
Coastal Hazards Adaptation Team (CHAT) Work Session #16

Tuesday, May 19, 2020

2 PM – 4 PM

VIRTUAL MEETING

GoToMeeting (Remotely)

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<https://www.gotomeet.me/KirstenHoward/chat-work-sessions>
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NOTES

Participants: Jay Diener, Rayann Dionne, Jason Bachand, Stephen LaBranche, Debra Bourbeau, Mark Olson, Tom Bassett, Bob Ladd, Barbara Kravitz (by phone)

Absent: Jennifer Hale, Bryan Provenchal, June Black, Steve Belgiorno, James Waddell

Staff: Kirsten Howard and Natalie Morison, NHDES, Elizabeth Durfee,

Ms. Durfee began the meeting at 2:00 PM and introduced the visitors, Lisa Pearson Pearson the Planning Director, Town of Salisbury, MA and Ben Sweeney, NOAA Coastal Management Fellow

1. Remote meeting logistics

Ms. Durfee asked everyone how the remote virtual meeting format was working out. Ms. Kravitz phoned in. Ms. Durfee thanked NHDES for providing the toll free number.

2. Introductions

The members introduced themselves and indicated whether they were affiliated with the Town, a group or were residents. Natalie Morison indicated she is the Coastal Resilience Specialist at NHDES Coastal, Jay Diener indicated he is a representative of SHEA, Jason Bachand indicated he is the Town Planner for the Town of Hampton, Rayann Dionne indicated she is the Conservation Coordinator for the Town of Hampton, Mark Olson indicated he is a member of the Town of Hampton Planning Board, Kirsten Howard indicated she is with NHDES Coastal, Stephen LaBranche indicated he is a representative of the Hampton Beach Committee, Robert Ladd indicated he is a representative of the Hampton Beach Village District and HBAC, Deb Bourbeau and Tom Bassett indicated they are Hampton residents. Barbara Kravitz is a representative of the Rockingham Planning Commission and Hampton Beach Area Commission.

3. Flood Mitigation strategy: hardened shoreline/barrier

a. Guest speaker: Lisa Pearson, Planning Director, Salisbury, MA

Ms. Durfee introduced Lisa Pearson who is the Planner for the Town of Salisbury, MA. Ms. Pearson will be presenting a question and answer presentation concerning the flood barrier project undertaken with the Army Corps of Engineers. Ms. Durfee showed photos previously provided by Ms. Bourbeau.

Ms. Pearson noted that when replacing the Route 286 bridge over the Blackwater River, the Army Corp. of Engineers did not do its due diligence and admitted its mistake after a nearby Salisbury neighborhood experienced higher levels of flooding associated with replacement of the bridge.

Ms. Pearson shared how the project was developed over 25 years. In that time resources changed with new environmental permitting and new resources to protect. Nonstructural alternatives were discussed with the affected property owners. Ms. Pearson fought for raising homes and infrastructure/roads and some residents wanted nothing to do with it. Ms. Pearson noted the frustration of a multi-million dollar project (\$7 million) to benefit the neighborhood with those it benefitted fighting the project every step of the way. Alternatives included the wall, berm, and wall with a berm.

Ms. Pearson noted appraisals were done of each of the properties, and some were donated and some reimbursed for their property, which made it tough to explain why some property owners were reimbursed and others were not.

Ms. Pearson indicated she was not entirely sure it was worth it. In the end it offered minimum protection. The neighborhood still floods in 100 year and 30 year storm events.

Mr. Bassett asked about the Army Corps' mistake and Ms. Pearson noted there was not enough analysis done when widening the replaced bridge and the water flow moved faster and allowed more volume.

Mr. Olson asked if the wall was designed with a breach. Ms. Pearson indicated the breach was part of the plan.

Ms. Pearson indicated the neighbors were asked what they wanted and the process was very public and resident oriented. The residents didn't want to raise homes. The wall design didn't consider SLR and planning for future flooding events. The residents have a right to decide what they want in their neighborhood but as a Planner Ms. Pearson wanted to be looking ahead 15-20 years out. The residents only thought about right now.

Ms. Pearson noted there are maintenance costs and schedules with louvers and annual maintenance.

Ms. Pearson indicated after the barrier wall was constructed there were reports from nearby neighbors who were now blaming the new barrier for increased flooding in their

neighborhood, who don't believe in SLR. There were no indications the barrier wall was responsible.

Mr. Diener asked about the condition of the adjacent salt marsh and Ms. Pearson indicated environmental monitoring is ongoing, there is a lot of phragmites, but due to restoration the marsh is coming back healthier than before.

Ms. Morison asked if the residents were revisited since the wall was built and are satisfied with the performance or expressed any interest in raising now with future flooding a possibility? FEMA has grants which pay 75% to elevate homes. Flood insurance has been astronomical since the maps changes. The people for the project say "I told you so" and the people who were against the project say "I told you so."

Ms. Howard asked if the Town's experience affected how the community would approach flood protection with storms and SLR? The marsh area has issues with sand on the ocean side and beach erosion issues and diverse flooding problems to address differently. Municipal vulnerability grants were looked at, there were public forums and discussions with beach flooding and SLR concerns. A lot is education. Some beach residents never had an issue and some having problems because of what their neighbors have done.

Ms. Pearson talked about the Community Rating System and education with brochures and flyers. Mr. Bassett asked about the CRS grade and Ms. Pearson indicated recertifying as a 9. There is a 5% discount on flood insurance.

Ms. Howard asked about the cost sharing for the project between the Army Corps and Town. Ms. Pearson noted it was a 75/25 split with the Army Corps paying 75% and the Town's cost being 25%. The state paid half of the Town's 25% leaving the Town to pay 12.5% which was funded through "in kind" services, appraisals, inspections, and leg work. The appraisal value of land that was donated was also used to help with match.

Ms. Durfee asked if the Town approved the matching funds the first year it was needed and Ms. Pearson noted most of the matching was non-cash, the neighborhood came to the meeting and it got approved.

Ms. Kravitz asked how involved the Town government was in the process and Ms. Pearson indicated the Town was very involved over 25 years. The BOS was a three member Board when the project began and many departments and Boards were involved: DPW, Conservation Commission, and the Assessor doing appraisals, Town Counsel wrote deeds and takings. There were meetings with multiple state agencies.

Mr. LaBranche asked the population of the Town of Salisbury and Ms. Pearson indicated 8,000, with 20,000 approximately in the summer. The Select Board is now a five-member Board and there is a Town Manager as well.

Ms. Pearson indicated a lot of property in Plum Island was right on the sand and a lot of homes were lost. Salisbury worked closely with Newburyport and Newbury to build significant dunes, bringing the sand back using Hurricane Sandy funding. Dune restoration is done annually, although not this year.

Mr. LaBranche asked about sea grasses and Ms. Pearson indicated the Town is working with UNH and the state park has a beach management plan, although they forgot to collect the extra money for it. There is a "sand bank," dune restoration plan, to catch sand and build dunes. A couple of homes were demo'ed and some rebuilt. Some neighbors bought the adjacent property and made a dune. FEMA helps with restoration and moving homes back.

Ms. Durfee thanked Ms. Pearson for coming. Mr. LaBranche noted it was interesting to hear what the Town went through. People fighting in the same neighborhood with those for and against the wall, people blaming the walls when it has nothing to do with it.

b. Discussion

Ms. Bourbeau indicated it was good to hear the other perspective, that the project was helpful to some and to be mindful that a protective measure could hurt others along the way.

Ms. Durfee noted the time frame, that it was a 25 year project.

Mr. Ladd noted the importance of the concept of no-regrets in decision making.

Mr. Bassett noted it was not clear the relationship between the bridge and flooding and how the wall solved the problem. Its important to consider the relationship. Ms. Howard noted it was a guess on her part but when the tide came in the water flow increased, the street juts out and the water hit that street. The Army Corps would have modeled to prove the case.

Ms. Durfee indicated the lower tide photo could be flood waters that extend out. Ms. Howard agreed she would expect to see the marsh full of water and can see a lot of channels.

Ms. Durfee noted she found the Army Corps reports and can come up with some specifics on the issue of the 286 bridge replacement and share that information.

Mr. Diener noted it supports there is not just one solution. The wall provides some relief but would rather people raise houses. Hampton may have to look at a multi-dimensional adaptation strategy.

4. Approve meeting notes from April, 2020 - Tabled

Mr. Bassett recommended edits by email. Ms. Durfee indicated she didn't see the email before the meeting and will bring the edits forward for next month's meeting.

5. Brief Flood Updates

Mr. Bachand indicated the steering committee will be getting back together tomorrow evening.

Ms. Howard indicated the Coastal Program is issuing an RFP for coastal resilience projects. There is \$150,000 available for projects. The RFP due date is the end of July. She also provided an update on the Fish & Wildlife grant Phase 2 flood study. A draft animated flood study flood model was developed. It is an interesting and powerful tool to see when it is released to the public and will be ready soon.

6. Temporary Barriers

a. Examples of some of the available products (reviewed before meeting)

<https://www.youtube.com/watch?v+PBfZ-Oa9QA> (7 mins)

<https://www.youtube.com/watch?v=5ZZyYyN2Dcw> (11 mins)

Ms. Durfee asked if everyone had a chance to watch the *Youtube* links:

IBS Flood protection system (Danube r)

Barrier Systems LLC (Sandbag)

Dam Easy – entrance way protection

Water Block (water filled plastic tubes)

Self Deploying Gate

Flood Defense Gate

NOAQ Box wall BW50

Gravel stone

Rapid Dam roll out cloth

Flood Block portable design

b. Review of Temporary Barriers

Mr. LaBranche noted the barrier only needs one break. There are a lot of rubber gaskets and metal parts. Salt water and Sun and no trees, heating and brakish water. Did not impress me.

Mr. Olson noted aesthetic issues and blocking view.

Mr. Diener agreed about the aesthetic issue. Dam Easy and NODQ could be a temporary protection, easy to erect quickly and put away. Not the be all end all but could make some difference. Wouldn't discount completely.

Mr. Ladd noted some are ugly and would never get community support. The cost could be prohibitive but he couldn't find the cost.

Ms. Durfee indicated door barricades on individual properties may be a good temporary solution.

Ms. Bourbeau indicated some methods won't work if only one homeowner does them.

Mr. LaBranche indicated some are temporary and require storage. Where would they put them and who would put them up and take them down? DPW employees are already busy when a storm is coming. Moving them around could cause damage to the barriers.

Ms. Durfee asked about sandbags being available to residents of Hampton and Mr. LaBranche noted he talked to a business owner and storing behind the house is an issue, the bags turn into cement, a solid block, are heavy and worthless.

Mr. Bassett agreed aesthetics are an issue. The videos present the solutions before they define the problem they are solving. You need to know what is driving the flooding, permitting, and maintenance.

Ms. Durfee agreed every situation is different.

Ms. Dionne noted important infrastructure like the new fire station could benefit from protections that would get them back on line sooner like sewer and wastewater stations.

c. Characterization of the Adaptation Strategy (worksheet – characterization questions/responses)

Ms. Durfee discussed flood mitigation and FEMA guidance for non-residential and displayed several figures (referenced below) from FEMA guidance on powerpoint slides.

Emergency measures such as sandbags, temporary flood barriers and “dry floodproofing measures.”

The sandbags are the lowcost solution, figure 4-22 shows techniques for proper placement.

Figure 4.23 shows a water filled temporary barrier which is brought out before a storm or super high tide.

Figure 4.24 shows gravel containers. Mr. Bassett noted it could be landscaped to look more pleasing.

Figure 4.28 is a combination wet and dry, raised first floor with Flood Dam entrance to walk up.

Dry Flood Proofing is sealing exterior walls. FEMA guidance is to install to base flood elevation and freeboard. The example shows a backfill valve to release water that has entered.

The Team reviewed advantages and disadvantages to non-residential barriers.

Ms. Durfee referenced the City of Boston Coastal Flood Design Guidelines which has quite a bit of flood solutions and provided a link to aquafence.

Ms. Durfee discussed with Ms. Dionne redevelopment regulations and the benefit of getting a lower insurance rate.

Ms. Morison cited a Portsmouth property that installed a flood barrier door frame to basement of a home that flooded regularly. Flood insurance would have them fill in their basement. The door frame barrier is practical to install when you know high tide or storm event is coming. The winter was not active so will wait to hear. Ms. Durfee indicated the cost of a few hundred dollars is a worthwhile protection investment even though the insurance rate is not reduced if flood damage is reduced. Another consideration if the event is serious enough to use the barriers, the ability to remain during an evacuation order to deploy these barriers.

Mr. Bachand indicated there were no zoning ordinances to temporary flood barriers that he was aware of and/or how long the barriers could be left up before they must be taken down or considered a structure. Mr. Diener addressing ordinances noted trailers and mobile homes have a length of time before becoming permanent. Ms. Dionne noted in the Wetlands Conservation District adding fill or unregistered trailers could be asked to move.

Mr. Bassett referenced the social equity issues to barriers on individual property, the scale, the diversity of the neighborhood, neighborhood wide cooperation, Town/State funding, burden to individuals and the Salisbury examples.

Ms. Durfee noted there will be people who can invest, those that don't want to, and those who aren't educated about available strategies. Ms. Morison noted each situation has to be envisioned on an individual basis. Some structures would divert water to a neighboring property. Having cooperation on a neighborhood scale would help. Ms. Bourbeau agreed, one person can affect the entire neighborhood.

Ms. Durfee asked what the Town would consider to reduce flood vulnerability?

Mr. Diener noted: cost, durability, impact on adjacent properties, performance and alternatives. Study the cost of the project and look at replacement cost versus the cost of protection. Can't look at the cost as absolute number. An earlier study noted that the cost of the replacement is very often multiple times the cost of protection.

7. Next Meeting: June 16, 2020, format TBD

Ms. Durfee noted that she is trying to schedule Tom Ballastero, an engineer at UNH, to present on different types of hardened shorelines at the next meeting

8. Adjourn

The meeting ended at 4:00 PM.

Respectfully submitted,

Nancy J. Hoijer
Recording Secretary