Initial Communication and Outreach Topics for 10/24/2023 Meeting

Matt Fee:

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2. Coastal Flood risks and costs.
3. Wetlands. Show how wetlands will expand. Utilize Brant Point to show how even if we block flow in and pump water out, ground water will rise and wetlands will re-establish and expand. (Supports Concom so do early.)
4. Loss of roads. Use Sachecha Pond Rd and or Washington Street NLB "solution" to show current near term projects.
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2. What is the timeline for implementation / break it down into 10 year chunks
3. define the important terms - management, adaptation, retreat
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5. what is the sediment transport study - what does it mean for nantucket

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Month 3 -

Detail the timeline for implementing the 40 recommendations in the CRP.

Month 4 –

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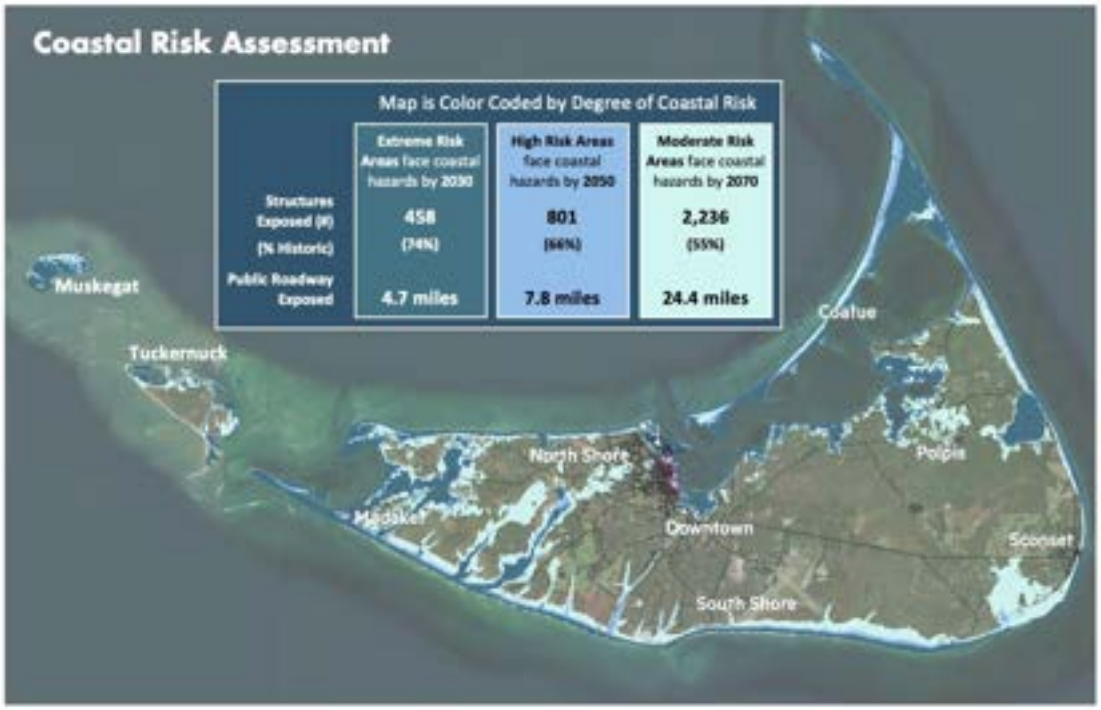

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*Topics crossed out are in draft communication and outreach timeline

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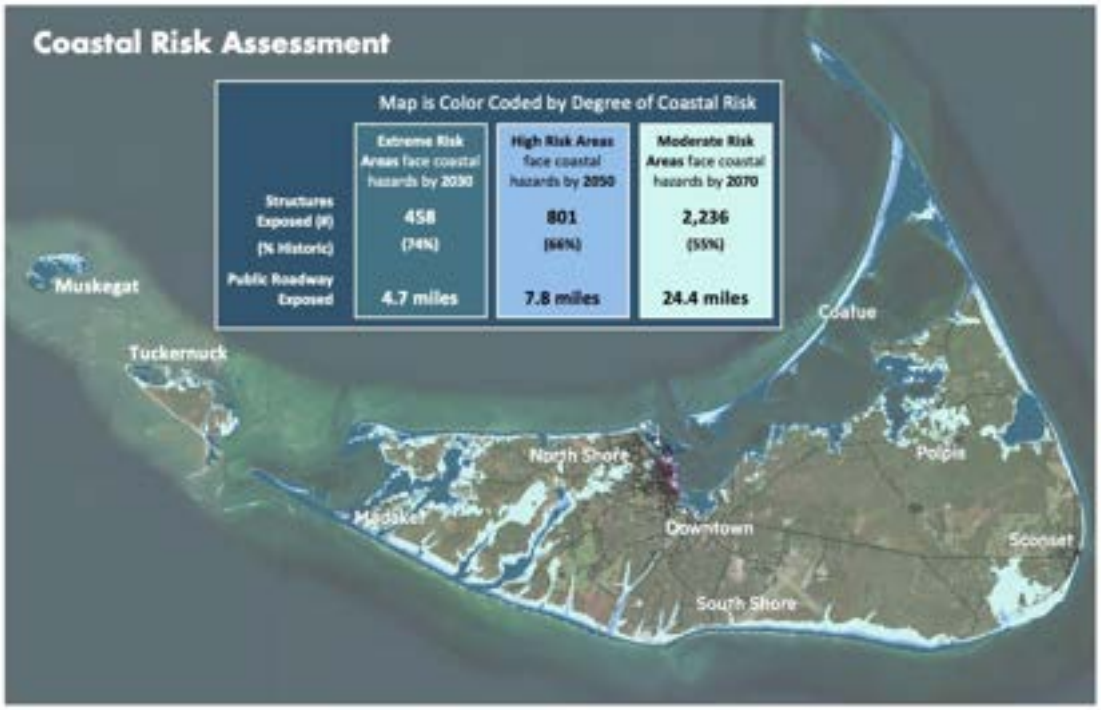

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Draft Communication and Outreach Topics and Timeline- 10/19/2023

Month & Theme	Topic	Description	Illustration to use
November- Coastal Risks on Nantucket			
Week 1	Risk Assessment in CRP	Why? What it looked at? Method? Major finding of annual damages and losses	Map on p. 68 showing $$ amounts
Week 2	Erosion	Nantucket has heighest erosion rates in state; geology of island plays large role; expected to excellerate with SLR, FEMA future projection map	Pic in CRP of house or video of coastal bank slumping, CRP p. 60 & 61; table illustrating vulnerable roads, structures; FEMA future projection map
Week 3	Flooding- high tide/sea level rise	Definition; explain why North East experiencing higher rates of SLR and sunndy day flooding predicted to increase, NOAA and MC-FRM models, $$	Pic of sunny day flooding; table with NOAA SLR projections for the island, NOAA and MC-FRM models
Week 4	Flooding- Coastal, storm surge	Definition; how it happens, $$	Pic in CRP or Land Banks pic of Easy St ; table on p. 58, Dougs map
Week 5	Groundwater table rise	Definition; how it happens, projections for future	Pic in CRP, map on p. 62
December- Coastal Resilience Plan			
Week 1	What is coastal resiliency?	Definition;	Coastal resilience diagram
Week 2	3 Methods of coastal resiliency	Explain Protect, adapt, relocate	CRP diagram p. 82-83
Week 3	What is the CRP?	Why the Town needs one, what its included in it (risk assessment, homeowners guide), recommendations. Include link in bio	Picture of title page
Week 4	Plans goals/objectives	List goals on p. 32	???

January- CRP Recommendations

Week 1	How they were determined	Stakeholder and community engagement, evaluation criteria	table on p. 87
Week 2	3 types	structural- what it means-examples	road elevation pics in CRP
Week 3	3 types	nonstructural (by-laws, studies, groups)-what it means- examples	???
Week 4	3 types	nature-based- what it means-examples- living shoreline, marshes, bioswales, rain gardens- importance	pic of marsh inundated, pic of living shoreline, bioswales, rain gardens on island

February- CRP Recommendations Cont.

Week 1	Rec. priorities	Describe how priorities chosen, explain # priorities	Show key with colored priorities
Week 2	Near-term stategic opportunities	Explain and chose examples	Use illistrations from CRP
Week 3	Long-term adaption pathways	Explain and chose examples	Use illistration from CRP
Week 4	Island wide recs	what it means, list recs.	map p. 88
Week 5	Area specific recs/focus areas	what is means, list recs.	map in CRP, Doug's map

March- CRP Timeline

Week 1	Timeline overview	How timeline produced, projects broken up into implementation years	timeline on p. 21
Week 2	2020's	explain projects for this timeframe, why chosen, if available $ saved with mitigation	???
Week 3	2030's	explain projects for this timeframe, why chosen, if available $ saved with mitigation	???

Week 4	2050's	explain projects for this timeframe, why chosen, if available $ saved with mitigation	???

April-CR projects/articles for Town meeting

Week 1	Coastal resilience districts	Explain what they are and why important, 1st in state, finance to pay for projects	???
Week 2	Stategic retreat and relocation plan	why need it, % land available for housing, what it would include	???
Week 3	Polpis Rd. at Folger's Marsh	Importance, stat about losing access, what it may look like	schematic from CRP
Week 4	2 CRP projects from week 2 & 3	Restate importance tof projects to reduce risks	schematics from CRP

May- On going CRP projects

Week 1 (before Town meeting)	Coastal resilience districts	Explain what they are and why important, 1st in state, finance to pay for projects	???
Week 2	Downtown Neighborhood flood barrier	CZM grant $, what it covers	use conceptual designs if available
Week 3	Sediment transport study and dredge plan	Updates about what it is, why we need it, desired outcome, CRP 1-9, high priority	
Week 4	Shoreline change monitoring project	details, website	use erosion pics, or repost timelapse video Leah took
Week 5	Ames avenue bridge resilience & madaket erosion management pilot	CRP 3-2 &3-4 both high priorities, importance, project status	CRP renderings, p. 180, 182-183

~~10-5-2023~~ 10-24-2024 **Draft Survey Questions for Homeowners**

~~**Purpose:**~~ **"Resilience is the ability of communities and systems to withstand, recover from, and adapt to shocks and stresses. The Nantucket Coastal Resilience Plan (CRP) focuses on the resilience of Nantucket's coastal areas, specifically" (CRP p. 30).** ~~**To**~~ **This survey will help the Town of Nantucket's Coastal Resilience Advisory Committee to gain clarity on** ~~**homeowner's**~~**homeowners' knowledge and worries about coastal hazards they experience on their property and within their neighborhood. "Coastal hazards are natural events that threaten lives, property, and other assets. On Nantucket, coastal hazards include coastal flooding due to storm surge, high tide flooding, and erosion. Sea level rise and other climate change impacts are increasing the severity, frequency, and consequences of coastal hazards" (CRP p. 30).** ~~**This**~~ **By answering these questions, it will help the committee develop** ~~**a roadmap and**~~ **informational materials that homeowners can use to implement best practices.**

~~***Use multiple choice as much as possible* add in elaborate box *be able to pick more than 1 mupltiple choice**~~

Directions: Please pick all that apply and elaborate when necessary.

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1. Which area association is your property located in?
    a. Brant Point
    b. Cisco
    c. Fishers Landing
    d. Harbor South
    e. Hinckley Lane
    f. Hummock of Nantucket
    g. Hummock Pond
    h. Hussey Farm
    i. Madaket Residents
    j. Miacomet
    k. Monomoy
    l. Nantucket Town
    m. Naushop
    n. Pine Valley
    o. Pocomo
    p. Polpis
    q. Quidnet Squam
    r. Shimmo
    s. Siasconset
    t. Surfside
    u. Tom Nevers
    v. Wauwinet

w. West Miacomet

2. Type of resident:
   a. Seasonal
   b. Year-round

~~1.~~3. What are your biggest concerns **today** regarding coastal hazards related to sea level rise on your property or within your neighborhood?
   a. Erosion
   b. Flooding
   c. Stormwater management
   d. Storm impacts
   e. Groundwater table rise
   f. Raising or relocating house
   g. Access to property and services
   h. ~~Other~~Additional thoughts:

~~2.~~4. Do you have concerns about your property or your neighborhood for the future? If so, what are they?
   a. Yes, please explain:
   b. No

~~3.~~5. Are you currently planning/implementing coastal resiliency measures?
   a. ~~-~~Raising your home
   b. Planting with native vegetation
   c. Using sand/snow fencing
   d. Dry floodproofing your home
   e. Wet floodproofing your home
   f. Removing hardscaping
   g. Using flood resistant building materials in interiors (i.e. ceramic tile or lime plaster)
   h. Flood vents
   i. Elevating appliances and utilities
   j. Seal foundation and basement walls
   k. Fill basement
   l. Redirecting stormwater
   ~~f.~~ Additional thoughts:
   ~~g. Other:~~

~~4.~~6. From your perspective, how can the Coastal Resilience Advisory Committee and the Town's Coastal Reslience Plan help your neighborhood?
   a. Informational presentation
   b. Roadmap ~~explain what it is~~
   c. Best practices brochure for your home

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d. Best practices brochure for your yard
e. ~~Online~~ Interactive online tool
~~f. Other~~ Additional thoughts:

~~g.~~

~~5.~~7. ~~Are you aware of the Town's Coastal Resilience Plan? Have you read it?~~

~~6. What aspects of the CRP should could/ might be rethought and how should we do that?~~
~~7. Do any of the recommendations fall within your property's location?~~
~~8. Are you prepared to pay for projects that benefit your property and assets?~~
~~9.~~8. ~~Are you considering moving your home to another island location that is less vulnerable?~~

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Oct. 25, 2023

Ian Golding
Seth Englebourg
Linda Williams
Michael Misurelli
Joseph W. Plandowski
Mark Beale
Tim Braine

Mr. Golding,

Aware of the Conservation Commission's current ongoing efforts in revising the Nantucket Wetlands Bylaw, specifically as it pertains to Nantucket's Coastal Resilience Plan (CRP), the Coastal Resilience Advisory Committee (CRAC) voted unanimously, 9-0, at its Oct. 24, 2023 meeting to support the Conservation Commission's revision process. We very much appreciate the addition of coastal resilience-related definitions and the word "resilience" prudently placed throughout these proposed bylaw revisions in the ConCom's latest version of its revised bylaw.

However, the CRAC is stopping short of issuing a detailed critique of the ConCom's proposed bylaw revisions beyond the above comment until your members have completed this process and offered up the revised bylaw for public dissection and discourse. We request through your representative on the CRAC, Tim Braine, that the ConCom keep our committee up to date on the evolution of your bylaw revisions.

The CRAC feels strongly that regular updates on the ConCom's bylaw revision progress by Mr. Braine would greatly improve our eventual final letter of support and foster constructive criticism that we hope the ConCom would find invaluable to it revising its

bylaw. We look forward to your continued updates through Mr. Braine.

Thank you for your time and patience.

Sincerely,

Peter B. Brace,
Chairman of the Coastal Resilience Advisory Committee

CZM Grant For The Downtown Neighborhood Flood Barrier

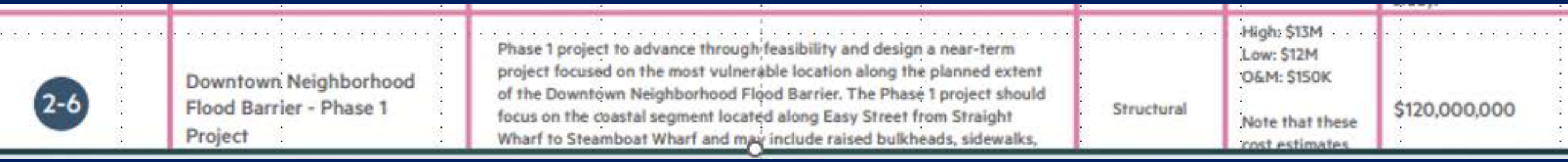
Presentation to CRAC on 10-24-2023

Leah Hill
Coastal Resilience Coordinator
Town of Nantucket Natural Resources Department
Lhill@nantucket-ma.gov
508-228-7200 ext. 7603

COASTAL RESILIENCE ADVISORY COMMITTEE

Overview of Downtown Neighborhood Flood Barrier

- Children's Beach to Washington Street
  - 1st phase = Easy Street between Straight Wharf and Steamboat Wharf
- Objective: Maintain access to and from the island for people and supplies by creating a flood defense to reduce coastal flooding and mean monthly high water through 2070
- Conceptual design in CRP includes different resilience approaches: raised roadways, raised bulkheads, reinforced dunes, flood walls and berms



2-6	Downtown Neighborhood Flood Barrier - Phase 1 Project	Phase 1 project to advance through feasibility and design a near-term project focused on the most vulnerable location along the planned extent of the Downtown Neighborhood Flood Barrier. The Phase 1 project should focus on the coastal segment located along Easy Street from Straight Wharf to Steamboat Wharf and may include raised bulkheads, sidewalks,	Structural	High: $13M Low: $12M O&M: $150K Note that these cost estimates	$120,000,000


Downtown
Island-Wide Coastal Risk Framework
Coatue
The Jetties
Brant Point
Nantucket Harbor
Steamboat Wharf
Straight Wharf
Downtown
The Creeks and
Consue Springs
Polpis Road
Mid-Island
LEGEND
Public Roadways
Private or Unknown Roadways
Area Protected by Proposed Near-Term Strategy
Existing Structures
Priority Coastal Risk Areas
High Coastal Risk Areas
Moderate Coastal Risk Areas

Potential to reduce the risk by protecting 2.5 miles of public roads and 230 structures within Nantucket Historic District from high tide flooding as soon as 2070

$170 M

Conceptual rendering of the Downtown near-term coastal resilience strategy.

What the CZM Grant Covers

- Awarded **$421,875 (total $532,500)**
- Town contribution **$30,000** (in-kind staff time) + **$110,625** cash (Article 10)
- Task 1: Existing Conditions and Flood Risk Assessment
  - Data Collection and Gap Analysis
  - Coastal and Stormwater Risk Assessments
  - Existing Conditions and Flood Risk Assessment Report
- Task 2: Alternatives Development and Pre-Permitting Feasibility Assessment
  - Preliminary Feasibility Assessment
  - Concept Design Development
  - Concept Design and Preliminary Feasibility Report
- Task 3: Community and Stakeholder Engagement Planning Strategy
- Task 4: Preliminary Design Development for Preferred Alternative and Basis of Design Report
  - Preliminary Design for Preferred Alternative
  - Cost Estimation and Timing
  - Permitting Assessment
  - Benefit Cost Analysis and Funding
  - Final Project Report

Grant Deliverables

- Project kickoff meeting
- Project timeline
- Inventory of key data and identified data gaps
- Waterfront structures inventory and conditions assessment
- Coastal and stormwater risk assessment memo
- Existing conditions and flood risk assessment report
- Concept design visuals and associated information for 4 alternatives
- Technical feasibility assessment
- Preliminary screening of required permit and permitting timelines
- Preliminary project cost estimates
- Preliminary screening of funding opportunities
- Draft and final concept design and preliminary feasibility report
- Community engagement planning strategy to include but not limited to:
  - Open houses to share and get community feedback on conceptual designs and feasibility information as well as feedback on the draft preliminary design for the preferred alternative
  - Web-based survey
  - Social media and news outlet postings
  - Provide updates to each stakeholder group upon deliverables or requested by the Town. Stakeholders include but are not limited to: CZM, CRAC, Select Board, permitting agencies, Land Bank, Steamship Authority, environmental justice communities, the public, business owners, property owners within the project area
  - Public agency meetings with Town, State, and Federal agencies that will be involved in permitting, constructing, and operating and maintaining the preferred alternatives
- Project preliminary (30%) design package including a dynamic adaptive policy pathway
- FEMA-approved Benefit Cost Analysis suitable for federal funding applications
- Project funding sources and opportunities identified including state and federal sources
- Project cost estimation and construction timeline
- Permitting assessment memo
- Draft and final project report

Grant Timeline

- Project estimated to take 18 month
- Grant accepted by SB on 10/18/2023
- RFP released on OpenGov 10/18/2023
- RFP closes on 11/20/2023
- Contract awarded hopefully 11/27/2023
- Contract accepted by SB hopefully on 12/6/2023
- Consultant company start work within 14 days
- December 2023- June 2024 (first 6 months)
  - Tasks 1 & 2: Existing conditions and flood risk assessment + alternatives development and pre-permitting feasibility assessment
- July 2024-June 2025 (1 year)
  - Tasks 3 & 4: Community and stakeholder engagement + preliminary 30% design for preferred alternative

Coastal Resilience Advisory Committee (CRAC)

3RD QUARTER REPORT TO SELECT BOARD FOR JULY-SEPTEMBER 2023

COASTAL RESILIENCE ADVISORY COMMITTEE

HIGHLIGHTS FROM THE QUARTER

- Peter Brace became the new Chair
- Dr. Sarah Bois became the new Vice Chair
- Doug Rose became the new Secretary
- CRAC produced recommendations to the Select Board regarding Coastal Resilience Districts
- 4th year in a row that September was Climate Change Awareness Month
- CRAC starting to work on high priority #1-1 Outreach on Property Owner Resilience Best Practices

#ACKLOCAL COASTAL RESILIENCE

COASTAL RESILIENCE ADVISORY COMMITTEE

COASTSNAP AND MYCOAST APPS

- CoastSnap is a community shoreline monitoring app to track how coast changes over time
  - Phone cradle set on a fixed post located at the end of Hummock Pond Rd- post will be donated from WHOI SeaGrant
  - Pictures uploaded to MyCoast app to document
  - Creates time-lapse pictures and information on sand volumetrics
- MyCoast is a coastal community monitoring program app used by a few states to document coastal storm damage, king tides, and coastal resilience projects
  - MA Coastal Zone Management and MEMA use it to collect and share photos of coastal flooding, storm impacts, shoreline adaptation to help state make informed decisions
  - Leah and Vince use it to document storms for MA Rapid Response Coastal Storm Damage Assessment Team

CRP STATUS UPDATE

- Leah Hill, Coastal Resilience Coordinator, updated CRAC on all 40 CRP recommendations and their status
- **In less than 2 years, more than half of the recommendations are in development, underway, or complete**
- No structural projects underway yet

In development
Underway
Complete

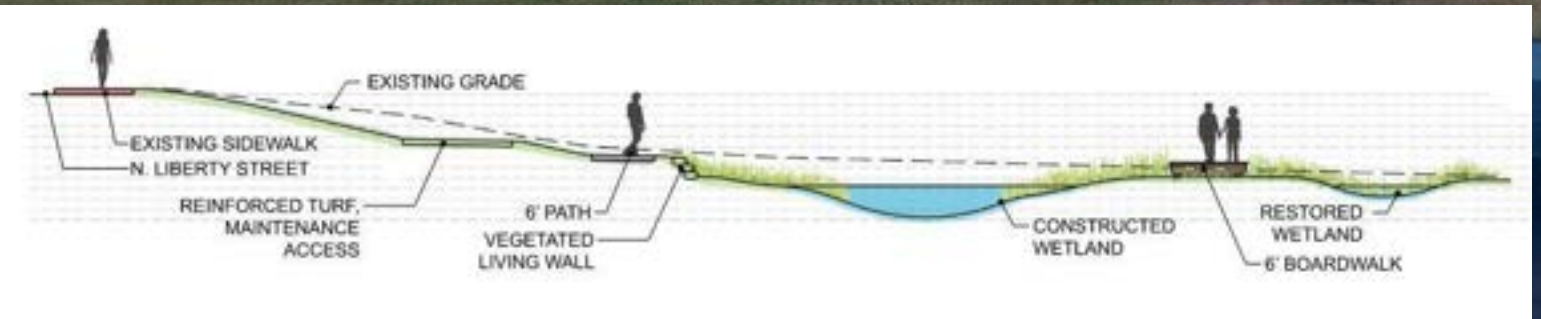
ISLAND-WIDE (section 06)

Project Priority
01 02 03

Strategy ID	Strategy or Project Title	Near-Term Strategy Project Description	Type	Estimated Cost	Estimated Benefits	Implementation Date
1-1	Community Outreach on Property Owner Resilience Best Practices	Comprehensive outreach program to at-risk home and business owners to raise risk awareness and provide guidance on best practices for reducing coastal risks for private properties.	Non-structural	Staff and Volunteer Time	N/A	2023, Ongoing
1-2	Updates to Zoning By-Law	Updates to the zoning by-law to encourage resilient design and limit investment in areas of high coastal risk.	Non-structural	Staff and Volunteer Time	N/A	2025
1-3	Updates to Wetland Ordinance and Regulations	Updates to the Nantucket wetlands by-law and regulations to encourage resilient and low impact design in resource adjacent areas while limiting impacts on resource areas.	Non-structural	Staff and Volunteer Time	N/A	2025
1-4	Strategic Retreat and Relocation Program	Develop and administer island-wide approach for pursuing strategic retreat and relocation in areas of priority coastal risks with an ongoing focus on risk communication and property owner outreach and education.	Non-structural	Staff and Volunteer Time	N/A	2024, Ongoing
1-5	Coastal Resilience & Sustainability Interdepartmental Working Group	Governance approach to encourage inter-departmental collaboration and coordination on issues related to coastal resilience and sustainability.	Non-structural	Staff and Volunteer Time	N/A	2022, Ongoing
1-6	Joint Staff Review of Development Proposals	Governance approach to maximize opportunities for coordinated decision-making and consistent customer communication by Town staff, particularly for projects located in or impacting coastal areas.	Non-structural	Staff and Volunteer Time	N/A	2022, Ongoing
1-7	Coastal Resilience and Sustainability Program	Governance approach to establish a formal program with necessary resources for managing coastal resilience and sustainability projects and programs across the island.	Non-structural	Staff and Volunteer Time	N/A	2023, Ongoing
1-8	Shoreline Change Monitoring Program	Employ mobile technology and other tools to engage community members in the process of monitoring shoreline change at pilot projects and across the island.	Non-structural	Staff and Volunteer Time	N/A	2026, Ongoing
1-9	Sediment Sourcing and Transport Study	Island-wide data collection and planning approach to identify sediment sources and define sediment movement across the island at various spatial and temporal scales in order to inform the design and planning of future sediment management projects.	Non-structural	High: $1M Low: $800K O&M: NA	N/A	2024
1-10	Stormwater Management Plan	Planning step to evaluate stormwater management issues across the island and identify recommendations for reducing stormwater flooding and improving water quality.	Non-structural	High: $650K Low: $400K O&M: NA	N/A	2025
1-11	Sediment Budget	Planning step to develop an operational sand budget for recommended shoreline projects.	Non-structural	High: $250K Low: $100K O&M: NA	N/A	2024
1-12	Stormwater By-Laws Assessment	Planning step to conduct an assessment of existing by-laws for opportunities to encourage stormwater management best management practices (BMPs).	Non-structural	High: $50K Low: $20K O&M: NA	N/A	2025
1-13	Stormwater By-Law and Regulations Update	Updates to stormwater management by-law and regulations to encourage best management practices (BMPs) that address water quality and quantity issues.	Non-structural	Staff and Volunteer Time	N/A	2025
1-14	Update locally-adopted sea level rise scenarios and Best Available Flood Hazard Data	Adopt sea level rise scenarios provide by the Commonwealth of Massachusetts and Massachusetts Coastal Flood Risk Model as the best available local flood hazard data.	Non-structural	Staff and Volunteer Time	N/A	2022

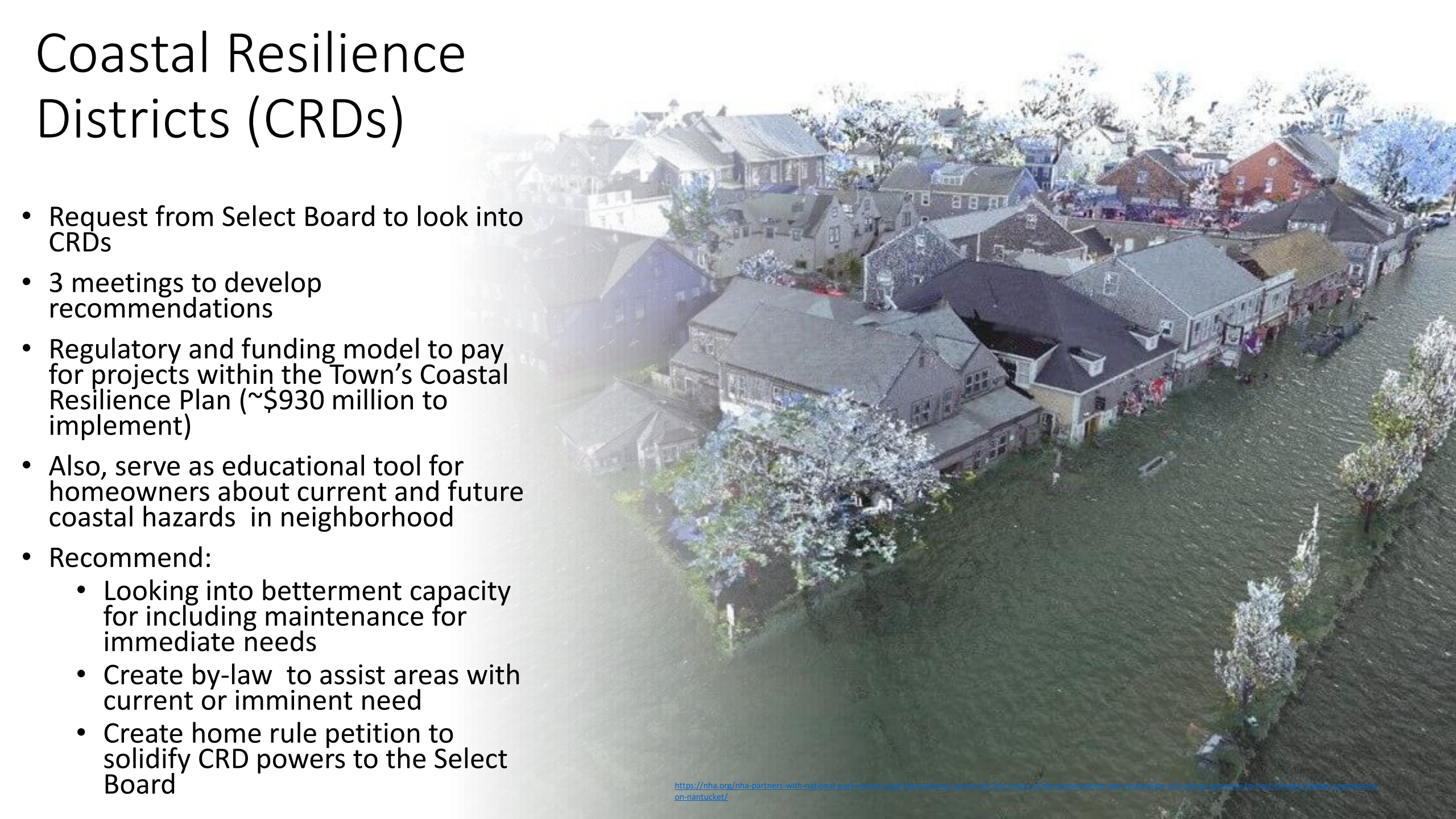
PRESENTATION ON LAND BANK AND SEWER DEPT.'S GRANT PROPOSAL FOR LILY POND

- Given by Emily Goldstein-Murphy, Research Ecologist for Nantucket Land Bank
- Applied for a Southeast New England Program (SNEP) Grant for $600k to implement 1st phase of Lily Pond Park Master Plan
- Goals: enhance parking and pedestrian access, address invasive species, increase watershed's capacity to remove suspended solids, nitrogen, phosphorus and bacteria from stormwater



Coastal Resilience Districts (CRDs)

- Request from Select Board to look into CRDs
- 3 meetings to develop recommendations
- Regulatory and funding model to pay for projects within the Town's Coastal Resilience Plan (~$930 million to implement)
- Also, serve as educational tool for homeowners about current and future coastal hazards in neighborhood
- Recommend:
  - Looking into betterment capacity for including maintenance for immediate needs
  - Create by-law to assist areas with current or imminent need
  - Create home rule petition to solidify CRD powers to the Select Board



https://nha.org/nha-partners-with-national-park-service-and-international-centre-for-the-study-of-the-preservation-and-restoration-of-cultural-property-to-host-climate-change-symposium-on-nantucket/

CLIMATE CHANGE AWARENESS MONTH PROCLAMATION

- CRAC and ACKlimate supported a proclamation to make September Climate Change Awareness Month on the Island
- 4th year in a row
- Educational activities throughout the month from many of the science organizations
- 1st Climate Change Summit on Island

ACKlimate Nantucket

SUB-COMMITTEES

- Education and outreach sub-committee
- Financial strategies planning sub-committee
- Intention to get more work done, educate public about the importance of the CRP, fund CRP projects
- With Town Counsel's guidance decided not to pursue
- CRAC will work on these topics within regular scheduled meetings

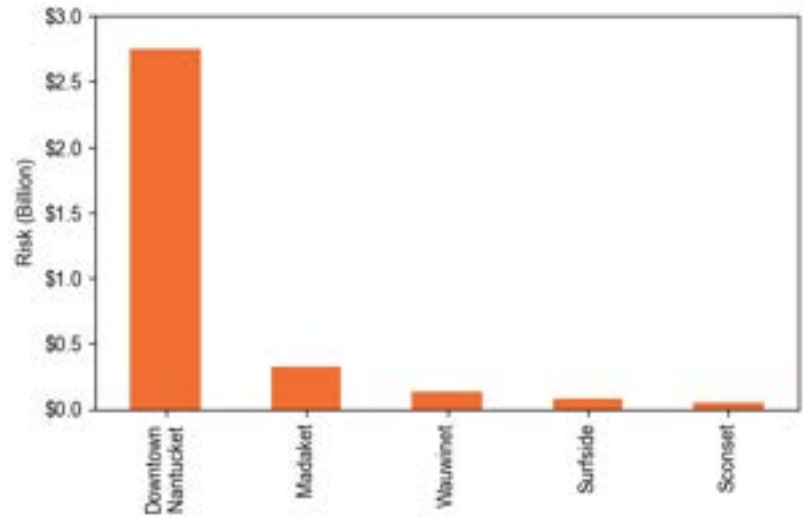


Figure 26. Buildings and Structures Damage by Neighborhood from The 2021 Existing Conditions and Coastal Risk Assessment Report

COMMUNICATION AND OUTREACH

- Implement CRP high priority #1-1 Community Outreach on Property Owner Resilience Best Practices
- Discussion with Florencia Rullo and Hayley Cooke about how the Town's Communication Office can help CRAC with education and outreach
- Many outlets: social media, surveys, newsletters, brochures, update webpages
- CRAC tasked to determine target audience and important coastal resilience topics to highlight in the next 6 months
- Work with Communication Office to achieve this and come up with a communication and outreach plan

DEVELOPED SURVEY QUESTIONS FOR HOMEOWNER'S ASSOCIATIONS

- Implement CRP high priority #1-1 Community Outreach on Property Owner Resilience Best Practices
- Going to work with Nantucket Civic League to distribute surveys to its 25 homeowner's associations
- Goal: Gain clarity on homeowners worries about coastal hazards they experience on their property and within their neighborhood, so CRAC can develop informational materials for homeowners to use to implement best practices
- Materials will be tailored to each neighborhood and expanded to other areas around the Island

https://www.gobankingrates.com/money/financial-planning/how-much-kids-will-have-if-they-invest-their-piggy-bank/

OVERVIEW OF TOWN'S PROJECT FUNDING PROCESS

- Jeff Carlson, Director of Natural Resources Dept., discussed the process for projects to get funded within the Town, particularly capital projects as many of the CRP recommendations fall under this funding category
- 2 CRP projects in for capital request for FY25
  - #4-1 Polpis Road Raising and Bridge Conversion at Folger's Marsh
  - #1-4 Strategic Retreat and Relocation Plan

REQUESTS AND RECOMMENDATIONS

- Town hire dedicated grant writer(s)
- Increase the amount of money allocated in Article 10 for Coastal Resilience projects
- Support the 2 CRP recommendations (#1-4 and #4-1) in for capital request

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Are there current or upcoming issues for which the Select Board would like the CRAC's advice?

The Coastal Resilience Advisory Committee generally meets on the **second** and **fourth Tuesday** of each month at 10 am via Zoom. Meeting notices and agendas are posted on the Town's website at: https://nantucket-ma.gov/1391/Coastal-Resiliency-Advisory-Committee

Contact Leah Hill, Coastal Resilience Coordinator, lhill@nantucket-ma.gov