

**Engaging Communities to Evaluate, Plan and Improve Resilience to Storms and Flooding
The Beaches Conference
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Facilitator: Ruth Indrick, Kennebec Estuary Land Trust
Note Taker: Lisa Wise, NH Sea Grant

Andrew, Vinalhaven

- o Should we talk about relocating?
- o SLR committee – Sewer Climate Adaptation Plan, DART Design and Resiliency Team
- o Education, outreach, document local knowledge; conduct studies; policies/protocols; economic impact study, cost benefit analysis □ adaptation? Relocation?

Rodney, Strawberry Banke

- o Our history is going underwater
- o Surface and groundwater issues, humidity, salt – damage
- o Is our history lost? Choices – what will be preserved?
- o ‘Keeping history above water’ events
- o SLR initiative – capital campaign
- o Pond liners to protect foundation, capping basements, moisture membrane, freeboard – bulkhead

Keith, Sustainable Seacoast

- o Take, make, waste economy; linear □ circular economy
- o Can’t recycle our way out of it
- o Making a difference either way (positive or negative)

Sarah, Seacoast Science Center – Marine Mammal Rescue Team

- o Grey and harbor seals (year-round), harp and hooded seals (winter)
- o Lack of understanding of the importance of marine mammals
- o 2018-19 unusual mortality event – distemper

Gabby – green crab fishery

- o Decline of NE fisheries and coastal ecosystems – climate change, invasive species, etc.
- o Groundfish, lobster (bait crisis, warming waters)
- o Ecosystem engineering – erosion

John, UMass Boston

- o Who owns the seaweed? 2014 Maine report – Ownership of intertidal seaweed remains unresolved
- o Rockweed – economic value increased
- o Public trust doctrine/colonial ordinance (ME □ own down to the low tide line)
- o Intertidal owners own the rockweed – recent court ruling (fastened to the seaweed)
- o Public shoreline access in Maine – citizens’ guide to ocean/coastal law

Engaging communities to evaluate, plan, and improve resilience to storms and flooding

This session will highlight how to bring community members together to think about resilience and share resources that support community conversations about what their community needs to be more resilient. It will share examples of the ways these techniques and resources are supporting coastal communities in identifying and addressing vulnerability to flooding from storm surge and sea level rise.

Moderator: Ruth Indrick, Kennebec Estuary Land Trust

Community Resilience Assessment in East Boston – John Duff, UMass Boston

- What is resilience and how do you assess it? What are the costs in maintaining the system
- Vulnerable infrastructure – subway, bus routes, evacuation roads, one major grocery store, storm sewers
 - Important to get insights from people living there – e.g., storm sewers getting clogged with trash and causing flooding before they fill up with water
- Matrix: risks, resources, roles, responsibilities x infrastructural, social, environmental
- Temporal aspect of resilience assessment – Bounce back over what period of time? What needs to be remedied immediately, and how quickly can it take place? Is the response quick enough?
- Roles – City govt., state agencies, civic associations, homeowners, landlords, tenants, developers
- Neighbors/residents/families are first responders too – What are their roles? How to build their capacity?
- Legal obligations – duty to protect, repair, maintain, communicate re: conditions of buildings/infrastructure
 - Learnings from Sandy – sued NYC for govt. failing to meet their obligations
 - Some legal obligations between neighbors (e.g., secure your property so it doesn't become hazard)
- Social risks – lack of investment in East Boston, language barriers, financial vulnerability, lack of emergency preparedness, high renter occupancy
 - Differences in how people get information (e.g., radio vs. social media)
- Social resources – strong neighborhood identity, families, community groups, communication plans
- Social responsibilities – social and legal duties of parents, custodians, neighbors; city and state duties to vulnerable populations (e.g., hazardous waste in basements – owners of the buildings vs. renters)
- Exposure: Who's exposed to what threats? What's the legal exposure? How long your lens is open – double exposure. Keep exposure and duration in mind.

Resilient Approaches, Resilient Outcomes – Nathan Robbins, Maine DEP

- Basic premise = listen and tailor resources to meet needs, using sustainable principles (e.g., make it easy, establish a network, work together to share knowledge and emphasize solutions, early adopters and champions of change, fund and connect with resources)
- *People and Nature, Adapting to a Changing Climate: Charting Maine's Course, 2010*

- Coordinating state resources – Maine Interagency Climate Adaptation Workgroup Group; centralized climate directory – Maine Climate Clearinghouse/Toolkit
- State of Maine climate resources and tech assistance – iterative assistance process, topic-specific toolkits
- Going Together: “Charting Maine’s Course” – match statewide resources with needs for Belfast

Belfast Maine’s Climate Change Committee – Samantha Paradis, Mayor of Belfast

- Ran campaign in 2017 based on climate action
- Almost 90% of municipal electricity is coming from solar
- Dialogue focused on transitioning to renewable energy to manage budget, rather than resilience
- Municipal focus – comprehensive planning, community building through resilience, utilizing and analyzing municipal data to make informed decisions about climate
- 3 reports on SLR in Belfast
- Next steps: Convene community outreach meetings, work on Global Covenant of Mayors commitments including a Climate Action Plan
- Resources/collaborations – UMaine (coastal mapping, storm surge research), Silver Jackets (high water mark project), Gulf of Maine Research Institute (citizen science), Mayors Covenant on Climate and Energy, Island Institute, Maine Center for Coastal Fisheries, Penobscot Bay Stewards, local activist groups; Belfast area high school – engage students in dialogue
- Resource wish list: database of other coastal municipalities doing this work, networking and dialogue with other municipalities engaged in climate change adaptation and resilience

Esperanza Stancioff, Maine Sea Grant

- Climate Change Adaptation Providers Network (CCAP) – started in 2010; 2 meetings per year plus 1 shared meeting with NH Coastal Adaptation Workgroup
 - o Purpose = knowledge exchange, improve communications across practitioners, share opportunities (funding, training, events), chart shared roles and responsibilities, collaborate on projects, determine mutual goals and activities
 - o Next project = website (access tools, case studies, resources)
- Barriers to a changing climate – longitudinal study (Bowdoin, UMaine Machias, and Esperanza)
 - o Municipal surveys (2010, 2015, 2017) + interviews re: climate adaptation actions, barriers
 - o Challenges: Funding; identifying applicable funding sources
 - o Need more specific data, spatial mapping, interactive websites, support from technical experts
 - o Since 2010, significant increase in municipal officials who understand climate change is happening and are taking action

Stonington Flood Vulnerability Study – Leila Pike, GEI Consultants, Inc.

- Goal: Remain a thriving community well into the community

- Project goals: 1) ID vulnerable town-owned infrastructure within the project area; 2) provide guidance on when adaptation solutions would need to take effect (2030, 2050, 2100); 3) develop up to three adaptation alternatives for each type of asset (e.g., roads, pump stations, culverts, etc.)
- 4 areas: Burnt Cove, Moose Island, Main Street, Oceanville Road
- Vulnerability assessment – exposure to flooding, sensitivity to flooding (how likely is it that the asset will be damaged if exposed to flooding), adaptive capacity (how easy will it be to adapt the asset)
 - o NOAA’s 2017 SLR projections – Stonington chose intermediate-low, intermediate, and intermediate-high scenarios @ 2030, 2050, 2100
 - o Worst case scenario flood extents – 2100, intermediate high SLR + 100-year storm □ all the assets that could be at risk to prioritize subsequent analysis
- Adaptation actions – ID scenarios under which the asset will experience flooding
- Not a lot of engineering guidance/framework for this type of work
- Provide adaptation solutions that are not ‘sensitive’ to flooding – it’ll be best if the solutions we implement aren’t vulnerable to flooding

Q&A

- Belfast committee – all volunteer, now seeking grants , requesting some city funds for monitoring supplies
- Belfast high-water mark project – pilot in Portland and York; second phase = Belfast, South Portland, Scarborough; goal = statewide
 - o Historic storm level + SLR scenarios; signs can be adjusted over time if scenarios change
 - o Tie in to other community initiatives; creative ways to look at flood risk □ find out what’s going on in town and how they can get involved
- How is the private sector adapting R&D for infrastructure? Many new designs have flood proofing measures
- Stonington – Process for selecting scenarios? How deal w/uncertainty when communicating w/stakeholders
 - o Meeting with municipal staff + public meeting □ town manager’s decision came from Leila’s input + what the people of Stonington would most likely accept
 - o Most extreme scenarios – shock paralysis
 - o Whatever scenario we choose, it helps get the conversation going
- Belfast – selecting risk horizon is an opportunity to think about justice; organizing public dialogue to get feedback; bring the people who are already experiencing flooding and make sure they’re at the table
- Maine Coastal Program grants – find out what other communities have been doing
- Community resilience challenges – gentrification, lack of equity, language barriers
 - o Social fabric of the city is being
 - o Have to look at the census demographic information but really need to listen
 - o Gentrification affects existing community and new community – institutional knowledge

- o Equity and climate resilience are linked – can’t work unless you hear from people, center the work around them, ensure all voices are involved; justice-based equity approach to climate adaptation
- What is the vision of the town – Incremental adaptation? Is there a place for a larger vision?
 - o Vision vs. reality – in reality, it’s usually incremental implementation; try to infuse the implementation with systems thinking

Undercurrents

- “Working with you to find solutions”
- Here’s some options – figure it out...
- Personalization
- Political horizons/timeframes
 - o How do we address the issue in the terms/time horizons they work in
- “Legacy”
- Tax base/property values
- Looking for options that will help us stay
- I should decide when my property is unlivable and I should leave
- What’s the town/state/federal role?
- Summer home vs. primary residence
- Mortgage or not
- Funding to rebuild but not relocate
- How do we define ‘managed retreat,’ what’s the best term?
- More short-term action
- Like a medical diagnosis □ treatment or hospice
- Asking property owners to deal with it on their own // allowing more coastal development...

Sea Level Rise, Chronic Flooding, and Property Values

Chronic flooding driven by rising sea levels is an emerging threat. Flood Insurance Rate Maps depict flood-prone land and require flood insurance as a condition of a loan in the floodplains. This impacts the real estate market and municipal services. See how professionals in the fields of real estate, insurance, and the financial sector are addressing this risk.

Erika Spanger-Siegfried, Union of Concerned Scientists

- 300,000 homes and commercial properties flooding chronically (26/year – every other week)
- 3,000 homes in district 1 of ME and NH
- 2100 – 2.25 million properties

Mike Bellamente, Keller-Williams Coastal Realty

- Really tough to engage people on; finite pool of worry
- Sense of ownership, ‘we’ vs. ‘I’

- Someone will pay the premium for coastal land
- Hope we have insurance premiums that really signal the risk – just to say we know there will be more flooding hasn't kept people from buying
- If we are going to build on the coast, let's do it in a smarter way
- Waterfront homes are appreciating but at a slower rate (lost \$15M in NH in appreciation value because of the looming risk) – the numbers are there, who's listening?
- As a real estate agent, I want to be pulling the floodplain maps; go down to the neighborhood and get an anecdotal sense of what's been going on – protect the buyer's investment
- If they want waterfront, they're going to buy it
- By and large, mortgage companies and real estate brokers want the deal – paychecks
- Buying a home is a very personal decision; the best we can do is educate and inform

Craig Foley, LAER Realty Partners

- Sustainability Advisory Group at National Association of Realtors
- Rethink 39 (39% of US energy consumption is in buildings)
- Perspectives from real estates on Plum Island and Chatham – what are they hearing from buyers about climate change? We're seeing some evidence that it is influencing some buying habits, but look at Houston – 3 500-year flood events in 5 years – prices are rising again. Plum Island – building code now requires elevation. Value continues to rise.
- Someone who grew up with the dream of living on the coast – they don't care about the data.
- How will the UCS data influence our profession, the insurance and mortgage industry (stranded assets)
- Data vs. what the on-the-ground realtor is experiencing
- Inman News article – reporter asked the question “What about 30 years from now – what does this mean?” The two realtors Craig spoke with said they'd never been asked that question. They do get asked if there's flooding. The answers to this reporter's question were frightening – litigation/risk perspective.
- Value of properties in a risky area – depends on climate “believer” vs. “denier” neighborhoods
- NAR's Climate Policy – working group to update in 2017; “extreme weather” vs. “climate change”
- Realtor magazine March/April – article re: climate change – leadership team at NAR and Realtor magazine knew this would be very controversial; super hot topic but proud to be working on this issue

Sue Baker, Maine Floodplain Management Program

- No mandatory flood hazard disclosure at the national level or in Maine; some states have passed that but nobody's bound to tell you when you're buying it; oftentimes people don't find out until they're in the middle of a lending transaction that they're in the flood hazard area and need flood insurance
 - People need to know before they're emotionally and financially invested in it; by the time they get to the bank, that's too late

- o Common question – how can I get out of mandatory flood insurance; your risk doesn't go from high to nothing just because you crossed that line
- 20-25% of the claims come from areas outside the mapped 1% floodplain
- 26% chance over a 30-year mortgage; we wouldn't dream of going without homeowners' insurance
- 8,200 policies in the state – way underinsured
- Have to be low income to get disaster assistance; max assistance is \$34,000 – won't make you whole again
- Encourage people to protect their investment, know their risk before they buy
- Would love to see some disclosure
- More realtor training last year than ever – it is coming to the forefront; it's important that realtors encourage people to look at what's going on

Discussion:

- Average tenure that people live in a home is 9-10 years
- Privilege of buying a home; climate gentrification; massive equity issue
- Affordability for the next generation
- NH case – property owner sued the listing agent for lying, lost
 - o Realtors code of ethics
- Culture war – climate deniers, apathy
- Could put forth prescriptive policies, but not likely to get passed
- Claims data has historically been protected by the privacy act; if they didn't have flood insurance there wouldn't be a record; some of that data may be released?
 - o Bill to update NFIP included an amendment for flood insurance disclosure (passed out of committee, due to go to the house next week)
- Can we create a mechanism for realtors to better answer questions about flood risk? “I realize your concerns. I'm not an expert, but I can send you the vulnerability assessment and adaptation plan.”
- FEMA cap on flood insurance (\$250k for residential, \$500k for commercial) – created in 1968 and very little has changed (other than it's in debt)
- New risk rating structure coming out
 - o Pre-FIRM – low rate, historically not collecting premiums commensurate with the risk
 - o Risk rating 2.0 will be based more on elevation
- How did the lead/asbestos disclosures get passed? All disclosures are done at the state level (MA does not have a mandated seller disclosure policy; CA's is very rigorous)
- Why not have disclosure requirements as some sort of backing? More to protect property ownership rights.
 - o MA effort for mandated energy disclosure so you know the operating costs (but the trade organization was against it)
 - o *Sellers'* interests
 - o No one wants a rating on your home that would put you at a disadvantage

- IL – created an environment where they’ve paved the way to get energy rating done across the state – voluntary to include it in the listing (if it’s good, you get the benefit, but you don’t have to)
- The amount of stranded assets is scaring the mortgage industry
- Homes that use less energy have less risk in the mortgage market
- NAR used to oppose fair housing, now very much in favor; we can’t afford to be on the wrong side of history on this topic; there is effort at the leadership level to engage on these conversations
- “Totally in/totally out” issue
- People who can afford to not care about the risk
- “Managed retreat” makes realtors think of “eminent domain”
- Liability – 30 fishermen in CA suing top fossil fuel companies
- Working on a policy statement on the cost of carbon – market way to deal with the issue
- RI Association of Realtors – homeowners brochure – links on how to figure out your flood zone, SLR
 - o Also look at UCS Know Your Risk brochure
- Reach out to your realtors to make sure they’re aware of the resources
- Update building codes, maps
- Public/private partnerships
- 1) Phase out risky policies, 2) Lean into policies on the books that can create resilience (disaster preparedness), 3) What else needs to be on the table long-term (relocating); first step = know the risk

New Developments in the Law Affecting the Seashore: Access, Ownership, and Seaweed

Moderator: Paul Dest, Wells National Estuarine Research Reserve

Amy K. Tchao and David Kallin, Drummond Woodsum

- Moody Beach case 1989 (Bell case) – started the controversy we’re going back to today
 - o Public trust in intertidal land act – found unconstitutional; still on the books (not enforced because it was found unconstitutional); court found that the public trust doctrine only allows fishing, fowling, navigation – those were the only three enumerated rights the public was allowed to engage in in the intertidal (very limited); does not include recreational rights
- Eaton vs. Wells case 2000 – public prescriptive easement (long-standing history of continuous use, adverse to the owner – very fact-intensive)
 - o Because of the Moody Beach case, parties asserted a broader range of theories; revisit this and adopt the dissent as majority (recreational rights are public), OR say the recreational rights have been transferred to the public
 - o Absentee landowner, didn’t recognize that they owned it, the town was operating like it owned it
 - o If recreation rights are private, upland owners can exclude public from recreating
 - o Longtime use qualifies as a transfer of rights for recreation – “scope of the easement” was used for public recreation
 - o One of the dissenting justices said we should reverse Moody, since that essentially invites expensive litigation

- Goose Rocks Beach case 2009 – town sued by about 30 property owners; still going; 3-week trial in 2012
 - o Wells case – did that also happen at Goose Rocks Beach? Long period of public lifeguards, other evidence of town involvement in the management and use. Trial court agreed. Law court said recreational rights are presumptively permitted if the landowner is silent (not an actual transfer). Sent back to the trial court. Who owns each specific parcel? Trial court found the town owns it. Issue of how rights transfer is a little unsettled – Wells = it can happen, but Goose Rocks = it’s challenging
 - Law court – quality of evidence is tricky, clogs up courts; focusing on public trust doctrine is easier theory to argue than public prescriptive easement
 - o 2 justices were recused; only 5 will be ruling; will they address the recreational piece?
- Harpswell 2016 case – another public prescriptive easement case, re: road to beach; found in favor of public prescriptive easement to get to this beach (otherwise only way to get there is by boat); law court flipped it
- Scuba diving case – someone giving scuba diving lessons from the house they owned, can you walk across the intertidal zone to get to the water to scuba dive; 6:0 said yes you can walk across to scuba dive (3 of them said it’s because it’s navigation; other 3 said – is this a reasonableness balance – walking across the intertidal to get to the water for any purpose should be fine)
 - o Old cases about navigation dealt with passenger ferries – also walking cases – attendant rights to what your overall use is
 - o Does this include the right to rest there? Trial court said walking to scuba dive was a right, but you can’t sit and eat lunch.
 - o Scuba diving is navigation because you use specialized equipment?
 - o Use-by-use basis – inviting you to make arguments that will let us overturn the 1989 case
- Ross seaweed case
 - o Seaweed is a private right; some justices – still think Moody should be overturned – puts the recreational use piece in an interesting place now
 - o Cases in the 1800s – seaweed is a private right
 - o If it’s been a private right, transferring it to public gets into takings territory
- Law remains unsettled; are there enough justices to get over the gulf – doesn’t make sense to do on a use-by-use basis or lengthy public prescriptive easement process
- Justices – disclosure – whether they own waterfront property
- Can be a long, expensive haul to litigate
- Tools to transfer private property interests also apply to beaches (e.g., easements, eminent domain)
- Negotiate beach use agreements (alternative to litigation)
 - o Challenges – Uncertainty/unpredictability of law; imbalance of power between landowners/users
- Upland owners pay taxes up to the wall, not down to the low-water; paying taxes doesn’t determine ownership; common claim though – if they own down to low-water, should pay taxes on it
- Use of the beach probably increases your property value (vs. amount of sand)

- Where the rights exist in this shared area
- 1st theory: Public prescriptive easement – the entirety of the beach
 - Use that goes on for so long, not objected to by owner (can apply everywhere, not just intertidal)
- 2nd theory: Rights in the intertidal zone only out of the public trust doctrine (Bell case)
- Deed history
- Colonial ordinance didn't apply in Maine; some portions shared jurisdictional association with MA but it was with a different charter; courts have said that the principles from colonial ordinance have been adopted into Maine's common law; equal footing doctrine – when state separated, had a chance to decide what elements of the colonial ordinance they want to carry forward
 - Bill for state to take ownership of the intertidal
- Animal (moves around) – publicly owned / plants (grows from soil) – privately owned □ two boxes – very limited; mussel vs. seaweed
 - Once we've put something into one of those two boxes (even if the rationale isn't accurate), the right has been established
 - Science evolves, activities evolve
 - Is there a legislative fix? Regulatory balancing analysis. Legislative change of common law.
 - One bill tried to make both recreation and seaweed public – passed house but not senate
- What are the boundaries around 'walking'?

- Seawall protects private property but has a negative impact on the width of the public trust
 - Public rights move with the intertidal zone
 - Case in FL vs. ACOE – because they permitted a jetty that caused erosion of the beach, they were at fault for losing some of the public rights; settlement agreement – agreed to truck sand out and do maintenance to preserve the beach for another 50 years (probably can't get that now)
 - Cases in other states but not yet in Maine
 - Is there any case against the property owner who put in the seawall or the agency that permitted it?
- York – town is considering purchasing Long Sands (private)
- Towns in a difficult position – litigating on behalf of some residents and against others