



Working Group Meeting

August 19, 2014

12:30 p.m. – 3:00 p.m. ET

1:30 p.m. – 4:00 p.m. AT

Briefing Book, v.1

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Gulf of Maine Council on the Marine Environment
 August 19, 2014 • Working Group Meeting • Briefing Book

GOMC Working Group Meeting DRAFT Agenda • Tuesday, August 19, 2014 12:30 p.m. – 3:00 p.m. ET / 1:30 p.m. – 4:00 p.m. AT		
12:30 PM ET	Welcome, Introductions, and Overview of Objectives for the Meeting <i>Steve Couture, Working Group Chair</i> <i>NH Department of Environmental Services</i>	
12:35 PM	Go To Meeting Technical check-in / questions and answers regarding use of 'Go To Meeting'	
12:45 PM	Consent Agenda <ul style="list-style-type: none"> • June 2014 WG meeting - summary acceptance (<i>pp. 4-8</i>) <ul style="list-style-type: none"> ○ SWOT Analysis (<i>pp. 9 - 14</i>) ○ 'Types of Work' Exercise (<i>pp. 15-20</i>) 	✓ For Decision <i>pp. 4-20</i>
12:50 PM	GOMC Organizational Assessment <ul style="list-style-type: none"> • Update from Council Advisory Committee August call • Discuss draft scope and timeline for assessment 	✓ For Information ✓ For Direction <i>pp. 21-24</i>
1:25 PM	Climate Priorities <ul style="list-style-type: none"> • Review Working Group responses • Discuss opportunities for NROC hazards webinar • Discuss opportunities for workshops at October WG Meeting 	✓ For Direction <i>pp. 25-31</i>
2:00 PM	Planning for October 2014 WG Meeting Agenda <ul style="list-style-type: none"> • Climate workshops • GOMC Organizational Assessment • Other agenda items 	✓ For Direction
2:15 PM	October 2014 WG Meeting Logistics	✓ For Information
2:25 PM	Brief Updates <ul style="list-style-type: none"> • October 14th Ocean Planning Workshop (T. Hall) • Fund Development Update (C. Krum) 	✓ For Information
2:40 PM	Management & Finance Committee Business Working Group members are welcome to stay on for this portion of the meeting which will be dedicated to M&F business.	
3:00 PM	Adjourn	

Draft Working Group Meeting Summary • Halifax, Nova Scotia • June 19-20, 2014

Meeting Participants

Working Group Members: Bill Appleby, Environment Canada; Heather Breeze, Fisheries and Oceans Canada; Rob Capozzi; NB Department of Environment and Local Government (via conference call); Sophia Foley, NS Department of Environment; Steve Couture, NH Department of Environmental Services; Jim Latimer, US Environmental Protection Agency; Ellen Mecray, NOAA; Rebecca Newhall, NOAA; Kathryn Parlee, Environment Canada; Ann Rodney, US Environmental Protection Agency; Susan Russell-Robinson, USGS; Jack Schwartz, Massachusetts Division of Marine Fisheries; Theresa Torrent, Maine Coastal Program; Prassede Vella, MA Office of Coastal Zone Management; Peter Wells, Bay of Fundy Ecosystem Partnership; and Bill Whitman, NS Fisheries and Aquaculture.

Other participants: Jim Boyle, GOMC Fund Developer (via conference call); Sarah Chamberlain, Dalhousie University; Jim Cradock, IT Coordinator; Jennifer DeCoste, professional facilitator from Nova Scotia Environment; Cindy Krum, GOMA Executive Director; Joan LeBlanc, GOMC Council Coordinator; and Slade Moore.

Opening Remarks

Working Group Chair Sophia Foley of Nova Scotia Environment welcomed participants and outlined objectives for the meeting. The meeting was co-chaired by incoming Working Group Chair Steve Couture.

Consent Agenda

The following consent agenda items were accepted:

- March 5, 2014 WG meeting summary
- March 19, 2014 WG meeting summary
- Summary of feedback received from Councilors during 2014 interviews

GOMC 25th Anniversary Update and Next Steps

Working Group members discussed the success of GOMC 25th Anniversary events and activities as well as plans for continuing activities and outreach throughout the 25th Anniversary year. Ad-hoc 25th Anniversary Committee co-chairs Heather Breeze and Susan Russell-Robinson thanked Working Group members for all of their assistance in making the anniversary activities a success. Projects included the GOMC publication “Facing Change”, a Gulf of Maine multimedia presentation, a special session at Coastal Zone Canada (CZC) 2014 – “Voices of Our Ocean and Coastal Treasure: The Gulf of Maine”, a GOMC display, 25th Anniversary reception and awards ceremony, and a geocaching project. WG members agreed that all of the GOMC’s 25th anniversary products and activities were well received at CZC 2014 and helped to raise awareness about both the Gulf of Maine as an ecosystem and the value of the Gulf of Maine Council.

The GOMC’s 25th Anniversary reception and awards ceremony was very successful with award winners from throughout the Gulf of Maine in attendance. At the beginning of GOMC’s special session at CZC 2014, Susan Russell-Robinson presented a captivating multi-media display featuring a blend of images, sounds and narration highlighting the unique beauty, valuable resources, and challenges facing the Gulf of Maine. Several speakers and panelists joined together to host a well-attended interactive session about the Gulf of Maine. Informative presentations were given by Ellen Mecray and Bill Appleby of the Climate Network, Slade Moore and Don Hudson of the Habitat Restoration Committee, and Christine Tilburg and Heather Breeze of ESIP and the State of the Gulf

of Maine committee. Following the presentations, Lee Sochasky hosted a lively panel discussion about priorities and needs for the Gulf of Maine. Kathryn Parlee and Sophia Foley provided an update regarding the status of the GeoTour Passport (geocaching project) which will launch by the end of June.

Key Decisions / Action Items

- Ann Rodney and Theresa Torrent will develop plan for 25th Anniversary follow up outreach activities and a scope for two month contract and with some limited funds
- WG members will send Ann names of possible contractors and ideas for the plan
- Jim will update media list and add email list signup to the website
- Joan will design cover for the GeoTour passport and send news about awards and GeoTour
- Theresa will be the US contact and Sophia will be the Canadian media contact for the Geocaching launch
- WG will send last minute edits for the GeoTour to Kathryn
- Gulf of Maine GeoTour will launch at the end of June
- Kathryn will send GOMC DVD to geocache sites so they can play on a kiosk
- Jim will link multi-media presentation to GOMC website (maybe show when website opens up)
- Outreach person will send publication and GOMC DVD to marine education associations
- Rob will distribute publications to local coastal communities
- Have outreach person expand and update lists on Constant Contact and use for ongoing announcements

WG members noted that the success of the GOMC's 25th Anniversary activities provided a key lesson -- GOMC can work very productively to accomplish a great deal with limited funds and time when all share the same commitment and enthusiasm.

GOMC Fund Development Update and Next Steps

GOMC fund development contractor Jim Boyle provided an update regarding fund development activities from December 2013 through May 2014. Despite extensive research and outreach to foundations and potential corporate funders, no new funds were brought in during the period. Jim provided an in-depth report summarizing his development efforts and prepared a list of strategies and next steps for fund development.

Feedback from foundation officers indicates that the Gulf of Maine Council is not appealing to most foundations because it is perceived as a 'government' organization and not a true non-profit organization in need of private support. The mission and programs of the Council are also not as compelling as many other environmental non-profits. Working Group members noted that GOMC lacks a vision to support fundraising and is not meant to compete with jurisdictions for funding. Ellen noted that there may be some funding opportunities from the NOAA climate office in July. Jim recommended pursuing a mitigation endowment as the best hope for identifying substantial private support for future GOMA / GOMC programs. Jim's full report summarizing activities and recommendations is available along with the meeting briefing materials at: <http://www.gulfofmaine.org/2/gomc-home/council-meetings/>

Key Decisions / Action Items

- GOMC will put broad private foundation fundraising efforts on hold, while Marina will continue to work on potential project-based funding proposals for climate
- Proposal for Slade to work on restoration grants was not supported by GOMA
- Jim will extend contract for three months (at no charge to GOMC) to follow up on 1) potential mitigation endowment strategy, 2) federal proposals for climate, and 3) special body of water designation

Plans for 2014-2015 New Hampshire Secretariat Year

Steve Couture provided an update regarding plans for the 2014-2015 New Hampshire Secretariat Year. At the June 2014 Council meeting, Councilors recommended convening an ad-hoc Council Advisory Committee to ensure consistent leadership and direction from Council members during the organizational assessment to take place throughout the year.

The following additional meeting plans and strategies were recommended:

- Council advisory ad-hoc committee will meet as needed throughout the year
- Management & Finance Committee will meet on a quarterly or as needed basis with a focus on finance
- Working Group will meet in person during October 2014 and June 2015 in Portsmouth, NH
- Additional Working Group meetings will be held every other month to support strategic planning / organizational assessment effort
- Keep opportunity for committee updates as option on Working Group meetings and / or calls
- Notify all Council and WG about dates for Council Advisory Committee meetings
- Council will have one in-person meeting in June 2015, other involvement as needed during year
- Secretariat Team will meet only as needed

Upgrade of GOMC / GOMA Website

Prassede Vella and Jim Cradock presented the newly designed Gulf of Maine Council website which was launched at the beginning of June. As part of ongoing efforts to raise awareness of the Gulf of Maine Council and celebrate the 25th Anniversary, Jim and Prassede have worked with GOMC committees and Working Group members to redesign, revise and enhance the Gulf of Maine Council's website. The new site provides a cohesive look, user friendly structure, and updated information. Jim and Prassede reported that the overall site design is complete, the GOMA website is complete, the GOMC 25th anniversary microsite is complete, and the content and social media links are mostly completed. Committee pages for ESIP, State of the Gulf, Climate Network, Gulfwatch, CMSP, and Habitat Restoration have also been developed and migrated to the new site.

Key Decisions / Action Items

- Jim and Prassede will continue to update habitat restoration pages, check all links, make all information current, update 'about the Gulf page', add feedback link so people can send specific recommendations for fixing or updating
- Jim will add geocaching information when ready
- Jim will add a link to the GOMC's new multimedia presentation
- Joan and Jim will follow up on calendar for the website
- WG members are asked to continue reviewing the site and provide general edits to Jim, as well as looking at historic information to inform how to archive outdated information
- KnowledgeBase will be kept on the site
- NGO database will be maintained but the link will be removed from the website
- Peoplefinder – keep database for internal list / remove website link for public
- Find opportunity to highlight photos of interest on the website
- Working Group members were also asked to provide news highlights to keep homepage content current, provide committee updates when available, share photos for slide shows, and review website updating needs in the context of strategic planning and organizational assessment

Council Key Decisions and Action Items for Strategic Planning

Joan LeBlanc provided an overview of the following key decisions and direction provided by GOMC Council during the Strategic Planning session held as part of the June 18th Council meeting.

1. Reaffirmed GOMC Founding Purpose (1989)

- To enable the region's governments to be more effective stewards
- To sustain strong partnerships
- To integrate watershed, coastal, and ocean management

2. Identified Key Priority Areas of Focus

- Climate Change
- Water Quality
- Habitat Protection
- Ecosystem Health
- Education and Outreach

3. Identified and Prioritized GOMC Two Most Important Types of Work

- Networking / Multi-Jurisdictional Collaboration and Facilitation
- Sharing resources/ best practices/ Capacity Building (regional or jurisdictional)

4. Identified Key Action Items for Strategic Planning

- Conduct organizational assessment during 2014-2015 Secretariat Year
- Develop recommendations for pursuing two shared priority 'types of work'

5. Identified Next Step and Overarching Themes for Organizational Assessment

- Develop scope for organizational assessment
- Overarching themes – ensure GOMC is:
 - Able to make a difference, "in the game"
 - Strategic
 - Decision-based
 - Reflective of jurisdictional priorities
 - Relevant
 - Effective
 - Able to adapt to changing needs

6. Develop Recommendations for Pursuing Priority Types of Work

- WG will assess existing programs / committees against agreed upon two priority types of work
- Joan will prepare draft 'shared priorities' document for review

7. Identified How We Will Work during 2014-2015 Secretariat Year

- Approved proposal for interim meeting structure to enable capacity for organizational / strategic planning
- Meeting plans for 2014-2015 will be flexible to ensure adequate Council feedback and involvement throughout the year (add conference calls / virtual meetings if needed)
- Ad-hoc Council Advisory Committee will be convened to assist with assessment
- Current Action Plan, projects, and committees will remain in effect during organizational assessment year

GOMC Priority Types of Work – Facilitated Session

In support of the GOMC’s Strategic Planning effort, WG members participated in an exercise facilitated by Jennifer DeCoste of Nova Scotia Environment to identify potential opportunities for implementing the top two priority GOMC “Types of Work” selected by Council.

1. Networking / Multi-Jurisdictional Collaboration and Facilitation
2. Sharing Resources/ Best Practices/ Capacity Building (regional or jurisdictional)

A summary of opportunities to implement priority types of work has been summarized in a separate document following this meeting summary.

Strengths, Weaknesses, Opportunities and Threats – Facilitated Session

In support of the GOMC’s Strategic Planning effort, WG members conducted a SWOT analysis of the GOMC to identify internal strengths, internal weaknesses, external opportunities, and external threats. This exercise was facilitated by Jennifer DeCoste of Nova Scotia Environment. A summary of the SWOT Analysis is included as a separate document following this meeting summary.

Next Steps for GOMC Organizational Assessment

Steve Couture thanked Jennifer DeCoste for her invaluable assistance as a professional facilitator and thanked Working Group members for their enthusiastic participation in the SWOT analysis and development of opportunities to pursue the Council’s priority types of work. Working Group members discussed next steps associated with the GOMC organizational assessment.

Key Decisions / Action Items

- Steve and Joan will assimilate and summarize Working Group feedback
- Steve and Joan will develop a scope of work for the organizational assessment that reflects Council direction

Roundtable Discussion

During a brief roundtable, Working Group members provided highlights of committee and agency news and projects. Guest meeting participant Sarah Chamberlain (a graduate student at Dalhousie University working with Peter Wells) provided an update regarding an EIUI project looking at Gulfwatch outputs and influence and use of products. Working Group members noted the value of continuing roundtable discussions at the in-person meetings (preferably at the beginning of the meeting to facilitate opportunities for dialogue among meeting participants throughout the two-day meeting period).

Meeting adjourned at approximately 4:00 p.m.

Meeting summary prepared by Joan LeBlanc, Council Coordinator.

Additional meeting materials and briefing notes are available at: <http://www.gulfofmaine.org/2/gomc-home/council-meetings/>

SWOT Analysis - Background

At the June 2014 Council meeting, Council members took part in a strategic planning session and approved plans for an organizational assessment of Gulf of Maine Council to be implemented during the 2014-2015 NH Secretariat Year. To support this effort, Working Group members conducted a facilitated SWOT Analysis of the GOMC during the June meeting. Working Group members were asked to identify internal Strengths to build upon, internal Weaknesses to address, external Opportunities to explore, and external Threats to consider. Results of the SWOT analysis are summarized in this document.

Strengths (Internal)

Bi-National Regional Approach / Collaboration

- Regional approach focused on the whole Gulf of Maine ecosystem
- Cross-jurisdictional perspective
- Bi-national collaboration and cooperation
- Mechanisms for transferring funds
- Access to leaders implementing national priorities (at federal level)
- Internationally recognized program

Expertise

- High level of expertise at table
- Multi-disciplinary problem-solving, topical expertise across many relevant topics (flexibility/agility across topics of interest to jurisdictions)

Significant Accomplishments

- Significant record of accomplishments for US-Canadian group with limited resources
- Excellent content (400 publications, variety of tools and products)

Jurisdictional Benefits

- Brings added value to agency mandates
- Regional benefit to major federal initiatives
- Shared finances across jurisdictions allows greater leveraging opportunities

Commitment

- Provincial-state entities established Council and continued participation for 25 years
- 25 years of commitment, passion of individuals involved

Information Synthesis / Synergy

- Success in bringing together multiple sources of data/info and compiling for synthesis and distribution

Resources

GOMC has built up a rich and unique set of resources to address regional ecosystem protection

- Existing relationships (including work outside the council)

- Committed people who dedicate their time
- Well-established network
- Access to additional expertise and resources
- Passion of the Working Group participants
- Visionary members at the Council and Working Group table

Other Strengths

While not selected by multiple Working Group members as 'key strengths' to build upon, the following additional strengths were identified by one or more Working Group members during the SWOT.

- Historical knowledge
- Structure that involves high level leadership and managers at the Working Group level
- Shared decision making
- Diverse set of clients, customers, markets, audiences, partners, stakeholders
- Good track record of finding contractors to fill work needs
- Cultural and historical connection between US and Canada
- New participants provide an opportunity for fresh ideas and input
- Region is rich in knowledge and research institutions

Weaknesses (Internal)

Lack of Focus (unclear, inconsistent, limited)

- Confusion about organization purpose / role (decision making vs. information sharing)
- Lack of clarity and process to seek consensus on jurisdictional priorities
- Working Group does not hear about the Council and jurisdictional priorities
- Councilors tend to bring their departmental agenda to table - this usually does not represent full jurisdictional priorities
- Watershed / inland areas (vs. just the coast) are not adequately represented

Leadership / Management Issues

- GOMC lacks consistent leadership due to shifting Secretariat, member turnover, and reliance on contractors
- No consistent point of contact for external groups, media, etc.
- Too few visionary leaders
- Councilors are not engaged
- Even without turnover, Council and WG member priorities are constantly shifting

Too Much Process / Bureaucracy

- Lack of organizational adaptability limits ability to respond to opportunities
- Can't get out of planning to implementation stage
- Too much process vs. policy decisions/discussions
- GOMC members resistant to change – want to hang onto non-priority projects
- 25 years of bureaucracy and internal structure have never been streamlined
- Too many layers of management

Limited Capacity

- Overall lack of resources (time, money, staff) limits GOMC capacity
- Enthusiastic members volunteer but often lack follow-through due to competing agency priorities
- Current funding structure limits the marketing of our products, efforts, and the GOMC as an entity
- Uneven work load for individual WG members (too much work for WG chair while those without a committee chair role don't have as much responsibility)

Other Weaknesses

While not selected by multiple Working Group members as 'key weaknesses' to address, the following additional weaknesses were identified by one or more Working Group members during the SWOT.

- No voice at GOMC table for local government at the level of implementation
- Committees operate in silos
- Committee co-chairs are primarily federal – need both scales of government running committees
- Success depends upon individual commitment
- Dichotomy within GOMC regarding how broad or narrow our mission should be
- Not using instruments like the Secretariat Team to promote continuity
- Poor use of contractors
- Too dependent upon contractors to drive agenda and implement project work
- Jurisdictions not committed to base funding
- Lack of understanding about different rules and regulations that need to be accounted for in truly regional strategic plans and efforts
- Difficulty in funding existing programs vs. next new 'shiny issue'

Opportunities (External)

Leadership on Priorities

- Regional ecosystem priority setting
- Identify cross-jurisdictional priorities for collective and collaborative action
- Make sure Council as a whole knows about / understands regional and national initiatives (opportunity to align to those)

Formal Designation

- Nation to nation
 - (How formal? May limit involvement of some players)
- Special Body of Water

Linking to Bilateral and International Policies/Treaties/Conventions

- Global Framework for Climate Services (GFCS)
- North American Climate Services Partnership (NACSP)
- North American Bird Treaty
- Law of the Sea

- Global Ocean Commission

Binational Focus on Climate

- Multi-stakeholder interest
- Utilize Gulf of Maine ecosystem as a model for tracking and responding to climate change
- Provide regional leadership around resilient, sustainable communities

Put the Economic Lens on the Issues

- Value of ecosystem services
- Quantify vulnerability related to climate change – not just ecosystem but human infrastructure and human costs
- Economic opportunity linkages to issues...e.g., green crab invasive species can also offer economic benefits
- Regional leadership on sustainable communities (economic focus)

Leverage Resources

- Utilize GOMC partnerships to assist jurisdictions with growing capacity for delivering programs
- Leverage existing resources – people, money, time

Expand GOMC

- Broaden Gulf of Maine Council leadership, membership and voice to include all key government and non-government interests. Avoid becoming huge and cumbersome by utilizing opportunities for short-term committees or working groups.
- Ensure membership / leadership and focus encompass all key sectors – forests, rivers, coastal, infrastructure, agriculture, aquaculture, fisheries, marine renewable energy, tourism, transportation, marine life (e.g., whales, invasive species...)
- Strategically broaden non-government involvement by NGOs, academia, local communities, businesses, and GOMC award winners

Engage movers and shakers (influential people) who love the Gulf of Maine

- Philanthropists (e.g., Martha Stewart)
- Authors (e.g., Harry Thurston)
- Artists
- Actors (e.g., Glenn Close, John Travolta – see Ann’s list)
- Political leaders/retired political leaders (e.g., Paul Martin)

Connect Residents to Gulf of Maine

- Education and awareness
- Sense of Place
- Capitalize on rich literature on GOM

Other Opportunities

While not selected by multiple Working Group members as ‘key opportunities’ to explore, the following additional opportunities were identified by one or more Working Group members during the SWOT.

- Bi-national environmental response
- Leadership for hazard mitigation

- Take advantage of natural and human-caused disasters as an opportunity for leadership and education
- Engage and collaborate with national disaster relief bodies (FEMA / Canadian counterpart)
- Fly the GOMC flag in front of international bodies such as UN
- Tie GOMC work with national efforts such as US executive orders, ocean planning, preparations for national climate impacts / Canadian National Conservation Plan
- Promote binational stewardship through education and outreach about GOM value
- Leverage other regional organizations (St. Croix, IJC) that map to sectors of interest
- Protect (not restore) a relatively pristine ecosystem of critical importance
- Expose Council members to GOMC successes via workshops, field practitioner tours, etc.

Threats (External)

Multiple Regional Organizations

- Regional organizations with competing agendas compete for limited resources
- Lack of coordination and cooperation among regional organizations

Lack of Transparency

- Hidden agendas
- Potential conflicts of interest (institutional and personal)

Lack of Formal Agreement / Designation

- Lack of a formal federal agreement between two countries
 - Important to understand specifics; consider the benefit/challenges associated with levels of formality (Treaty, MOU, Letter of Cooperation)
 - Type of agreement or lack of certain agreements can also be a strength
- Lack of formal or official designation for the Gulf of Maine

Disconnect Regarding Jurisdictional Priorities

- Disconnect between jurisdictional priorities and what's expressed at Council (different management levels at table)
- Different priorities expressed at WG vs Council
- Level of representation and organizational influence has been lowered and/or shifted over the past 25 years

Lack of Consistent Funding

- Causes focus on short term products and issues rather than being more strategic
- Too much focus on trying to find funding
- Could lead to 'flavor of the month' funding which in turn could shift the focus of the Council so that projects / programs may not reflect Council priorities
- Exacerbated by limited staff capacity to make GOMC work a priority
- GOMC ends up competing with other member agency priorities

Other Threats

While not selected by multiple Working Group members as ‘key threats’ to address, the following additional threats were identified by one or more Working Group members during the SWOT.

- Competing priorities at executive levels (need to address supervisor priorities)
- Lack of altruism
- Economic downturn has limited funding opportunities
- Lack of and constantly shifting policy direction
- Changes in national and regional political leadership affect GOMC membership and support
- GOM is less of a priority because it is not as impaired as other ecosystems
- Perception of GOMC as competing for already limited jurisdictional funds
- Perception of GOMC as an additional layer of bureaucracy
- Pace of environmental change is increasing
- Cost of future crises on environmental and public health

About this Document

Initial summaries of key points were prepared by Working Group members during ‘report out’ portion of the SWOT session. Council Coordinator Joan LeBlanc edited these initial summaries for consistency / organization, and then added additional information from the more detailed poster boards filled out during the SWOT session.

DRAFT - 'Types of Work' Facilitated Session - Background

At the June 2014 Council meeting, Council members took part in a strategic planning session and approved plans for an organizational assessment of the Gulf of Maine Council to be implemented during the 2014-2015 NH Secretariat Year. During their initial strategic planning session, Council members identified the following two highest priority 'types of work' that the GOMC should continue to focus on within the framework of a streamlined organization.

1. Networking / Multi-Jurisdictional Collaboration and Facilitation
2. Sharing Resources/ Best Practices/ Capacity Building (regional or jurisdictional)

In support of Council direction, Working Group members participated in a facilitated session to identify a wide range of potential opportunities for implementing the Council's identified priority types of work. Thanks to support from Nova Scotia Environment, the session was facilitated by HR professional facilitator Jennifer DeCoste. Results of the Types of Work facilitated session are summarized in this document.

Council Engagement

Engage Councilors in Creating a Strategic Plan

- Develop vision / mission / goals / objectives (Note: Council members reaffirmed support for existing mission, goals and Action Plan at the June 2014 meeting)
- Have Council members participate in their own SWOT Analysis
- Host a professionally facilitated session with Council to define desired outcomes and clear long-term goals

Articulating GOMC Priorities / Needs

- Council should reach consensus on a few priorities that are supported by at least two or three jurisdictions annually, and then focus in more detail on a specific topic throughout the year
 - Need to focus on specific topics / priorities that reflect common challenges across our jurisdictions – especially those where cross-border dialogue would make a difference, e.g. stream barrier work that NH lead 10 years ago provided benefit to all jurisdictions
 - In order to maintain relevance on the regional scale, the Council must request (and WG and its Committees must deliver) specific tools – information that benefit the jurisdictions
 - Create and implement process to 'survey' Councilors about their top 3 priorities
 - Hold 60 minute call for each priority to flesh out –
 - What aspects of issue are most important
 - How to engage specific staff members in learning from each other about methods and approaches
 - Develop timeline for actions
 - Evaluate what efforts can be region-wide vs. entity to entity
 - Define elements of success for addressing goals and priorities

Make Council Meetings More Decision-Based

- Council members have conference call to set their own meeting agenda and identify opportunities to discuss binational decisions / policy direction at meetings
- Keep Council meetings focused on dialogue among Councilors vs. updates from Working Group

Engage Council Members in Field Activities

- Identify an annual activity that allows Council members to participate directly in a GOMC facilitated activity / initiative / project in the host jurisdiction, e.g.
 - Planting Marram grass for a dune restoration project
 - Viewing a naturalized wetland stormwater management site
 - Restoring dyked lands to coastal wetlands
 - Viewing climate adaptation initiatives and / or tools such as LIDAR enhanced wet areas mapping

Make Council More Relevant / Effective

- Create a process / structure for Council-level response to environmental emergencies as close to 'real time' as possible
- Identify and ensure completion of at least one strategic action that Council wants accomplished each year
- Act on new collaborations that are not 'resource heavy' but will generate success and demonstrate ability for GOMC to bring value with little money

Additional Options for Enhancing Council Engagement

- Council members should be actively engaged with the committees and subcommittees to help fund work and communicate about the results of projects and other components of the current Action Plan
- To build capacity, Council should recognize topical leaders at the table and make specific requests for information

Communications

External Communications

- Develop and execute communications plan featuring large-scale outreach campaign with unifying messages
- Continue outreach around 25th Anniversary products
 - Hire two month contractor for distribution and social media strategy
- Develop 'GOMC 101' presentation that members could use as a tool for outreach to external groups, NGOs, academia

Internal Communications

- Develop structured internal communications plan, including:
 - Priorities
 - Cross jurisdictional interactions / meetings
 - 'News' from organizations
- Promote regular information sharing within GOMC via:
 - Webinars

- Face to face meetings
- Calls targeted to addressing specific issues
- Ignite presentation format for brief updates during meetings
- Online repository for information sharing 'in the cloud'
- Shared publications via GOMC website (categorized by topic)
- Shared calendar on GOMC website with cross-jurisdictional events
- Create a brief presentation that WG members could use to increase GOMC awareness among their departmental and jurisdictional peers (slightly different version of the 'GOMC 101' presentation)
- Working Group needs to unify around key messages communicating full benefits to high level jurisdictional representation on the Council
- Improve understanding of our agencies' missions, jurisdictional strengths, and mandates so we can increase our network's ability to draw upon each others' talents and knowledge for GOMC or other outside work

Expand / Improve Communications Tools

- Increase communications within the GOMC network via Constant Contact and other means
- Update committee listserves
- Develop current and effective media contact list
 - Load media list developed for Climate Network into Constant Contact
- Expand Social Media Presence
 - Build on existing Facebook, Twitter capacities
 - Add additional social media tools such as Linked In
 - Identify and recruit individuals with expertise
- Develop 'handles' for email messages such as 'urgent' means..., 'Important' means..., 'Need advice' means..., etc.

Training and Local Guidance

Host Educational Webinars

- Run monthly / bimonthly webinars (or lunch & learn sessions) on Council member programs
- Host educational webinars and or training sessions on key topics of shared interest such as:
 - Engaging regional policy makers in collaborative, consistent efforts regarding climate change adaptation, policies and regulation
 - Sharing information about how other jurisdictions are addressing green crabs or other aquatic invasive species

Develop and Share Regional Guidelines and Best Management Practices

- Develop regional guidelines and best management practices for addressing issues of concern such as tidal stream crossings taking sea level rise and storm surge scenarios into account
- Host multi-jurisdictional training sessions or workshops to share best practices for addressing key challenges such as stormwater and wastewater management
- Develop and share sea level rise / marsh migration summary document
- Take a look at how jurisdictions are applying 'economic lens' on shared interests such as climate change, vulnerability, and coastal erosion

Internal GOMC

- Conduct internal survey to identify priority topics for webinars (WG, Council, others in GOMC network)
- Focus on one category of best practices to be shared via workshop or training session at each in-person Council or Working Group meeting

Sharing Resources

Sharing Information with External Audiences

- GOMC should serve as a forum for sharing information
 - Discussing common issues across borders
 - Facilitating dialogue
 - Sharing resources and expertise
 - Sharing of data, project results, policies, information, and methodologies for priority issues and topics
 - Without challenges and constraints of bureaucracy
 - Bring together data / information from multiple sources, synthesize / interpret, add value and disseminate / identify and address knowledge gaps
- Develop a strong climate network that is a regional resource for sharing information
- Host collective, multi-stakeholder, cross-border events such as a high-level climate resilience summit
- Provide ecosystem services such as compilation of GOM studies / efforts
- Provide briefings to political leaders about key issues that need to be addressed
- Make a personal commitment to convey GOMC knowledge, expertise, products directly to NGOs, communities, and practitioners so they can implement / deliver these at the local level
- Report local initiatives, innovative projects, and programs, and trends in jurisdictions back to the Council (not just roundtable updates but full presentations to WG and Council)
- Share insights to inform a Coastal-Marine Atlas
 - (Bill Whitman will be seeking GOMC help and insights to develop a Nova Scotia Coastal Atlas Concept)

Sharing Non-Monetary Resources and Tools

- Create opportunities for sharing staff and physical resources such as technology, specialized equipment, ships, or other vehicles

Financial Resources

- Develop funding strategy that encompasses federal, provincial and state resource contributions
- Maintain neutral bi-lateral GOMA-like entity with ability to pool and transfer financial resources
- Each jurisdiction should contribute back in-kind or monetary resources to support their priorities
- Continue to research and pursue funding sources
- Ensure that monetary resources are tied to key priority needs of the ecosystem
- Enhance / expand US and Canadian federal funding for GOMC priorities

Expand Membership

Near Term Actions

- Broaden the GOMC network to add leaders from different sectors (beyond coastal) that might benefit from collaboration
 - Identify region-based (GOM) NGOs to recruit
 - Identify names of leaders from key (non-coastal) sectors to invite
 - Identify and invite key university / academic leaders for Council selected issue areas
- Evaluate appropriate GOMC representation for “total” jurisdiction
 - Share among WG and Council ‘who represents who’ and ‘to whom they report’
 - Share organizational charts
 - WG should share about how and if they get input from their jurisdictional partners, e.g. Nova Scotia Provincial Ocean Network

Long-Term Actions

- Council with expanded membership has regular dialogue to promote binational decisions and policy directives

Issues to Consider

- Council needs to consider roles of non-federal and non-jurisdictional members (NGOs) as conflicts of interest may exist, but could be hidden

GOMC Operations and Guiding Principles

Change “Load of Work” Paradigm

- Have Council co-chairs each year
 - US state + Canadian province
 - Canadian province + US federal
- Determine level of participation in response to needs
 - Don’t be afraid to work on sub-GOM efforts that may only involve a few jurisdictions
 - Create agile less formal focus teams to address pressing issues vs. more formal ongoing Committees that require longer term commitment and excessive process
- Focus on work that is at the core of our ‘day jobs’

Streamline Council and Working Group

- Redesign relationship between Council and Working Group
- Consider combining WG and Council into one coordinating body – pulling partners, stakeholders, leaders, and colleagues in as needed
- Host targeted Council meetings focused on specific topics (conduct annual survey to determine appropriate topics)
- Focus dues and coordinator efforts toward implementing the two priority types of work and achieving tangible results
- Rescope Council Coordination and IT contracts

Overarching Issues

- In order to share resources (people, money and time), the Council needs to recognize its special unique bi-lateral role and NOT faction into jurisdictional more narrow concerns. Think regionally and altruistically.

Summary prepared by GOMC Council Coordinator Joan LeBlanc.

Summary of Key Decisions / Action Items – Council Advisory Committee Meeting August 7, 2014

Call Participants

Mel Cote, Steve Couture, Perry Haines, Tim Hall (for David Millar), Terry Holman (with Susan Russell-Robinson), Joan LeBlanc, Rebecca Newhall (for Jen Anderson), Lorrie Roberts, Christophe Rivet (for Geoff Mercer), Lee Sochasky, Jack Wiggin

Key Decisions / Action Items

- Steve provided an update regarding the purpose of the Council Advisory Committee (CAC) -- to ensure appropriate Council direction during the GOMC organizational assessment being conducted throughout the 2014-2015 NH Secretariat year
- Steve and Joan presented a draft scope and timeline for the organizational assessment
- Joan will edit the scope to reflect the following CAC recommendations:
 - Ensure that GOMC Action Plan is reflected in organizational assessment
 - Add language about the need to broaden GOMC leadership / membership
 - Expand list of partner organizations as part of scope
- Terry and Tim will forward list of additional partner organizations for Joan to add to the scope
- Joan will provide updated scope and timeline to Working Group
- Lee / Susan will provide notes from GOMC panel and public input from CZC 2014 to Joan as background for organizational assessment
- CAC will convene every other month prior to Working Group meetings
- Joan will add CAC meeting schedule to the timeline
- Steve and Joan presented a summary of the Strengths, Weaknesses, Opportunities and Threats (SWOT) exercise undertaken by Working Group in June 2014
- CAC members noted that SWOT analysis conducted by Working Group reflected most Council issues
- CAC will forward any additional issues to add to the SWOT analysis to Joan
- Joan will finish write-up of 'Types of Work' exercise from June Working Group meeting and forward to WG and CAC
- Joan will prepare and circulate key decisions and action items following each CAC meeting

Next CAC Meeting

- The next CAC call will take place during September
- Joan will circulate a doodle poll to schedule the call
- Agenda for next CAC meeting:
 1. Review summary of 'Types of Work' exercise conducted at June 2014 Working Group meeting
 2. Discuss GOMC leadership and structure

Summary prepared by Joan LeBlanc, Council Coordinator

Gulf of Maine Council – Organizational Assessment
2014-2015 Secretariat Year
DRAFT - Scope of Work

Process

Working Group Chair and Council Coordinator will work with the ad-hoc Council Advisory Committee, Council members, and Working Group to conduct an organizational assessment of the Gulf of Maine Council during the 2014-2015 NH Secretariat Year.

- **Council** - An ad-hoc Council Advisory Committee will be convened to ensure Council involvement throughout the year. The committee will meet as needed to provide direction and feedback regarding the organizational assessment. The Council Advisory Committee will determine if and when supplemental virtual Council meetings are needed during the year. The full Council will be asked for feedback via email and / or telephone contact throughout the year. A set of preliminary recommendations and / or status report will be provided to Council for feedback in December 2014. Council will discuss and make decisions regarding final recommendations at the June 2015 Council full day meeting in New Hampshire.
- **Working Group** – Working Group will meet every other month during the 2014-2015 year to ensure consistent involvement and feedback in the organizational assessment.

Initial Background Planning / Research

- Assemble historic GOMC records for review. Examples include – initial founding documents, federal partner policies, inter-organizational agreements etc.
- Summarize and review decisions and feedback from June Council and Working Group meetings, and from public input received during GOMC panel at CZC 2014.
- Council Advisory Committee will review and provide additional input to the Strengths / Weaknesses / Opportunities and Threats (SWOT) analysis conducted by WG in June.
- Prepare scope for organizational assessment.

Organizational Assessment

- GOMC leadership.
 - Review role and relationship between jurisdictions, federal partners, and non-profit partners.
 - Consider opportunities to broaden Council membership / leadership.
 - Identify potential options for Council consideration.
- GOMC organizational structure.
 - Evaluate existing and potential organizational structure.
 - Identify recommended options for Council consideration (ensure that recommendations reflect Council priorities identified at June 2014 meeting).

- GOMC internal management structure.
 - Evaluate the roles of management committees – Council, Working Group, Management and Finance, Secretariat Team.
 - Identify opportunities for streamlining structure.

- GOMC project / program committees.
 - Evaluate role of committees in light of GOMC Action Plan and Council member priority ‘types of work’.
 - Identify committees that best support Council priorities.
 - Identify options for committees that do not support Council identified priorities.

- GOMC and partner organizations.
 - Evaluate GOMC role in relationship to partner organizations such as Northeast Regional Ocean Council (NROC), Northeastern Regional Association of Coastal and Ocean Observing Systems (NERACOOS), Regional Association for Research on the Gulf of Maine (RARGOM), Regional Committee on Coastal and Ocean Management (RCCOM), Bay of Fundy Ecosystem Partnership (BoFEP), Northeast States Emergency Consortium (NESEC), New England Interstate Water Pollution Control Commission, (NEIWPCC), International Joint Commission (IJC), and others.
 - Identify potential opportunities for enhancing cooperation, collaboration, communication and efficiency among GOMC and partner groups.
 - Provide recommendations to Council for promoting cooperating, collaboration and communication between GOMC and partner groups.

- GOMC organizational capacity.
 - In conjunction with the GOMC budget development process, identify preliminary budget and staffing needs for 2015-2016 fiscal year. The budget will be revised as needed to reflect decisions about GOMC structure.

Recommendations to Council

- Communicate regularly with Council Advisory Committee throughout the year.
- Consider potential impact of results / recommendations on current stated Action Plan.
- Prepare preliminary options for Council consideration and feedback in December 2014. A virtual meeting or conference call will be scheduled for December.
- Prepare set of options for Council consideration at June 2015 meeting.

Gulf of Maine Council on the Marine Environment
 August 19, 2014 • Working Group Meeting • Briefing Book

Gulf of Maine Council on the Marine Environment
Timeline for 2014 – 2015 Strategic Planning / Organizational Assessment

Activity	2014							2015					
	July	August	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	
Initial Background Planning / Research													
• Develop scope for assessment	x	x											
• Assemble historic records	x	x											
• Summarize decisions from June Council and WG meetings	x												
• Council Advisory Committee (CAC) provides input to SWOT		x											
Organizational Assessment													
• Evaluate GOMC leadership, organizational structure, internal management structure, committees and role of partner organizations		x	x	x	x	x	x	x	x	x	x		
• Develop preliminary budget / staffing needs in conjunction with GOMC budget development process							x	x	x	x	x		
• Provide status report / recommendations to Council						x						x	
Council Advisory Committee Meetings													
• Convene Council Advisory Committee		x											
• Council Advisory Committee Meetings		x	x		x		x		x		x		
Council Meetings													
• Brief virtual meeting or conference call December (date TBD)						x							
• Full day in person meeting, Portsmouth, NH Wednesday, June 17, 2015												x	
Working Group Meetings													
• Two day in person meetings, Portsmouth, NH October 15-16, 2014 / June 18-19, 2015			x									x	
• 2.5 hour virtual meetings Tuesday, August 19 (other dates TBD)		x				x		x			x		

Timeline last updated August 11, 2014

Gulf of Maine Council on the Marine Environment Meeting Briefing Note				
Title of Agenda Item: GOMC Climate Priorities				
Submitted by: Steve Couture and Joan LeBlanc				
Type of Item (place X in appropriate box)	For Decision	For Direction x	For Information <small>(internal GOMC)</small>	For Information <small>(External)</small>
Background (required): Working Group members were asked to provide brief summaries of jurisdictional and regional climate priorities to inform GOMC efforts to organize a climate workshop as part of the October Working Group meeting. The climate priorities will also be used to help develop GOMC recommendations for potential topics for hazards webinars being coordinated by NROC's Hazards Committee. The following climate priorities were identified: Priority #1: Strategic Habitat Conservation (DOI) Priority #2: Water Quality and Availability (DOI) Priority #3: Bird Conservation (DOI) Priority #1: Critical (built) Infrastructure and impacts of land use (NOAA) Priority #2: Understanding vulnerable communities and economies (NOAA) Priority #3: Protecting upland, coastal and marine ecosystems (Natural systems) (NOAA) Priority #1: Social Vulnerability (NS Environment) Priority #2: Flood risk mitigation (NS Environment) Priority #3: Better use of information (NS Environment) Priority #1: Climate Change impacts on fisheries and aquaculture sectors (NS Fisheries & Aquaculture) Priority #2: Flood risk mitigation (NS Fisheries & Aquaculture) Priority #3: Communicating Climate Change Impacts in Gulf of Maine (NS Fisheries & Aquaculture) Priority #1: Water quality (MA) Priority #2: Vulnerability of marine ecosystems (MA) Priority #3: Community adaptation and response (MA) Priority #1: Shellfish Management implications from Ocean Acidification (MA DMF Shellfish) Priority #2: Shellfish Management implications from Increased Temperature, (MA DMF Shellfish) Priority #3: Shellfish Management implications from Ecosystem Alterations (MA DMF Shellfish)				
Actions, Outcomes or Decisions Requested (optional): Working Group members will provide direction regarding plans for the October climate workshop and GOMC recommendations for potential NROC hazards webinars.				
Supporting Documentation (If applicable, list additional documents included in the Briefing Book following this Briefing Note): Detailed climate priorities submitted by Working Group members. (pp.)				

Gulf of Maine Council on the Marine Environment 2014 Climate Related Priorities
Submitted by: Susan R2 Jurisdiction or Regional Area Covered: Northeast Region/Department of the Interior
BOLD * - specific USG-Canada need
Priority #1: Strategic Habitat Conservation <u>Issue(s):</u> Shifts in vegetation assemblages (top priority – Appalachian Forest) <u>Need (s):</u> <ul style="list-style-type: none">• Information on lands being added to conservancy• Assessments of impact of urban forestry methods on shifting private land blocks from conifer to hardwood forests• Bulletins about advance of ash borer and other invaders that affect forest health• Extending NE Terrestrial habitat map into Atlantic Canada *
Priority #2: Water Quality and Availability <u>Issue (s):</u> Emerging deleterious changes to soil and groundwater quality <u>Need (s):</u> <ul style="list-style-type: none">• Region-wide changes in well water concentrations of cancer-causing elements like arsenic• Impacts of increased precipitation on recharge rates for groundwater• Effects of antibacterial agents on soil and groundwater microbes• Extending geologic identification of AS bearing rocks into Atlantic Canada *
Priority #3: Bird Conservation <u>Issue (s):</u> Identify specific locations critical to bird life cycles <u>Need (s):</u> <ul style="list-style-type: none">• Map abundance and distribution of marine birds• Forecast effects of slr on habitats for piping plover, roseate terns and other shore birds• Develop apps to engage more citizen scientists in bird rescue and habitat protection during breeding, nesting and young life stages before fledging

Gulf of Maine Council on the Marine Environment
2014 Climate Related Priorities

Submitted by: NOAA (Becca, Ellen and Adrienne)

Jurisdiction or Regional Area Covered: US Gulf of Maine (ME, NH, and MA)

Priority #1: Critical (built) Infrastructure and impacts of land use

Issue(s): Failing wastewater treatment plants, roads, bridges, culverts and associated infrastructure from flooding;

Need (s):

- Understanding precipitation trends
- Intersection between river flooding and ocean surge
- Understanding erosion
- Understanding effects of freeze/thaw
- Understanding impacts of development on hydrology
- Providing adequate sea level rise data and understanding
- Impacts of climate change on fish populations in streams, and potential need to modify fish passages
- Ways for effectively communicating to local decision makers
- Working with FEMA flood maps
- Strategies for addressing vulnerable/damaged infrastructure

Priority #2: Understanding vulnerable communities and economies

Issue(s): Fisheries dependent communities/working waterfronts; health of youth, the elderly, mobility-impaired, urban populations including the vulnerability to: heat, loss of jobs, extreme events (heat, cold, flooding, drought, storms, hurricanes, etc.)

Need (s):

- Understanding of tools/models/impact analysis that have been done.
- Access to suppressed data (ME, NH, MA - employment/wages, hospital visits, central A/C)
- Anticipating opportunities and responding with supportive policies

Priority #3: Protecting upland, coastal and marine ecosystems (Natural systems)

Issue (s): Impacts of sea level rise to marshes, dunes, beaches and woodlands; Natural infrastructure for flood protection; impacts to forests, bird populations, riparian buffers, habitat loss, land-use change, riverine floodplains

Need (s):

- Providing adequate shoreline assessments, sediment types, sea level rise data and understanding
- Understanding erosion
- Tools for planning habitat migration, including baseline habitat maps (inland, coastal and offshore)
- Strategies for increasing natural infrastructure

Gulf of Maine Council on the Marine Environment
2014 Climate Related Priorities

Submitted by: Sophia Foley, Nova Scotia Environment
Jurisdiction or Regional Area Covered: Nova Scotia

Priority #1: Social Vulnerability

Issue(s): Certain groups, such as ‘seniors,’ are more vulnerable to being cut off from resources because of climate change impacts. The demographic trend is for an increase in vulnerable groups.

Need (s):

- Tools for increased understanding of the geographic distribution of social vulnerability to climate change
- Hazard mitigation strategies
- Improved Emergency Management planning
- Community design that plans for and implements elements that avoid hazards and risks

Priority #2: Flood risk mitigation

Issue (s): Flood risks are increasing as a result of climate change. Sea-level rise, increased frequency and intensity of extreme rainfall, and erosion are making many Nova Scotia Communities more vulnerable to the impacts of flooding.

Need (s): flood hazard mapping, flood plain mapping, flood risk mapping, land use planning (discourage new construction in vulnerable locations, hazard assessments and flood protection requirements in vulnerable locations), infrastructure upgrades and repairs (culverts, bridges, roads, dykes, aboiteaux) that protect communities, municipal and provincial capacity to support flood management initiatives, community education.

Priority #3: Better use of information

Issue (s): Nova Scotia has myriad studies, reports and tools that were generated from various sources and collaborations. Using these resources is a difficult task because of fragmented access.

Need (s): Improved web-based tools for accessing, summarizing and understanding the interconnections of the various climate adaptation resources.

Gulf of Maine Council on the Marine Environment
2014 Climate Related Priorities

Submitted by: Bill Whitman, NS Fisheries & Aquaculture

Jurisdiction or Regional Area Covered: Nova Scotia (see also NS Environment submission from Sophia Foley)

Priority #1: Climate Change impacts on fisheries and aquaculture sectors

Issue(s): Climatic changes are driving ecosystem changes in GOM. These changes are causing changes in fish species and marine life distribution patterns, health, and life cycle impacts. (e.g., temp changes, salinity change, ocean acidification, changes in occurrence of algal blooms)

Need (s): increase knowledge and awareness through webinars or other tools and learning events. Main Target audiences: civil servants, fishing and aquaculture industry, academia

Priority #2: Flood risk mitigation (as identified in NS Environment priority template)

Issue (s): Flood risks are increasing as a result of climate change. Sea-level rise, increased frequency and intensity of extreme rainfall, and erosion are making many Nova Scotia Communities more vulnerable to the impacts of flooding.

Need (s): flood hazard mapping, flood plain mapping, flood risk mapping, land use planning (discourage new construction in vulnerable locations, hazard assessments and flood protection requirements in vulnerable locations), planning infrastructure upgrades and repairs (culverts, bridges, roads, dykes, aboiteaux) that protect communities, enhance municipal and provincial capacity to support flood management initiatives, community education.

Opportunity for knowledge exchange sessions on how jurisdictions have developed web-based map products (atlases and map applications) to assist planners and increase awareness of these issues amongst public and private sectors.

Priority #3: Communicating Climate Change Impacts in Gulf of Maine

Issue (s): Climate Change impacts can be challenging to communicate effectively in political and policy decision-making spheres. General statements of projected risks appear to have less influence than concrete examples of changes, especially observed and published by credible agencies, and projected socio-economic impacts (\$\$\$ and public safety)

Need (s): Knowledge on how to effectively apply a climate change lens to social and economic planning, policy, and decision-making. What works? What doesn't? Increased sharing and availability of quantified impacts, especially translated to socio-economic language. Stronger linking of how ecosystem service changes will impact society.

Gulf of Maine Council on the Marine Environment 2014 Climate Related Priorities
Submitted by: Prassede Vella Jurisdiction or Regional Area Covered: Massachusetts
Priority #1: Water quality <u>Issue(s):</u> Stormwater <u>Need (s):</u> <ul style="list-style-type: none">• Examples of stormwater management through green infrastructure• Information on BMPs especially costs
Priority #2: Vulnerability of marine ecosystems <u>Issue:</u> Fish population migration <u>Need:</u> <ul style="list-style-type: none">• Examples of research that is focused on this issue and attributing fish population migration to changes in sea temperature; economic impacts <u>Issue:</u> Changes in pH (ocean acidification) <u>Need:</u> <ul style="list-style-type: none">• To address the need for data on changes in the chemistry of the ocean (pH, pCO2)
Priority #3: Community adaptation and response <u>Issue (s):</u> Communication and response <u>Need (s):</u> <ul style="list-style-type: none">• How to effectively communicate threats and need to respond to climate change impacts to sea level rise to communities and garner their commitment to respond and take action

Gulf of Maine Council on the Marine Environment
2014 Climate Related Priorities

Submitted by: MA Division of Marine Fisheries Shellfish Program. Contact: Jack Schwartz
Jurisdiction or Regional Area Covered: Massachusetts territorial marine waters

Priority: Shellfish Management implications from Ocean Acidification, Increased Temperature, Ecosystem Alterations

Priority #1: Ocean Acidification

Issue: Reductions in seawater pH impacting larval shellfish recruitment from low saturation state of calcium carbonate in water and interstitial water

Need(s):

- Explore restoration strategies and improved spat capture techniques
- Research implementations of large-scale pH buffering and/or shell recycling efforts

Priority #2: Increasing Ocean Temperature

Issue: Higher frequency of bivalve disease prevalence; larval recruitment impacts

Need(s):

- Research examples of resource management around heavily impacted stocks
- Development of disease-resistant strains

Priority #3: Climate induced ecological alterations with higher shellfish predation

Issue: Loss of shellfish recruitment/survival and supporting habitat

Need(s):

- Management strategies to mitigate widespread shellfish predation
- Research impacts to shellfish from degraded habitat