Coastal Hazards Adaptation Team (CHAT) Work Session #34

Tuesday, January 18, 2022
2:00-4:00 PM
VIRTUAL MEETING

Join Zoom Meeting
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or Call 929.205.6099
Meeting ID: 820 7448 4656
Passcode: 795474

MINUTES

1. Introductions
   Jason Bachand, Hampton Town Planner
   Tom Bassett, Hampton Representative
   Deb Bourbeau, Hampton Representative
   Barbara Kravitz, Hampton Beach Area Commission
   Bob Ladd, Hampton Budget Committee
   Joe Lynch, Hampton DPW Deputy Director
   Brianna O'Brien, Hampton Conservation Commission
   Stephen LaBranche, Hampton Representative
   Jim Waddell, Hampton Board of Selectmen
   Jen Hale, Hampton DPW Director (arrived 2:12)
   Ann Carnaby, Planning Board member (guest)
   Jay Diener, Seabrook-Hamptons Estuary Alliance
   Rayann Dionne – NHDES Coastal Program
   Nathalie DiGeronimo – NHDES Coastal Program
   Liz Durfee – Planner/Meeting Facilitator
   David Walker – Rockingham Planning Commission - Assistant Director

2. Seacoast Transportation Corridor Vulnerability Assessment
   Dave Walker with the Rockingham Planning Commission provided an overview and the preliminary findings of the Seacoast Transportation Corridor Vulnerability Assessment. A copy of the presentation slides is at the end of the minutes.

   The purpose of this project is to assess the impacts of projected sea-level rise scenarios on the seacoast transportation network.
   - Evaluated changes in traffic volume, patterns, and road capacity due to sea-level rise. Selected a few sites impacted by flooding for further evaluation.

- Used LIDAR imagery and a Travel Demand Model that was adapted for this project.
- There are some model limitations, but overall, it provides a good big-picture look at traffic patterns and insight into how those patterns could shift. What the model believes is the most efficient route may diverge from what is seen in real life.
- Seven road sites identified in Hampton and Lafayette Rd were selected for a more in-depth evaluation.

Ms. Harake noted that the primary traffic patterns match the original/old road network in Hampton.

Mr. Lynch asked which baseline tide height was used in the model Mean Higher High Water (MHHW) or King Tide?

Mr. Walker responded that they used MHHW and then added on sea-level rise.

Ms. DiGeronimo added that the addition of sea-level rise helps to demonstrate an increase in frequency (once if not twice a day) but not necessarily the depth of these flooding events. It is the frequency that will be more impactful. The 1.0 to 1.7 ft sea-level rise is a good proxy for a current King Tide without a storm.

Ms. Hale provided additional details regarding King Tides from the drainage mitigation studies.

- Used the 2019 King Tide as one of the storms to validate the areas that flood during a King Tide.
- The completed modeling used the 2019 King Tide flooding levels as the baseline with the sea-level scenarios added on top. The increase was not exactly linear, but when you look at 1.7 and 4 ft in this transportation corridor modeling, the oldest roads that run east to west and north and south, from Seabrook to Rye, are the roads underwater.
- When high tide flooding becomes more frequent it's going to be less about people trying to go about their normal business and more about how to get out or evacuate. In the most recent flooding event, Ashworth Ave, High St, Route 1, Church St, Gentian Road areas were inundated from both the marsh and ocean. But this morning, you would have never known that flooding had happened.
- The increase in frequency and the associated disruptions is a challenging problem to solve.

Mr. Walker addressed the intent behind looking at the "business as usual" scenario. The intent is to find ways to maintain access versus retreating from the coast and not using it. Modeling from the perspective of what do we need to do to the transportation network to ensure continued access to the coast under different sea-level rise scenarios.

Ms. Kravitz agreed that a key point is what can be done to preserve the quality and character of the seacoast, where a lot of people live, do business, and visit. In parallel, you

have to look at the impact on schedules and services as a result of not having access for an hour a day or multiple days.

Mr. Walker agreed and added

- Transportation projects or improvements to the roadways or adjacent properties cannot address all of the flooding challenges.
- Some may require larger-scale changes or even retreat. There will need to be land use and development changes to help facilitate/preserve transportation uses.
- This effort used a "bathtub" model (increases water levels, but does not account for wave action), which is a limitation. The state is building a hydrodynamic model and when completed, it would be worth revisiting this effort to see how impacts change – are there new areas flooding? or is it happening sooner?

Mr. Ladd commented that the Town will vote on a bond to repair High Street in March. Does this effort offer any insight into how best to rebuild that road or should it be delayed until further evaluation?

Ms. Hale responded that the bond covers infrastructure replacement and resurfacing High St.

- Will evaluate additional infrastructure or available options to make conditions better.
- Important to recognize this area is fully developed and the end of High St is bordered by a tidal marsh - options are limited.
- Intend to make improvements changing conditions as far out as they can. At least 10-20 years, but adapting to conditions further out (50-100 years) may not be feasible.

Ms. Carnaby noted that the presentation began to allude to specific actions that were good for certain areas and those that are not practical. At the end of this project, will there be a set of detailed/specific recommendations for the identified road segments? Particularly interested in Church St – will any recommendations address how to improve access off the beach which is currently through this single-lane road?

Mr. Walker responded that the level of detail will mirror what was presented today. Although there will be some sites that get a more in-depth evaluation. He agreed that Church St is a big transportation challenge. This project can raise the question and help start the discussion about if it doesn't work now, is there a way to address sea-level rise and traffic needs at the same time.

Ms. Durfee appreciated the planning timeline graph that shows when different roadway segments become vulnerable under different sea-level rise scenarios. This could be good for outreach projects. She asked what is the feasibility of adapting the model to potential land-use changes that might occur as a result of sea-level rise?

Mr. Walker responded that the amount of traffic leaving a specific area is dependent on the amount of housing whereas the amount of traffic entering is derived from commercial activity in that area. It is possible to set housing and commercial to zero (no traffic coming in and out) which would equate to removing development from an area. Then you could look at how the model adjusts - it would be a rough approximation of change.

Ms. DiGeronimo added that the fundamental assumption and the question the modeling effort is trying to answer is how do we maintain access to the beach as sea-levels rise.

- Is there a way to capture the need for additional land use analysis, as specific adaption options are considered for those different sites?
- Highlighted the Hampton-Seabrook bridge discussion. In deciding which sea-level rise scenario to plan for, needed to look at both the life of the project and the surrounding area.
- The life of the project has to match the life of the nearby properties. This is a good case study for framing these considerations in future projects/efforts.

Ms. Kravitz commented that when dealing with the water might need to consider different options like using a ferry to get to the beach.

Mr. Lynch noted that NHDOT used the 4-foot sea-level rise for the Hampton Bridge design because it was driven by the need to pass boats under the bridge – more about navigation than surrounding development.

There was a brief discussion about the sea-level rise projections and their dependence on greenhouse gas emissions and how uncertainty expands beyond 2050.

- Mr. Walker noted that based on the Coastal Flood Risk Guidance there's a 67% probability we'll experience 0.5 to 1.5 feet of sea-level rise between 2000 to 2050.
- Ms. DiGeronimo added
    - 2 feet of sea level is almost certain by 2070, with a good chance of it happening by 2050. Two feet of sea-level rise could come more quickly if greenhouse gas emissions continue to grow.
    - The probabilities are associated with a scenario the greenhouse gases stabilize by the end of the century – not on track.
    - Projections are to be updated every 5-years - based on the trajectory we are on higher sea level rise projects are expected.

Ms. DiGeronimo noted that planning efforts may select different sea-level scenarios depending on the criticalness of the feature/project (e.g., plan for one sea-level rise for most roads except those critical evacuation routes that must be maintained into the future).

Mr. Walker shared that Rye is looking at a combination of approaches – short-term traffic detours, but in the long-term, those secondary routes maybe transition to primary routes.

3. Vote to approve amendments to Rules and Procedures and Mission Statement Rules/Procedures

Motion by Ms. Kravitz to approve the Rules and Procedures with the revision that Section 3.2 be revised to enable virtual communication which would allow monthly meetings to be conducted either virtually or in person.
Ms. Hale requested that the DPW Director be noted as the primary CHAT member with the Deputy Direct as a backup.
Motion was seconded by Tom Bassett
Vote: All were in favor (Mr. Ladd, Mr. Bassett, Mr. Bachand, Ms. Bourbeau, Ms. Hale, Ms. Kravitz, Mr. Waddell, and Ms. Harake) with no abstentions

Motion by Ms. Hale to approve the CHAT mission statement
Seconded by Mr. Bachand
Vote: All were in favor (Mr. Ladd, Ms. Kravitz, Mr. Bassett, Mr. Bachand, Ms. Bourbeau, Ms. Harake, Ms. Hale, and Mr. Waddell) with no abstentions

4. Approve meeting notes from December 2022
   Motion by Ms. O'Brien to approve the November CHAT minutes.
   Seconded by Mr. Basset
   Vote: All were in favor with no abstentions

   Motion by Mr. Bassett to approve the December CHAT minutes
   Seconded by Ms. Hale
   Vote: All were in favor with Ms. Kravitz abstaining

5. Relevant Flood Updates

Ms. O'Brien shared that she had received a call from a property owner in response to impacts to recent flooding and asked specifically about the Town's focus on mitigation. The property owner was considering selling because of inconveniences and damages. It would be helpful to have a set of resources to provide property owners.

Mr. Bassett noted that although flood levels in his neighborhood have dropped significantly, it is still hazardous because the cold temperatures cause the streets to ice over.

Mr. Bachand gave an over of the Hampton Master Plan update noting that the community conservation series begins on the 30th and will be held virtually. There are a total of five dates and he encouraged people to participate. Links to the event are available on the Town website.

Ms. DiGeronimo shared an observation about the level of activity/posts about the recent flooding on the Friends of Hampton Beach Facebook page. There were several photos and videos posted. She noted that it would be interesting to find a way to capture and document this information. Many of the postings were from people that we don't normally see or attend Hampton public meetings. They were also wondering what the Town is doing to address flooding. Wondering if there is a way to weave this into future CHAT outreach activities.

Ms. Bourbeau noted that she receives many calls from neighbors about what to do. Liked Nathalie's idea, to use social media to grab some of these people to spread the word.

Ms. Durfee noted that at the next meeting RPC will be sharing an update on the draft coastal innovative land-use regulations.

Meeting adjourned at 4:03 pm