
Coastal Hazards Adaptation Team (CHAT) Work Session #5

Tuesday May 21, 2019
3-5PM
Masonic Lodge, 77 Tide Mill Road

DRAFT NOTES

Meet PPT Slides:

Members Present: Mark Olsen, Jim Waddell, Jennifer Hale, Tom Bassett, Debra Bourbeau, Rayann Dionne, Jason Bachand, Bob Ladd, Nancy Stiles, Stephen LaBranche, Jay Diener

Staff Present: Elizabeth Durfee, Nathalie Morison

Members Absent: Bryan Provencal

Staff Absent: Kirsten Howard

1. Approve meeting notes from 4/16/19 (5 mins)

a. Discussion:

Tom: Draft notes under agenda item 2 “finalize rules and procedures” suggest that a few minor edits were made to the resident representative section; would argue that removing residents from CHAT membership is a major edit. Community participation is basic and important; would be interested in talking more about why this decision was made since he wasn’t at prior meetings.

- **Jennifer:** clarified that there has never been a question as to the importance of having resident participation; discussion was to ensure that the resident representatives represented the town at large, not just their own neighborhoods.
- **Liz:** asked Tom to clarify what version of the rules and procedures he was referring to; resident representatives are still included in current version; will re-send a final version to everyone following the meeting; can always revisit if there are other concerns later on.

Tom: re: Jennifer’s flood update where it says “*We’re evaluating Meadow Pond and how it operates from the top to the bottom, which is the West side of Ashworth Ave.*” Suggest changing “*which is*” to “*and.*”

b. April minutes were approved with corrections. Jim, Tom, Deb abstained.

2. CHAT member updates and report back (30)

Jay: SHEA held a flood smart roundtable last week re: hazard mitigation assistance (HMA) grants. Low attendance, including 2 state reps. Presentation provided basic overview of 3 different HMA grant programs and include 2 videos, which explained how two communities in MN and VT used grant opportunities.

Nancy: HBAC did not have a meeting in April, but there is a meeting tonight. The plan is to discuss how they should proceed with the Hampton Beach Area Master Plan so that it is not duplicative with the town-wide update and coastal hazards and adaptation master plan chapter. Might propose to focus on beach aesthetics, etc.

Stephen: made copies of the CHAT report for the budget committee; one budget committee representative asked why CHAT/Hampton is not coordinating with Seabrook and whether resilience planning should be done on a more regional scale. Didn't provide an answer at the meeting, but would like CHAT input on how to respond. Initial thought was that Hampton has its own special interests.

- **Rayann:** would add that CHAT is an outgrowth of a SHEA grant project focused on Hampton. SHEA is comprised of Seabrook and Hamptons. Focus now is to continue working in Hampton, with the ultimate goal of transmitting lessons learned to the other communities.
- **Nathalie:** would also add that while regional resilience planning is important for things that cross jurisdictional boundaries like emergency response and evacuation routes, common practice is to focus at the local level in order to address site specific vulnerabilities/needs/interests/etc.

Bob: Village District has received inquiries about the dredging of the harbor and the misconception that it will help with flooding; precinct is encouraging the town to adopt an emergency management committee, recognizing that the police chief will not have the capacity to address increasing flooding issues and take on the additional paperwork required to apply for Hazard Mitigation grants. HBVD is also considering partnering with the Town to do an economic impact study to understand what kind of town Hampton would be if projections play out; results of this study would be of interest to non-beach residents and hopefully would be useful to help communicate the importance of investing in proactive adaptation.

Jason: The Planning Board is excited and encouraged by what CHAT is doing. Planning Board members were asked at their last meeting to send in ideas/feedback for CHAT. The Planning Board will be holding Master Plan "initiation sessions" at the second Planning Board meetings of each month, starting in June. The plan is to invite RPC to the June 19th Planning Board meeting to give a Master Planning 101 overview; subsequent initiation sessions will focus on specific Master Plan elements/chapters. Town boards/commissions have been invited to appoint a representative to participate in these discussions. The hope is that

these initiation sessions will help build support to move forward with another warrant article to fund the Master Plan development, potentially for next Town Meeting.

Rayann: Gave CHAT report out at Conservation Commission meeting in April. Conservation Commissioners didn't have any particular feedback, but are interested in seeing output of mapping exercise.

Debra: Has been keeping neighborhood group of 80 or so homes up to date on CHAT sessions and upcoming conferences in Maine. Neighborhood residents are curious what's happening with the harbor dredging and the grant for West of Ashworth and Kings Highway neighborhoods.

Tom: Meadow pond/Gentian Rd/Greene St neighborhood has had flooding this past weekend. Neighborhood is also concerned with flood study status. There was a request from Aquarion Water Company before the planning board re: replacing the water line in neighborhood that dates back to 1950s. Tom thinks one of the issues in the neighborhood is due to aging infrastructure/perforated pipes, so he contacted Jennifer Hale to see if the Town could link replacement of the infrastructure when Aquarion does their work in order to save money and avoid digging up pavement twice. Unfortunately, there is no funding available to upgrade the infrastructure at this point, but it does sound like the planning board has delayed the Aquarion project for the time being.

Nathalie: The Coastal Program is still pushing to make a long term record of Hampton tide gauge data publicly available and has had conversations with NERACOOS, who manages the contract with the tide gauge operator. Not sure when and how that information will be made available, but those conversations have been initiated and are ongoing, so that's good news. Nathalie and Kirsten also have signed up to receive alerts when the tide height recorded at the Hampton gauge approaches 10' and have noticed an uptick in alerts over the last month. Nathalie showed a graph of the water level data since April 21, which shows 16 days with tides exceeding 10'. On some days, both high tides exceeded 10'. The highest recent tide observed in the last 30 days reached 11' on May 17, 2019. The Coastal Program and UNH Cooperative Extension/NH Sea Grant have also launched the Coastal Landowner Technical Assistance Program (LTAP) and have already visited a few properties in Hampton. The LTAP seeks to provide consistent, technical assistance to interested coastal landowners to help them understand potential coastal flood risks and restoration opportunities, clarify goals for managing their property, and identify conceptual options that may enhance the resilience of their properties, neighborhoods, and community's natural resources. The program cannot provide assistance that would otherwise typically be conducted by a paid consultant. We will continue to provide updates as the program gets underway.

- **Stephen:** It would be nice if we could link the tide gauge data with the moon cycle and storm events to see the correlation

- **Nathalie:** The NOAA tide prediction tables account for all astronomical considerations, while the National Weather Service hydrologic forecast accounts for weather-related impacts on tide heights. We can inquire as to whether it would be possible to note if/when observed tide heights correlate with moon phase and/or storm events in the long term tide height dataset as it gets developed.

Link to NWS hydrologic forecast for Hampton:

<https://water.weather.gov/ahps2/hydrograph.php?wfo=gyx&gage=hpmn3>

- **Bob:** Were any of the properties you visited in Hampton ones that are giving us trouble with NFIP non-compliance?
 - **Nathalie:** The purpose of the first site visits is purely to collect information about the property and the landowner's goals. LTAP is not a regulatory enforcement program and we are not inspecting properties for compliance with local regulations during these visits. Many of the landowner participants have also signed a research consent form, which allows us to share aggregate program findings, but we cannot disclose specific information about a property, including for example, which properties may appear to be non-compliant.
 - **Rayann:** The Town is making good progress on enforcing NFIP compliance. Rayann will plan to provide a more detailed update on the status at the next CHAT meeting.
- **Bob:** can people sign up for the Landowner Technical Assistance Program?
 - **Nathalie:** Yes, anyone interested in participating in the program can sign up by contacting Kirsten Howard at kirsten.howard@des.nh.gov or 603-559-0020. Participants are required to fill out a pre-visit questionnaire and must be present for two site visits.

A copy of the program summary is enclosed with the meeting notes.

Liz: No update on the project but just wanted to reiterate the response Kirsten received from the US Army Corps of Engineers re: dredging of the Hampton Harbor as it relates to flooding in Hampton. Read from the April 16, 2019 CHAT meeting notes:

"Good afternoon Kirsten

The maintenance dredging of Hampton Harbor is not expected to change the height of tide or reduce any flooding impacts. The purpose of the dredging is for navigation.

Please let me know if you need anything else.

Wendy

Wendy Gendron

*Programs & Project Management Division
Chief, Civil Works & IIS Branch*

Jennifer: Related, the dredge task force is meeting tomorrow (May 22), so can report back at the next CHAT meeting. Flood studies for both Meadow Pond/Gentian/Greene/Kings Highway and West of Ashworth Ave are underway. The Town is working with UNH to deploy 8 flood sensors, which will provide information for both consultants, going in, UNH deploying those and supplier of information for both consultants Milone & Macbroom and Hoyle, Tanner & Associates. Held kick off meeting with Milone & Macbroom last week and meeting with Hoyle, Tanner & Associates is scheduled for next week. At this point, the funding appropriated through the warrant articles has almost been expended. With help from Kirsten and Nathalie, the Town has applied for a National Fish and Wildlife Federation (NFWF) Coastal Resilience Grant for \$180,000 to take 2-3 alternatives developed as part of the current studies out to preliminary design. There is a 1:1 match required, so the \$180,000 appropriated from the warrant articles will be used as match for this proposal. The goal is to potentially put forth another warrant article in 2020 for another pot of money to serve as the 1:1 match for the next round of NFWF grants to fund construction of these 2-3 designed alternatives. We don't know how much money will be available and it's nationally competitive. One thing we have going for us is that Kevin Lucey from the NHDES Coastal program was successful in obtaining a NFWF grant for designing priority tidal crossing replacement projects. Trying to complete work in phases and apply for grants in sequence; fortunate to have support of DES, UNH, Town, etc.

Jim: The Board of Selectmen had a good presentation last night on FEMA Hazard Mitigation Assistance grants and how they have to go through the town. A link to the presentation will be posted on the Town website. Individual will have to go through the Town to apply and the town is willing to work with people to do that.

Mark: A Planning Board member suggested there might be opportunity to hold more water west of Route 1 between Hampton and Hampton Falls. May be interesting to think about where there might be capacity to hold water and where else we can put water if we need to manage it.

- **Liz:**
 - i. Will be exploring flood storage areas in our mapping exercise
 - ii. Rich Sawyer (Police Chief/Emergency Management Director) may stop in to talk about Emergency Management, schedule permitting.

3. CHAT Map Set (45 min)

- a. NWS Flood Categories
- b. Review Updates to Existing Flood Conditions Draft Maps

- c. Review Future Flood Conditions Draft Maps
- d. Evacuation Routes & Emergency Management

Liz reviewed existing flood conditions map that was discussed at last meeting. Markups that CHAT members provided at last meeting have been digitized.

Liz showed a screenshot of the attribute table CHAT members helped to fill in at last meeting, which shows location of flooding; whether the flood prone area is within the 1% (100-year) or 0.2% annual chance floodplain and/or 10-11' tide proxy; whether the area floods during a storm; and types of infrastructure impacted.

Liz explained that the attribute table also has a column to describe severity of flooding (i.e., minor, moderate, major). One group at the last meeting discussed the possibility of developing criteria to help better define these flood categories. Nathalie suggested using the flood categories developed by the National Weather Service (NWS). CHAT members generally agreed that this was a good idea.

Liz reviewed the NWS flood category definitions:

Minor: minimal or no property damage, but possibly some public threat.

Moderate: some inundation of structures and roads near stream. Some evacuations of people and/or transfer of property to higher elevations.

Major: extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations.

- **Tom:** concerned that these definitions emphasize property damage; there are a lot of different dimensions to vulnerability (e.g., social) that aren't necessarily captured in NWS definitions.
- **Liz:** these maps are still a work in progress; we could add datasets to reflect more vulnerable populations, etc. at a later date
- **Tom:** the data we show on the maps will depend on whose attention are we trying to get. The more variables we can add, the better.
- **Nathalie:** the NWS flood categories are also correlated with flood elevation. For example, in Hampton, the threshold for minor flooding is 11', the threshold for moderate flooding is 12', and the threshold for major flooding is 13'. The January and March 2018 winter storms produced total water levels that exceeded the thresholds for major and moderate flooding, respectively.
- **Jay:** these definitions provide a general overview of the types of impacts that might be experienced.
- **Deb:** severity of flooding also depends on time of year; streets off of Ashworth Ave. are empty in the winter vs. in the summer when everyone is back.

- **Liz:** we can continue to refine how we define the severity of flooding, to better capture social vulnerability and/or physical flood risk.

Liz presented an overview of the future flooding conditions map.

- **Jen:** we should be consistent with how limits of SLR are displayed; suggest changing how the 8' sea-level rise layer is displayed to show flooding extent with a line instead of a shaded polygon.
- **Bob:** it would be nice to add references to land mass affected.
- **Deb:** adding street names would also help orient us.
- **Bob:** could we show flood depth?
 - **Nathalie:** it gets tricky to display both flooding extent and depth for all scenarios.
 - **Liz:** we could display flood depth for one scenario.
- **Tom:** the maps on the slides from the last meeting looked small; the scale of this new map is effective; the larger the better.
 - **Liz:** we could also zoom in on specific locations, if desired.

Liz described the flood storage area maps. Data obtained from The Nature Conservancy's *Land Conservation Priorities for the Protection of Coastal Water Resources: A Supplement to The Land Conservation Plan for New Hampshire's Coastal Watersheds (2016)*. Flood storage areas are areas with high flood storage capacities that reduce risks to downstream infrastructure, and natural areas that will accommodate sea level rise and salt marsh migration. Data incorporates mapped wetlands and riparian areas, as well as flat flood prone areas that may not be mapped as a wetland or floodplain. Approximately 1,828 acres of mapped flood storage; approximately 1,027 acres of this area extends beyond MHHW; maps show potential opportunities to leave land that has flood storage undeveloped.

- **Jay:** if you increase flood storage, how much more water could we hold? Is there correlation between flood storage area and volume of water it could hold?
- **Liz:** One of the benefits the maps provide is that you see natural areas that could serve as buffer areas; if you were to develop those areas it might push the water elsewhere, whereas if you left them undeveloped they are unlikely to make the problem worse.

Group participated in an exercise to review the future condition and flood storage maps. Members that were not at the last meeting added additional flood prone areas to the existing conditions map.

4. Examples of Mapping in Other Communities (20 min)

This agenda item has been postponed until the next meeting.

5. Next meeting (5 mins)

Next meeting is June 18, 3-5 pm. Location: Masonic Lodge

Jay mentioned that he and Rayann have spoken with Alyson Eberhardt from UNH Cooperative Extension/NH Sea Grant who is developing a mobile application for citizen scientists to collect waypoints and map the geographic extent of high tide flooding. Alyson is interested in coming to speak with CHAT, possibly at the next meeting, to discuss how CHAT can get involved and/or help generate public interest and involvement during the pilot event, which is scheduled in conjunction with the king tide on October 27-30, 2019. This might be an opportunity to have a combined CHAT and Flood Smart roundtable meeting so CHAT and residents can all learn about Alyson's project.

Group expressed interest and agreed that inviting Alyson to a future CHAT meeting was a good idea.

We also discussed having a presentation to CHAT on the Hazard Mitigation Grants. CHAT might be in a position to recommend a process for the Town for gathering interest in, qualifying properties for, applying for one of the Hazard Mitigation grants, and then managing the projects if funding is secured.

6. Adjourn

Group adjourned at 5:10pm.