



UPDATED MEETING POSTING

Original Posting Date 1/17/2024

Original Posting Number T 065

TOWN OF NANTUCKET

Pursuant to MGL Chapter 30A, § 18-25

All meeting **notices and agenda** must be filed and time stamped with the Town Clerk's Office and posted at least 48 hours prior to the meeting (excluding Saturdays, Sundays and Holidays)

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2024 JAN 19 PM 01:40
NANTUCKET TOWN CLERK
Posting Number:T 071

Committee/Board/s | Coastal Resilience Advisory Committee

Day, Date, and Time | Tuesday, January 23, 2024, at 10 am

Location / Address | ☐ REMOTE PARTICIPATION VIA ZOOM The meeting recording will be available at a later time on the Nantucket Government TV YouTube Channel at https://www.youtube.com/playlist?list=PL49sKqpy7VAiUk-g5h2jIuAn_2jqocI2L

Signature of Chair or Authorized Person | Peter Brace, Chair
Leah Hill, Coastal Resilience Coordinator

WARNING: IF THERE IS NO QUORUM OF MEMBERS PRESENT, OR IF MEETING POSTING IS NOT IN COMPLIANCE WITH THE OML STATUTE, NO MEETING MAY BE HELD!

UPDATED AGENDA

Coastal Resilience Advisory Committee

Agenda for Tuesday, January 23, 2024, at 10 am

A. Convene in Open Session via Zoom

Join Zoom Meeting

<https://us06web.zoom.us/j/86863383148?pwd=YkE0YUVNMlU1NnpwYTJ6clg4U241QT09>

Meeting ID: 868 6338 3148

Passcode: 917271

1. Call to Order

2. Meeting announcements

- Script for remotely conducting Open Meetings, read by the Chair
- The meeting is being audio / visually recorded

3. Public Comment

4. Coastal resiliency recommendations to include in the Nantucket and Madaket Harbors Action Plan Update by Kim Starbuck, Senior Research Associate at the Urban Harbors Institute

5. Discussion on site visit to Sewer Treatment Facility

6. Update on Conservation Commission meeting regarding proposed updates to local Wetland Regulations- See packet

- Letter and comment protocol for the future

7. Update on Article 10 regarding coastal resiliency funds by Leah Hill, Town of Nantucket Coastal Resilience Coordinator • NRD internal project review process

- Finance Department's Capital Project's Collision presentation
- Discuss allocation increase recommendation that was included in Q3 report to Select Board

8. Discuss upcoming February 27th meeting (school break)

9. Public outreach ideas/strategies from committee members

- Updated media scorecard summary by Doug Rose

10. Approval of Minutes from January 9, 2024

11. New business, Committee & Natural Resources Dept. reports from Planning Board, Conservation Commission, Harbor and Shellfish Advisory Board, Select Board, Advisory Committee of Non-Voting Taxpayers, and other committee members.

- Storm report by Leah Hill- See packet

12. Discussion of upcoming meeting dates and topics: Next Meeting is February 13, 2024, on Zoom.

13. Motion to adjourn

Nantucket and Madaket Harbor Plan Update Coastal Resilience/Climate Change

Prepared for: Nantucket Coastal Resiliency Advisory Committee (CRAC)
UHI (Kim Starbuck, Kristin Uiterwyk, Alan Bartels) and WHG (Dack Stuart)



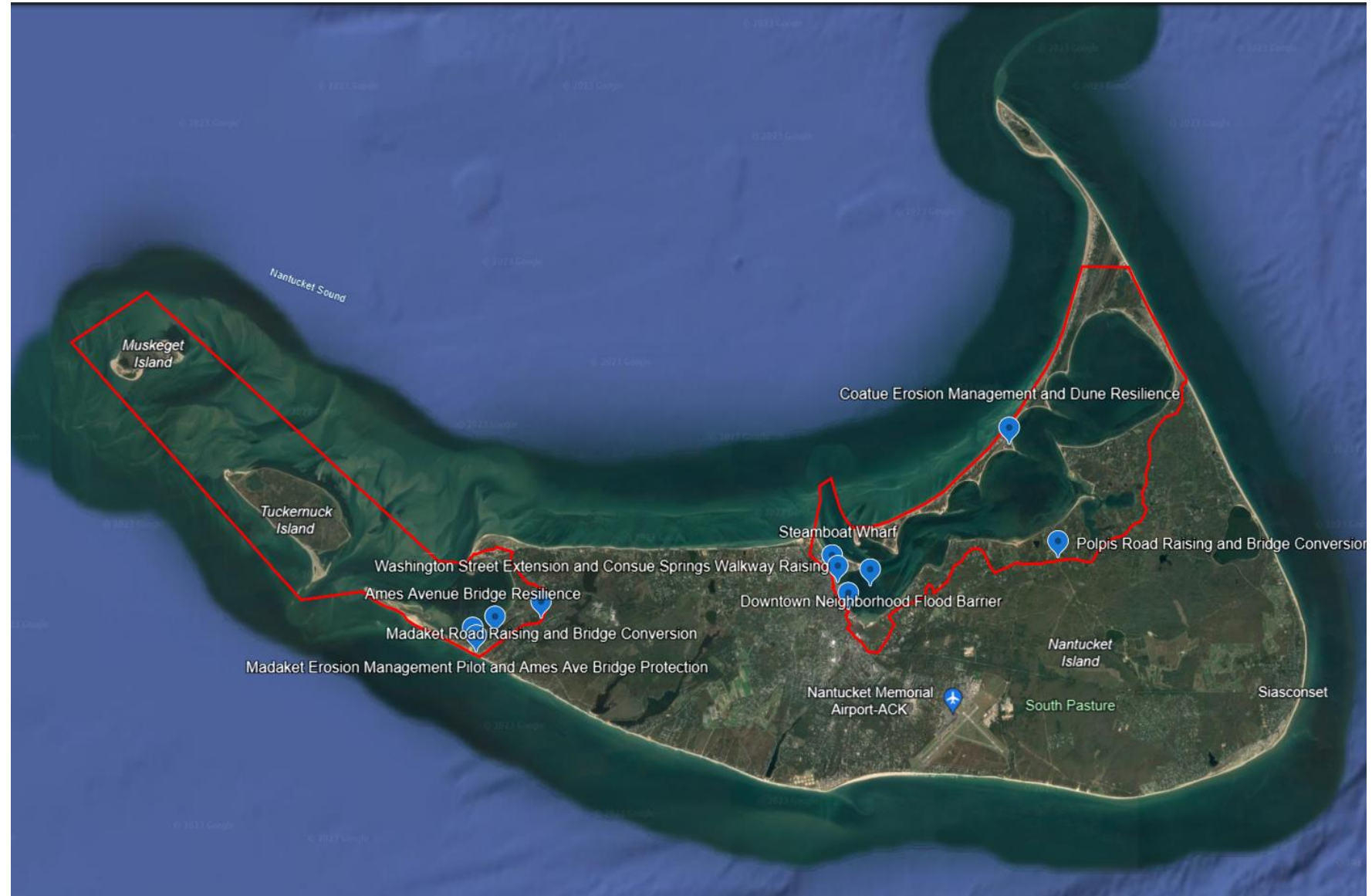
Purpose of Harbor Plan Update

- Document that establishes community goals and policies to guide public and private land use along the harbor
- Identify goals, vision, and recommendations for the waterways
- Address boating, fishing, climate change, public access, natural resources, and more
- Integrate and align with existing plans
- Inform state decision-making regarding activities in town
- 10 year updating schedule

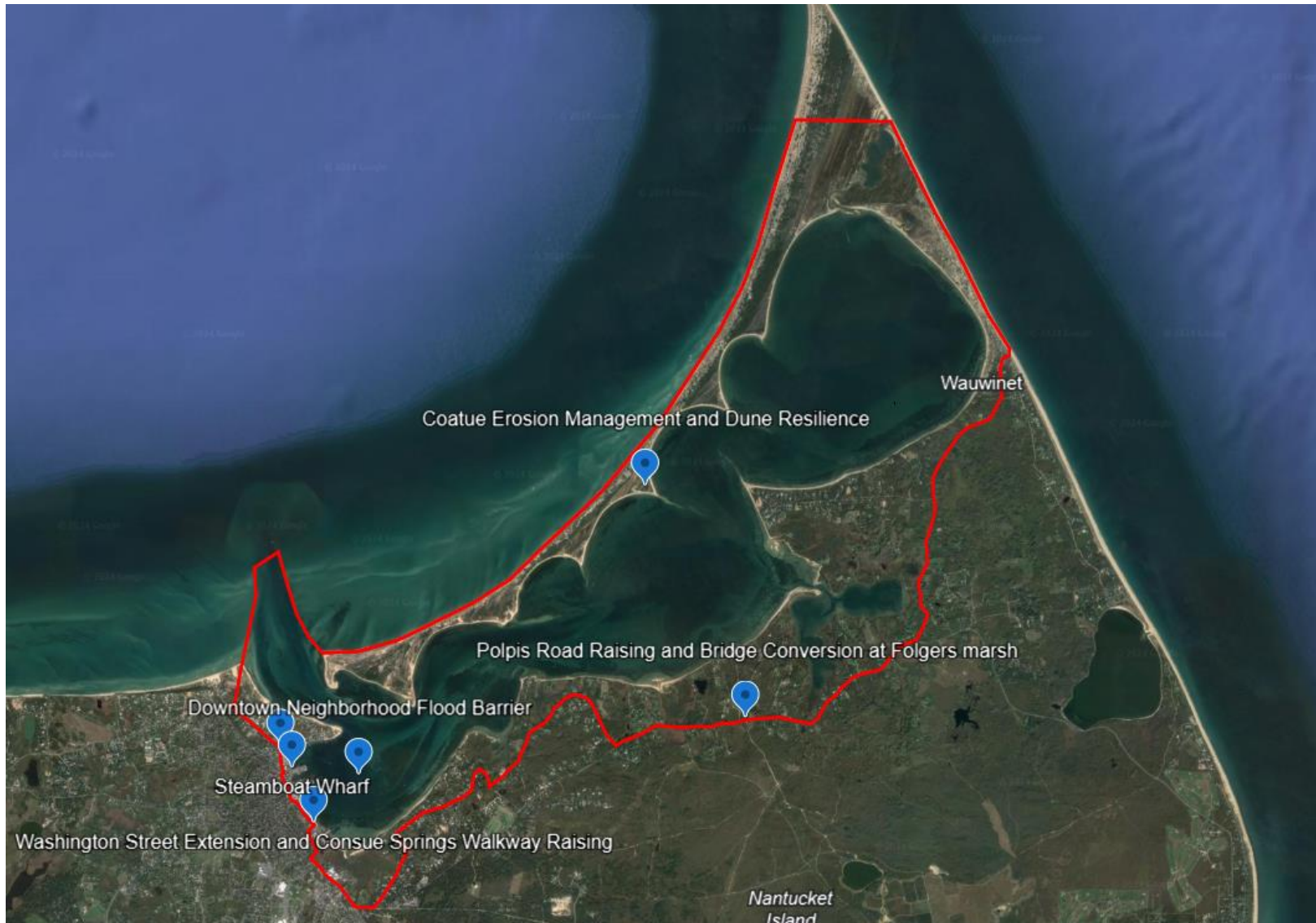
Timeline & Engagement



Nantucket and Madaket Harbor Plan Boundaries



Nantucket Harbor CRP Projects



Madaket Harbor CRP Projects



CRP Projects Within Harbor Plan Boundary*

Island Wide
Updates to Zoning By-laws
Strategic Retreat and relocation
Shoreline Change Monitoring Project
Sediment sourcing and transport study
Sediment budget
Stormwater Management plan
Stormwater by-laws assessment
Stormwater bylaws and regulation update
Sand Pumping feasibility study
Downtown
Steamboat Wharf Resilience
Downtown Neighborhood Flood Barrier- Initial phase
Downtown Neighborhood Flood Barrier- Later phase
Easton Street and Hulbert Ave Road Raising
Washington Street Extension and Coatue Springs Walkway Raising
Building Scale Resilience at 37 Washington St

Madaket
Madaket Road Raising and Bridge Conversion
Ames Avenue Bridge Resilience
F Street Boat Ramp
Madaket Erosion Management Pilot and Ames avenue Bridge Protection
Nantucket Harbor and Coatue
Polpis Road Raising and Bridge Conversion at Folger's Marsh
Coatue Erosion Management and Dune Resilience
Numerical Modeling Study of Coatue Breaching

*- Inclusive of Leah Hill's Recommendations

Integrating the Harbor Plan and the Coastal Resiliency Plan

Plan public engagement process resulted in comments on coastal resilience which may be useful for CRP

CRP is a longer timeframe; harbor plan is on 10-year update timeframe

The plan can make recommendations to reinforce some projects;
Chapter 91 recommendations for public access conditions

How much of CRP should be reiterated in Harbor Plan?

General Public Comments Related to Coastal Resilience

- Rising Sea Levels
- Cohesion Between Plans
- Infrastructure Protection Prioritization (short vs. long term)
- Private vs. Public Cost Responsibility
- Regulatory Approach + Building Codes (Strict vs. Adaptable)
- Community Involvement vs. Expert-led approaches
- Green vs. Grey Protections
- Development vs. Vulnerable Areas
- Mitigation vs. Adaptation

A large orange circle is positioned on the left side of the slide, partially overlapping the text area.

Quotes from Public Comments

"Learn from the Sconset geotube debacle. CR has to happen for all of us not just the mega rich."

"If we don't work together we are just fighting each other for sand."

"Concerns of wasting tax money on building raising, it would be better spent getting ready to retreat."

"We need to address some of the really big infrastructure issues such as ferry docking, lack of a backup commercial pier, sewer bed protection before replacing the culvert with a bridge to Madaket. "

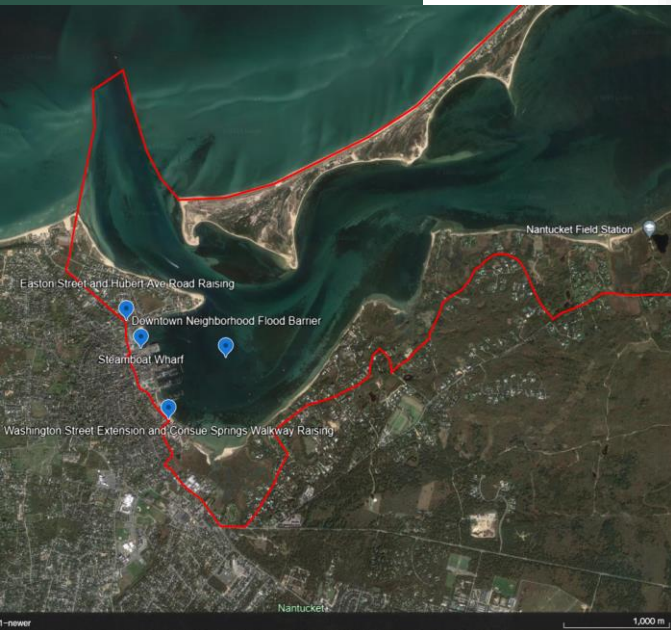
"Madaket Road needs to be elevated at the several temporary culverts in order to maintain access for emergency vehicles and residents as the supposed sea level rise, tidal flooding will render the area inaccessible, including for access to public piers, the waste management work at the Nantucket Landfill"

"I think the plan for the raised path along Washington Street is brilliant and should be acted upon as soon as possible. Protects the town, creates safe access for bikes and pedestrians and enables us to see the harbor. "

Island-Wide,
Nantucket
Harbor and
Coatue

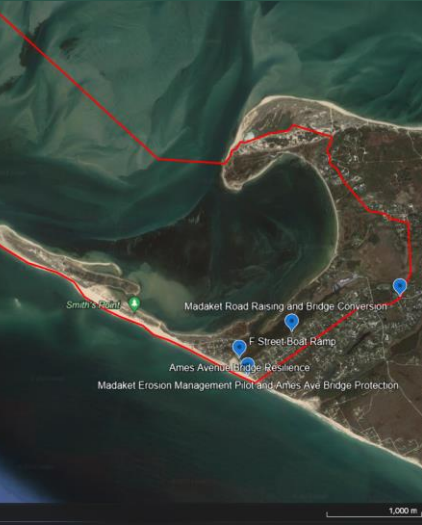
Island Wide			
Strategy/Project Title	Target Implementation	Status	Permitability
Updates to Zoning By-laws	2025	Not Started	GREEN
Strategic Retreat and relocation	2024, Ongoing	Not Started	N/A
Shoreline Change Monitoring Project	2024, Ongoing	Underway/Complete	N/A
Sediment sourcing and transport study	2024	Underway	N/A
Sediment budget	2024	Not Started, Transport	N/A
		Study Hold	
Stormwater Management plan	2025	Not Started, Sewer Dept	N/A
		Funded	
Stormwater by-laws assessment	2025	Not Started, Stormwater	N/A
		Plan Hold	
Stormwater bylaws and regulation update	2025	Not Started, Stormwater Plan Hold	GREEN
Sand Pumping feasibility study	2027	Not Started	N/A
Nantucket Harbor and Coatue			
Strategy/Project Title	Target Implementation	Status	Permitability
Polpis Road Raising and Bridge Conversion at Folger's Marsh	2035	Not Started, Capital Planning for FY25	GREEN
Coatue Erosion Management and Dune Resilience	2025	Underway, NCF and Trustees funded	YELLOW
Numerical Modeling Study of Coatue Breaching	2026	Not Started, Arcadis Quotes Received	N/A

Downtown Projects



Downtown			
Strategy/Project Title	Target Implementation		Permitability
Steamboat Wharf Resilience	2030	Not Started	GREEN
Downtown Neighborhood Flood Barrier- Initial phase	2025	Funding Secured, just had kickoff meeting	YELLOW
Downtown Neighborhood Flood Barrier- Later phase	2050	Not Started, Initial Phase Hold	YELLOW
Easton Street and Hulbert Ave Road Raising	2050	Not Started	GREEN
Washington Street Extension and Coatsue Springs Walkway	2050	Not Started	YELLOW
Building Scale Resilience at 37 Washington St	2024	Not Started	GREEN

Madaket Projects



Madaket			
Strategy/Project Title	Target Implementation	Status	Permitability
Madaket Road Raising and Bridge Conversion	2030	Not Started, Madaket Sewering Opportunity	GREEN
Ames Avenue Bridge Resilience	2025	Not Started, Staff Limited, \$1M Town allocated	GREEN
F Street Boat Ramp	2050	Not Started	GREEN
Madaket Erosion Management Pilot and Ames avenue Bridge Protection	2025	Not Started, Ames Ave Related, Subdivide?, MVP Rejected	GREEN

Discussion and Questions

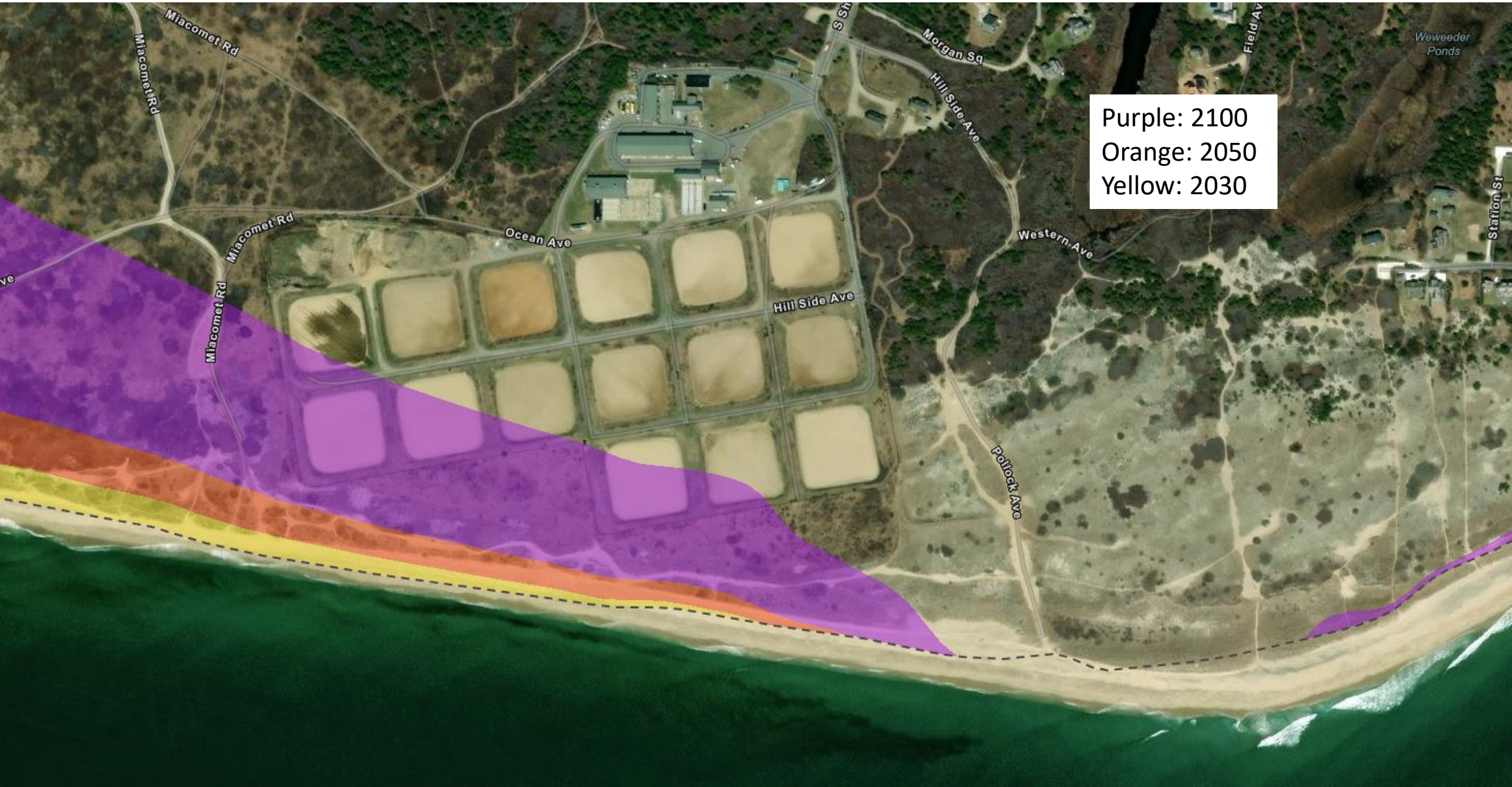
- How to best engage CRAC as we develop plan?
- How to use the harbor plan to move coastal resiliency projects forward/reinforce certain aspects of projects?
- How to best use public engagement feedback to reinforce CRP goals and projects?
- Suggestions to DEP regarding climate change and public access?

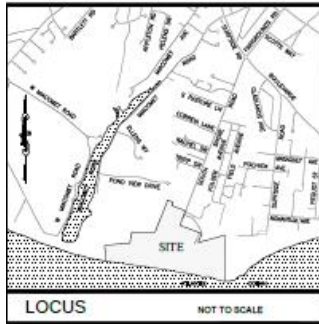
Contact Us

Kim Starbuck at Kimberly.Starbuck@umb.edu

Website: <https://www.nantucket-ma.gov/2604/Nantucket-and-Madaket-Harbors-Action-Pla>

FEMA Erosion Projection Map (2012 NOAA High Sea Level Rise Scenario)

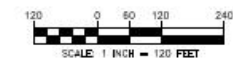




GENERAL NOTES:

- [illegible]

AERIAL IMAGERY TAKEN FROM
MASS GIS SPRING 2021

[illegible]

DATE: DECEMBER 19, 2019

DATE: DECEMBER 19, 2023

DRAWN BY: SKD	DESIGN BY: DCM	CHECK BY: DCM
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PROJECT NO. 19232

ISSUED FOR:

REVIEW

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SITE PLAN SHOWING TOP OF BANK

81 SOUTH SHORE ROAD
SUSSEX 90 R'S MAP 87, PARCEL 136
NANTUCKET, MASSACHUSETTS

PREPARED FOR TOWN OF NANTUCKET

DRAWING TITLE:

SITE PLAN

SCALE: 1"=120'

SHEET NO.

1 OF 1



Fig. 2 – Station SB1, SB2, SB3. SB1 was lost to erosion.

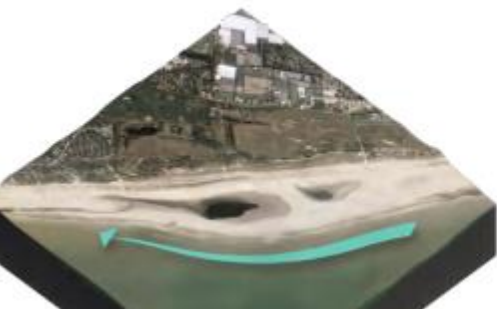
Recommended Project Summary- Surfside Wastewater Treatment Plan

This and the following pages include projects recommended on the South Shore as part of the coastal resilience strategy, including the anticipated benefits, estimated costs, level of protection, urgency, and duration of performance for each.

Surfside Wastewater Treatment Facility and Nantucket Memorial Airport Dune Restoration

Description	Dune restoration and construction to reduce risk of erosion to critical infrastructure. Hard core dunes are appropriate given risk to critical facilities. Location of dune concept on beach or upland area should be determined through preliminary design phase. Project may include need for ongoing nourishment or installation of near-shore underwater sand berm. Strategic relocation alternatives for settling tanks closest to the coast at the wastewater treatment facility should be pursued in parallel.		
Resilience Objective & Level of Protection	Prolong the service life of critical infrastructure with dune construction. Design elevation to the 1% annual chance storm with 4.3 feet of sea level rise (16.0 to 18.0 feet NAVD88, expected by 2070)		
Duration of Performance	40-50 years with ongoing performance monitoring and maintenance	Priority	First/Second
Estimated Cost	Surfside Wastewater Treatment Facility Dune Restoration Capital Costs: \$27M Capital Costs with Contingencies: \$33M - \$38M Annual Operations and Maintenance: \$420K Nantucket Memorial Airport Dune Restoration Capital Costs: \$20M Capital Costs with Contingencies: \$25M - \$28M Annual Operations and Maintenance: \$310K		

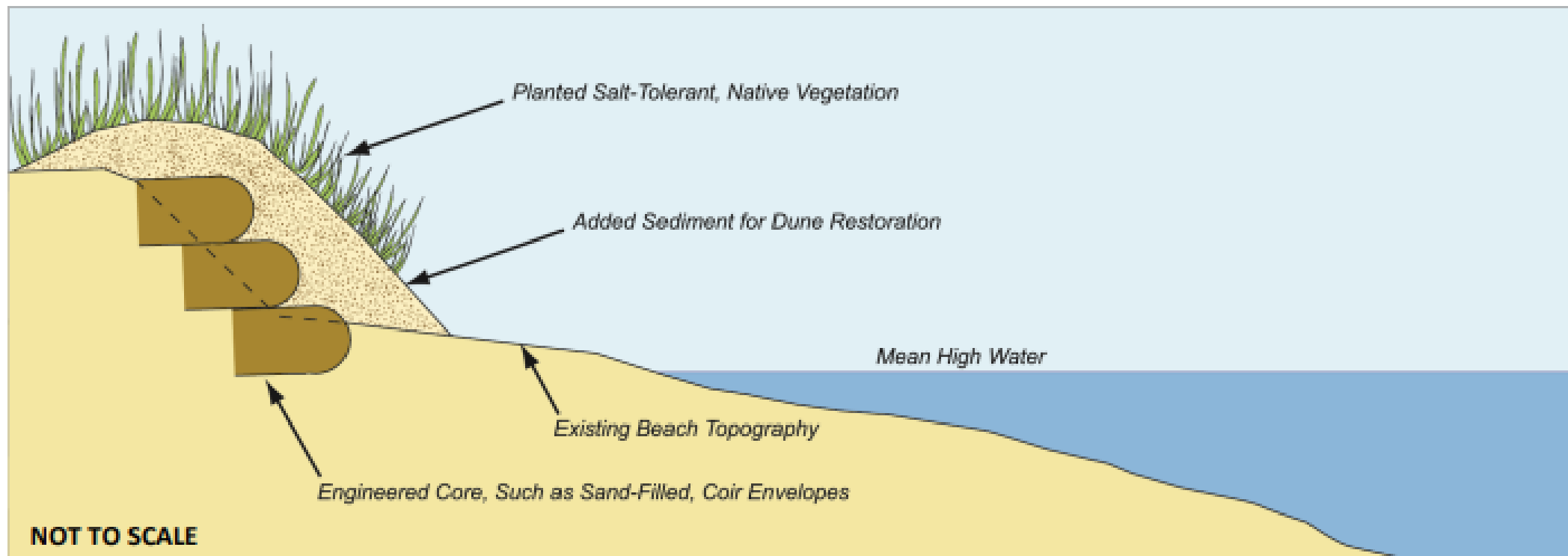
Estimated Benefits:	Not quantified for this study. Qualitative benefits include long-term mitigation of risk to infrastructure and assets at both facilities, which could reduce the risk of loss of service for wastewater treatment and air travel.
Cobenefit Opportunities	Dune restoration can provide new and enhanced habitat Potential to enhance public access to Nobadeer Beach as part of restoration project Monitoring of project can employ mobile technology to crowd-source images and data that can build community awareness and help inform long-term management approaches



Nearshore Berms

A nearshore berm is a submerged sand berm that is constructed parallel to the shore and can act as either a feeder berm or a stable berm. A feeder berm is intended to provide a source of sand to a beach and migrates onshore through wave action. One of the advantages of this approach to beach nourishment is avoiding constructing directly on the beach which in some environments may have a negative impact on sensitive bird species and turtle nesting. In this sense, nearshore berms have the potential to expand the construction window. Research is ongoing to update and further refine design guidance for this method of shore protection. Cost, constructability, and regulatory requirements will be considered during feasibility studies.

Design Schematics



**Spoken by Peter Brace, Chair of CRAC, on Behalf of CRAC to the Conservation
Commission on 1/11/2024**

The Coastal Resilience Advisory Committee, CRAC, wishes to make the following statement with regards to the Conservation Commission's proposed amendments to the Nantucket Wetlands Bylaw, which is a high priority recommendation within the Town's Coastal Resilience Plan

CRAC very much appreciates the Conservation Commission making coastal resilience a priority while working on its bylaw amendments by inclusion of new language making property owners, developers, coastal engineers and the Town aware of the risks of sea level rise impacts and providing them with aspects of this bylaw that they must adhere to.

Going forward, as notices of intent for development are submitted to the ConCom within at-risk coastal areas on Nantucket that you all know intimately, we ask that the Commission continue to work with the Coastal Resilience Plan and CRAC's mission in mind when reviewing these applications for proposed work on properties along the island's shoreline and other island areas vulnerable to sea level rise.

We enthusiastically support the inclusions of the terms "Climate Change", "Coastal Resilience Plan", "Coastal Resilience", "Resiliency", "Sea Level Rise" and "Coastal Risk Areas" as additions to your Definitions.

We support with your proposed "undisturbed two-foot separation to high groundwater.

We strongly support the bylaw's existing stance on the protection of salt marsh habitat and the proposed addition of the word "resiliency" to your list of protected interests in 390-11, Section A. Item 1. In an effort to refine the inclusion of this word, the CRAC proposes that you add the word "coastal" in front of "resiliency". Further, we propose that in the 13 other places within the bylaw's text that you use the word "resiliency", where the commission deems it appropriate, that you put the word "coastal" before it since in every instance you're proposing to include the word "resiliency" in your bylaw, you are referring to a "coastal" area. Without "coastal" in front of "resiliency" in the context of the impacts of sea level rise, "resiliency" is rendered a vague term.

As the Commission may be aware, the Select Board is working on adapting the concept of coastal resilience districts (CRDs) to the anticipated funding needs of island areas at risk of the impacts of sea level rise and climate change for future coastal resilience projects. Although Town Counsel is currently working out the details of using CRDs on Nantucket, the CRAC wants the Conservation Commission to familiarize its members with this concept because if employed on Nantucket, it's likely that CRDs could have bearing on orders of conditions issued by the commission.

The CRAC is particularly concerned with the potential proliferation of swimming pools within vulnerable island coastal areas and near wetlands such as, but not limited to, the Brant Point area, Washington Street Extension, Union-Washington streets, Smith's Point and Hither Creek neighborhoods and in general, along Nantucket Harbor shores.

These areas, subject to all imaginable complications due to coastal flooding during storms exacerbated by storm surge and sea level rise, and sea level rise on its own, present particularly challenging scenarios for Nantucket's wetland areas when swimming pools exist within them.

When the Conservation Commission holds its public hearing concerning its proposed increase of no-build buffer zones around wetlands from 25 to 50 feet, the Coastal Resilience Advisory Committee will have a statement on this proposal for the Commission.

Finally, the CRAC reminds the Conservation Commission that myself, our committee and our coastal resilience coordinator, Leah Hill are always available as a resource should you need clarification on a wetlands coastal resilience issue.

Additionally, we extend our help out to developers, coastal engineers and property owners considering any kind of development within low-lying coastal areas around the island vulnerable to the impacts of sea level rise.

Thank you for your time in considering our letter of support for your bylaw revisions efforts.

Competing Capital Priorities: Debt & Execution Collision

September 27, 2023

Finance Department

Brian E. Turbitt, Director of Municipal Finance

Susan M. Carmel, Assistant Finance Director



Agenda

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2. Capital Project Initiation Process	7
3. Major Capital Projects on the Horizon	8
4. Out-year Major Capital Projects	14
5. Unknowns	16
6. Discussion and Questions	-

Debt & Execution Collision

“The elephant in the room is never comfortable to acknowledge, but its always necessary” – unknown

- The Town faces two collisions:
 - A financial prioritization collision where large sums of money will be required to maintain and improve island-wide assets
 - An execution collision where many large and complex projects simultaneously compete for limited non-financial resources, such as staff capacity, scarce building materials and currently unknown, but emerging critical capital projects
- These two collisions create risks with the financing, execution and implementation of the Capital Improvement Plan (CIP) over the next 10 years
- The current CIP projects a funding requirement of more than \$800,000,000 over the next 10 years
- There are more than two dozen major capital projects in the plan over the next decade, including:
 - Our Island Home
 - Employee Housing
 - Central Municipal Building
 - New DPW Campus

Debt Collision

- The debt collision results from previously authorized projects, projects in the forward-looking CIP, and an increasing number of debt exclusions
- The Town has approximately \$64,000,000 in authorizations for projects not yet started and an additional \$800,000,000+ in the CIP
- Taken together, prior and proposed authorizations could put the Town's Aaa rating at risk, leading to higher borrowing costs
- If the Town is subject to higher borrowing costs, project costs will rise as a result
- Through disciplined planning and project sequencing, Town Administration seeks to dampen the impact to taxpayers when major projects are competing for resources

Execution Collision

- The ability to execute and deliver the CIP is as important as the ability to finance it. Without execution discipline, the financial risk increases.
- The Town is resource constrained and has a backlog of funded projects. Constraints include:
 - Budgeting and staffing of a Program Management Office to properly sequence competing projects
 - Staff resources to deliver important project components such as project scope, timeline and milestones, technical and quality specifications
 - Management oversight
 - Competing priorities and contention for materials
 - Unknown permitting timelines
 - Local objection to a given project slowing its execution
 - Unexpected, time-consuming emergent issues requiring some projects re-prioritization
- The scope and complexity of the CIP create substantial reason for concern. Successful execution requires strong discipline and difficult choices and trade-offs will need to be made.

Funding Requests: Competing Capital Priorities

Prior Years Authorized (\$64.1 million)

Surfside Area Roads Reconstruction
Landfill Closure
Waite Drive Employee Housing (c)
New Our Island Home (d)
Town-wide Municipal Facilities Maintenance
Wauwinet Rd Multi-use Path (c)
Miacomet Pond Dredging

2024 ATM (\$24.4 million)

Ticcoma Way Employee Housing (d)(c)
Public Safety Auxiliary Building (c)
Somerset Needs Area Sewer Ext (d)
Parks & Recreation Master Plan Projects

2024 STM (\$50+ million)

New Public Works Facility (c)

2025 ATM \$129.1 million)

Our Island Home (c)
Somerset Needs Area Sewer Ext (c)
Baxter Road Alternative Access (c)
New Senior Center (d)
Parks & Recreation Master Plan Projects

2025 STM (\$36 million)

New Senior Center (c)

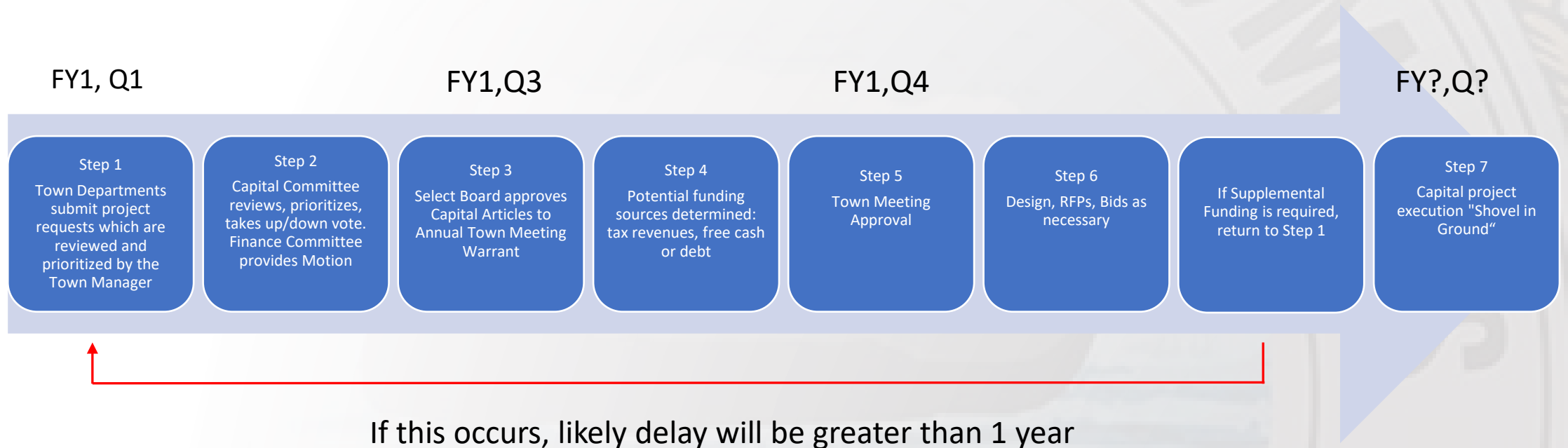
Outyears (\$177 million)

New Middle School (c)
Central Municipal Building (d) (c)
'Sconset Fire Station (d) (c)
Surfside Area Transportation Improvements
Delta Fields Expansion & Reconfiguration

(d) = design
(c) = construction

Capital Project Initiation Process

There are many required steps in the capital approval and execution process where delays can occur



Prior Year Authorized & Unissued Borrowings (\$4,000,000 and greater)

		<u>Status</u>
• Surfside Area Roads Reconstruction (ATM 2023)	\$13,000,000	Design
• Landfill Closure (ATM 2019 & 2023)	\$19,000,000	Permitting
• Waitt Drive Employee Housing Construction (ATM 2022)	\$ 8,500,000	Out to bid
• Design of New Our Island Home (ATM 2022)	\$ 8,500,000	Designer selection
• Town-wide Municipal Facilities Maintenance (ATM 2021)	\$ 6,500,000	On-going
• Wauwinet Road Multi-Use Path (ATM 2023) *less \$2.1 million grant funding	\$ 4,610,000	Design pending
• Miacomet Pond Dredging (ATM 2023) *potential for \$1.5 million in offset funding	<u>\$ 4,000,000</u>	Permit pending
Estimated Total		\$64,110,000

2024 ATM Potential Debt Exclusions: \$24,400,000+

- **Ticcoma Way Town Employee Housing (design & construction)** \$11,000,000
 - Development of 8-16 units, depending on configuration
 - Currently working with an architect to develop high level schematic drawings
- **Public Safety Auxiliary Building** \$5,000,000
 - Construction of an auxiliary building for public safety vehicle storage and mechanic space to perform necessary repairs and maintenance
- **Somerset Needs Area Sewer Extension** \$5,400,000
 - Design of the expansion of the sanitary sewer collection system into the Somerset Needs Area
 - Part of Sewer Master Plan
- **Parks & Recreation Master Plan Projects** \$3,000,000
 - Jetties Tennis Reconstruction
 - New Nobadeer Athletic Complex Playground
 - Upgrade Tom Nevers Playground
- **Solid Waste Facilities Potential Purchases** TBD
 - In accordance with Waste Services Agreement
 - Composter & Transfer Station

2024 STM Potential Debt Exclusions: \$50,000,000+

- New Public Works Facility
 - 2017 feasibility study confirmed deficiencies in the existing facilities and impact on operations
 - Construction of a new DPW campus
 - Possible locations being evaluated include 188 Madaket Road (not at landfill), Sun Island Road and 1 Shadbush Road

2025 ATM Potential Debt Exclusions: \$129,100,000

- **Our Island Home Construction** \$50,000,000
 - Construction of a new Our Island Home facility
 - Cost drivers include employee housing, number of beds and private/shared room ratio
 - Refined cost estimates will be coordinated with design firm and Owners Project Manager
- **Somerset Needs Area Sewer Extension Construction** \$35,600,000
 - Identified as Needs Area in 2004 & 2014 Comprehensive Wastewater Management Plan
 - Part of Sewer Master Plan
 - Sewer main and Bartlett Road Pump Station sized to accept future flow
 - Pump Station will require land acquisition by Town
- **Baxter Road Alternative Access Construction** \$30,000,000
 - Ensure property access given instability of Baxter Road
 - Route selected design under way

2025 ATM Potential Debt Exclusions: \$129,100,000 (continued)

- Design of New Senior Center \$3,500,000
 - Convert current OIH facility to a new Senior Center
 - Potential for expanded programming
 - Provide for the health, safety and comfort of participants, staff & community
- Parks & Recreation Master Plan Projects \$10,000,000
 - Tom Nevers Field restoration of baseball field dugouts & installation of fencing on softball field
 - Removal of debris from Tom Nevers beach and face of bluff to increase public safety; stabilization to be put in place to help prevent erosion

2025 STM Potential Debt Exclusions: \$36,000,000

- Construction of New Senior Center
 - Convert current OIH facility to a new Senior Center
 - Potential for expanded programming
 - Provide for the health, safety and comfort of participants, staff & community

“Potential” Outyear Debt Exclusions: \$177,000,000 (FY2027 & beyond)

- **Construction of New Middle School** **\$85,000,000**
 - Timing of project will be based on population growth
 - Proposed location is on recently acquired property at Surfside Road
 - New facility will include improvements to science and vocational programming
- **Design & Construction of a Central Municipal Building** **\$56,000,000**
 - New Town office building
 - Will likely house most town departments and include meeting space
 - Plan includes reuse recommendations for existing space
- **‘Sconset Fire Station** **\$15,000,000**
 - Expanded & improved fire station
 - Plan to staff station seasonally
 - May need to consider alternative site

“Potential” Outyear Debt Exclusions: \$177,000,000 (FY2027 & beyond - continued)

- **Surfside Area Transportation Improvements (supplemental)** **\$6,000,000**
 - Roadway reconstruction to Lovers Lane, Okorwaw Avenue, and Monohansett Road
 - Upgrades to drainage in a closed storm drain system
 - Approximately 2.4 miles of new bike paths connecting Old South Road to Surfside Road and the Airport to Lovers Lane
- **Parks and Recreation Master Plan Projects** **\$15,000,000**
 - Delta Fields expansion & reconfiguration
 - Relocate and renovate two existing baseball fields & construct two new softball fields
 - Install new playground
 - Connect to existing adjacent bike trails

To Be Determined

Unknowns with Potential Capital Improvement Plan Impact

- Scope of PFAS Remediation
- Coastal Resiliency Planning Recommendations
- Hazard Mitigation updates
- Intermodal Transportation Center
- Transportation Projects

Summary

- The financial and execution demand the Town faces dwarfs any prior period
- If all projects are borrowed by FY31, the Town will have more than \$845 million in outstanding and will have simultaneously started or completed many complex projects, including:
 - New Our Island Home
 - New Central Municipal Facility
 - New DPW Campus
 - Several coastal resilience projects
- In addition to the large, complex projects outlined in the previous pages, a portfolio of smaller projects requires additional funding of \$10-\$15 million a year. Examples include improvements to:
 - Island-wide roads
 - Sidewalks & cobblestone roads
 - Town-owned buildings
- “Flattening” or “dampening” the impact to the taxpayer is complex
- As the capital cycle for FY25 approaches, substantial caution and discipline are required to avoid further complicating the financial and execution challenges outlined in previous pages.

Conclusion

- Discussion and Questions

Contact Information:

Brian E. Turbitt, Finance Director bturbitt@nantucket-ma.gov

Susan M. Carmel, Assistant Finance Director scarmel@nantucket-ma.gov



Town of Nantucket, Massachusetts

Projected Interest Rate on BANs: 3.50%
 Projected Interest Rate on Bonds: 4.00%

Financing Plan - Tax-Supported Debt Model
Bonds Issued FY27-FY31
General Fund Tax-Supported Debt - Excludes Enterprise Fund Debt

	A (page 2)	B <i>Plus:</i> (page 3)	C <i>Plus:</i> (pages 4 & 5)	D <i>Plus:</i> (pages 6 & 7)	E <i>Plus:</i> (pages 8 & 9)	F <i>Plus:</i> (pages 10 & 11)	G <i>Plus:</i> (pages 12 & 13)	H <i>Equals:</i> A+B+C+D+E+F+G
Fiscal Year	Total Existing Tax-Supported Debt	Tax-Supported Short-Term Interest	\$42.7M Tax-Supported Bonds Dated July 2026	\$226.1M Tax-Supported Bonds Dated July 2027	\$52M Tax-Supported Bonds Dated July 2028	\$10M Tax-Supported Bonds Dated July 2029	\$106M Tax-Supported Bonds Dated July 2030	Total Projected Tax-Supported Debt Outstanding
2024	13,597,136	-	-	-	-	-	-	13,597,136
2025	11,860,288	-	-	-	-	-	-	11,860,288
2026	11,587,821	1,494,500	-	-	-	-	-	13,082,321
2027	11,235,889	9,408,000	854,000	-	-	-	-	21,497,889
2028	10,806,169	9,733,500	3,388,700	4,522,000	-	-	-	28,450,369
2029	10,445,532	2,170,000	3,320,100	18,995,900	1,040,000	-	-	35,971,532
2030	9,563,578	4,060,000	3,251,500	18,589,700	4,118,400	200,000	-	39,783,178
2031	9,161,413	3,710,000	3,182,900	18,183,500	4,035,200	792,000	2,120,000	41,185,013
2032	8,876,701	-	3,114,300	17,777,300	3,952,000	776,000	8,615,700	43,112,001
2033	8,495,811	-	3,040,800	17,371,100	3,868,800	760,000	8,437,100	41,973,611
2034	8,294,988	-	2,972,400	16,964,900	3,785,600	744,000	8,258,500	41,020,388
2035	7,567,085	-	2,904,000	16,558,700	3,702,400	728,000	8,079,900	39,540,085
2036	7,535,238	-	2,835,600	16,147,600	3,619,200	712,000	7,896,400	38,746,038
2037	7,349,870	-	2,767,200	15,741,600	3,536,000	696,000	7,718,000	37,808,670
2038	6,931,029	-	2,693,900	15,335,600	3,452,800	680,000	7,539,600	36,632,929
2039	5,154,090	-	2,625,700	14,929,600	3,369,600	664,000	7,361,200	34,104,190
2040	3,434,295	-	2,557,500	14,523,600	3,286,400	648,000	7,182,800	31,632,595
2041	3,277,891	-	2,489,300	14,117,600	3,203,200	632,000	7,004,400	30,724,391
2042	3,046,466	-	2,421,100	11,452,700	3,120,000	616,000	6,826,000	27,482,266
2043	918,109	-	2,352,900	11,138,900	3,036,800	600,000	6,647,600	24,694,309
2044	-	-	2,284,700	10,825,100	2,953,600	584,000	6,469,200	23,116,600
2045	-	-	2,216,500	10,511,300	2,870,400	568,000	5,840,000	22,006,200
2046	-	-	2,148,300	10,197,500	2,787,200	552,000	5,680,000	21,365,000
2047	-	-	2,080,100	9,883,700	2,704,000	536,000	5,520,000	20,723,800
2048	-	-	2,011,900	9,569,900	2,620,800	520,000	5,360,000	20,082,600
2049	-	-	1,943,700	9,251,200	2,537,600	504,000	5,200,000	19,436,500
2050	-	-	1,875,500	8,937,600	2,454,400	488,000	5,040,000	18,795,500
2051	-	-	1,807,300	8,624,000	2,371,200	472,000	4,880,000	18,154,500
2052	-	-	1,739,100	8,310,400	2,288,000	456,000	4,720,000	17,513,500
2053	-	-	-	7,996,800	2,204,800	440,000	4,560,000	15,201,600
2054	-	-	-	-	2,121,600	424,000	4,400,000	6,945,600
2055	-	-	-	-	-	408,000	4,240,000	4,648,000
2056	-	-	-	-	-	-	4,080,000	4,080,000
Total	159,139,399	30,576,000	64,879,000	336,457,800	79,040,000	15,200,000	159,676,400	844,968,599

Assumptions:

† For discussion only; not to be used for budgeting purposes.

CRP Recommendations for 2023-2026 That Are Not Underway

Strategy ID	Strategy or Project Title	Near-Term Strategy Project Description	Type	Estimated Cost	Estimated Benefits	Target Implementation Date	Champion /Co-Lead
★ 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	\$100,000	N/A	2025	PLUS/NRD
★ 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	\$250,000	N/A	2024, Ongoing	NRD/PLUS
★ 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	Sewer/NRD
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	NRD/CRAC
★ 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	Sewer/NRD
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	Sewer/NRD
★ 2-5	Building Scale Resilience at 37 Washington Street	Pilot project to showcase building-scale resilience best practices on a Town-owned facility, including potentially elevation of critical systems, protection of sensitive equipment and documents, and deployable flood risk reduction measures. The first step in this recommendation is a site-specific study to determine the appropriate risk mitigation approaches for this structure.	Structuvral	High: \$150K Low: \$50K O&M: NA	Not quantified; benefits are dependent on risk mitigation strategy developed through recommended site-specific study.	2024	DPW/Admin
3-2	Ames Avenue Bridge Resilience	Maintain bridge for access to Smith's Point while protecting it from coastal erosion and flooding through dune restoration (see project 3-4). Continue maintenance and monitoring of existing Ames Avenue Bridge, with future elevation or relocation if necessary based on service population.	Nature-Based	See strategy 3-4	See strategy 3-4	2025	DPW/NRD

- \$1 million allocated at FY24 Town Meeting for #3-2 & 3-4
- Can't do sediment budget until sediment transport study complete

Project Priority



2023-2026 Recommendations							
Strategy ID	Strategy or Project Title	Near-Term Strategy Project Description	Type	Estimated Cost	Estimated Benefits	Target Implementation Date	Champion /Co-Lead
3-4	Madaket Erosion Management Pilot and Ames Avenue Bridge Protection	Dune restoration along shoreline from Madaket Road / Ames Avenue intersection to Esther's Island. Project involves natural dune construction techniques of sand and vegetation with fencing as needed. Project includes need for ongoing nourishment and maintenance of the dune at an interval determined through the design process.	Nature-Based	High: \$96M Low: \$86M O&M: \$1.1M	\$51,000,000	2025	NRD/ Property Owners
★ 3-5	Department of Public Works Facility and Landfill Resilience	Building scale resilience and operational resilience planning to reduce risk of damage and limit disruption to core operations at the facilities. The first step in this recommendation is a site-specific study to determine the appropriate risk mitigation approaches for the facility.	Structural	High: \$300K Low: \$150K O&M: NA	Not quantified; benefits are dependent on risk mitigation strategy developed through recommended site-specific study.	2024	
4-4	Numerical Modeling Study of Coatue Breaching	Numerical modeling study to evaluate the likelihood and consequences of Coatue breaching for the Harbor and surrounding communities, including impacts to habitat and navigation, in order to inform decisions about future adaption measures on Coatue.	Non-structural	High:\$800K Low \$350K	NA	2026	NRD/ Property Owners
5-4	Sconset Bluff Nearshore Breakwaters Feasibility Study	Conduct detailed feasibility study to assess technical constraints, potential impacts, and benefits and costs of nearshore breakwaters along the Sconset Bluff .	Non-Structural	High: \$800K Low: \$600K O&M: NA	N/A	2030 and re-evaluate	NRD/Admin
★ 6-2	Surfside Wastewater Treatment Plant Dune Restoration	Dune restoration and construction to reduce risk of erosion to critical infrastructure. Hard core dunes are appropriate in this location given risk to critical facilities. Project includes need for ongoing nourishment or installation of near-shore underwater sand berm. Strategic relocation alternatives for settling tanks closest to the coast at the wastewater treatment facility should be pursued in parallel.	Nature-Based	High: \$38M Low: \$33M O&M: \$420K	Not quantified; qualitative benefits include long-term mitigation of risk to infrastructure and assets, which could result in loss of service for the WWTF.	2025	Sewer/NRD
★ 6-4	Surfside Emergency Access Planning	Develop emergency access and service plan for Surfside Neighborhood to ensure access to coastal areas in event of loss of service along Nonantum and Nobadeer Avenues, particularly near Lovers Lane.	Non-structural	\$50,000	N/A	2025	PLUS/NRD

Project Priority

01

02

03

Priority	High Estimate in 2023 \$	Low Estimate in 2023 \$
1 (high)	\$153,672,000	\$136,230,000
2 (moderate)	\$2,109,000	\$1,311,000
3 (low)	\$57,000	\$22,800
TOTAL	\$155,838,000	\$137,563,800

- Majority of \$ for Surfside Wastewater Treatment Plant (high = \$43 million) and Madaket Erosion Management and Ames Ave. Bridge Resilience (high = \$109 million) leaving about \$4 million from high estimate for the other projects
 - Wastewater Treatment = capital?
 - Madaket resilience = break up into smaller pieces and focus on public parking lot and end of Madaket Road

*Projects in matrix = \$1.4 million total for years 2023-2026

Flooding Pictures from the January 10th & 13th 2024

Leah Hill

Coastal Resilience Coordinator



January 10, 2024



January 10, 2024



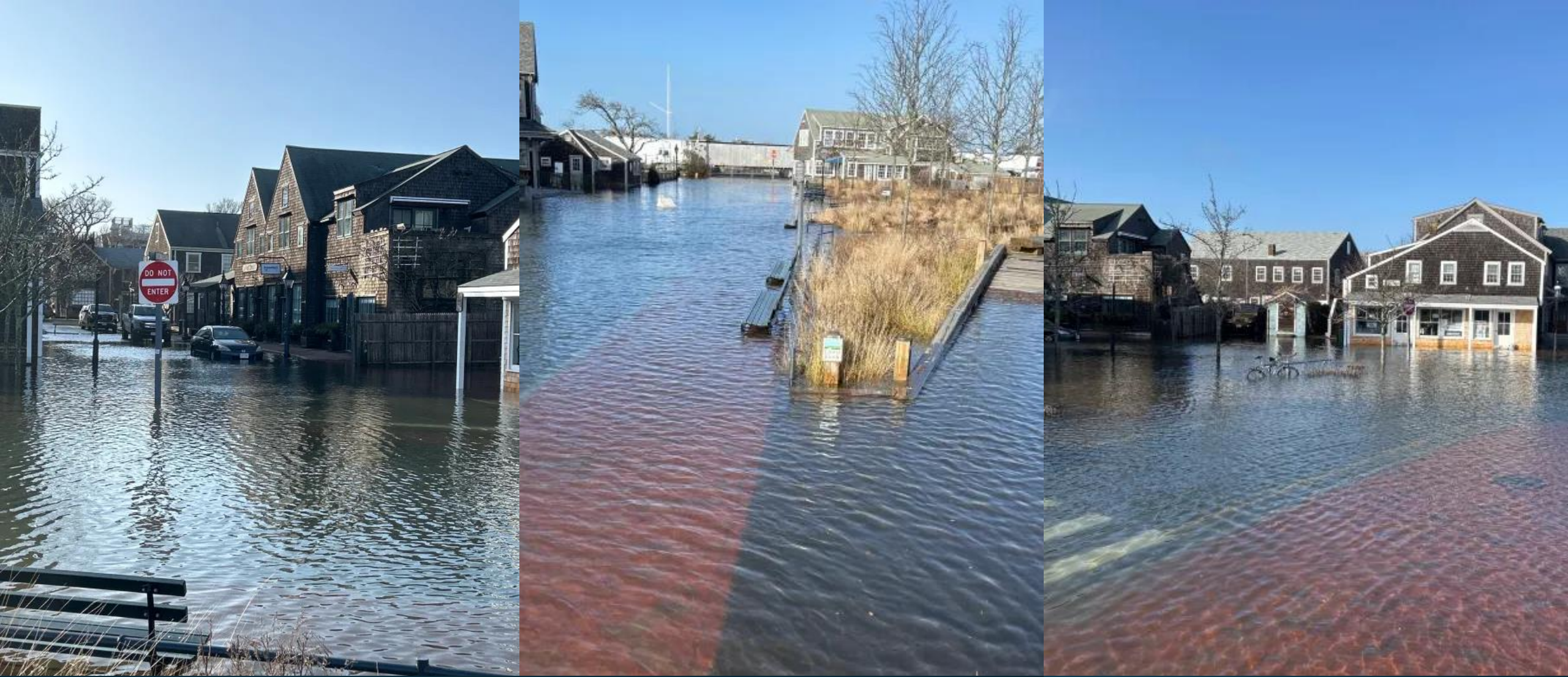
January 10, 2024



January 13, 2024



January 13, 2024



January 13, 2024

January 13, 2024

