	Working Group meeting Community groups spotlight/participation Arts reception (1.5 hours) Brian Skerry, Photojournalist, National Geographic “Critical Waters: Reporting on the State of the Ocean”
Tuesday, June 8	Working Group meeting (continued; concluded by 11-11:30) World Ocean Day cruise for Working Group and Council on Casco Bay – 3 hour cruise (back at 4:30) Gala with Wall of Achievements, Funders Recognition, and Dancing (Starting at 6:30)
Wednesday, June 9	Council meeting State of the Gulf of Maine release / media event (11:30-12 AM) Council meeting reconvenes for the afternoon

David remarked that at the December meeting Peter Lamb brought together Funders and the Council. Would it be possible to hold a half day forum with the Funding community, science community (Census of Marine Life) and the Council? Justin commented that if the forum were to overlap with the Council meeting you would need a two day meeting in order to ensure that all of the Council business could be covered. Theresa suggested that there might be an opportunity to fit it in with the Working Group meeting on Tuesday. Tim made the suggestion that holding the forum on Wednesday with the media event might give the Funders some media coverage.

Action: Theresa will add the Funders Forum to the agenda.

Action: Theresa will add the Census of Marine Life to the agenda (possibly with the media event).

Action: Peter will work with Justin to get material for the Wall of Achievements to Julia by April 14, 2010.

Action: Michele and Julia will post the Wall of Achievements presentation to the ftp site and inform the Working Group via the listserve. This will allow the Working Group the opportunity to review the presentation prior to the June meeting.

Part One: Charting our Course. What’s in it for you?

Ted commenced the discussion by explaining to the Working Group that this is the beginning of the process for developing the new action plan. The Council must first examine how it is currently engaging the jurisdictions. The Council must also determine what it is that is important to our jurisdictions. This discussion will help achieve those goals.

Where we fit into the current priorities:

Ann presented the EPA perspective on hot issues, which included:

Climate Change (adaptation, energy and sustainability)

Adrienne presented the NOAA Coastal Services Center and NOAA Fisheries Perspective, which included:

Adaptation – vulnerability assessment and risk assessments.

Modeling and mapping the risks and vulnerabilities

Planning for the risks and vulnerabilities of climate change.

Benefits of Conservation for Climate Change (green infrastructure and how it can support conservation)

Marine Spatial Planning – community building as it relates to MSP.

Restoration of Fisheries

Ocean Acidification research

Susan presented the Dept of the Interior perspective, which included:

Renewable Energy and its affects

Climate Resilience

Economy and Jobs – New development in coastal communities

Multiuse Plans on Coastal and Interior lands

Land Based Climate Change on how it impacts ecosystems

Sea Level Rise and its effects on communities

Justin presented the Nova Scotia priorities, which included:



Water Quality

Michele has presentation

Rob presented the New Brunswick priorities, which included:

Michele has presentation

Tim presented the Fisheries and Oceans priorities, which included:

Fisheries Renewal and implication from climate change

Increasing the Effectiveness of MSP (called it another name I missed)

Governance Frameworks

Data Sharing – network to accomplish this

Vulnerability Assessments

Conservation Planning

Habitat Restoration

Climate Change – increasing awareness of this from DFO ☺, EC has typically take the lead on this.

Habitat Mapping

State of the Gulf of Maine Reporting

MSP – regulation and management, habitat management (fish passage is the single biggest issue)

Larry presented the Environment Canada priorities, which included:

Biodiversity – Coastal habitats is priority within that

Watershed Planning/Management

Conservation and Restoration

Nearshore Water Quality – point source controls (WWTFs)

Climate Change and Coastal Resilience

State of the Environment Reporting

ECIP support

All of this is partly guided by the Gulf of the Environment funding

Habitat - biodiversity and migratory birds.

EC Atlantic priorities

Impacts on Adaptation

EC Atlantic move to support will as much as they can, however senior leaderships is not as sold on the benefit of GOMC as the regional entities are.

Ted presented the NH priorities, which included:

Climate Change - mitigation and adaptation (social impacts grants available)

Coastal Adaptation Workgroup (CAW) has recently been formed.

Stormsmart Coast developed by MA and has gone national.

Water Quality – nutrification, waste load and load allocations. Point and non-point sources must be reduces by 50% to affect nutrient levels. Implement Nutrient trading and a small watershed basis. Not clear how this integrates with GOMC

Land Use – climate change. Fluvial Erosion Hazard mapping in stature that DES signs off on.

Restoration – Primarily river restoration (dam removal, sedimentation issues, fish passage), have done a lot with coastal/saltmarsh in prior years. Now have wetland mitigation fund. A couple million has already gone to projects in the Merrimack watershed. Coastal WMF is new this year and an RFP was issued on 3-23-10. Applications are due in September. PREP management plan is currently being worked on and due to be released soon.

Ted will chair NROC starting in July and it has similar goals.

Offshore energy and MSP are not currently big issues in NH

Julia presented the Massachusetts perspective, which included:

Technical Assistance to municipalities

Identify Ocean Resources – Planning for future development

Coastal Water Quality

Data Management and outlets

Climate Change and MSP

Would like to reinforce connections within GOMC with ECIP and restoration. Link with constituents to make a case for the priorities of the GOMC.

Fisheries and Fishing – not under the Ocean Management Act. Red tide is a hot issue as well as lobster populations.

Theresa presented the Maine perspective, which included:

Similar priorities as others

Strategies and Policies for Wind Energy

Ocean Energy and MSP

Fisheries

Water Quality

Nutrients

Landscape Level Conservation

Lack of Money to do what we want

Ecosystem Based Management

Council Action Plan and new directions / participant priorities

Ted began the discussion by pointing out that there are key priorities that have come up within jurisdictions (i.e. nutrients) that have not been talked about before. When developing the new plan focus needs to be placed on the Council's role in the plan, keeping in mind that this is not a plan for the Gulf of Maine, it is a Council workplan. Susan provided an example of they type of change to the current goals that could be made. In Goal 3 Susan suggested dropping the "marine-dependant industries" language. Justin pressed upon the group that the work the Council does in the coming years need to focus on the new goals that are developed. Tim commented that working and communicating across the jurisdictions is a key part of the Council and it is not reflected well in the current action plan. It may be appropriate to have a goal in the new work plan that reflects this interaction. Larry acknowledged the need to discuss what the Council did or did not accomplish as part of the last workplan, and report on those activities. Further discussion will need to include a statement indicating weather the activity is still a priority and if the Council will continue in that path or not. It must also be made clear that the new workplan plan begins in 2013 and concludes at the end of 2018. David asked the group if they envision a plan that looks similar to the last one. Ann responded no, the new plan will be a more specific plan similar to the Work Plan at a Glance sheet/insert in the current plan. Michele suggested that the plan have a broad regional guidance but then be specific on the Council's role on accomplishing that goal. Theresa suggested the Council present the vision for the health of the Gulf of Maine and then describe the Council's role within that vision. The group was unanimous that the new workplan needs to have more flexibility so that the Council can change direction during the five year timeframe if needed. Michele commented that providing an overarching vision for the Gulf of Maine would afford the Council the opportunity to change direction over the next five years. An issue may not get defined in one of the Council's goals, but if it falls under the over arching theme it will make the transition/shift easier. Theresa suggested the Council may get more benefit by redesigning the website to reflect the new plan than to actually produce a similar document as the current action plan. Redoing the website and having a smaller more detailed document that can easily be discussed with people should be the priority. Ann commented that on pages five and six of the current plan there is already an overarching goal defined.

In summation the new (smaller) plan should include:

- A discussion of what does the council do best (i.e. information sharing between jurisdictions).
- An overarching vision for the Gulf of Maine.
- A description of the Council's role in the vision for the Gulf of Maine.
- An evaluation on past progress and how that related to the Council's goals (S.M.A.R.T. model; Specific Measurable Achievable Realistic Timeliness).
- Description of the new goals
- The activities need to accomplish the new goals

Next steps to prepare for June:

- Develop a list of the sections in the current plan.
- Have the group decide what sections in the current plan are expendable, what should remain, and what should be dropped.
- Complete the summary of jurisdictions priorities (Michele's matrix)
- Create a new website function to encompass the action plan, less of a print document.
- Go through/review what has been done and assess results and identify lessons learned.

Part Two: Charting our Course. Marine Spatial Planning Overview with provincial, state, and federal program linkages

Susan gave an overview of the US National Ocean Policy. The Policy has been out for review, cabinets have signed off and it has gone to the President. The Policy is due out as an Executive Order in April; it will not be a Presidential Directive. Tim informed the Working Group that there already exists a similar policy on Ocean Management and



Planning in Canada. Additionally, there is an Oceans Program currently operating and there is concern in Canada that the push to Marine Spatial Planning (MSP) will change the direction that the program is currently headed. NGO communities in Canada are pursuing the Canadian government to adopt MSP. Currently the process being used for integrated management follows the ideas of MSP up until the regulation of where things can happen. In DFO there is a National Ocean Management Committee developing a discussion paper on how MSP overlays their current policy. Justin commented that there is not a lot of provincial interest in developing a new acronym for what is already taking place. If MSP is preserved as a conservation tool the marine industry will not get involved, however, if MSP is presented as a tool to maximize industry needs there may be acceptance from the marine industry. This could provide an opportunity for the Council to be a convener and bring the regions together to discuss how MSP can work across the border. Jack stated that communication between NROC and the New England Marine Fisheries Council needs to happen so that their ideas can be integrated or represented in the process. Justin commented that Canada is already doing MSP though it is not under the umbrella of that term. There is a real need to make sure terminology is defined. In June Canada will make an announcement if a review of the moratorium on offshore drilling will be reviewed or not.

Action: Tim, Susan and Adrienne will work together to find a time to have an informal discussion with key players of MSP.

Action: Susan will present at the Council meeting in June to inform the Councilors that a discussion around MSP will be convened. Susan will ask the Councilors for consent to allow the GOMC to be a convener of the MSP discussion.

Action: Susan will hold a discussion with NROC to make them aware of the Council's interest in having this MSP discussion.

Update on the State of the Gulf of Maine and its role in the next five year plan

Tim gave an overview on the State of the Gulf of Maine. Since the Nov/Dec meeting there has been an editorial committee formed. The context document has been reviewed and the first theme paper has been sent out for review. Peer review will be managed by the editorial committee, and the documents will be presented to the Council for final approval. The Website is in the process of being designed and will be hosted through the Council's website. The context document is at Management and Finance for its second review. Five theme papers have been sponsored and are currently being worked on. At the June meeting the State of the Gulf of Maine will be unveiled as a website, with printable copies available via the website. Over the next three months funding will be sought for the design of a common layout for the theme papers. David asked if RARGOM needed to be contacted to look at these papers to ensure the scientific portions are bulletproof. Tim responded that the job of the editorial committee is to contact the appropriate parties to ensure the validity of the material discussed. The editorial committee is finding the experts that are needed for the scientific review.

Climate Change Network

CCN exists and moves forward as:

- Leader for the disseminator of information
- Instrumental in generating climate change information in GOM specific issues

Funding Opportunities:

- Framework development – NESCAUM
- Planning assistance on climate change issues
- Economic impact assessments
- Restoration and conservation objectives
- Communication issues
- Networking

Possible Projects:

- Habitat restoration
- Bundle the communication issues together
- How can we plug into the economic impact tool

CCN has been working with Wes Shaw, the developer of Storm Smart Coast, to develop a regional version of the tool. There is the option to explore how Canada can adopt the tool for use/adoption if it is desired.

Action: Susan will e-mail the Working Group with the details of a meeting tentatively scheduled for June where climate change priorities will be discussed.

Conservation and Restoration Initiative (Great Waters)

David gave an overview of the discussion from the December Working Group and Council meeting and what recommendations were made. Possible items to present to the Council at the June 2010 meeting include Presentation of draft Plan & possible uses of it, Overview of appropriations initiative, Relationship of Council to GOM



Alliance (w/invited guests), and Clarify Council restoration and conservation priorities in context of new Action plan and implications of GOM Habitat Restoration and Conservation Plan on the Council.

Three things discussed with the Canadian coalition

1. Why would the provinces want to do a plan?
 - a. To help meet current mandates and directives
 - b. To coordinate conservation and restoration initiatives
 - c. Show bilateral connections
 - d. Help leverage new resources
 - e. It might be used in negotiations with provincial agreements
2. If so how?
 - a. Might be an opportunity through the Canadian association of the Council to leverage funds and hire a Canadian contractor to bring the appropriate individuals together.
3. What would it involve?
 - a. Describe current state, provincial, governmental restoration policies and legislative directives
 - b. Canadian table of what is in place and who the lead contacts are

By June there should be some US and Canadian materials to present at the Working Group meeting.

What would the Working Group like to recommend to the Council in June?

1. The need for restoration and conservation will be looked at to see what the need is and who would be involved.
2. It is important to look at maintaining and moving forward in the future with climate change. If we can get out at the forefront of this issue the Council might become a leader on this issue.
3. What about our action plan? Need to be addressed upfront and articulate that this is the primary focus. Discuss the Council's role in this.
4. The Great Lakes plan provided a model for the Council to work from in the development of the GOM plan.
5. There is no federal program that names the Gulf of Maine so congress doesn't know how to deal with it. If the Council gets a plan together it gives the federal government a vehicle to recognize the issues in the Gulf and open an avenue for funding of restoration and conservation projects and redirect federal priorities.
6. Need to state there are real issues that need to be addressed in the Gulf of Maine. People outside of the Council see the Great Lakes and all of their major issues and then when they think of the Gulf of Maine they see it as relatively healthy.
7. Need to incorporate a piece that this will also help create jobs in the coastal communities.
8. There are a lot of jurisdictional differences on how things get done and where resources come from. A regional perspective will help get around some of these issues.
9. Showing the needs on the Canadian side will help congress see why this is needed.
10. Moving forward with this will help bolster the development of the Council's 2013-2018 action plan.

Ted raised the point that before the Council can move forward with the Working Group must clarify the Council's role with this initiative and how the Councils intends to support it.

On the topic of 'Does the Council support this initiative?'

- There was a motion to recommend to the Council to support the development of the conservation and restoration initiative. Specifically the creation of the plan and the stakeholder involvement.
- The motion was seconded.
- A comment was made that the motion be postpone until the Working Group receive an assessment from NOAA Habitat and Restoration on their role and interaction on this issue. It was felt that people may not have enough information to make a recommendation.
- A vote was held: All voted in favor of the motion. No one voted to reject the motion. No one abstained. Mr. Schwartz voted "present".
- The motion was passes.

On the topic of 'How does the Council support initiative?'

Three options were presented: **A.** Passive endorsement; **B.** Active support, Involved as a facilitator and organizer; and **C.** The Council wants to lead the initiative.

- There was a motion that the Council support the initiative through option C with a comment that it is compatible with other initiative in the northeast region.
- The motioned was seconded.



- After some discussion the motion withdrawn.
- There was a motion that the Council support the initiative through option B, tying it back to the Council's action plan. Need to figure out exactly how the council will take that role as a facilitator.
- The motioned was seconded.
- After some discussion the motion withdrawn.
- There was a motion that the Council starts out as an active supporter (option B) and then move into a leadership role if it desires (option C). We can decide what pieces of this we like or support and incorporate these aspects into the action plan. Need to consider what amount of resources are needed before option B or C are chosen.
- A vote was held: All voted in favor of the motion. No one voted to reject the motion. No one abstained.
- The motion was passes.

Action: Present a recommendation to the Council at the June meeting to support the development of the conservation and restoration initiative, specifically the creation of the plan and the stakeholder involvement.

Action: Present a recommendation to the Council at the June meeting to support the development of the conservation and restoration initiative as an active supporter, with intention of developing into the lead role.

NERACOOS

NERACOOS has funding to hold workshops around the four themes areas, which include: Maritime Operations; Ocean Energy Planning and Management; Coastal Hazards; and Ocean and Coastal Ecosystem Health. These discussions will bring together 10-15 highly knowledgeable individuals to discuss the issues in May and June (dates yet to be determined). NERACOOS would like two things from the Council, workshop facilitators and more Canadian involvement on the development of these discussions. People can contact Theresa with suggestions of potential Canadian's who might want to be involved and/or if they would like to be a facilitator. The meetings will be held somewhere in New Hampshire or Massachusetts as it is equidistant for all possible participants. There was a comment that NERACOOS has not done a good job in the past of engaging coastal managers in the Canadian jurisdictions. Additionally all of the travel has already been submitted for the coming year and it will be very difficult to get travel authorization to attend these meetings. In response to these points it was discussed that there will be conversations beforehand to help engage the concerns of the Canadians and the concerns will be addressed in the discussions/meetings.

Action: Theresa will send an e-mail to the Working Group requesting assistance in developing a list of questions to help determine what the Council would like to gain from these discussions. The questions will focus around what types of outputs and outcomes would benefit the Council and might aid in the development of the action plan.

Action: To assist the Working Group in the development of these questions, David will send out drafts of the meeting agendas to the Working Group.

Part Three: Charting our Course. Gulf of Maine: the next five year plan

Ted began this discussion with a summary of the conversation from yesterday. There was a lot of agreement across the jurisdictions on the hot issues. They included:

- Climate change adaptation
- Renewable energy
- Water quality
- Habitat restoration
- Land conservation
- Jobs and the economy
- Populations at risk (marine biodiversity as a whole)
- Marine Spatial Planning (multi use of Ocean space)
- Watershed Management

One hot issue that might have been missed was information management. Now the Council needs to decide what the role of the Council will be in each of these categories. Information management might be the thing that ties these to the Council. Michele showed the "David Matrix" as an example of a way to look at these issues and see how they fit throughout the jurisdictions/regions. The Council is at the top of a proverbial funnel and over the next year the Council needs to get to the bottom, and narrow down where to go from here. Is the Council going to go through a similar logic model as last time? One concern is that the logic model is a chain. If funds dictate pieces be dropped the model might breakdown. The Council needs to look at what was done for an evaluation last time and what those costs were. Instead of using a "model" the Council might want to use back casting. The Council has made the

decision to do a fairly narrow update and fit it into the current set of goals and framework. Need to see what doesn't fit, what will go on the website, and what to incorporate into a more action based plan. The new plan should articulate that this is a plan for the Gulf of Maine but the plan would detail the Council's role in that overall plan. The Council needs to engage the committee chairs and see how their needs tie into the plan. Need better information sharing and dissemination where the committees update the Council on a regular basis beside the reports submitted in the briefing book. One possibility would be to convene an annual information sharing workshop to bring everyone together.

Action: Michele will send out Matt's summary of the jurisdictional priorities from 3/24 to each of the presenters so that they can be fleshed out and sent back to Michele for integration into the summary matrix.

Prepared by Matt Wood, NH Department of Environmental Services and Administrative Assistant for the Council

Climate Change Committee: Event and Activities Status

Outline

- Climate Change Network Event held October 7th.
- Engagement on producing Theme Papers for SOER.
- Regional Adaptation Collaborative
- Review of importance of Network to Environment Canada priorities.

Climate Change Network Event:

At the last Gulf of Maine WG Meetings, a summary of the Climate Change Network Event was presented as a briefing note.

A summary of the Meeting and the presentations are still planned to be posted on the CCN website. Thanks are due to Adrienne Harrison and Ellen Mecray for the development and wrap-up of proceedings.

Future events were strongly recommended but funding such events through efforts of Environment Canada may be difficult. While EC is supportive of these events and any movement on the topic of climate change in general is seen as positive, it is unlikely that new money will be available over the next few years to fund either events or network development.

Theme Papers for SOER

The Climate Change Network fully supports efforts to write, review and complete climate change Theme Papers for the State of the Environment Report (SOER). Expertise is available to provide reviews of papers. As well, Environment Canada has provided funding (fiscal 2009-2010) for the production of one of the proposed papers.

Regional Adaptation Collaborative

In August of 2008, Atlantic Canada's proposal to collaborate on over 50 projects related to adaptation to coastal impacts was accepted by Natural Resources Canada's Climate Change Impacts and Adaptation Program, thereby establishing a Regional Adaptation Collaborative (RAC). Funding for the RAC will soon be ratified and be approximately \$3M Cdn, to be matched by cash and in-kind partners including the four provinces and private sector. The Climate Change Network maintains a close relationship with a number of the same partners and will follow the numerous projects and their results as they roll out over the next 2 years. Synergies with projects in New England will continue to be explored including potential funding opportunities.

Environment Canada Priorities

Environment Canada Atlantic has reviewed current Gulf of Maine priorities and, with regard to climate change issues, agrees with any proposed direction that incorporates climate change information on a regional level into the decision making process.

This means that emphasis on climate change impacts on the marine environment is important and should continue. However more attention should be paid to the impacts to coastal environments and the watersheds that feed them.

Proposed Next Steps

1. Continue efforts to finance Network activities.
2. Start planning for next CCN event next fall.

*Submitted by Gary Lines
17 March 2010*

Gulf of Maine Times: Progress Report on Securing Financial Support

Background – In 2009-10 the Council focused its fund development efforts for the *Gulf of Maine Times* on soliciting annual contributions (e.g., recurring support) from agencies and non-profit organizations that share a communications interest in objective, science-based reporting about issues in the Gulf of Maine.

- Three levels of sponsorship were created (see below) as well as a 1-page prospectus (see page two of this brief).
- Possible sponsors were identified and 20+ were sent a sponsors package. Phone calls were then placed within 5-7 days to present the concept and respond to questions. Frequently several calls and emails were exchanged before the prospective sponsor could make a decision. USGOMA then processed invoices to collect the funds.
- The *Gulf of Times* web site was then amended to enable a rotating banner that proudly identifies our sponsors.

Levels of sponsorship

Contributor -- \$500: In recognition of your support at this level we will include your organization's logo on the "Sponsor Page" of the Gulf of Maine Times' website for one year, and include a link to your own website that brings visitors to your site. Contributors are encouraged to offer story ideas to the editor and may serve as a resource for the editor.

Supporter -- \$1,000: In addition to the benefits listed above, we will include your logo, a 2-3 sentence description of your organization and a link to your website in the "Sponsors' Banner" on the home page of the Gulf of Maine Times website. (The banner is shared on a rotating basis by all sponsors at this level (or above), ensuring that everyone is guaranteed visible, front-page coverage.)

Donor -- >\$2,000: At this level of sponsorship you will get all the benefits listed above, plus you will have space in each edition for a 300-word article written and submitted your organization that is relevant to the Gulf of Maine. The organization may also provide short press releases that will be edited into articles for the Times monthly updates. (Placement is subject to editorial approval)

Status – Six organizations have now provided nearly \$25,000. Six organizations declined to be a sponsor, three are considering the idea and three have said they will be a sponsor but have yet to act. We have a list of 10+ other organizations that have yet to be contacted. In addition, in May non-government organizations that are members of the Council were asked to consider how the communications interests of their respective organizations aligned with the *Times* and whether they could become a sponsor.

Your trusted source of information about the Gulf of Maine/Bay of Fundy is in jeopardy

Our Request

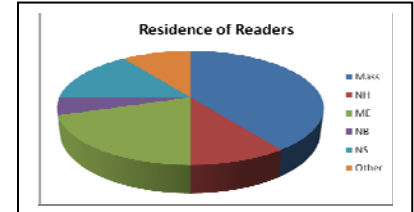
For over fifteen years the bi-national Gulf of Maine Council on the Marine Environment has produced the *Gulf of Maine Times* as a service free of charge. The *Times* is an unbiased source of information about research and happenings in the Gulf of Maine/Bay of Fundy. It helps people understand, appreciate and preserve the diverse and complex Gulf of Maine watershed and marine environment. However the federal grant the Council used to produce the *Times* is gone and this quarterly newspaper is in jeopardy.



Your constituents, the people living and working in the Gulf of Maine/Bay of Fundy watershed, look to your organization, the Council and others for unbiased information. **Today we are asking you to join with other organizations to make sure the *Times* continues to be a trusted source of information. With a small annual contribution from your organization and many others, important connections across our region will be maintained.**

The Situation

- A unique and quality product -- The *Times* has proven to be an objective, factual newspaper that is distributed to over 12,000 readers throughout the Gulf of Maine/Bay of Fundy watershed and beyond. They are involved in legislation, policy, enforcement, industry, commerce, education, conservation, science, recreation, and health. A talented part-time editor and gulf-wide editorial board assures it covers the breadth of environmental, economic and social issues of concern to people living and working in the watershed. (Less than 5% of the content is about the Council.)
- Costs to produce the *Times* – For the past decade the Council produced four hardcopy editions of the *Times* each year and posted it on line as well. It costs \$15,000/online edition and monthly e-zones for an editor, writers, web site and project management. To print and mail the hardcopy it is an additional \$12,000/edition. Our immediate goal is to raise \$60,000 to produce four on line editions a year. (We would like to reinstate a hard-copy newspaper at some point.)
- Sources of support – The Council is asking individual readers to contribute and it has received more than fifty donations in the past few months. The Council is committed to securing one-half the production costs through its own network. With this solicitation the Council is asking regional partners (e.g., regional organizations, non-profits, academia, industry, etc.) to join the Council in sustaining the *Times* as a trusted source of information.



Why step up

The people living and working in the Gulf of Maine/Bay of Fundy watershed are our shared constituents. While there are many newsletters there is no other newspaper focusing on this ecosystem. Working together on this communications tool we can do something that we can not do alone. In doing so contributors will receive visibility and advance their communication objectives.

Please take action

With a small annual contribution important connections across our region will be maintained. We are asking you to make an annual contribution according to your ability. Some organizations have already expressed an interest in providing amounts ranging from \$500 to \$5,000. Please take a minute to discuss possible options with David Keeley at the Council (207) 549-3598 or david@thekeeleygroup.com. **Let's keep the *Times* as an objective source of information about the Gulf of Maine/Bay of Fundy.**

GOM Habitat Restoration and Conservation Initiative

Decisions Required

At the June 2010 Council meeting Councilors will be asked to make several decisions related to this initiative. On the May 6th call Councilors will help to frame what those decisions are and their implications (e.g., policy, financial, etc.). To assist in this effort the Working Group recommends the following:

1. The Council should support the creation of the Gulf of Maine Habitat Restoration and Conservation Plan and the stakeholder involvement process.
2. The Council's role should be as an active supporter/facilitator/organizer in collaboration with non-profit and for-profit interests.

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	6) Long-Range Planning, Science, and Communication
	7) Measuring and Monitoring Improvements (Or Declines) Over Time

Considerations

Geographic Scope of the Plan – At this time the Plan will only address habitat restoration and land conservation needs in Maine, Massachusetts and New Hampshire. A parallel strategy to identify comparable needs for the provinces emerged at the March 2010 Working Group meeting. In June it is likely more information on this Canadian approach can be discussed.

Content of the Plan – There are seven chapters in the Plan (see box). Each chapter will present a) an analysis of the problem, b) a vision statement (what “restored and conserved” looks like), c) a statement of solutions (goals and objectives, both short and long-term), d) recommendations for implementing solutions, and e) an analysis of financial and time requirements per issue area. It will not present a prioritized list of projects.

Timing and relation to the Action Plan -- The Gulf of Maine Habitat Restoration and Conservation Plan will be completed by September 2010 – well in advance of the Council's new Action Plan. The Council can decide at that point what pieces of this we like or support and incorporate these aspects into the revised Action Plan.

Financial Implications – At this time all funds needed to prepare the Plan and support the stakeholder engagement process in the states have been raised from non-profit sources and are being managed by the USGOMA.

If implementation funds are provided by Congress in 2011 it is expected they will be distributed competitively by EPA, NOAA and DOI through existing authorized programs. (It is envisioned that the Council may advise the agencies but it will not be managing or distributing these funds.)

Policy Implications – If the Council accepts the Working Group's recommendations (see above) the policy implication is that Council supports accelerating the pace of habitat restoration and land conservation in the Gulf of Maine. Implementation of the Plan by the US federal agencies will have no direct policy implications for the Council.

Background Materials

Council Discussion: December 2009 Council Minutes

Action#1: *David will present a detailed discussion of the Gulf of Maine Conservation and Restoration Initiative at the June 2010 Council meeting, which will include a discussion of the GOMC role and implications of the initiative on the Council as an entity and on its Action Plan.*

Action#2: *An agenda item will be added to the Working Group's March 2010 meeting to continue the Gulf of Maine Conservation and Restoration Initiative discussion with a goal of developing clear directions to be presented to the Councilors at the June 2010 Council meeting. (For example, does the Council support accelerating the pace of habitat conservation and restoration in the Gulf/BoF? Are the proposed categories in the GOM Restoration Plan consistent with the agency mandates?)*

Action#3: *Invite members of the coalition and ACOA to speak at the June 2010 Council meeting so that the Councilors can gain another perspective on what they envision as the role of the GOMC in the initiative. (Note: At the March WG meeting Canadian representatives raised questions about ACOA being invited.)*

Partial list of Donations to the Gulf of Maine Council on the Marine Environment and Wish List for Needed Council Products and Products

June 1, 2010

This document is a first draft and contains a first table that attempts to recognize the many contributions that agencies and other Gulf of Maine Council participants have made to continue and enhance the GOMC's programs. The listed contributions are beyond Working Group member and committee/subcommittee participation and donations other than dues. Please provide to Michele Tremblay and Cindy Krum any of the defined contributions that are not listed. A revision will be drafted and distributed after the March Working Group meeting.

There is a second table that provides opportunities for GOMC participants to provide their support for discrete products and services. Please contact Cindy or Michele if you wish to take advantage of any of these opportunities.



This is a draft list. If any donation was inadvertently not included, please email Michele L. Tremblay at info@GulfofMaine.org. Note: Numbers may be different from numbers in the Council's budgets due to indirect rates, exchange rates and other factors.

2009-2010 donations

Program/Project	Donating agencies, organizations, and individuals	Amount Donated from July 1, 2009 - June 30, 2010	Annualize amount donated/ needed
Outreach			
<i>Gulf of Maine Times</i>	Maine Coastal Program, Department of Fisheries and Oceans, NH Charitable Foundation	\$25,880	\$49,600
Constant Contact marketing services	US Geological Survey and individual donations		
<i>E-Zone</i> technical and mailing list maintenance Services	Maine Coastal Program	200 / month	2,400
Assistant Editor of the <i>Gulf of Maine Times</i> , Cathy Coletti	NH Department of Environmental Services	3,500	3,500
Individual donations		2,200	N/A
Gulfwatch			
Program Management and 2009 organics and metals analysis	Environment Canada	40,000	47,400
Information Technology			
Data Exchange Network	NH Department of Environmental Services	19,202	N/A
Restoration Project services	NOAA/NMFS	4,420	4,000
Ocean Data Partnership	NH Department of Environmental Services (staff)	5,000	5,000
Secretariat			
GOMC 20 th Anniversary / World Ocean Day celebration	Maine Coastal Program	5,000	N/A
Wall of Achievements	MA Office of Coastal Zone Management (intern)	3,840	3,840
2009 GOMC Awards Ceremony	naturesource communications, Normandeau Associates, Woodard and Curren, and VH, Inc.	900	900
Administrative services	NH Department of Environmental Services	20,000	20,000
Conference call services	NOAA	1,800	1,800
Ecosystem Indicator Partnership			
ESIP Program Manager project-based work	United States Geological Survey; Environment Canada; Canadian Department of Fisheries and Oceans; US Environmental Protection Agency	67,270	80,350



Conference call services	United States Geological Survey	4,000	4,000
Habitat Restoration/Conservation			
Habitat Restoration Partnership grants and coordination	National Oceanic and Atmospheric Administration/National Marine Fisheries Service	430,000	400,000
Coordination match	Maine Community Foundation; New Hampshire Charitable Foundation	3,459	40,000
Conservation and Restoration strategy	Maine Community Foundation; New Hampshire Charitable Foundation	34,041	N/A
Conference call services	Maine Coastal Program; NOAA NMFS	2,000	2,000
State of the Gulf of Maine reporting			
Project coordination	Department of Oceans and Fisheries, Environment Canada, and MA Office of Coastal Zone Management	To date 58,000	56,000
Invasive species theme paper	MA Office of Coastal Zone Management	To date 8,000	8,000

2010-2011 wish list for Needed Council Services and Products

Program/Project / What is needed	Donated by whom	Pricing	Annual Amount Needed
Outreach			
<i>Gulf of Maine Times</i>	Your agency's name here	\$12,400 / issue	\$49,600
Constant Contact	Your agency's name here	350	350
Marketing services, E-zone, technical and mailing list maintenance	Your agency's name here	200 / month	2,400
Gulfwatch			
Program management	Your agency's name here	18,000	20,000
2009 data report	Your agency's name here	4,500	4,500
2010 Data Report	Your agency's name here	4,500	4,500
organics analysis	Your agency's name here	14,175 (2009 #s)	16,900
Metal analysis	Your agency's name here	8,804 (2009#s)	10,500
Information Technology			
Core website maintenance	Your agency's name here	1,700 / month	20,400
Restoration Project services	Your agency's name here	4,000	4,000
Ecosystem Indicator Partnership			
ESIP Program Manager	Your agency's name here	6,695 / month	80,350
Habitat Restoration/Conservation			
Habitat Restoration Project Coordination match	Your agency's name here	3,540 month	42,500



Secretariat and Other			
Major sponsorships of the GOMC 20 th Anniversary and World Ocean Day in June 2010	Your agency's name here	At least ten at 500 each to match the Maine Coastal Program's 5,000	5,000
<i>Gulf of Maine Habitat Primer</i> printing	Your agency's name here	2,500 copies	8,000
<i>American Eels: Restoring a vanishing resource in the Gulf of Maine</i>	Your agency's name here	2,500	3,000
<i>Action Plan</i> production, printing, and distribution	Your agency's name here	#2,500 copies of the 36 page document plus insert postcard	18,000
Reprinting Gulf of Maine Watershed Poster with bathymetry images	Your agency's name here		3,000

Prepared by Michele L. Tremblay, Council Coordinator and Cindy Krum, US Gulf of Maine Association

2009 – 2010 Fund Development Report

Context for Development Initiative

1. Council fund development priorities (Climate Change, ESIP, GOM Times, IT, and Habitat Restoration)
2. Tough economic conditions and highly competitive funding environment
3. Team effort of Working Group, Committees and contractors working to secure funds for Council tasks
4. 7% reduction in GOMC support for fund development activities in 2009-2010 period
5. Pursued new development approaches (funded ESIP coordinator to develop project concepts, solicited GOMT sponsors to make annual contributions, partnered with NROC to scope shared climate change projects, engaged six NE states on joint Congressional request)

Level of Effort, Results and Next Steps

Climate Change Adaptation

- Effort – Engaged NROC; compiled provincial, state and federal policy, planning and management needs; interviewed regional experts; identified priority projects and potential partners; created list of top funding prospects
- Result – Created partnership with NROC
- Next steps – Prepare funding proposals

Ecosystem Indicator Partnership

- Effort – Submitted \$175,000 proposal; ESIP coordinator scope expanded to create two project concepts; identified funding prospects
- Result – Have two solid project ideas
- Next steps – Prepare funding proposals

GOM Times

- Effort – Requested subscribers to register on-line, solicited individuals to be donors, developed appeal and engaged 12 organizations to become ongoing sponsors; worked to increase circulation/readership; increased web site functionality; partnered with Huntsman Marine Science Center on \$26,000 proposal - \$15,000 for the Times (grant decision pending)
- Results – Raised \$16,500 from NHCF, Northeast Consortium, DFO, Chewonki Foundation & Cox Trust; have pledges of \$6,000 from NE Aquarium, Census for Marine Life, Mass Ocean Partnership, and NERACOOS;
- Next Steps – Engage additional organizations to become ongoing contributors

Information Technology

- Effort – Prepared funding proposals that contained IT support tasks
- Results – Raised \$3,500 for IT
- Next steps – Continue to include IT in proposals

Total Funds Raised – All Sources

Grants & Cash Donations

Gulf of Maine Times	\$16,500
Information Technology	\$3,500
Habitat Restoration Strategy	\$76,000
Restoration Coordinator	\$5,000

2009-2010 Return on Investment

July 2009 – May 2010

Successful grants	\$100,000
Funds Pledged	\$31,000
Fund Development Expenses	\$27,032

Habitat Restoration Coordinator & Strategy

- Effort – Prepared three successful funding proposals (MCF, NHCF, Cox Trust); created Canadian approach to assess restoration & conservation needs & strategy to secure \$25,000 pledge to support effort;
- Results – Raised \$5,000 for restoration coordinator position; raised \$76,000 to prepare US Restoration and Conservation Plan;
- Next steps – Complete plan by 9/10; write proposals to maintain momentum

US Federal Appropriation Initiative

- Effort – Partnered with NROC on \$70M regional request to Congress - \$10M/GOM state; created content & materials; secured four Governors' letters and 3 Legislative Resolves; engaged Hill staff; supported state representatives; etc.
- Results – Request is pending as well as authorizing strategies
- Next steps – Continue to engage Hill staff & members of Congress

Cultivate foundations

- Effort – Engage foundation community in Council activities; organize, convene and report-out on December Funders' Forum
- Results – Increased knowledge of 10+ foundations about the Council and its work
- Next steps – organize Council - foundation events

2010-2011 Gulf Maine Council Budget

Contractors for the Gulf of Maine Council included in July 1, 2010-June 30, 2011 Budgets. All funds are secured unless shown in *Italics*. Contracts will only be written with secured funds

Contractor	Contract End Date	Title	Funds
Krum Steele Consulting (Cindy Krum)	06/30/2011	U.S. Association Executive Director	Indirect/ Reserve
Lori Hallett	06/30/2011	U.S. Association Finance Assistant	Indirect/ Reserve
The Keeley Group (David Keeley)	12/31/2010	Core Services Fund Development/Support for Action Plan/Additional projects	Dues <i>ME SPO</i> JB Cox Fund
The Keeley Group (naruresource communications)	12/31/2010	Core Services Council Coordination/Support for Action Plan	Dues Reserve/Indirect <i>ME SPO</i>
The Keeley Group (Jim Craddock)	12/31/2010	Core Services Information Technology Support, Programming and Systems Administration /Additional projects	Dues NMFS JB Cox Fund
The Keeley Group (Nancy Griffin)	12/31/2010	Core Services Gulf of Maine Times Editor	JB Cox Fund Donations USGS DFO NH Charitable Found
Biological Conservation (Slade Moore)	06/30/2011	Habitat Restoration Project Coordinator	NMFS <i>ME DOT</i> Dues JB Cox Fund
UNH (Steve Jones)	03/31/2011	Gulfwatch Program Coordination	<i>EC</i>
Lawrence LeBlanc	03/31/2011	Gulfwatch 2009 Data Report	<i>EC</i>
Christine Tilburg	01/25/2011	ESIP Program Manager	USGS <i>EC</i> <i>DFO</i>
Talking Conservation (Peter Alexander)	10/15/2010	Coordination and Product Production -New England Cross-border Conservation Initiative	JB Cox Fund
Waterview Consulting (Peter Taylor)	10/15/2010	Conservation and Restoration Strategy-writing and design	JB Cox Fund

** Final 6 month contract will be done once unsecured portion of Dues are received.

Action Plan: Guidance for the Future and Engaging the Council’s Membership in Implementation

Jurisdictional Priorities Aligned with Gulf of Maine Action Plan Goals • V.3

Current GOMC Action Plan	ME	MA	NB	NH	NS	Federal
Goal 1 Habitat restoration and conservation	MESPO – restoration with fishery and habitat management MESPO – connectivity with inventories and assessments MESPO – habitat modification and landscape level conservation	MCZM – Coastal Water Quality	NBDE and NBDOF – Petitcodiac and Aulac projects NBDE and NBDOF – coastal lands and wetlands securement	NHDES – primarily river (dam removal and fish passage) NHDES – coastal/saltmarsh focus NHDES – Shellfish for nutrient and turbidity control	NSDE	DFO – restoration and tidal barrier removal/river restoration DFO – habitat mapping EC – biodiversity and coastal habitats EC – conservation and restoration EC – migratory birds and species at risk NOAA - fisheries
Goal 2 Contaminants	MESPO - nutrients	MACZM – Coastal Water Quality MADMR Red Tide		NHDES – eutrophication and waste load allocations NHDES – NPS and PS pollution NHDES – nutrient loading by watershed	NSDE – water quality is a big issue	EC – Near shore WQ and point source controls with wastewater treatment facilities EPA – nutrients EPA – safety of chemicals EPA – protecting American’s waters EPA – environmental justice EPA – urban stormwater EPA – beaches

Current GOMC Action Plan	ME	MA	NB	NH	NS	Federal
Goal 3 Sustainable maritime activities			NBAA/F – Green economy: reduced fuel costs and alternative fuels and design for fishing boats, water use reduction and effluent in plants, bio product development	NHDES – Tidal energy research		EPA – cleaning up communities EPA – building strong partnerships EPA- green capital to renew community prosperity
X-cutting Climate change		GOMC and ESIP restoration with link to constituents	NBDE and NBDOF – coastal flooding, risk to infrastructure and inland flooding from precipitation, erosion, and sedimentation with coastal and border area project (LIDAR, elevation model) NBDE and NBDOF – specific areas include Acadian Peninsula, greater Moncton, Richibucto, lower Saint John River, Atlantic Canada Schools of Engineering, professional Engineers, and Geo-Scientists, Atlantic Planners Institute, and Municipal Associations	NHDES – mitigation and adaptation NHDES – coastal adaptation workgroup (CAW) NHDES – StormSmart NHDES – Land use, fluvial erosion hazard mapping	NSDE – climate change a coastal resilience	DFO – fisheries renewal re: CC DC – particularly for coastal resilience EPA – adaptation, energy, and sustainability NOAA- vulnerability and RA NOAA – modeling, mapping, and planning NOAA – green infrastructure as a support EC – resiliency with focus on costal habitats (migratory birds and species-at-risk)

Current GOMC Action Plan	ME	MA	NB	NH	NS	Federal
X-cutting Indicators			NBDE and NBDOF – coastal designation and wetlands designation orders and operational guidelines			DFO – state of GOM reporting EC – state of GOM reporting with emphasis on ESIP support EC – coastal habitat and supporting indicators with status and trends

GOMC participant defined priority	ME	MA	NB	NH	NS	Federal
Water management		Fisheries and Fishing (not under Ocean Management Act)		NHDES – Instream flow	NSDE – water strategy and coastal strategy	
Wetland and watershed planning and policy			NBDE and NBDOF – Coastal Areas Protection Policy and Coastal Designation order NBDE and NBDOF – Northumberland Strait management plan Bay of Fundy Marine Resources Planning NBDE and NBDOF – Coastal Areas Protection Policy and Coastal Designation order NBDE and NBDOF – mapping Marine Planning Statement	NHDES – wetland mitigation fund	NSDE – wetland policy	DFO (watershed) EC (watershed) EPA – regional ocean planning

GOMC participant defined priority	ME	MA	NB	NH	NS	Federal
Energy	MESPO – wind development		NBAA/F – regulatory control processes, legislation, policies with site allocation criteria and examination of impacts, particularly fishing and aquaculture NBAA/F – efficient energy use in fish processing plants	NHDES – Tidal energy research		EPA- renewable energy and efficiency DFO – tidal and wind energy
Marine spatial planning	MESPO – Ocean Atlas development as development tool		NBDE and NBDOF – Coastal Areas Protection Policy and Coastal Designation order NBDE and NBDOF – Inter-Departmental Steering Committee and Working Group on Collaboration in Marine Planning NBDE and NBDOF – Coastal Areas Protection Policy and Coastal Designation order NBDE and NBDOF – mapping	NHDES – Offshore mapping needs		DFO – with fish passage as the single biggest issue NOAA EC – for near-coastal watersheds (not offshore)

GOMC participant defined priority	ME	MA	NB	NH	NS	Federal
Fisheries management		MADMF lobster populations	NBAA/F – eco-labeling, traceability, fishing certification, regulation guidelines, NBAA/F – aquaculture focus on research, new species, fish health management (sea lice), multi-tropic research for environmental and economic benefits, offshore aquaculture technology review and development, certification precuts			DFO – fisheries renewal
Ecosystem based management	MESPO – fishery and habitat management with restoration					EPA – health and resilience of eco-systems
Air quality						EPA – air quality EPA – energy efficiency
Tribal and Municipal		MACZM – assistance to coastal communities		NHDES NHCP – technical assistance through regional planning commission.		EPA – building strong partnerships
Ocean acidification						NOAA – research
Communications			NBDE and NBDOF – possibly fund an issue GOMT			
Biodiversity						EC

Prepared by Michele L. Tremblay, Council Coordinator with input from GOMC members

New England-Canadian Maritime Collaboration and Planning Initiative: GOMC Participation

Synopsis

Regional organizations, extending from Long Island Sound to the Gulf of Maine including the Canadian Maritimes, that have a shared interest in our oceans and coasts are collaborating to identify the most pressing issues and to determine the policy, planning, and management responses that the participating organizations may take.

Background

In the northeast there are numerous organizations engaged in planning for the future management and stewardship of the region's coasts and oceans. Given their shared geography and common interests ten have agreed that the benefits of more formal collaboration are:

- Thoughtful and sustained interaction among organizations with shared interests;
- More efficient use of limited financial resources for planning, outreach and engagement;
- Individuals involved in multiple organizations as well as stakeholders can participate in one vs. multiple planning and implementation processes; and
- Development of a consensus on the region's most pressing issues and joint policy, planning and management implementation responses will accelerate our progress.

Approach

Organizations in the northeast are working cooperatively, through four theme-based meetings, to define shared goals and expected outcomes for the next several years that their organizations will then pursue either independently or with others. These by-invitation meetings will be convened in May and June 2010. (The themes include Ocean and Coastal Ecosystem Health, Renewable Ocean Energy, Coastal Hazards, and Ocean Observing.) NERACOOS and the Northeast Regional Ocean Council are co-leads in organizing and supporting an ad-hoc Steering Committee consisting of representatives from New England's coastal ocean management and stewardship community.

A hallmark of this joint planning and implementation process is the development of thoughtful materials and intra-organization consultations in advance of the meetings. The basis of these materials is a first-ever synthesis of the multitude of national, regional, state-based plans and studies specific to each of the four meeting themes. Moving beyond an assessment of joint priorities these materials recommend specific projects and/or activities that are needed to effectively address these issues. Public, non-profit and for-profit meeting participants will consult with colleagues before the meetings on the proposed activities and come prepared to offer improvements as well as jointly create a set of recommendations.

In the fall of 2010 the ten organizations will then convene a Partners Summit to agree on what policy, planning and management projects they will jointly act on.

If you are interested in learning more about this initiative please contact Ru Morrison (ru.morrison@neracoos.org), Ron Rozsa (saltmarshmd@charter.net) or David Keeley (david@thekeeleygroup.com).

State of Environment and Wall of Achievements Preview

The State of the Gulf of Maine Report will be officially launched on June 9, 2010. It is available at: www.gulfofmaine.org/stateofthegulf.

The report is a modular, living document made up of a context document and a series of theme papers. The context document provides an overview of the Gulf of Maine particularly for those readers who are not familiar with the region. The theme papers provide a more in-depth look at important issues within the Gulf, based on priority areas identified by the Council.

By June 4, *The Gulf of the Maine in Context* (context document) and three of a possible fourteen theme papers will be available on the website. The rest will be developed incrementally during 2010 and 2011. After that they will be regularly updated at time intervals appropriate to each issue. Theme papers for the June 9 launch are:

- Climate Change and its Effect on Humans;
- Climate Change and its Effect on Ecosystems, Habitats and Biota, and
- Emerging Issues.

Two other papers will be available for posting in June/July:

- Invasive Species, and
- Coastal Ecosystems and Habitats.

Review Process

The review process for each paper consisted of the following steps: 1) Technical and peer review coordinated by the Editorial Committee; 2) Management and Finance Committee review; 3) Council Advisory Committee review, and 4) Publication protocol review.

The Editorial Committee consists of:

- Jay Walmsley, Fisheries and Oceans Canada (Editor-in-Chief)
- Justin Huston, NS Department of Fisheries and Aquaculture,
- Michele Tremblay, Council Co-ordinator,
- Liz Hertz, Maine State Planning Office,
- Diane Gould, US EPA,
- Paul Currier, NH Department of Environmental Services.

The Council Advisory Committee consists of:

- Tim Hall, Fisheries and Oceans Canada
- Mike Walls, NH Department of Environmental Services
- Priscilla Brooks, Conservation Law Foundation
- Don Hudson, The Chewonki Foundation
- Stephen Perkins, US Environmental Protection Agency
- Russ Henry, Province of New Brunswick
- Peter Colossi, NOAA, National Marine Fisheries Service

Acknowledgements

Thank you to everyone who participated in document review. The timelines were short and we appreciate the quick responses.

Thank you also to the following agencies for funding/in-kind support:

- Fisheries and Oceans Canada
- Environment Canada
- US Geological Survey
- Maine State Planning Office
- Massachusetts Office of Coastal Zone Management
- National Marine Fisheries Service, NOAA.

Next Steps

- We are looking for interested parties to author or support the development of the next set of theme papers.
- Layout is being undertaken by Peter Taylor, Waterview Consulting at \$1 500 for each theme paper. A more sustainable approach to formatting the papers may need to be sought.

Submitted by Jay Walmsley and Tim Hall, June 2010

Climate Change: Contribute to Emerging Project Funding Proposals

Background— The Council has designated Climate Change as one of its fund development priorities. A precursor to preparing proposals is to have compelling, important and timely project concepts. The following activities have occurred over the past four-months:

1. In March the Working Group participates in project concept development sessions (e.g., reviews and comments on draft project concepts);
2. The co-chairs of the GOMC Climate Change Network and the NROC Coastal Hazards Resiliency Committee, because of common geography and similar target end-user needs, agree to explore project concepts and consider preparing joint funding proposals.
3. Various provincial, state, federal and non-profit climate change adaptation plans and initiatives (e.g., Regional Adaptation Collaborative, etc.) are read and project needs are synthesized.

4. Expert interviews are conducted with 15 CAN/US climate change program managers to discuss the synthesis, set priorities, and learn of their interest(s) in collaborating in developing proposals. (The synthesis was also provided to members of both committees for their comment.)
5. Seven project concepts are identified as being top priority – bold text in red. (In May a \$200K Letter of Intent to the NOAA – CSI Coasts Program, that draws on these materials, was submitted.)

Status – On June 8th the Working Group will have a 1-hour session to discuss the following:

- 15-minutes: What are the project concepts and what are the top priority projects (see below);
- 30-minutes: How can the top priority projects be improved (e.g., draw on existing efforts, etc.) and what partners should be engaged including people in your agency; and
- 15-minutes: What recommendations should the Working Group present to Council?

Regional Climate Change Project Proposal Ideas

Background: The Gulf of Maine Council's Climate Change Network and the Northeast Regional Ocean Council's Coastal Resiliency Committee are collaborating in the development of several climate change adaptation funding proposals that would benefit the region extending from Long Island Sound to the Bay of Fundy. The organizations are interested in projects that will take 12-18 months to complete, are \$50-\$250,000 in value, meet multiple jurisdictional needs, benefit from a regional approach, and build on existing efforts. Our audiences for these projects are decision-makers and coastal managers. The basis of the projects ideas described below were synthesized from recent state, provincial and federal climate change forums, meetings, user needs assessments and reports.

Adaptation involves making adjustments in our decisions, activities, and thinking in response to observed or expected changes in climate, with the goal of moderating harm and taking advantage of new opportunities that may be presented by these changes

Current Situation: In April and May 2010 over twenty climate change experts from throughout the Gulf of Maine region reviewed and contributed suggestions to the initial synthesis. Their consensus priority project recommendations are:

Priority Ideas for Projects (see highlights below)
<ul style="list-style-type: none"> ➤ Promote climate change exchange ➤ Expand StormSmart Coast ➤ Enable community infrastructure assessments ➤ Offer municipal guidelines ➤ Summarize adaptation policies ➤ Disseminate and use LiDAR tools ➤ Develop climate change regional monitoring strategy

Category 1: Growing the capacity of local and provincial/state leaders to more effectively respond to climate change

Local, provincial/state and non-profit leaders from Long Island Sound to the Bay of Fundy are developing and applying creative climate change adaptation strategies – often in isolation of each other. At the national level CEQ is poised to release a national adaptation strategy. There are a number of ways we might accelerate the learning and implementation of effective adaptation responses. Examples include:

- a. **Promote climate change “exchange”** – Develop and effectively disseminate a routine e-correspondence tool for coastal managers (e.g., local, state, provincial and federal representatives, non-profits, legislative staff, etc.) engaged in climate change issues. Use existing communications tools (e.g., Gulf of Maine Times, monthly e-newsletters, etc.) and integrate/adapt existing materials (e.g., CZMA Climate Change, Coastal Hazards E-News from NOAA, etc.) **(Priority Idea)**

Next steps

- *Solicit state, provincial and federal climate change managers to learn where they get their information, priority needs, perceived gaps, and recommended delivery methods (e.g., frequency, detail, sources, etc.);*
- *Compile directory of leading climate change sources of information pertinent to the region;*

- Commence immediately circulating these sources to existing outlets (e.g., Gulf of Maine Times, State CZ newsletters, etc.) for re-distribution;
- Develop new materials responsive to climate change managers needs & disseminate;

Partners to engage

Northeast Federal Partners, Environment Canada, NRCAN, ICLIE, NESCAUM, Regional Adaptation Collaborative

- b. **Expand StormSmart web presence** – several states are in the midst of providing community-level decision-makers, via the StormSmart Coasts Network, with information to better prepare and recover from natural disasters such as storms and sea-level rise. <http://stormsmartcoasts.org/> Parallel Provincial materials are being organized. The region's ocean observing assets can also make important contributions. Collectively these efforts need to be augmented and sustained. **(Priority Idea)**

Next steps

- Enable the New England states that have yet to complete content for their state pages/sites to finish this work;
- Speak further with Wes about incremental improvements to individual New England state pages/sites (e.g., 6-month update process for the states to keep pages "fresh"; create a listserve for interested parties to join and send documents, updates, etc. A listserve moderator can then upload information to the website if relevant; actively promote the site to target audiences via the CSC magazine, Coastal Connections and other methods;
- Learn from the NB and NS members of the Regional Adaptation Collaborative about their comparable web development projects and needs and assess next steps (They have confirmed their interest in StormSmart.);

Partners to engage

NOAA/CSC, State coastal hazard leaders (e.g., floodplain & emergency management programs, coastal management, geological survey, etc.), ICLIE, RAC

- c. **Support networking of climate change professionals** -- support mechanism to coordinate and communicate data and decisions across sectors; foster communication and coordinated policy recommendations; achieve broad consistency in the region about the common elements for adaptation planning strategies, etc.
- d. **Organize annual climate change networking event** -- A content rich, annual event that brings practitioners together to discuss accomplishments, share approaches and strategize collaborative ideas for the coming year. Possible participants include state/provincial climate adaptation officials, NEIWPC, NESCAUM, GOMC, NROC, ICELI (local government), regional fish & wildlife staff, forestry experts, transportation officials, academia and federal partners.
- e. **Offer adaptation workshop(s)** – compile existing workshop materials and results (e.g., fall 2010 NOAA/NESCAUM, ICELI, etc.) and offer additional opportunities for natural resource management professionals, including state/provincial and local resource managers, planners, and program administrators to be more informed about climate change. Workshops would target foundational and process content and skills to support integration of climate adaptation planning in communities and planning processes. (Topics include comprehending the science, governance -integrating climate adaptation, engaging stakeholders for the long-term, communications -considering perceptions and applying principles, risk assessment - understanding methods and interpreting results, adaptation planning -identifying and prioritizing actions, adaptation implementation and monitoring - considering changing conditions)
- f. **Develop shared messaging and communication:** develop materials to engage communities, local officials, legislatures, Governors/Premiers and media that communicate climate literacy and the benefits of taking actions today, even in the midst of a tough economic climate. Understand current attitudes and awareness of the target audience (e.g., 2010 Clean Air – Cool Planet report). Commence work by engaging environmental agency education staff to document lessons-learned.

Category 2: Terrestrial projects that prepare for and increase resilience to the most likely foreseeable impacts of climate change

The coastal zone has a unique set of challenges and opportunities associated with climate change adaptation planning. For example, anticipated rise in sea level is a primary concern in planning how the region's coast could become more resilient. However the effects of higher sea surface levels will be compounded by the increase in significant storm events. Increases in precipitation that result in greater storm-water runoff have a coastal impact because most of the additional runoff reaches the major rivers that flow through and into estuaries and wetlands, bringing with it sediments and pollutants. These climate effects drive beaches, dunes, marshes, and wetlands "inland". In many places they are unable to migrate to new locations and we risk losing the benefits of systems that provide protection for our communities and vital natural resources.

- A. **Enable community infrastructure assessment:** Enable communities to prepare climate change assessments that support comprehensive planning and capital improvements. Initially this would involve developing criteria for

assessing natural communities and infrastructure for response and resilience to likely climate impacts, including a mechanism for evaluating vulnerability. Look for the intersection of water utilities and transportation corridors. These should recognize the unique ecological, social, and economic qualities of different areas of the coast, and should be used to guide investments in infrastructure repair, protection, and land conservation and restoration.

(Priority Idea)

Next steps

- *Conduct literature review for criteria used to assess natural communities and infrastructure for their response and resilience to likely climate impacts;*
- *Engage New England and Maritime hazard and municipal planning managers to understand their needs and likely applications of the criteria (see recent NS Climate Change Centre needs assessment);*
- *Adapt criteria and/or develop new criteria as needed;*
- *Work with managers to implement on pilot basis, evaluate and expand effort.*

Partners to engage

State coastal hazard leaders (e.g., floodplain & emergency management programs, coastal management, geological survey, climate change program leaders, etc.), NESCAUM, RAC, professional associations (e.g., engineers, architects, planners, etc.)

- B. Organize municipal guidelines:** Assemble and present materials for protective zoning/regulation and conservation in coastal areas that allow for the movement of natural areas and species in response to anticipated climate effects. Present metrics to identify priority locations based on best scientific forecasts of highest risk of loss from sea level rise and related impacts, and promote opportunities for state/provincial and local partnerships to develop creative approaches to respond to anticipated climate effects. **(Priority Idea)**

Next steps

- *Conduct a literature review of protective zoning/regulation and conservation in coastal areas that allow for the movement of natural areas and species in response to anticipated climate effects and assess effectiveness. Draw on current Canadian Institute of Planners work on a planning guide, the earlier Canadian Climate Impacts and Adaptation Research Network manual for Canadian municipalities; pending NOAA/OCRM Planning Guide for State Managers; etc.*
- *Develop 1-2 pilot projects in the region that are exposed to the highest risk of loss from sea level rise and related impacts. Implement and evaluate results.*

Partners to engage

Leaders from a few areas in the region that are exposed to the highest risk of loss from sea level rise and related impacts; respective federal, state and provincial hazards managers; chapters of Associations of Planners;

- C. Summarize adaptation policies:** Prepare a regional white-paper/briefing that identifies a range of municipal adaptation policies and standards for publically-owned properties, infrastructure and investments in the coastal zone. This could include guidelines that smaller communities and rural areas could use to evaluate current and projected hazards vulnerability and emergency preparedness. **(Priority Idea)**

Next steps

- *Conduct a literature review of municipal adaptation policies and standards for publically-owned properties, infrastructure and investments in the coastal zone and related evaluations;*
- *Produce synthesis of applicable policies and standards for the region;*
- *Disseminate and promote their use/application*

Partners to engage

NE Federal partners, RAC, state hazards managers,

- D. Produce LiDAR products and maps:** In 2010 a \$1.4M ARRA funded collaborative light detection and ranging (LiDAR) program was launched by the New England states in cooperation with USGS, FEMA and other federal partners to develop 2-meter point-spaced LiDAR files at +/- 15-cm vertical resolution (and metadata) for the New England coastal region to better inform shoreline management decision-making. Once the data are collected (projected "leaves-off" fall 2010) and processed (likely delivery in June 2011) the real work begins (e.g., maps produced, priority products/interpretations prepared for coastal managers, etc.) It can then be used to create inundation and sea level rise scenario maps using Digital Flood Insurance Rate Maps or standardized digital flood zones; delineate current and future resources areas, especially salt marshes; use first return DEMs to calculate canopy coverage and development footprints; etc. (These same data can be used in a variety of other ways -- map wildlife habitat, predict erosion, model suitability of potential wind energy sites, choose locations of cell towers or wireless broadband equipment, and predict forest types.) **(Priority Idea)**

Next steps

- *The New England states develop a strategy (e.g., applications/uses, methods, timeline and funding plan, etc.) for “data crunching, derivative map and tool generation, etc.” for the most vulnerable regions in New England (e.g., beaches, low marsh areas, bluffs, etc.).*

Partners to engage

LiDAR project participants and end-users (e.g., towns, COGs, planning commissions, watershed associations, utility districts, nonprofits, etc.)

- E. Municipal technical assistance:** Strengthen municipal land use ordinances, building codes, and community capacity to respond climate change. Examples of this work includes amending local ordinances, bylaws, hazard mitigation plans, emergency planning, design standards and codes to go beyond the minimum; developing informative materials about the rationale/need for municipal amendments that address sea level rise and coastal inundation; and scaling down regional inundation materials to the local scale & convening regional workshops; etc.
- F. Make vulnerable municipal infrastructure more storm resilient:** Assist municipalities adapt shoreline municipal infrastructure to be more storm resilient through design, site planning, engineering and permitting. Examples of this work includes adapting existing shoreline stabilization structures, flood-proofing, address highly erodible bluffs that have associated municipal infrastructure, incorporate soft/green solutions; reengineer sewer lines, elevate structures, relocate frequently damaged roads, raise manholes, elevate outfalls, sand dune enhancements to improve buffering, architectural and design changes to reduce flood impacts, etc.
- G. Document priority thresholds:** Assemble regional experts to assess and report-out on where the thresholds of key natural systems in the region are at risk of disruption and critical data gaps. Exceeding these have the potential to cause abrupt ecosystem changes that are able to produce significant risks/hazards. Examples of these thresholds could be:
- ocean acidification for sensitive marine organisms;
 - terrestrial plant and animal species sensitive to temperature and precipitation;
 - warming that creates new opportunities for human diseases that were previously inhibited by our cold climate.
- H. Habitat restoration & climate change considerations:** engage regional partners (e.g., NOAA, TNC, etc.) in developing regional climate change criteria for evaluating habitat restoration projects (e.g., whether to fund a project, how to design a project, how to set project restoration goals that fully consider a changing climate and establish achievable baselines, etc.). The goal could be to about what standards to address (e.g. 2 or 3 sea level rise scenarios for marshes; higher coastal floodplains for roads, bridges, higher tidal flow through culverts, infrastructure elevation or capacity for stormwater, etc.).
- I. Wastewater facility adaptation:** Engage the engineering and architect community in developing materials specific to publically-owned wastewater treatment facilities (POTW's) that assist such facilities to consider the effects of changing precipitation and/or sea level rise on their infrastructure, and support decisions needed for capital planning, disaster mitigation, etc.
- J. Prepare Critical Infrastructure Protection Plan:** Based on the 2007 Portland/Vancouver Urban Area Critical Infrastructure Protection Plan initiative (and their lessons-learned) select a priority area (e.g., inter-state, complex metropolitan area, etc.) and develop a definition for critical infrastructure specific to the area; identify private and public critical infrastructure that meet the regionally specific definition; develop a method to prioritize the region's critical infrastructure; and identify existing standards for protection of each critical infrastructure sector that can be used for public- and private-sector planning. (Convene a series of “interdependencies workshops” (e.g., dams, utilities and energy providers; transportation, shipping and military; etc.) to not only look at what was the most critical infrastructure within the region but also how they related to each other.)
- K. Inventory vulnerable natural areas:** Identify (1) undeveloped low-lying coastal areas for wetland migration through up-dated mapping and evaluation of coastal marshes, dune systems, and other wetland types having the capacity to buffer against storm events; and (2) undeveloped up-lands that protect these systems and offer potential for eventual inland migration of these systems. The inventory should identify potential areas of loss and gain, including economic, ecological, and cultural value, and design and/or enhance robust monitoring systems to track change and vulnerability over time. Identify landscapes to which tidal wetlands are likely to migrate in response to SLR.
- L. Health considerations:** As data on climate-related health impacts are gathered and assessed, information for health providers and the public will need to be revised and made available. A focus may be on vulnerable populations (e.g., elders, children, indigenous people, disabled/handicapped people, low income groups, refugees/migrants) and communities of special concern when viewed through the lens of climate.

Category 3: Marine environment responses

The marine environment has a profound effect on the region's climate, weather, quality of life for wildlife and humans, and economy. Impacts with the likelihood of most significant impact to the ocean are:

- Changes in ocean circulation patterns, especially open ocean current changes that have an impact on the transport of deep cold waters into the Gulf from the Atlantic;
- Changes in seawater chemistry, including nutrient levels and acidification;
- Changes in amount of freshwater delivery to the Gulf from melting ice in the Arctic, which would impact stratification and in turn productivity;
- Changes in seawater temperature, which may differ between in-shore and open ocean; and
- Changes in off-shore wind patterns, a matter of importance in light of current efforts to utilize wind energy.
- changes in near-shore wind patterns are intensifying hypoxia in LIS and will affect long-shore sediment transport patterns (and thus the efficacy of existing erosion control structures).

Given the extreme complexity of ocean chemistry, it is not yet clear just what changes such as acidification, calcification, or nutrient transport and availability will have on the marine ecosystem and the species it supports. These are already stressed by other human impacts, especially storm-water runoff, which may be exacerbated by climate change. The entire marine food-web is expected to undergo changes in both plant and animal species, including the increased risk of invasive species, with corresponding changes to the region's ocean fishery.

A. Develop a regional monitoring strategy for key marine climate change indicators: Secure seed-funds to prepare and promote federal implementation of a Gulf of Maine to Long Island Sound sustained climate change monitoring framework that coordinates the acquisition and exchange of scientific knowledge. This effort would determine what is required to initiate and maintain a suite of monitoring programs in the marine environment. (LISS and CT DEP/UConn are developing a sentinel monitoring strategy for climate change.) For the estuarine and marine ecosystems, climate change affects the physical and chemical properties of Gulf of Maine waters, which in turn alters physiological processes, food webs, and distribution and migration patterns of marine organisms. Robust monitoring programs are needed to monitor atmospheric and water properties, circulation patterns, distribution and abundance of marine organisms (phytoplankton to marine mammals and sea birds, including invasive species), changes to habitats, impact on the economic and social systems, etc. (Examples of current initiatives to draw on include the Gulf of Maine Monitoring Inventory & ESIP Monitoring Map, the emerging Gulf of Maine Restoration and Conservation Initiative, the Massachusetts Ocean Plan, NOAA ocean acidification implementation report, and the Long Island Sound Study.) **(Priority Idea)**

Next steps

- *Form ad-hoc steering committee of bi-national climate change and monitoring experts to scope the content and cost of a regional monitoring strategy for key marine climate change indicators;*
- *Prepare a seed-funding grant to assess existing monitoring programs, develop the scope of the monitoring strategy and prepare implementation recommendations*

Partners to engage

RARGOM, BoFEP, the region's climate change leaders (e.g., state/provincial climate change program managers, NOAA/OAR, etc.)