

**Coastal Resilience Advisory Committee
Tuesday, January 25, 2022
Via Video Conference and Recorded**

Members Present: Mary Longacre, Gary Beller, Fritz McClure, Matt Fee, Peter Brace, Ian Golding and Joanna Roche.

Members Absent: Sarah Bois and Jen Karberg

Staff Present: Vince Murphy, Holly Backus, Allyson Mitchell, Morgan Sayle, Chuck Larson.

Consultants Present: None

Speakers: Chuck Larsen, Manager of Strategic Projects, Town of Nantucket

Meeting recording: <https://www.youtube.com/watch?v=Mdj3QMsOF3g>

CALL TO ORDER.

The meeting was called to order at 10:01 AM. Roll Call made.

APPROVAL OF AGENDA.

Unanimously approved and Covid Announcements were made by Chair.

The meeting was recorded and recording is available on the Town's YouTube channel.

DISCUSSION.

1. **Presentation from Chuck Larsen entitled:** "Easy Street: An Update on High Tide Flooding." The slide presentation is attached to these minutes. Study includes data from 1980-2021 from the Nantucket tide gauge. High Tide flooding at Easy Street has increased measurably due to sea level rise. The Easy Street bulkhead that was rebuilt in 2017 was not designed to protect the street from storm surge. The ten year average days of flooding (by decade) from 1980 to 2020 has gone from 5.8 days per year in the 1980's to 35.1 days per year in the 2010's. Flooding in 2021 occurred on 56 days during the year, tying the record set in 2010. Chuck displayed projections for increasing flooding from a Sea Level Change model developed by NASA, NOAA, and the University of Hawaii, available at <https://sealevel-nexus.jpl.nasa.gov/flood-projection/>. The projections were corroborated by a research paper titled "From the extreme to the mean: Acceleration and tipping points of coastal inundation from sea level rise" A forecast from an article in Nature Magazine titled "Rapid increases and extreme months in projections of United States high-tide flooding" available at <https://www.nature.com/articles/s41558-021-01077-8#sec16> predicts that flooding will accelerate between 2030 and 2040 on Nantucket, with 8-10" of flooding expected on Easy Street at Oak Street for 61 days in 2030 using the NOAA Intermediate sea level rise scenario. Chuck reviewed the criteria other cities and studies have selected to decide when the number of flooding events significantly impacts livability, ranging from 25-35 flooding events per year as mentioned in the Nantucket Coastal Resilience

Plan, to cities that have chosen 5-10 flooding events as a threshold. Question from Gary Beller: Where is the flooding coming from? Ans: Back flow from storm water outflows at Easy Street and lower Broad Street due to failing or missing backflow prevention valves. Question from Mary Longacre: Could we build a 3" wall around the storm drain to prevent water from coming through the pipe and out of the drain onto the street? Ans: Yes, something like temporary sandbagging around the drains might work in a limited circumstances. That's a creative solution. Presentation <https://nantucket-ma.gov/DocumentCenter/View/41177/CRAC-2022-0125-HTF-Final-as-Presented-PDF>

2. Discussion with Steamship Authority Representatives about Coastal Resilience Planning - Bob Davis, Rob Ranney and Nat Lowell. Steamship Authority is currently rebuilding the Woods Hole facility and has incorporated coastal resilience measures. Nantucket will be next facility to be re-built as it almost 40 years old now and the wharf bulkhead needs to be reconstructed. Easy Street entrance is a major issue. Bulkhead will be rebuilt and raised and building will be raised. Questions: Fritz McClure - when do you estimate you will start work on the Nantucket facility. Ans: 3-4 years until starting to engineer the project and start of construction in 5-6 years. Project complete is about 10 years. Gary Beller - Will the current facility be operable until project complete, given the projections for sea level rise and higher tides. Ans: The Nantucket terminal building should be fine although the approaches to the wharf will flood first. Hyannis is a bigger concern due to harbor filling with sand. Changes on Nantucket make no difference if boats can not get in and out of Hyannis port. Joanna Roche - What are three most important issues for 10-20 years. Ans: Adaptable design.
3. Envision Resilience Nantucket Challenge Survey II has launched and is open.

PUBLIC COMMENT. None

APPROVAL OF MINUTES.

The minutes from January 11 2021 were adopted with minor edits.

NEW BUSINESS and COMMITTEE REPORTS.

Harbors Action Plan - Mary Longacre announced that a new RFP has been released to update from 2009 Plan. The RFP is available on the Town's website at <https://www.nantucket-ma.gov/documentcenter/view/41104>

Storm Update - Flooding on January 17th. - Vince Murphy and Morgan Sayle. A slide presentation with photos is attached to these minutes. 1.01 inches of rain recorded at the airport for January 17. Observations on Easy Street were made at high tide, about 2 hours after the peak of the storm. South Shore erosion was observed at Madaket and ten to eighteen linear feet of bluff were lost at the sewer beds over weekend, as measured by three locations in a new erosion monitoring system. Fritz McClure commented on dune wash over west of Austin Locke Way. Vince Murphy spoke about plans to install additional erosion monitoring stations along the South Shore and Madaket. Rob Ranney commented on loss to end of Madaket Road in last 100 years - about 10-12 feet per year. Vince added that the State has erosion data back to 1844, showing 8-9 feet per year.

Presentation <https://www.nantucket-ma.gov/DocumentCenter/View/41179/Morgans-CRAC-Powerpoint-PDF>

FUTURE MEETING DATES AND TOPICS.

The next meeting of the Committee will be held on February 8, 2022 at 10:00 AM.
Remote meetings will continue through April 1.

D. Anne Atherton suggested that a future topic be DEP's re-location plans for sewer etc.
What are the triggers.

ADJOURNMENT.

The meeting was adjourned at 11:49 AM.

NOTE. There were 32 Attendees at the beginning of the meeting and 41 attendees at 10:58 AM, including seven committee members and five staff.