

**Coastal Resiliency Advisory Committee
Tuesday, June 16, 2020
Via Tele-Conference**

Members Present: Mary Longacre, Graeme Durovich, Jennifer Karberg, Peter Brace, Fritz McClure, Gary Beller, Matt Fee and Sarah Bois.

Members Absent: Ian Golding.

Staff Present: Vince Murphy, Holly Backus, and Chuck Larson

CALL TO ORDER.

The meeting was called to order at 10:31 AM and Mary Longacre made introductory statements required by procedures for remote meeting.

APPROVAL OF AGENDA.

Unanimously approved by roll call vote

APPROVAL OF MINUTES.

The approval of minutes for March 3, 2020 were deferred until next meeting.

DISCUSSION OF COMMITTEE ON RECOMMENDATION TO SELECT BOARD.

The latest draft of the recommendation was displayed for additional review and comment. Jennifer Karberg noted that there was no recommendation for flooding and storm surge. Graeme Durovich had minor corrections and edits. Gary Beller thought the recommendation was too passive. Mary Longacre suggested changes to reflect comments. Additional discussion and comment. Holly Backus noted that the Commission has no power to require any action by other Boards and Commissions. Upon motion made by Fritz McClure and seconded by Matt Fee, the draft recommendation, as revised, was adopted unanimously by roll call vote. Vince Murphy will send the language of the final recommendation to Committee members within seven days and thereafter, Mary Longacre will forward to the Select Board. **The language of the final recommendation is attached to these minutes.*

PUBLIC QUESTIONS AND COMMENT.

None.

OTHER BUSINESS.

Vince Murphy reported that the RFP for consultant is being advertised and that he expects a selection by the end of August. The selection committee will be composed exclusively of town employees. Jennifer Karberg and Sarah Bois questioned why there will be no one from the Committee on the selection committee. Vince Murphy will inquire again.

Sarah Bois reported that the education sub-committee had not met due to the virus but that it would meet soon.

Matt Fee noted that R.P Eddy - the author of "Warnings" - would be available for a conversation .

Gary Beller stated that a report on the Committee's work is on the agenda for the next meeting of non-voting taxpayers.

FUTURE MEETINGS.

July 14, 2020 from 10:00 - 12:00

August 11, 2020 from 10:00 - 12:00

PUBLIC COMMENT.

D. Anne Atherton stated that the Committee should have some role in the selection of the consultant and that the Committee should move forward expeditiously.

ADJOURNMENT.

The meeting adjourned at 12:05 PM.

Coastal Resilience Advisory Committee (CRAC) recommendation to Select Board

Recommendation

Pending the Select Board's acceptance of a detailed Coastal Resilience Plan and its specific project recommendations (for which an RFP is currently in the procurement process), the CRAC proposes the following recommendation to the SB:

"The CRAC recommends all Town Departments, Boards, Commissions and Committees and any service providers, contracted engineers and consultants need to be aware of and need to use the NOAA "High" projections to accommodate moderate storm surge as well as Sea Level Rise in their decisions, deliberations and project planning. These data are periodically updated by NOAA and will be posted on the CRAC page on the Town's website."

Intent

The purpose of the recommendation is to supplement FEMA flood elevations.

Supporting information

Sea Level Rise (SLR) data and Coastal Resilience strategies are listed in the Town of Nantucket Coastal Resilience Risk Assessment and Strategies report that was accepted by the Town in January 2020: <https://www.nantucket-ma.gov/DocumentCenter/View/35045/Coastal-Risk-Assessment-and-Resiliency-Strategies-Report-January-2020-PDF>. This is now a guiding document for CRAC and should be used by all Town staff and vendors to make public infrastructure and private construction & development projects more resilient to Sea Level Rise and coastal flooding. Projects should look at the Sea Level Rise scenarios appropriate for their expected useful life.

Nantucket Sea Level Rise projections

NOAA has developed specific Sea Level Rise projections specific to Nantucket. Due to the orientation of the harbor, and the position of the island off the Northeast coast, the island is projected to experience higher levels of Sea Level Rise than the global average.

The projected SLR for Nantucket is **4 to 6 feet by 2100** above the sea level at 2000 as listed in Town of Nantucket Coastal Resilience Risk Assessment and Strategies report. NOAA (2017) SLR projections are presented in **Table 1**. The CRAC recommends following the "High" NOAA projections to accommodate moderate storm surge as well as Sea Level Rise. (See **Storm frequency and impact on SLR** section on the next page). Use these data appropriate for the lifespan of the project.

Table 1. NOAA SLR projections. All measurements are in feet.

Year	Low	Int-Low	Intermediate	Int-High	High	Extreme
2000	0.00	0.00	0.00	0.00	0.00	0.00
2010	0.16	0.20	0.26	0.36	0.43	0.46
2020	0.36	0.43	0.59	0.79	0.92	0.95
2030	0.52	0.62	0.92	1.21	1.48	1.64
2040	0.72	0.85	1.28	1.77	2.26	2.49
2050	0.89	1.05	1.71	2.36	3.12	3.54
2060	1.08	1.31	2.17	3.05	4.13	4.82
2070	1.21	1.51	2.66	3.81	5.15	6.17
2080	1.38	1.71	3.22	4.66	6.36	7.71
2090	1.48	1.87	3.77	5.58	7.74	9.51
2100	1.57	2.03	4.33	6.56	9.25	11.42

Storm frequency and impact on SLR

Critical infrastructure, high value infrastructure, infrastructure with long life expectancy, infrastructure that would not tolerate flooding, or other infrastructure that is currently not in a flood zone but is near a flood zone may need to be designed to resist the combination of SLR and storm impacts.

The U.S. Army Corp of Engineers (USACE) commissioned a report published in 2014 called “North Atlantic Coast Comprehensive Study”. Phase 1 of the report, “Statistical Analysis of Historical Extreme Water levels with Sea Level Change”, looks at historical water levels and combines that data with storm surge modeling. This differs from many other SLR projections that are limited to increases in mean sea level and do not estimate high water elevations during future storms. The report projects to the year 2114, looking out 100 years from the report’s baseline year. This data is for the North Atlantic area, and not Nantucket specific.

The USACE report is available on the Town website <https://nantucket-ma.gov/DocumentCenter/View/36719/North-Atlantic-Coast-Comprehensive-Study-Phase-1-Report-Statistical-Analysis-of-Historical-Extreme-Water-levels-with-Sea-Level-Change-PDF>

Storm Surge

Storm events, particularly from the Northeast, have the potential to temporarily increase the water level in Nantucket Harbor and cause flooding. Stormtide stacking may also occur when the wind does not allow the low tide to release high tide waters from the harbor. Subsequent high tides can “stack” more water in the harbor and compound flooding. Stormtide pathways were studied and added to the Town of Nantucket GIS online mapping system, which can be accessed here to evaluate potential risk to developments and projects: <https://www.nantucket-ma.gov/151/GIS-Maps>