

## 11:00-1:30 Field Sessions, Workshop, Training

### **Training: Tools to be equipped for change: from raising awareness to adaptation practices**

Presenters: Nathan Robbins (Maine DEP), Gayle Bowness (Gulf of Maine Research Institute), Abbie Sherwin (Maine DACF)

Attendees: Sadie Mae (Bates College student), Jeremy (Midcoast Conservancy, Colby College), John (retired UNE), Lisa Graichen (UNH Cooperative Extension and NH Sea Grant; notetaker)

#### *Welcome and Introductions*

- Tools:
  - Community Resilience Informed by Science Experience (C-RISE) – Gayle
  - Maine Flood Resilience Checklist – Abbie
  - [Maine Adaptation Toolkit](#) – Nathan
- Goals:
  - Raise awareness of climate change issues
  - Inform and make available resources to use
  - Co-develop and train on the use of resources
- Objectives:
  - Raise awareness of SLR risks to ME communities
  - Ability to use tools to apply to different scenarios
  - Raise awareness of GMRI’s CRISE programming, ME Flood Resilience Checklist, ME Adaptation Toolkit

#### *C-RISE (Gayl)*

- Developed with an advisory committee
- Very focused on the Portland area but does translate throughout southern Maine; also some folks from Machias thinking about how it could work in Downeast region
- Learning outcomes – Participants understand:
  - how SLR, storm surge, and increased precipitation will impact them personally or indirectly;
  - the need to make decisions in the face of uncertainty;
  - the importance of using data and modeling to inform decisions
- Goal: Engage 1,000 citizens in C-RISE by September 2018 (launching 8/3/2017)
- Introduction to SLR → explore SLR scenario maps → explore compounding impacts of SLR, storm surge, and heavy rain → explore SLR impacts on community resources of personal value → examine case studies of SLR resiliency globally, nationally, and regionally
- On the first end of awareness of the issue and possible next steps
- “Preparing for SLR” workshop series in Portland, starting 8/3; also looking to partner with organizations and stakeholders to deliver some specific programming (e.g., South Portland working on their new sustainability plan; Brunswick Library; Wells NERR; garden clubs)
  - Let Gayle know if you have an interested group
- Testing with teachers → adapting for student audience – incorporating shortened component into GMRI program for 5<sup>th</sup> and 6<sup>th</sup> grade audience; testing with high school students too
- Using ESRI StoryMaps
- Adapt → NH SLR data layers
- Developing a facilitators guide (will ID where you need to plug in site-specific information/data) – need more funding for that component

- Maine: already an 8" rise; increased rate of rise – anthropogenic (ocean warming and land-ice melt)
- Visualizing data is really difficult – conference at Bates in August; important to coordinate our messaging; can be confusing for the public to see diverging lines from different sources of data
- “What impacts of SLR have you already seen” – discussion, images (e.g., King Tide photos)
  - Flooding along the coast and flooding through stormwater systems further inland
  - High tides plus heavy rain events plus storm surge
- Scenarios (2100)
  - Historical rate → lowest (8")
  - Historical rate + ocean warming → mid-low (1.6 ft)
  - Historical rate + ocean warming + limited land-ice melt → mid-high (3.9')
  - Historical rate + ocean warming + maximum land-ice melt → highest (6.6')
- 2017 NOAA Technical Paper 083 – six projections
- These are global averages, but SLR doesn't happen like a bathtub – rises at different rates in different areas (ocean currents, subsidence, river input, density of land beneath the ocean)
- Climate Central → localized data for Portland – 11.2' (extreme)
- Currently recommended to plan to mid-high SLR scenario for 2100 (4'), but also plan for a storm event on top of that (possibility of 6')
  - Relative SLR adjustment vs. global averages
- Community resilience: 4 things we can think about –
  - Keep the water out
  - Live with water (e.g., build with floodable space)
  - Planned relocation (involves banks/mortgage lenders, insurance, community zoning)
  - Public education and support
- High-water mark projects (past events and visualizing future SLR projections)
  - Projects in Portland and York – signs to visualize SLR
- Get involved – beach monitoring (state program, global citizen science projects)
- DEP – grants for WWTPs to work on a climate adaptation plan
- Building a common language/understanding → support for projects, investments in infrastructure

*Maine Adaptation Toolkit (Nathan)*

- Who: Those gaining an understanding of the issues, those applying knowledge of the issue and translating it into action
- What: An online library of Maine-focused resources for climate adaptation and resilience actions
- Why: Learn about Maine's changing climate; access information to help integrate best practices into communities, homes, or places of work
- Goals = access and understand community resilience needs; leverage local, state, federal climate-related resources (projects, tools, data, etc.); bring resources to ME communities to aid their efforts
- Uses: short-term project and long-term planning
- Revised version is coming later this month or next month
- Maine Interagency Climate Adaptation workgroup (MICA)
- Provide feedback at: [SurveyMonkey.com/r/AdaptationToolkit](https://www.surveymonkey.com/r/AdaptationToolkit)

*Maine Flood Resilience Checklist (Abbie)*

- Who: Communities wanting to understand vulnerabilities to flood hazards and SLR; communities interested in building flood resilience
- What: Integrated framework for examining local flood risk, assessing vulnerability, and identifying strategies for increasing resilience

- Why: Prepare for increasing flood hazards; build resilience and reduce vulnerability to protect people, places, and nature; move beyond the theory of resilience toward operationalization of the practice of resilience
- Regional planners = best people to work with communities on the checklist – training workshop
- Checklist categories:
  - Risk and vulnerability
  - Critical infrastructure and facilities
  - Community planning
  - Social and economic vulnerability
  - Natural environment
- Link to the Community Rating System program (discounted flood insurance in exchange for communities implementing actions that go above and beyond the minimum requirements of NFIP)
  - Appendix – CRS credit description, points
  - Can be used by communities who already participate – ID what they can do to earn more credit; and by communities interested in participating
- Associated materials: process diagram, agenda templates, process agenda templates

*Discussion*

- Lisa – send Nathan resources re: land conservation and climate (TNC, OSI, LTA)
- Add a link to suggest a new tool/resource (survey or email pop-up)
  - Nathan: Adding a new link for feedback
- Helpful to have case studies of communities that have taken some of these actions (e.g., RAINE)
  - Nathan: Adding an ‘adaptation actions’ section; Maine solutions map
- Checklist → online platform (Maine Coastal Program moving to Maine DMR)
  - Data collection opportunity (not required –
- Ipad issues, needing to download an app?
- NOAA maps vs. FEMA maps? Different maps that don’t align – that’s a problem
  - NOAA visualization tools are not regulatory; hard to communicate about that with people
  - CIMP5
- Resist change to your websites unless it’s really important – takes forever to go back through it and find what I used to be able to find
- Is this approach helpful/effective?
  - Yes – helpful to see the C-RISE project and Checklist first before getting to the Adaptation Toolkit; Toolkit needs context for people who might not be as familiar with resilience
  - More on how these things link together
  - Really explaining what you mean by resilience – so many definitions