

Newburyport Resiliency Committee (NRC)
3 PM April 27, 2022 Virtual Meeting

NRC Mission Statement

The Newburyport Resiliency Committee will analyze, coordinate, and develop a plan in conjunction with regional planning efforts to increase community resilience related to sea level rise, storm surge, flooding and extreme weather events throughout the city. Further, the committee will advocate for and oversee implementation of the plan's recommendations.

NRC Attendees: Julia Godtfredsen, Sarah Tappan, Andrew Port, Brett Lefebvre, Jane Healey, Molly Ettenborough, Barry Connell, Joe Teixeira, Connie Preston, Samantha Burke, Absent today: Jon-Eric White, Rishi Nandi

Other Participants: David Moon (Mass Audubon), Rick Taintor, Annalee Tweitmann (Mass Audubon), Rourke Lee, Andrew Levine, Lela Wright, Samara

Note taker: Sarah Tappan

Key Accomplishments this month

- Connie Preston joined the committee as the City Council liaison
- Samantha Burke joined the committee as a new volunteer
- 5-Year update of Newburyport Hazard Mitigation Plan update for FEMA, May 18 "Listening Session" approved.
- MVP action grant Climate Resilient Newburyport: Community Collaboration, Capacity Building and Catalyst Project drafted
- Barry, Connie and Jane met to discuss NRC input to the annual budget/CIP process.

Notes:

- **Membership Announcements:** Connie Preston, at large City Councilor, joined the committee this month as the City Council representative. Connie has a long-term interest in resiliency for Newburyport and the planet.

Sam (Samantha) Burke, reached out to the Mayor to offer her services as a volunteer - Long term Newburyport resident. Sam works as an ESG Analyst at Boston Trust Walden Company and brings an excellent skill set to the committee.

- **Speaker: David Moon and Annalee Tweitmann, Mass Audubon - Living Shorelines and Ribbed Mussel Restoration in the Mouth of the Merrimack River.**

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David is the Community Science and Coastal Resilience Manager for MA Audubon North Shore and Annalee is a Coastal Restoration Ecologist at Mass Audubon.

David described the long-standing concerns with edge erosion of the marsh behind Joppa flats and up-river towards the WasteWater Treatment Facility. Low marsh platform erosion and collapse is one of several coastal resiliency concerns being investigated by Mass Audubon. Behind Joppa flats the salt marsh is not healthy. It is the most degraded portion of the entire Great Marsh. There has been noticeable lost marsh over the last decade and the marsh in this area is fragmented with the low marsh integrating into the high marsh. Mass Audubon is gathering data on the marsh edge erosion and the health of the marsh using a technique developed by Peter Phippen. Mass Audubon has been adding resource capacity to specifically address this problem. There is a lot of exciting work planned this summer.

Annalee addressed the specific work that is getting started now. They will be applying for grants this year to support the effort. The project will estimate the rate of degradation and the causes. The hypothesis is that excess nutrients (excess nitrogen) in the water is the cause. With excess nutrients, salt marshes experience fast growth above ground, which outpaces the growth of the roots and causes the plants to topple over. To protect the marsh we need to buffer wave action, trap sediment and address the nutrient issues. Mass Audubon recommends using living shoreline techniques to buffer the wave action and trap sediment and investigate the use of native ribbed mussel restoration to address the excess nutrients. A pilot in the Bronx, NYC showed promising results in nutrient extraction.

Next steps are substrate and survival studies for the ribbed mussels. Applying for funds to assess the feasibility of the living shorelines and to identify other landowners interested in participating in the studies.

Email contacts: dmoon@massaudubon.org, atweitmann@massaudubon.org

Discussion

- Andrew Port noted that the presentation was a great overview of the issue and potential solutions. He is very supportive of the idea, cautioning that the team will need to think about potential secondary effects.
- Molly also expressed support for the work. Asked if MA Audubon was collaborating with the refuge and the marine lab in Newbury. David responded that they have a large contract with PI LTER in Newbury on water sample analysis and also that MA Audubon operates the PI LTER outreach program, the salt marsh science project funded by NSF. They also have added a new person on staff that will work at the PI National Wildlife Refuge. MA Audubon operates closely with the PI NWR on coastal resilience including pepperweed removal projects. MA Audubon is working closely with a number of nonprofits in the region including Trustees, Great Marsh Coalition, Ipswich River Watershed Association, integrating the work and improving communication.
- Barry - noted that the lower Parker River has a robust population of ribbed mussels. What would explain the strength of that population there? Annalee will be leading surveys to answer this question more fully but she believes it is due to a lack of habitat substrate. Barry recommended talking to the team at the WWTP facility and the Water Treatment Supervisor as excess nutrients of drinking water supply has been an issue that they have been studying. Annalee agreed.

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- Action:** Jane will provide the contact names.
- Julia asked if the mussels used in the living shoreline would also be used as a way to break up the wave action or trying to get the mussels to grow in the marsh itself? Is there any potential to damage the marsh due to the new mussel growth. Annalee said they are still investigating, but would likely be used on coir log and hardened substrate to buffer wave action. There are indications that the mussels used to be here but now are not because of the degradation. Julia suggested Cashman park which is city-owned property and has highly degraded remnants of salt marsh as an additional site to consider.
 - Jane noted the project's goals are aligned with the resiliency committee's goals and we will keep in touch.
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- Approval of 3/16/22 mtg notes: [the notes from last month were approved and will be posted.](#)
 - Committee Updates
 - CommEdu
 - Storm Surge Speaker Series - May & June (Sarah)
 - Storm Surge Speaker Series events are scheduled for May/June and we'd appreciate Resiliency Committee members attending.
 - Wednesday May 25, 7-9 pm, at the Senior Center. Tom Cusick, Newburyport water treatment superintendent and Don Kretchmer, Limnologist D&K Consulting. They will present an update on the water resiliency projects and source water protection. Julia Spurr Knight, DPS Business Manager, will present an overview of the conservation aspects of the watersmart tool available to residents. [Register here](#)
 - Wednesday June 22, 7-9 pm at the Senior Center and will focus on the Newburyport Energy Advisory Committee (Mike Strauss, Chair, Molly Ettenborough, Newburyport Sustainability Director) and on the city's goals, programs and status against long-term Energy objectives. [Register here](#)
 - Remembrance of Climate Futures signage (Sarah/ Rourke Lee)
 - Thomas Starr, a Professor at Northeastern University College of Arts Media and Design. Remembrance of Climate Futures is a site specific public art installation focused on climate change that started in 2019 with installations in Cambridge, Essex, and Durham NH and expanded to include the Clipper Rail Trail last year.
 - Dr Starr is working with Newburyport students Rourke Lee and Theo Roberts on adding additional signs in Newburyport. Rourke attended the Resiliency Committee meeting today and gave an overview of the project. The website <https://climatefutures.us/page/?city=Newburyport> gives additional information on the current installations and the project.

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- Rourke asked the committee for input on the location of future plaques and on the content of the signs. The Essex County Community Foundation funded this project to expand the project to include additional north shore towns including Salisbury, Rowley, Salem and organizations such as MA Audubon and
 - Jane suggested considering PI locations also connecting with Jon-Eric when he returns.
 - Barry suggested the Central Boardwalk as it is the place where many people congregate. Also the Cashman Park boat launch site. Also the ramp at Joppa landing by the sea wall.
 - Joe seconded Cashman park as it is frequently flooded.
 - David Moon has talked with Dr Starr and suggested that the future plaques should include visions of using nature as a solution. For example a plaque that describes a future restoration of the salt marsh at Cashman park as a joint project of the city and MA Audubon.
 - Julia - also recommends that the future messages be positive; Perhaps consider Plum Island turnpike (sized so you can read as you drive by?) which will be flooded by daily high tides by 2070. Would need to work with the town of Newbury.
 - Connie - sits on the waterfront park ad hoc committee. Would be happy to help pass this along.
 - Andy Port - loves the ideas; expressed some concern about signage clutter. Agrees with Cashman Park and PI Turnpike. Andy is happy to help coordinate with the city to get approvals for the signs to be installed (Parks Dept, Waterfront Park committee, City Council, Newbury etc). Andy noted that Rick Taintor had given a presentation last year that had a graphic showing water inundation to the bullnose on Market Square. That might be an interesting place for a sign placement.
 - **Action:** Jane will distribute Rourke's contact info to the resiliency committee.
- MVP Grant Proposal - Community Collaboration, Capacity Building and Catalyst Project (Julia/Sarah)
 - Jane and Sarah drafted a grant proposal on behalf of the Communications sub-committee. The proposal, titled **Climate Resilient Newburyport: Community Collaboration, Capacity Building and Catalyst Project** focuses on the communications plan for elements of the Newburyport Resiliency plan and to expand the reach of our communications by seeding partnerships between our local government and our local community-based organizations. The proposal is being reviewed. Deadline for submission is Thursday, **May 5, 2022 at 2pm** EST, if approved by the city.

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- Julia noted that Nancy London, the city's grant-writer, is working on a number of other grants that are also due this week and next. She is working on this MVP grant and believes we will be able to complete it by the deadline
 - Jane noted that the next steps will include discussing the proposal with Andrew Levine and the mayor's office.
 - Andy Port had spoken with Nancy as well and expressed his support for the proposal.
 - Andrew Levine also expressed support for the idea.
- Website/City Website Overhaul (Brett/Molly)
- After reviewing some ESRI StoryMap presentations by local communities we've decided to begin evaluating the StoryMap software.
 - The StoryMap software provides tools for integrating text, audio, maps, images, and videos into compelling internet accessible presentations.
 - The StoryMap presentations would be linked into the city's website.
 - There are three levels of licensing from ESRI
 - GIS Professional (subscription) \$700/year
 - Creator - online \$500/year
 - Storyteller (subscription) \$100/year
 - Public account (free)
 - We are currently using the public account for evaluation but government usage requires one of the other licenses.
 - Sarah and Brett met with Steve Lopez (GIS/IT Program Manager) and Mikayla Minor (GIS Analyst) from MVPC to help us understand how to use StoryMap software. Mikayla made the StoryMap presentation for Rowley that prompted us to look into the StoryMap software.
 - They suggested using the Storyteller subscription in conjunction with MVPC as it would allow us access to the maps created by MVPC for Newburyport.
 - Both Steve and Mikayla were very enthusiastic about StoryMaps and highly recommended it.
 - They also suggested that we might leverage the creator subscription used by Newburyport DPS. They offered to discuss it with Jamie Tuccolo. Going down this path would save the \$100/year fee.
 - Molly asked Andrew Levine for an update on the timeline of the city website update? Andrew said a contract should be available shortly. The redesign team will hopefully be available to start work shortly after the contract is signed. The redesign will be focused on usability, layout and design. Does not anticipate any issues covering the requirements that the Resiliency Committee submitted to the process.

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- Andy Port noted that he understands there are concerns with the length of the url's on the website and suggested that if the committee is thinking of a different url, such as resilientnewburyport.com, it should point back to the city's website.
 - Brochure (Julia)
 - The brochure is ready to go to print with the exception of needing a quote from the mayor for the backpage and closure on the URL for the back page.
 - Andrew Levine has the quote from the mayor and will send it to Julia.
 - The website pointer had been discussed in email and the recommendation was to use www.cityofnewburyport.com >> Government >> Resiliency Committee
- Regs Working Group
 - Site design review/Resiliency Questionnaire (Jane)
 - No update
 - Jane had a question on the MIMAP update for Andy - Andy explained we need to close the loop on the dataset for the layer that MVPC is creating.
- Funding & Finance
 - CIP/Budget (Jane/Barry)
 - The Resiliency Committee will continue to be a resource to the Mayor's office throughout the CIP & budgeting process.
Action: Jane will follow-up with Andrew L. on meeting with the Mayor, Connie Preston and possibly DPS staff about the resiliency-related CIP projects.
- Other Business
 - Nbpt Hazard Mitigation Plan (Julia)
 - We would like to schedule the May 18th Resiliency Committee meeting as a "Listening Session" for the FEMA 5-Year Hazard Mitigation Plan update that we have been working on this year. Once the listening session is held, we can submit the HMP to MEMA for their review and comment. The sooner we get the plan approved, the better. Julia proposed using the May 18th NRC meeting for that purpose. **Decision:** Approved.
 - A second meeting would be at a city council meeting looking for approval of the plan, then we could send the approved plan to FEMA.
Discussion: Molly noted that the listening session announcement should go to the community at large. Molly suggested that the Mayor could promote it and it will be on the city website.
- City Project Updates (Jon-Eric's updates were deferred as he was absent)

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- Lower Artichoke Dam Reconstruction Project (Jon-Eric)
- Indian Hill Raw Water Line and Pump Station (Jon-Eric)
- Water Supply Protection and Treatment Projects: Amesbury Interconnect – emergency and permanent, WTP Upgrades, watershed management (Jon-Eric)
- WWTP Flood Protection - sidewalks (Jon-Eric)
- Central Waterfront Bulkhead Renovations (Andy) - Making good progress on the funding sources, hope is for bidding to proceed and construction to start next winter. Andrew Levine noted that the city received a \$2.25 M earmark from the Federal Government with the help of Congressman Mouton's office. Congressman Moulton's office has been extremely helpful; they are also assisting with an EDA Nature Grant. A third grant being applied for is a state level grant through the Seaport Economic Council.
- Central Waterfront Park (Andy)
- PI Reservation Terrace status (Julia)
- Waterfront West (Jane/Andy)
- New Business
 - Streets and Sidewalks and Resiliency (Jane)
 - Jane asked about incorporating resilience into the street and sidewalk plan. She has spoken with Sheila Taintor, Chair of the Tree Commission, about cost effective ways to increase the city's tree canopy along city streets and noted that the planned work on streets and sidewalks could provide a great opportunity to do this kind of work. Andrew Levine responded that there is time to influence the plan for years 2-5.
 - Molly suggested that Jon-Eric be brought into the discussion as he has given a lot of thought on similar work and will be a good resource.
 - Action:** Jane will follow-up with Andrew Levine once she has more details.
 - Future meetings - in person or zoom?
 - Not discussed as the May meeting will be a listening session for the Hazard Mitigation Plan.

Next Meeting: May 18, 2022, 3-4:30pm - "Listening Session" for the FEMA 5-Year Hazard Mitigation Plan

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