

MAINE CLIMATE COUNCIL

Scientific and Technical Subcommittee

(STS)

16th Meeting (Zoom) – January 18, 2024

1-3 PM

AGENDA

Members in Attendance: Steve Dickson (co-chair), Ivan Fernandez (co-chair), Susie Arnold (co-chair), Adam Daigneault, Alyssa Soucy, Amanda Cross, Andrew Barton, Andrew Goode, Caleb Goossen, Carl Wilson, Cindy Eisenhower, Damian Brady, Daniel Hayes, Eileen Johnson, Gail Carlson, Glen Koehler, Glenn Hodgkins, Hannah Baranes, Jason Lilley, Kanae Tokunaga, Kathy Mills, Kristen Puryear, Lily Calderwood, Linda Bacon, Pamela Lombard, Peter Slovinsky, Phillip deMaynadier, Rachel Schattman, Rebecca Lincoln, Rick Wahle, Sean Birkel, Susan Elias. Members Not in Attendance: Aaron Weiskittel, Alix Contosta, Allison Gardner, Bradfield Lyon, Darren Ranco, Jonathan Rubin, Joe Kelley, Senator Matt Harrington, Representative Mark Michael Babin, Mark King, Muhammad Drammeh, Nicholas Record, Nichole Price, Sally Stockwell, Senator Nicole Grohoski, Todd Ontl, Representative Vicki Doudera. Additional Expertise Affiliated with the STS Process: Allison Bistline-East, Jessica Reilly-Moman, Nathan Robbins, Nicholas Whiteman, Parker Gassett. Observers: Karl.

Meeting Action Items:

1. Immediate next step is to email Susie and Ivan, or with the full STS group, with information that they can provide into the Climate Council special meeting next Tuesday 1/24.
2. Jess is going to be tagging each of the subgroups with instructions around draft report editing as she is working on their chapters. Draft report is being assembled with a focus between Jan. 15 to Feb. 9 when Jess is available, but will continue until complete.
3. Next STS meeting tentatively scheduled for February 15 9 am-12 pm, focusing primarily on review of the draft report.
4. MCC meeting in March 14, 9am-12pm, details forthcoming. Will ideally feature release of the STS report and possible presentation(s) during the meeting or at a later webinar event by STS.

Maine Climate Council Special Meeting registration:

https://mainestate.zoom.us/webinar/register/WN_2GpD2AIgT9qXa74Z55OQlw#/registration

1:00-1:15 Welcome

- Welcome, logistics, zoom protocols, land acknowledgment.
- Update on WG, Steering, MCC

Steve led discussion

- Welcome from the Co-chairs, Steve Dickson, Ivan Fernandez, and Susie Arnold
- Maine has seen two significant storms in the past two weeks. On January 10th, water levels were just shy of record in Portland, and the second storm did set record water levels for Portland.
- In light of recent events, the Maine Climate Council will hold a special meeting to discuss these events and responses.
- Steering Committee met January 8 on the STS highlights and were to be distributed to the working groups following that meeting. Special meeting registration.
- The deadline for comments on the highlights was yesterday, 1/17. However, STS will consider later inputs to the extent possible from the WGs and STS.

1:15-1:45 Update and Discussion about assessment report process

- Timeline and logistics
- Figures and tables
- Information Needs section

Ivan led discussion

- The primary focuses for the discussion today are to review the information needs and hear in more detail from members to begin to updating this portion of the report.
- We have received positive comments on the highlights from working group members and from the steering committee, the council co-chairs, and anticipate that all the working groups have or will be receiving the highlights. STS co-chairs have not yet received additional feedback from those group and anticipate they may hear from groups once they have a chance to review the materials.
- Process now for STS will be to systematically work through each of the sections
- Potentially during the meeting of the Council in March there may be opportunity to highlight some of the STS reporting.
- Following the MCC March meeting anticipate STS may hold a webinar on the findings of the report.
- The report will be available online once completed, and there will be a limited number of printed copies made available.
- There is not a firm deadline in March for STS to complete the report, but the aspiration is to meet that timeframe without compromising the quality of the reporting which is the priority.

Questions, Comments, and Discussion:

- Will the information needs be at the end of each chapter or its own section? Can be either. There was some initial interest expressed to have this content at the end of each section. There is also a spreadsheet version of this content that will be an appendix.
- What is the scope of the information needs? Using the Maine Won't Wait framework, the information needs are primarily focused on the policy priorities that are needed to best implement the climate action plans strategies. The primary audiences are, and focus is,

what the Climate Council, the legislature, the state agencies, and other partners ought to be aware of and hear from the STS.

1:45-2:30 What are the key *draft* science Information Needs for our final 2024 assessment report?

1. Climate
2. Marine
3. Biodiversity

1. Climate (Sean Birkel)

- ...
- ...
- Trends in lake ice is an area where we do need updates from previous study
- Changing on summer precipitation and low streamflows
- Emphasize need to implement mitigation strategies for HABs
- Pollen monitoring work has advanced since the 2020 report, sites have been identified, sensors purchased for some initial sites, and CDC and DEP joint committee are overseeing this work planning to begin monitoring this spring.

2. Marine (Peter Slovinsky)

- Develop priority post-storm guidance information for waterfront decisionmakers and decision support tools that support adaptive management.
- Continue to establish high water marks throughout the State, *especially post-storm 2024*.
- Incorporate updated tidal datums to account for sea level rise that has occurred since the last tidal datum (this is slated to occur sometime in 2026 per NOAA).
- Continue to expand Maine's network of water level sensors to support flood forecasting, development of local flood thresholds (relationships between water level and flood impacts), and establishment of local tidal datums that inform flood management and coastal planning particularly in coastal areas vulnerable to joint river and marine flooding.
- Conduct investigations on increasing frequency and/or intensity of southeast storm events in Maine, and the ongoing sea level rise anomaly impacting the Maine coastline
- Provide technical guidance on how to use sea level rise projections, combined with other water level datasets, for calculating future high water levels over a given future planning horizon.
- Develop a plan for sharing results and educating the public and practitioners about the ME-CFRM.
- Establish a statewide network of wells that can be used to monitor for saltwater intrusion throughout Maine's coastal zone to help quantify ongoing impacts and provide a basis for future modeling.
- Further investigate and quantify impacts of sea level rise on other important fringing habitats.

- Integrate marsh sedimentation datasets from the Statewide RSET network into marsh migration models to help quantify marsh changes in the future.
- Develop engineering capacity for reviewing coastal stabilization projects, regulatory permitting of said projects, and coastal modeling efforts.
- Continue monitoring coastal erosion of Maine’s beaches. Update coastal bluff stability/landslide hazard maps which are over 20 years old in most locations.
- Continue to acquire high-quality topobathy LiDAR and orthoimagery on a regular basis of Maine’s coastal zone.
- Develop data relating to quantifying sediment flux and transport along the Maine shoreline.
- Complete erosion hazard modeling and studies that account for future SLR conditions in Maine for different shoreline types (e.g., bluff, dune, wetland).
- Develop comparison mapping between inundation observed from the Jan 13, 2024 storm event and FEMA flood inundation mapping.

3. Biodiversity

- No updates were given.

Questions, Comments, and Discussion:

- Do we need to stick to top 3 or can we go beyond this? We are looking to identify the top three; however, we should include others within reason and not extending to a comprehensive list (more than 3 is okay)
- As groups are making updates, members should be using the shared spreadsheet distributed by co-chairs.
- Northeast Regional Climate Center is currently making similar updates. That information can be linked into the STS reporting.
- What is the deadline for information needs? January 31.
- STS members discussed having the information in the spreadsheet versus at the end of each section, versus in totality in the document.
- STS discussed a revision to the spreadsheet that changed a column previously called “who?” to “expertise” in order to present organizations that could be sought out for expertise in implementation but did not task them with doing so.
- If there are a few points that are most important to elevate at the MCC meeting, please be in touch with the co-chairs.

There will be a request forthcoming to complete the information needs by the end of the month.

Co-chairs asked STS members if they had a few points that are most important to elevate at the MCC special meeting next Tuesday. Please send those by email to the co-chairs or contact Susie and Ivan.

2:30-2:40 Break

2:40-3:30 What are the key *draft* science Information Needs for our final 2024 assessment report?

1. Human Dimensions
2. Agriculture and Food Systems
3. Forestry
4. Other?

1. Human Dimensions (Cindy)

- We have sections on inclusive governance
- There's so much data from other cultural and local places; we have strong evidence of indicators of resilience, but not always in the Maine-based context
- We need more context and culturally-specific data in resilience
- Population migration, beginning to recognize this as important issue. None have expertise in this area for estimating or quantifying those migrations, for Maine or the region.
 - possible example:
https://www.tandfonline.com/doi/pdf/10.1080/14693062.2020.1828795?casa_tok=en=tl5N-hUI89sAAAAA:XvVXaoWkQMqLBqf1nsP-YUtW66ID9eBbu2QLNSsO9EpSDFeSpCtJ4i0aYl-BCpkFxfjtX5OX8teA
 - related projects in Maine and region:
 - [NEST Project Report](#), Senator George J. Mitchell Center for Sustainability Solutions
 - [2023 NH-ME Climate Networks Exchange; Climate Migration](#), Maine Climate Change Adaptation Providers Network & New Hampshire Climate Adaptation Workgroup
 - [2023 Local Solutions Conference: Climate Migration](#), Antioch University of New England
 - [Assessing the Carrying Capacity of the Blue Hill Peninsula](#)
 - [Gulf of Maine Research Institute, climate migration presentations.](#)

2. Agriculture and Food Systems (Caleb and Allison)

- Maine specific research to carbon sequestration in soil, across different depths and soil types
- Possibly looking at market and farm viability impacts of extreme weather events, state and regional
- And sequence of events consideration as well, 3 bad years vs 1
- Assess potential gains, GHG reductions for electrification of Ag, improving efficiency
- Better understanding, refining prior point, enteric methane, and methane digesters, where we're at now and what the info needs are
- Support programs for recovery, financial and otherwise after events
- Better applicability of crop insurance
- What application might fit the Maine landscape
- Potential invasive species, pest pressures

- New tech to extend food storage duration, in homes and food pantries
- 3. Forestry (Adam)
 - Many stem for what asked for in the previous round
 - Modeling:
 - Influence of climate on stressors, not just change of biomass and carbon sequestration
 - Since seen wildfire in similar systems, what physiological stressors
 - How to adapt to extreme events, continuing freeze thaw when would normally be ramping up operations
 - How to expect freeze thaw, and how to change operations as a result
 - Physiological and ecology of forests
 - Soil and carbon sequestration above ground we can measure, but still don't have a good idea what's going on under the surface
 - Potential huge stock fluxing more than we think
 - Cross-cutting with human dimensions
 - More indigenous cultural knowledge and impacts, to understand how climate affects forest from that perspective
 - Cross cutting with resilience
 - Distributional impacts, what can communities expect for species distribution, supply, etc. when comes to community planning

Questions, Comments, and Discussion:

- In thinking about impacts of recent storms, are we capturing info about who is experiencing vulnerabilities and now exacerbated? Additional.

Co-chairs welcome any thoughts about the implications of the past month of weather for any sectors:

- What have these events brought forward that were not as vivid before? Send an email about what these storms brought forward.

3:30-3:45 Photos of Climate Science in Action in Maine

There will be an email forthcoming from co-chairs with a general call for images with a process for collecting this information. The intention is to use some of these within the STS report, but also could consider post on a website (potentially STS site), that showcase activities happening within the scientific community here in Maine. Its especially helpful to be able to show methods, how information is collected, which is often unclear by many non-scientists.

Questions, Comments, and Discussion:

- Rachel Shatman has photos
- Alyssa Soucy is a photographer who is also available to help take pictures. Please contact Alyssa if you would like to see if this could work for your idea.
- Andrew Goode is working on a project that would fit this well.

3:45 - 3:55 Public Comment

No public comment received.

3:55 - 4:00 Next Steps and Wrap-up

Co-chairs wrapped up with a few next steps.

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