



MEETING POSTING

TOWN OF NANTUCKET

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Committee/Board/s	Coastal Resilience Advisory Committee
Day, Date, and Time	Tuesday, March 12, 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-g5h2jluAn_2jqoc12L
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!

Coastal Resilience Advisory Committee

Agenda for Tuesday, March 12, 2024, at 10 am

A. Convene in Open Session via Zoom

Join Zoom Meeting

<https://us06web.zoom.us/j/86863383148?pwd=YkE0YUVNMIU1NnpwYTJ6clg4U241QT09>

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. Update and discussion on bylaw and home rule petition for Island's Coastal Resilience Districts and betterments by Kate Edwards, Principal Engineer for Arcadis, and Vicki Marsh, Town Counsel for Nantucket- see packet.
5. Follow up discussion with Kim Starbuck, Senior Research Associate at the Urban Harbors Institute, and Alan Bartels, Research Assistant at the Urban Harbors Institute, regarding coastal resilience goals and recommendations within the Nantucket and Madaket Harbor Action Plan- see packet.
6. Discussion on ranking 2023-2026 Coastal Resilience Plan recommendations that have not been started- see packet.
7. Edits, discussion, and approval of CRAC's 4th quarter update for Select Board- see packet.
8. Public outreach ideas/strategies from committee members
 - Updated media scorecard summary by Doug Rose
9. Approval of Minutes from November 28, 2023; January 9, 2024; January 23, 2024; February 13, 2024
10. 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.
 - Update on Steamship Authority's resilience planning- Leah Hill
 - Update on Washington St. Resilience Framework-Leah Hill
 - Update on Con Comm's Wetland Regulations- Tim Braine
11. Discussion of upcoming meeting dates and topics: Next Meeting is March 26, 2024, on Zoom.
12. Motion to adjourn

BETTERMENTS AND COASTAL RESILIENCE DISTRICTS PROJECTS

Betterments and special assessments - a tax on real property

A betterment assessment or special assessment is a tax on real property by which a city, town, district, or county acting through its authorized board can recover some or all of the cost to the governmental body of a public improvement. General Laws Chapter 80, enacted in the mid-1800's, covers the assessment of betterments. Note that although assessments for water, sewer, stormwater drains and sidewalks are covered by other statutes, the provisions of Chapter 80 regarding apportionment of payments of over a term of years, reassessment of invalidly assessed betterments, division of an assessment between portions of property later divided; abatement of assessments that exceed the special benefit to a particular property, collection of assessments, liens to secure collection, and interest on assessments, apply to these special assessments as well.

The assessing board for public improvements is the board or commission having custody or control of such ways or other land on which improvements shall be made, which may be the Select Board for Town ways or improvements and the County for ways or improvements made by the County. the having Betterments may be assessed only within a limited and determinable area that derives a special benefit from the improvement beyond the general advantage to the community. G.L. c. 80, § 1.

The following is a brief summary of the betterment process:

1. Town Meeting needs to appropriate funds for the public improvement project. Town Meeting does not have to authorize the Select Board to assess betterments.
2. The Select Board must make an order that the project will be undertaken and that betterments will be assessed.
3. The Select Board must record a statement of that order with the Nantucket Registry of Deeds, or if registered land, with the Nantucket Registry District of the Land Court, within ninety (90) days of that order.
4. Within six (6) months from the date the project is completed and the final project costs are known, the assessment is made by the Select Board and certified to the Board of Assessors. The amount assessed may not exceed the amount previously estimated, or the actual cost of the project, whichever is lower.

The following is a discussion of issues relating to betterment assessments:

Constitutionality of betterments; need for proportionality and special benefits

The Massachusetts Constitution requires that all taxes be proportionate. In assessing betterments, the board must determine the value of the benefit to all privately-owned land within the specially benefitted area and assess upon each parcel of land a proportionate share of the cost of the improvement. If publicly-owned land also obtains a special benefit, the benefit to that land should be taken into consideration in determining the portion of total project cost to assess as a betterment or the assessing board may allocate total project costs in such a manner as to include the publicly-owned land, although the town would not assess a tax upon its own property, and may not assess the Commonwealth or any of its subdivisions, agencies or instrumentalities or by recording an order or statement obtain a lien upon such publicly-owned property.

Although the ultimate test is how much the improvement has added to the fair market value of the property (Driscoll v. Inhabitants of Northbridge, 210 Mass 151 (1911), 151 (1911)), the board may uniformly apply a formula in making the assessments, based on factors such as frontage and area of a parcel of land, that are reasonably likely to yield proportionate assessments, and estimated assessments based on such a formula and liens based thereon may not be challenged as invalid based on alleged disproportionate assessment with regard to a particular parcel.

Betterments are constitutional only when based on special benefits, and are illegal if in substantial excess of such benefits. Sayles v. Public Works of Pittsfield, 222 Mass. 93 (1915). Betterments may be assessed against properties which receive a direct benefit from the public improvements, and also against properties which receive a more remote benefit; however, the assessing entity will need to distinguish between those properties receiving a direct, rather than an indirect, benefit, in determining the amount to be assessed against the types of properties. In re Opinion of the Justices, 261 Mass. 556 (1927).

Special assessments

Although the terms are often used interchangeably, a betterment is described at G.L. c. 80, § 1, and authorizes an assessing entity to impose a property tax upon an area which receives a benefit or advantage other than that shared by the general community. A common example is the establishment or improvement of a public way.

There are four statutory special assessments:

Water Special Assessments. Any town having a water supply or water distributing system may authorize the levy of special assessments for the costs incurred in laying pipes in public or private ways, as well as the expenses of other material and labor, for the conveyance or distribution of water to its inhabitants. G.L. c. 40, § 42G.

Sewer Special Assessments. A person who enters his particular sewer into a common sewer, or who by more remote means receives benefit thereby, shall pay to the town a proportional part of the charge of making and repairing the common sewer, and the charge, not already assessed, of making and repairing other common sewers through which the same discharges. G.L. c. 83, § 14. A town may adopt a system of sewerage for a part or all of its territory, and may provide that assessments be made upon owners of land within such territory. G.L. c. 83, § 15. A town by bylaw may separate the costs of general benefit facilities, such as pumping stations trunk and force mains, from that of special benefit facilities. G.L. c. 83, § 15.

Stormwater Drain Special Assessments. A person who enters his particular drain into a main drain, or who by more remote means receives benefit thereby, shall pay to the town a proportional part of the charge of making and repairing the main drain, and the charge, not already assessed, of making and repairing other main drains through which the same discharges. G.L. c. 83, §14.

Sidewalk Special Assessments. Construction of a new sidewalk or the reconstruction of an existing sidewalk may be the subject of a special assessment, so long as the board making the order does not assess more than half the cost upon the abutting properties. G.L. c. 83, § 26.

The provisions of Chapter 80 relative to the apportionment, division, reassessment, abatement and collection of assessments, and to interest, apply to assessments made under Chapter 40 and Chapter 83.

Properties exempt from betterment assessments

Properties owned by governmental entities are exempt from betterments and special assessments. Individuals, charities, religious and other organizations, otherwise eligible for full or partial exemptions from annual property taxes, are not exempt from betterments and special assessments.

Allocation of costs of project cost among the properties benefited

The Select Board must proportionately allocate the cost of the public improvement among the properties that benefit from the improvement. There are a number of methods employed. Under Chapter 80, the assessing board has discretion to choose the method to use. For water, sewer, drain and sidewalk betterments, statutes prescribe methods among which the assessing board may elect.

For betterments Under Chapter 80, within six (6) months from completion of the improvements, the assessing board determines the value of the benefit or advantage to the various properties, and assesses upon each property a “proportionate” share of the costs of the public improvement. The statute does not set forth any particular method (such as lot frontage or area) which the assessing board must employ. As mentioned, a vote of Town Meeting to assess betterments is not required, since the Select Board is authorized by statute to assess betterments whenever a limited and determinable area receives special benefit or advantage from a public improvement made by or in accordance with the formal vote or order of a board. G.L. c. 80, §§1 and 2.

Assessment process – the pre-construction order – creating the lien

The board must formally adopt an order or vote for construction of an improvement, describe the area to be benefited by the project, and state that betterments or special assessments will be assessed. (Betterments, G.L. c. 80, § 2; Water Special Assessments, G.L. c. 40, §§ 42I; Sewer/Drains/Sidewalks, G.L. c. 83, §§ 25 and 27).

Such an order may adopted or vote taken at the same time as an order of layout or an order of taking or other order the board is authorized to make, or at the time the board votes to enter into a contract for the construction of an improvement, or to approve borrowing that has been authorized for the improvement. Although it may be difficult to precisely estimate total project cost at this stage, to avoid challenges to the validity of an assessment, I recommend that the order

or vote be made and recorded early in the process, and it must be made prior to project completion and final assessment of betterments.

For betterments other than water, sewer, drain or sidewalk, such order (or vote) must contain a description sufficiently accurate for identification of the area which it is expected will receive such special benefit or advantage. G.L. c. 80, § 2. The order must refer to a plan of such area (which can be an assessors plan showing the benefitted parcels), and must contain an estimate of the betterments that will be assessed upon each parcel of land within the area. G.L. c. 80, § 2.

Such order and plan and estimate must be recorded with the registry of deeds within ninety (90) days from the adoption of the order. G.L. c. 80, § 2. If the order, however, pertains to improvements to a way that is to be accepted, relocated or altered as a public way, the order may be recorded within ninety (90) days from the acceptance by a town of the laying out, relocation or alteration in case such acceptance is required before the establishment of the way. G.L. c. 80, § 2.

Betterments may not be assessed unless such order is recorded as so provided, nor upon any parcel of land not within such area, nor for a greater amount than such estimate. G.L. c. 80, § 2. I recommend that the Town estimate costs conservatively, so that actual costs do not exceed the estimate.

Not all of the requirements of G.L. c.80, which governs betterment assessments generally, apply to water, sewer, drain or sidewalk assessments. For example, the requirement of G.L. c.80, §1 that assessments be imposed within six(6) months after the completion of the improvement does not apply to sewer or water assessments. Gudanowski v. Northbridge, 17 Mass. App. 414 (1984). For sewer, drain and sidewalk assessments, whenever the appropriate board lays out or determines to construct a sewer, drain or sidewalk, and assessments may be made under Chapter 83 for the construction of such improvement, they must “forthwith” cause to be recorded a “statement” of their action, which shall specify the ways in which such sewer, drain or sidewalk is located. The recording of that statement creates a lien to secure the collection of the assessments that are later to be assessed. G.L. c. 83, § 27. For water improvements, the board must likewise forthwith record a similar statement. G.L. c.40, §42I. Note the absence of any requirement to record a plan of the benefitted area, or for a pre-construction estimate of the assessments to be recorded, as compared with G.L. c. 80, § 2.

Lien to secure collection

A lien takes effect upon the recording of the order stating that betterments are to be assessed. If the Town Meeting elects by vote or by its bylaw, to defer recording a lien, the Collector would send notice to the owners of the land assessed indicating the amount of the assessment, and if said owner pays the amount in full within 30 days, no lien would be recorded for that particular property. The Select Board should then record an order or statement for all the properties whose owners did not pay in full, which then creates the lien for collection of the unpaid amount assessed upon those properties. G.L. c. 80, §12.

The law in regard to the collection of annual taxes, to the sale of land for the non-payment thereof and to redemption therefrom applies to betterment assessments. G.L. c. 80, §4.

Collection

G.L. c. 80, § 4 provides that, within a reasonable time after making the assessment, the Select Board shall certify to the Assessors the list of assessments; the assessors then must forthwith commit such assessments with their warrant to the Tax Collector. The Tax Collector then must forthwith send notice to the person designated as the owner of each parcel assessed and demand payment of the assessment. Usually, the Select Board, the Assessor and the Collector work together to make sure the certification, the commitment and the sending of the notice to the owner occur within not more than a few days. The Collector has the same powers and is subject to the same duties with respect to such assessments as in the case of the annual real estate taxes, including the power to sell land for non-payment, but the property owner is **not** personally liable for payment of the betterment or special assessment.

Interest

In order to avoid interest accruing upon an assessment, the owner must pay the amount due within 30 days from the commitment (that is, from the date the Assessors advise the Tax Collector of the assessments). Interest is assessed upon the unpaid amount from 30 days after the date of commitment to the date when interest on taxes becomes due and payable once the apportioned assessment (see below) has been added to the annual taxes due on the property, at 5% per annum, or at the election of the Town by Town Meeting vote or bylaw, 2% above the rate of interest for borrowing for the improvement to which the assessment relates. G.L. c.80, 13. If the Town has not borrowed for the improvement or has borrowed at a zero or other very low rate and wants to pass on that rate to the assessed owners without a 2% premium, a special act would be needed; otherwise interest at 5% or (if elected) 2% above the borrowing rate or if zero then at 2%, must be imposed. Note that after an assessment, or apportionment of an assessment (see below) has been placed on the annual tax bill, the total amount of said bill shall be subject to 14% interest under G.L. c.59, §57.

Apportionment

An owner may elect to pay the assessment in installments, not to exceed 20 annual payments. If the owner makes no election, the Board of Assessors may divide the assessment into equal portions not to exceed 20. G.L. c.80, §13. Typically, all owners electing to apportion payments, and the assessing board choose the full 20 years. The assessors then add one of said portions, with interest on the amount remaining unpaid to the date when interest on taxes becomes due and payable, to the first annual tax upon the land and then add to the annual tax for each year thereafter one of the portions and one year's interest on the amount of the assessment remaining unpaid until all such portions have been added, and includes the apportioned assessment with interest on the annual tax bill.

Termination of lien

Generally, if there has been no conveyance of the property to a third party, the property remains subject to the lien until the assessment has been paid in full. If there has been a conveyance of the property, the lien terminates at the expiration of two (2) years from October 1 of the year in which the assessment is first placed on the annual tax bill, or, if an assessment has been apportioned, from October 1 of the year in which the last portion is placed upon the annual tax bill, whichever is later. G.L. c. 80, §12.

Dissolution of lien

A lien is dissolved by the recording or registration with the Registry of Deeds by the Collector of Taxes of a certificate, on a form approved by the Commissioner of Revenue, stating that the assessment constituting the lien, together with any interest and costs associated therewith, has been paid or legally abated. Although it is a good practice, and seemingly required under G.L. c. 60, §23, for a collector upon request for a certificate of municipal liens to include in the certificate all liens to secure the collection of betterments and special assessments, the failure to do so will not discharge the lien (unlike other tax liens) because the lien is for an assessment with respect to which there has been filed for record or registration a statement or order creating or continuing such lien and such lien can be discharged only by the recording or registration of a release of lien under G.L. c. 80, §12. G.L. c. 60, §23.

Extension for vacant land.

The board making the order for the assessment of any betterment upon land which is not built upon may extend the time of payment of the assessment until it is built upon or for a fixed time; but interest at the rate of 4% per annum must be paid annually upon the assessment from the time it was made, and the assessment must be paid within 3 months after such land is built upon or at the expiration of such fixed time. G.L. c. 80, §13A.

Deferral for low-income elderly domicile owner.

In a Town that accepts the provisions of G.L. c. 80, §13B, the Select Board must, upon application by an owner of real property assessed, if the owner is eligible for an exemption under G.L. c. 59, §5, cl. 41A with regard to taxes assessed on his domicile, as a low-income elderly owner, enter into a deferral agreement with such owner on behalf of the Town. Such agreement must provide that no sale or transfer of such real property may be consummated unless the betterment assessment has been paid in full with interest, and that upon the demise of the owner, the assessment with interest must be paid in full by the owner's estate, unless the owner leaves a surviving spouse, the spouse also has a right to enter into a deferral agreement, and the assessment cannot be collected during the life of the surviving spouse unless the property is sold or transferred. Once the provisions of G.L. c. 80, §13B are accepted, the right to such a deferral applies to all betterments and special assessments thereafter assessed.

Division of assessed land.

If land that is subject to a lien for an assessment is subsequently divided by sale, mortgage, partition or otherwise and such division has been duly recorded in the registry of deeds, the board may, or upon the written request of the owner or mortgagee of a portion thereof, shall, proportionately divide said assessment and the costs and interest accrued thereon, among the several parcels into which said land has been divided. At least 7 days prior to making the division, the board must send registered-mail notice to all owners of any interest in the land assessed of the board's intention to make such division and of the time appointed therefor. A person aggrieved by the action of the board in making such division may seek an abatement.

Reassessment.

If an assessment is invalid and has not been paid in full or has been paid under such circumstances that it can be recovered back from the town by the payer, it may be reassessed by the board in the amount for which the original assessment ought to have been made, at any time

before the expiration of two years from the date of the assessment, if the land has in the meantime been alienated; otherwise at any time before the alienation thereof. G.L. c. 80, §16. Cases annotated under this section are not helpful in illuminating the circumstances under which a board may undertake such a reassessment. Since only assessments that are “invalid” may be so reassessed, I have not seen this process used. It could be used, for example, if a court determined that an assessment was invalid because not all benefitted real property was assessed, and the board then undertook to reassess all benefitted real property, thus reducing the assessment of those properties that were originally invalidly assessed.

Abatements.

Abatements are provided for under Sections 5-10A of Chapter 80. An owner of any real estate upon which betterments have been assessed may, within 6 months after notice of such assessment has been sent out by the Collector, file with the Select Board a petition for an abatement, and the Select Board must grant such abatement as may be necessary to make such assessment conform to Section 1 of Chapter 80 (essentially, to make the assessment proportionate). An owner who is aggrieved by the refusal of the Select Board to abate an assessment in whole or in part may appeal to the Superior Court under Section 7 or to the County Commissioners under Section 10. Abatements will be the subject of a separate session.

Municipal Finance

The Massachusetts Department of Revenue advises that income from payment of betterment assessments must be deposited in the general funds of the town, absent a special act providing that income be deposited to an enterprise fund or debt-repayment fund. DOR notes that betterment income is not derived from the enterprise, as would be the case with a user charge. Municipal clients should be advised with plenty of lead time that if it is intended that income be available for the enterprise or for debt repayment without appropriation, a special act will be needed.



Coastal Resilience Districts Overview

Coastal Resilience Advisory Committee

Open Meeting

Nantucket, MA | March 12, 2024



Agenda

- 1 Basics of Coastal Resilience Districts
- 2 Nantucket Context
- 3 Discussion



Basics of Coastal Resilience Districts



What is a Coastal Resilience District (CRD)?

- Specially-established district in areas with specific coastal resilience and risk mitigation needs
- Complements existing zoning, buildings codes, and other land use laws and regulations to implement resilience measures
- Clearly-defined geographic boundaries
- Flexible in application and size



What is the purpose of a CRD?

- Enhances a municipality's ability to manage funding, infrastructure construction, and general improvements related to coastal resiliency matters
- Enables a municipality to collect needed funds for coastal resiliency projects in the district
- Provides a mechanism through which projects are funded by the property owners that benefit from them



How does a municipality in Massachusetts establish a CRD?

- Special act of legislature
 - Home rule petition approved by Town Meeting and then filed with state legislature.
- Municipal bylaws and regulations
 - Adopted by municipality
 - Could be zoning bylaw or general bylaw
 - Must be approved by Massachusetts Attorney General



Precedents

Raymond L. Flynn Marine Park Climate Resiliency Infrastructure Funding Mechanism (Boston)

- Example of a resilience financing district
- Tenants of the park pay a pro rata share of BPDA and/or City of Boston flood mitigation investments in the RLFMP.
- Payments assessed the year after an infrastructure investment is completed and amortized over 30 years at the interest rate available to the BPDA to finance the investment at the time.
- Annual payment capped at \$250,000 per year (2022), escalating annually based on the rate of inflation.

Resilience Authorities (Maryland)

- State legislature enable the creation of resilience authorities by counties and municipalities.
- Authorities:
 - Fund resilience infrastructure projects within their respective geography.
 - Have non-profit status, and subsequent grant eligible.
 - Issue bonds
- Allows for decision-making outside of the political process.



Nantucket Context



How are CRDs defined for Nantucket?

- The land constituting the Islands Coastal Resilience District (the “ICRD”) is the entirety of the Island of Nantucket and Tuckernuck and Muskeget
- Purpose is to provide for shared funding among the property owners in the respective Coastal Resilience Districts who benefit from the coastal resilience projects and improvements.
- Funding for planning, construction, monitoring and maintenance of coastal resilience projects in the respective Coastal Resilience Districts.
- The establishment of the ICRD and the Sub-Districts will enable the Town to undertake coastal resilience projects to mitigate against the effects of coastal erosion and shoreline change to the Town’s coastline, sea level rise, flooding or other coastal hazards with resilience related infrastructure



Nantucket Islands

Islands Coastal Resilience District

Island boundaries depicted as of approximately 2020.



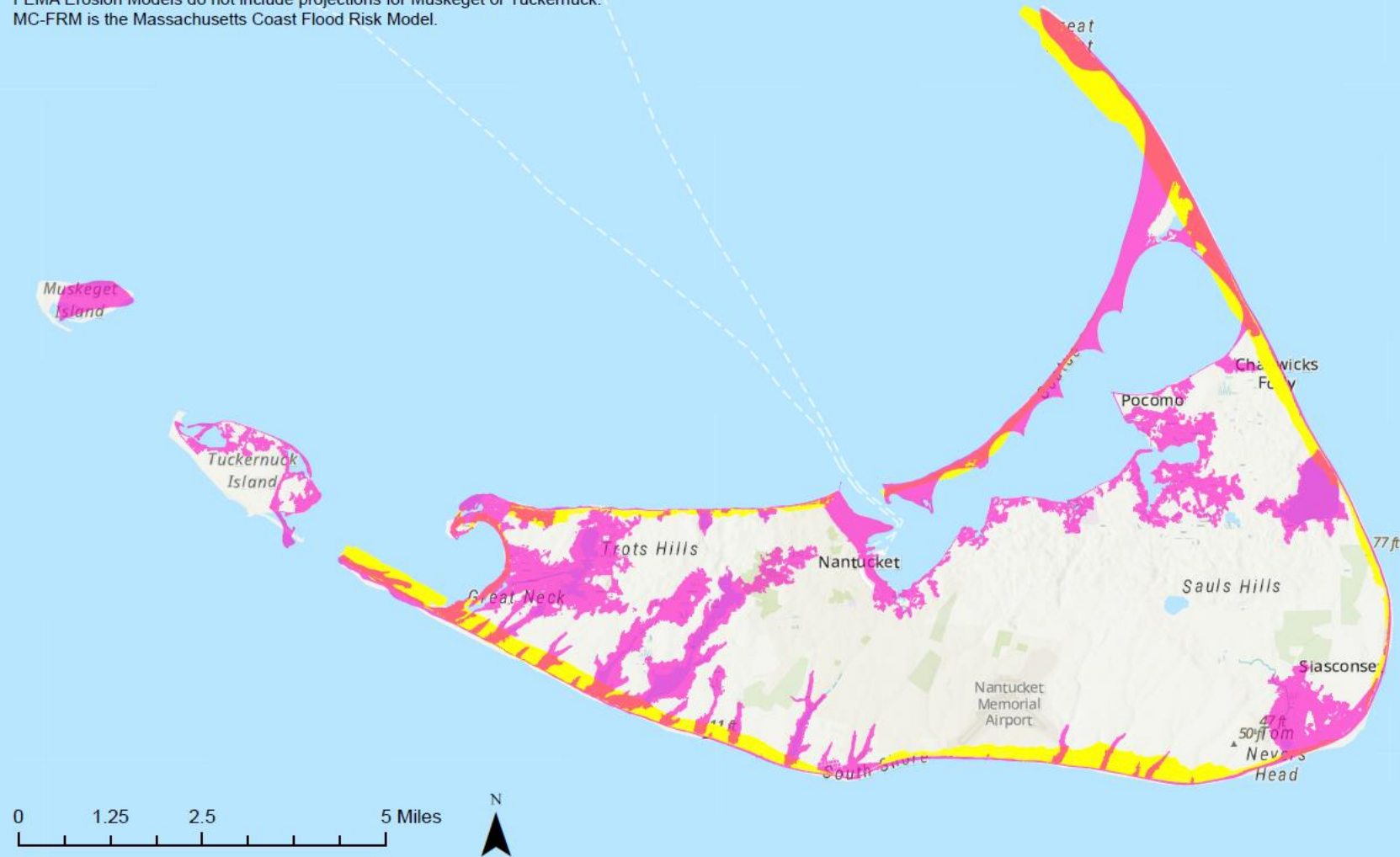
- Initial district incorporates the entire Town and County
- Moving forward, sub-districts could be formed with Select Board approval.



Coastal Risk Areas

- 1% Annual Chance Floodplain in 2070 (MC-FRM)
- Erosion Hazard Areas by 2100 (FEMA)

FEMA Erosion Models do not include projections for Muskeget or Tuckernuck. MC-FRM is the Massachusetts Coast Flood Risk Model.



Esri, NASA, NGA, USGS, FEMA, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Sub-districts may be defined based on existing and predicted flood and erosion hazards.



What are the benefits of a CRD for Nantucket?

- There are many recommendations for critical capital improvements in the Coastal Resilience Plan
- Town needs a mechanism to fund and implement recommended projects
- CRDs would allow funds to be raised from the people who benefit
- Has the potential to cover operations and maintenance costs in addition to design and construction
- Aligned with purpose of the Flood Hazard Overlay District as set forth in the Town's Zoning Bylaw, §139-12 H



What is the current proposal on Nantucket?

General Bylaw

- Town can create CRD by approval of general bylaw at Town Meeting
- However, this bylaw does not authorize the Town to assess betterments within the CRD.

Home Rule Petition

- Special legislation at state level
- Town is authorized to assess betterments within the CRD
- Defines geographic boundaries of the district
- Authorizes Town to undertake the necessary projects to protect the property and residents in the district and the utilities and public roadways serving the district
- Authorizes Town to fund projects through the assessment of betterments on the properties benefitted by said projects



*In Massachusetts, cities and towns have limited powers under state law. A **Home Rule Petition** is a request from a city or town for a new type of power from the state legislature.*

Definition adapted from Somerville Community Corporation



Process

We Are Here

Step 1

**General Bylaw Proposed
Home Rule Petition
Proposed**

2

**General Bylaw and Home
Rule Petition Approved at
Town Meeting**

3

**Home Rule Petition
Submitted to State**

4

**Home Rule Petition
Considered by State
Legislature**

5

**Home Rule Petition
Approved by State
Legislature**

6

**Select Board considers
how best to establish sub-
districts and payment
structure**

7

**Sub-districts and payment
structure established.**



***Moving forward, ongoing
consideration of sub-
district boundaries and
authorization of payment
structure.***



What is the **next** step for Nantucket?

- Town meeting vote on two warrant articles
 - Home Rule Petition (Article 67)
 - General Bylaw (Article 69)



Betterments Discussion

- Statutory authorization – currently an option for funding projects. Will require town to define the area to benefit.
- Town must appropriate the funds up front (for any betterments). Requires vote of Town Meeting.



Discussion



Betterments and Special Assessments

Assessment and Collection Procedures

Prepared by the Division of Local Services, April 2001

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BETTERMENTS AND SPECIAL ASSESSMENTS

Assessment and Collection Procedures

I. NATURE OF ASSESSMENT

A. Special Property Tax

A betterment or special assessment is a special property tax that is permitted where real property within a limited and determinable area receives a special benefit or advantage, other than the general advantage to the community, from the construction of a public improvement. If properties abutting or nearby the improvement are specially benefited, all or a portion of the cost of making that improvement may be assessed on those properties. Union Street Ry. v. Mayor of New Bedford, 253 Mass. 304 (1925).

B. Assessment Standard

Assessments of the project costs must be reasonable and proportional and not substantially in excess of the special benefits received from the improvement.

1. Definition: A special benefit is defined as an enhancement of the value or use of property due to the construction of the improvement.
2. Measurement: A special benefit is measured by how much the particular improvement has increased the fair market value of the property, as between a willing buyer and seller considering all present and future uses to which the property is or may be reasonably adapted in the hands of any owner. Driscoll v. Northbridge, 210 Mass. 151, 155 (1911); Union Street Ry. at 309-312.

C. Exemptions

Properties owned by governmental entities for public purposes are exempt from betterments and special assessments, but individuals, and charitable, religious or other organizations, ordinarily eligible for full or partial exemptions from annual property taxes are not exempt.

II. AUTHORITY TO LEVY ASSESSMENTS

The Commonwealth, a county, city, town or district must have statutory authority to impose a betterment or special assessment for a public improvement.

A. Betterments

The cost of all or a portion of a public improvement made upon formal order or vote of a board of officers of the Commonwealth, a county, city, town or district may be assessed as betterments. G.L. Ch. 80 §1. This typically applies to improvements involving eminent domain takings such as street layouts.

B. Water Special Assessments

Cities, towns and districts may assess all or a portion of the cost of installing water distribution system plant in public and private ways. This includes the cost of pipes, other materials and labor and other incidental expenses. G.L. Ch. 40 §42G.

In order to make the assessments, the city council, town meeting or district meeting must accept G.L. Ch. 40 §§42G, 42H, 42I and 42K (to use uniform unit method) and authorize the assessments for the project by vote, ordinance or by-law.

C. Sewer Special Assessments

Cities and towns may assess all or a portion of the costs of sewer system plant and facilities. This includes the cost of general benefit facilities, such as pumping stations, trunk and force mains, and special benefit facilities, such as mains serving adjacent properties. G.L. Ch. 83 §15.

City council or town meeting authorization by vote, ordinance or by-law is required to make the assessments.

D. Sidewalk Special Assessments

Cities or towns may assess no more than fifty percent of the cost of sidewalk original construction or reconstruction with material of more permanent character, and may by ordinance or by-law limit the amount assessed on each parcel to no more than one percent of preceding year's assessed valuation. G.L. Ch. 83 §26.

III. ASSESSMENT PROCEDURE

A. Ordering Improvement and Assessment

The Assessing Board (City/Town Council, Board of Selectmen, Water/Sewer/Road Commissioners) must formally adopt an order for construction of the improvement that describes the area to be benefited by the particular project and states that betterments or special assessments will be levied for the improvement.

1. Betterments: The order must describe the area to be benefited, referring to a plan of the area, and contain an estimate of the betterments to be assessed on each parcel within the area. G.L. 80 §2.
2. Water Assessments: The order must identify the ways in which the pipes will be laid and describe the parcels not abutting the ways that will be assessed. G.L. 40 §§42G and 42I.
3. Sewer/Sidewalk Assessments: The order must identify the ways in which sewer/sidewalk is located. G.L. Ch. 83 §§25 and 27.

B. Creating Lien

A special assessment or betterment is a lien on the property benefited. In order to enforce collection, the Assessing Board must establish a valid lien. The property owner is not personally liable for the assessment.

1. Recording Requirements

In order to create a lien, the Assessing Board must record the following information at the Registry of Deeds:

- a. Betterments: Order, plan and estimates within 90 days of (1) date order adopted or (2) town acceptance of street layouts, relocation or alterations, if acceptance required. G.L. Ch. 80 §2.
- b. Water Assessments: Order, list of ways and parcels not abutting the ways to be assessed (identify in same way as of prior January 1 for tax purposes using assessors' maps) and list of owners of each parcel to be assessed (as of prior January 1 for tax purposes) "forthwith." G.L. Ch. 40 §42I.
- c. Sewer/Sidewalk Assessments: Order and list of ways "forthwith." G.L. Ch. 83 §27. Should also record list of owners of each parcel to be assessed (as of prior January 1 for tax purposes).

2. Deferred Recording Procedure

The Assessing Board may defer recording the required information for betterments authorized by G.L. Ch. 80, and sewer or sidewalk assessments authorized by G.L. Ch. 83, until after the project is completed, assessments are made, and bills issued and then only for those properties where the assessment was not paid in full within the 30 day period for paying without incurring interest. Use of this option requires city council, town meeting or district meeting authorization. G.L. Ch. 80 §12.

3. Duration of Lien

- a. Arises: The lien exists from the time the recording is made. G.L. Ch. 80 §12; G.L. Ch. 40 §42I; G.L. Ch. 83 §27.
- b. Terminates: The lien terminates two years from October 1 of the year (1) the entire assessment is first added to the tax bill or (2) the last apportioned amount appears on the tax bill, whichever is later, if there has been a recorded alienation during that time. If there has been no recorded alienation during that period, the lien continues until there is a recorded alienation.

Exceptions: The lien will continue: (1) even if there is a recorded alienation, if a suit is brought to challenge the validity of the assessment, for a year after the validity is finally determined; (2) if a sale or taking cannot be made because of federal or state law or proceeding and the collector files a statement at the Registry of Deeds to continue the lien, until payment or abatement; and (3) if time for payment is extended and the collector files a statement at the Registry of Deeds, until payment or abatement.

- c. Dissolves: The lien dissolves upon recording in the Registry of Deeds a certificate from the collector that the assessment, interests, costs have been paid or abated. A charge of \$4 is imposed for each certificate the collector issues to be paid over to the general fund.

C. Assessing Costs

Once the project is completed, the Assessing Board determines the actual benefits to and assesses the cost of the project among the properties.

In some cases, the methods to be used to determine the benefits and allocate the costs are prescribed by statute. If not, the Assessing Board may adopt any method that is reasonably calculated to determine the benefits received so long as it does not result in the assessments being substantially in excess of or disproportionate to those benefits. For example, a frontage, area and/or valuation formula may be appropriate methods for apportioning the cost of various improvements. In addition, it may be permissible to classify properties for assessment purposes into those receiving direct or remote benefits.

1. Betterments: Assessments must be made within six months of project completion. G.L. Ch. 80 §1. No method is prescribed by statute. The amount assessed cannot exceed the estimate recorded. G.L. Ch. 80 §2.
2. Water Assessments: Assessments should be made within a reasonable time after project completion. A city, town or district may adopt by ordinance, by-law or vote one or more of the following statutory methods: frontage, area within fixed depth of way, assessed valuation, or uniform unit (number of existing and potential water units based on existing zoning). G.L. Ch. 40 §§42H and 42K.
3. Sewer Assessments: Assessments should be made within a reasonable time after project completion. A city or town may adopt one of the following statutory methods: fixed uniform rate (frontage, area within fixed depth of way or both frontage and area) or uniform unit (number of existing and potential residential equivalent sewer units based on existing zoning). G.L. Ch. 83 §15.
4. Sidewalk Assessments: Assessments should be made within a reasonable time after project completion. No method is prescribed by statute.

D. Committing Assessments

Within a reasonable time after making the assessments, the Assessing Board certifies them to the assessors. The assessors then commit the assessments to the collector with a warrant. G.L. Ch. 80 §4.

Because interest on unpaid betterments accrues from the 30th day after the commitment not the mailing of betterment notices (See Section IV below), the assessors should not make this formal commitment until the collector has prepared the betterment notices for mailing.

IV. COLLECTION PROCEDURE

A. Assessment Notice

After receiving the commitment, the collector sends a bill showing the amount of the assessment to the owner of each parcel assessed. G.L. Ch. 80 §4.

The collector should include an explanation of the property owner's options and provide a form to request an apportionment from the assessors.

B. Payment/Appportionment

The property owner may pay the assessment in full within 30 days after the assessments are committed to the collector (not after the bills are mailed) without interest. Alternatively, the property owner can pay some or none of the assessment and request an apportionment of the unpaid amount into a maximum of 20 equal portions. The request for an apportionment is made to the assessors. G.L. Ch. 80 §13.

C. Adding Assessments to Tax Bill

The collector must certify the unpaid assessments to the assessors before they complete the annual real estate tax commitment list for the year the assessments will first appear on the tax bill. Any unpaid or apportioned assessments are then collected by adding them to the real estate tax bill and collecting them as part of the tax. G.L. Ch. 80 §13.

1. Timing

Assessments originally committed to the collector on or before January 1 must be added to a tax no later than the tax assessed as of that date.

Example: Assessments committed during calendar year 2000 (*i.e.*, on or before January 1, 2001, which is the assessment date for FY2002 taxes) must be added to a tax commitment no later than the FY2002 commitment and bills.

Assessments committed during calendar year 2000 (*i.e.*, before January 1, 2001) may be added to the FY2001 tax commitment and bill so long as property owners have an opportunity to pay the full assessment without incurring interest before the addition.

2. Amount

- a. Apportionment Requested: If the property owner requested an apportionment, the assessors will add one of the portions with interest.
- b. Apportionment Not Requested: If the property owner did not pay the assessment in full and did not request an apportionment, then the assessors will add the amount of the entire assessment that remains unpaid with interest or may apportion the assessment on their own and add one of the portions with interest.

3. Committed Interest

- a. First Year: In the first year, the entire or apportioned amount is committed with interest on the amount of the entire assessment that remains unpaid calculated from the 30th day after the original commitment until October 1.

Example: The assessments are originally committed on April 1, 2000. They are first added to the taxes assessed as of January 1, 2001 for FY2002. Interest is computed from May 1, 2000 until October 1, 2001. If they were first added to FY2001 taxes, interest would be computed from May 1, 2000 to October 1, 2000.

- b. Subsequent Years: In subsequent years, the apportioned amount is committed with interest on the unpaid balance calculated from October 1 to October 1.

4. Rate

The interest rate to be applied is five percent per year unless (a) a city or town has voted the optional rate, which is two percent above the rate charged the city or town if it borrowed for the project, or (b) a special act establishes another rate. G.L. Ch. 80 §13.

D. Suspensions/Deferrals

1. Suspensions

If the assessed parcel is vacant, then the Assessing Board may extend the time for paying the assessment until the land is built upon or for a fixed time. Interest on a suspended assessment accrues at the rate of four percent per year. For water assessments, payment of both the assessment and interest is suspended. In all other cases, only payment of the assessment is suspended. The property owner must pay the interest annually. Payment of the suspended amount is due within three months after the land is built upon or the fixed time period expires, which applies. G.L. Ch. 80 §13A; G.L. Ch. 40 §42I; Ch. 83 §19.

Assessments on classified forestland, except those for the installation of water pipes to provide fire protection to the forestland, are suspended during the time the land is classified. G.L. Ch. 61 §5. If the assessment is on classified agricultural or horticultural land, the assessment and interest on the assessment may be suspended upon application by the property owner until the use of the land changes. G.L. Ch. 61A §18. If the assessment is on classified recreational land, however, only payment of the assessment may be suspended until the land use changes. The property owner must pay the interest annually. G.L. Ch. 61B §13.

2. Deferrals

If the city or town accepts the provisions of G.L. Ch. 80 §13B, the Assessing Board may permit the deferral of betterment and special assessments for elderly property owners in the same manner as property taxes are deferred.

Only property owners who are eligible for a deferral of their property taxes under G.L. Ch. 59 §5(41A) may defer assessments. They must apply to the Assessing Board for a deferral within six months of the date the assessment notices were sent by the collector. If approved, the Assessing Board will enter into a deferral and recovery agreement with the property owner and will record the agreement in the Registry of Deeds.

E. Prepayment of Apportioned Assessment

After an assessment has been apportioned, the property owner may choose to pay all or a part of the assessment. If a property owner makes a written request to prepay the assessment, the assessors commit the amount of the prepayment, with interest, to the collector with a warrant. If no apportioned amount has been added to the tax, the interest is calculated from the 30th day after the date the assessment was originally committed until the date of prepayment. If an apportioned amount has been added to the tax, then the interest is calculated from October 1 of the year the last portion was added until the date of prepayment and the prepayment will be applied to the final year(s) so as to reduce the payment period. G.L. Ch. 80 §13.

V. PROPERTY OWNER REMEDIES

A. Abatement

1. Deadline

The property owner may seek an abatement of the assessment by filing an application with the Assessing Board within six months of the date the collector mailed the assessment notice. G.L. Ch. 80 §5.

Exception: If a suit challenging the validity of an assessment is brought during the 6 month filing period or within six months after the determination of an earlier lawsuit involving the same challenge, brought within that timeframe, which was dismissed on certain jurisdictional or procedural grounds, the deadline for filing an abatement application is extended until six months after the final determination of the lawsuit. G.L. Ch. 80 §6.

2. Grounds

The grounds for an abatement are that the amount of the assessment (1) is more than the enhanced value of the property attributable to the improvement or (2) reflects a disproportionate allocation of the cost of the project in relation to the enhanced value of the property when compared to other benefited property. Whiting v. Boston, 106 Mass. 89, 97 (1870); Driscoll at 154; Union Street Ry. at 312.

If the value or use of the property is enhanced by the improvement, it does not matter that the property owner did not request or may not use the improvement.

3. Assessing Board Action

The Assessing Board has four months from the date the application is filed to consider the merits of the property owner's claim and to act on the application by granting or denying the abatement. The Assessing Board must notify the property owner within ten days of its decision. G.L. 80 §§5 and 10A.

4. Approved Abatement Applications

If the Assessing Board grants an abatement, the assessors are notified so that they can process the abatement. The assessment as abated is then collected in the same manner as the original assessment. However, if the property owner had paid the assessment in full he is entitled to a refund in the amount of the abatement with interest at the rate of six percent calculated from the date the assessment was paid. G.L. Ch. 80 §5.

5. Appeal of Denied Abatement Applications

- a. Denied: If the Assessing Board denies the application, the property owner may appeal that decision to the County Commissioners or the Superior Court. The appeal must be filed within 30 days after the property owner is notified of the Assessing Board's decision. G.L. Ch. 80 §§7, 10.

If the property owner chooses to appeal to the County Commissioners, he must give notice to the city, town or district within ten days of filing the appeal by mailing a copy, registered mail, to the Assessing Board or the city, town or district clerk. G.L. Ch. 80 §10.

- b. Deemed Denied: If the Assessing Board did not act on the application within four months of the date it was filed, then the application is denied by operation of law and the property owner may appeal in the same manner as if the application had been denied, except that he has 60, rather than 30, days to file the appeal. In addition, if the assessment has been paid in full, the property owner cannot appeal after ten months from the date the assessment was paid. G.L. Ch. 80 §10A.

B. Other Remedies

The property owner may challenge the validity of the assessment because the applicable recording requirements were not met or other procedures for ordering and constructing the improvement or assessing the costs were not followed. If so, an abatement proceeding is not the appropriate remedy.

1. Before Commitment

Before the commitment of the assessments to the collector, the property owner may challenge the validity of an assessment by bringing a civil action in the nature of certiorari, G.L. Ch. 249, §4; Chilson v. Mayor of Attleboro, 247 Mass. 191, 202 (1924), or for a declaratory judgment, California Village Corporation v. Town of East Longmeadow, 4 Mass. App. Ct. 128, 130 (1976); Zambernardi v. Selectmen of Wilmington, 2 Mass. App. Ct. 873 (1974).

These remedies are separate and distinct from an abatement proceeding and the property owner may bring a suit challenging the validity of the assessment and file for an abatement in order to challenge the amount of the assessment. Chilson at 202-203; Hitchcock v. Aldermen of Springfield, 121 Mass. 382, 386 (1876).

2. After Commitment

After the assessments have been committed to the collector, the property owner is limited to the abatement and appeal procedure, Gallo v. Division of Water and Pollution Control, 374 Mass. 278, 288-289 (1978); Gudanowski v. Northbridge, 17 Mass. App. Ct. 414, 421 (1984), and, where the assessment is wholly void, to an action to recover an unlawful tax under G.L. Ch. 60, §98, Wheatland v. City of Boston, 202 Mass. 258 (1909); California Village Corporation at 129.

VI. ADMINISTRATIVE PROCEDURES

A. Property Divided After Assessment

As with real estate taxes, if a parcel is divided by sale, mortgage, partition or otherwise after the assessment has been made and the division has been recorded at the Registry of Deeds, the Assessing Board may, and if requested by the owner or mortgagee of any of the divided parcels, must apportion the amount of the assessment that remains unpaid, including interest and costs, among the divided parcels. The division cannot occur after the property has been advertised for sale or taking for non-payment of the assessment.

The division is to be made so that the amount assessed upon each divided parcel is proportionate to the benefit received by the divided parcel from the improvement. After the division, only that portion of the assessment, interest and costs assessed on the divided parcel constitutes a lien on it.

At least seven days before making the division, the Assessing Board is required to send a notice by registered mail to all owners of the parcel that was divided of its intention to make the division. A property owner may contest the division in the same manner as if the Assessing Board had denied an abatement application.

G.L. Ch. 80 §15.

B. Reassessment

If an assessment is invalid and it has not been paid in full, it may be reassessed by the Assessing Board in the amount the original assessment should have been made. The reassessment must be made within two years of the date of the assessment if there has been an alienation within that time. If not, the reassessment must be made at any time before the property is alienated.

If the reassessed amount has not yet been paid in full, it is a lien on the parcel and is collected in the same manner as the original assessment.

G.L. Ch. 80 §16.

VII. ACCOUNTING FOR REVENUE

Betterments and special assessments are special property taxes. Anticipated revenues from apportioned and unapportioned betterments and special assessments, including committed interest, are treated as estimated receipts when setting the tax rate and actual receipts are credited to the general fund unless:

A. Enterprise Fund

An enterprise fund has been adopted under G.L. Ch. 59 §53F½ for the capital improvement or facility for which the assessments are made. If so, the revenue belongs to the enterprise.

B. Estimated Sewer Assessments

The revenue is from estimated sewer assessments made under G.L. Ch. 83 §15B for a sewer treatment plant or facility. If so, the revenue is reserved for appropriation to pay for the cost of constructing the plant for which the assessments are made or the debt service on the plant.

C. Special Act Betterment Reserves

Special legislation specifically authorizes the betterment and special assessment revenue to be reserved for appropriation to pay for debt service or other purposes.

BETTERMENTS AND SPECIAL ASSESSMENTS

Responsibilities of Parties

I. City, Town or District (City/Town Council, Town/District Meeting)

- A. Accepts any applicable local option provisions.
- B. Authorizes assessments for water and sewer system improvements.
- C. Determines assessment method(s) and percentage of costs to be assessed for some improvements.

II. Assessing Board (Selectmen, City/Town Council, Water/Sewer/Road Commissioners)

- A. Issues order to assess betterments/special assessments for particular project.
- B. Records assessment order and other required information at Registry of Deeds.
- C. Determines benefit and makes assessments on parcels after project completed.
- D. Certifies list of assessments to Assessors.
- E. Grants or denies applications for abatement.
- F. Suspends or extends time for payment on assessments on vacant parcels until built upon or for a fixed period of time.
- G. Enters into deferral and recovery agreement if property owner is eligible for a deferral under G.L. Ch. 59 §5(41A).
- H. Divides assessments proportionately if parcel assessed is subsequently subdivided.
- I. Reassesses assessments under certain conditions.

III. Board of Assessors

- A. Commits list of assessments to Collector.
- B. Apportions assessments with or without request of property owner.

- C. Processes abatements and issues abatement certificate only when notified to do so by Assessing Board.
- D. Issues special warrant if property owner requests to prepay apportioned assessment in full or in part.

IV. Tax Collector

- A. Mails assessment notices.
- B. Certifies unpaid/unapportioned assessments to Assessors for addition to annual real estate tax.
- C. Has same powers and duties with respect to collection of assessments as with real estate taxes.

V. Property Owner

- A. Has no personal liability for assessment which is a lien on property.
- B. Pays bill in full without interest within 30 days of commitment or
- C. Requests apportionment of unpaid assessment and pays annual installments, with interest, until assessment paid in full.
- D. May file application for abatement with Assessing Board.
- E. May appeal denial of abatement to Superior Court or County Commissioners.

BETTERMENTS AND SPECIAL ASSESSMENTS

Schedule of Events

1. City/Town/District takes action required by law to impose assessments such as accepting statutes, authorizing assessments for system, deciding on method for making assessments and on percentage of costs to be assessed.
2. Assessing Board records assessment order and other required information at Registry of Deeds within 90 days of order for betterments under G.L. Ch. 80 or forthwith for water, sewer and sidewalk assessments, unless the deferred recording procedure applies and is elected.
3. Assessing Board determines benefit and makes assessments within 6 months of project completion for betterments under G.L. Ch. 80 or within a reasonable time for water, sewer and sidewalk assessments.
4. Assessing Board certifies assessments to the Assessors within a reasonable time after making them.
5. The Assessors commit the assessments to the Collector forthwith.
6. The Collector mails the assessment notices.
7. The assessments are due and payable in full within 30 days after they are committed, unless the property owner requests an apportionment. In that case, the assessments are payable in a maximum of 20 installments with interest.
8. Assessing Board records assessment order and other required information at Registry of Deeds if the deferred recording procedure applies and is elected.
9. The property owner has 6 months from the date the assessment notices are mailed to file an application for an abatement with the Assessing Board and/or to file an application for a deferral of the assessments.
10. The Assessing Board must notify the property owner within 10 days of making a decision to grant or deny the abatement request.
11. If the Assessing Board acts on the abatement application within 4 months after it is filed, the property owner has 30 days to file an appeal with the Superior Court or the County Commissioners.
12. If the Assessing Board did not act on the abatement application within 4 months after it is filed, the property owner has 60 days to file his appeal with the Superior Court or the County Commissioners.

13. If the property owner files the appeal with the County Commissioners, the property owner must notify the Assessing Board or City/Town Clerk within 10 days of filing the appeal.
14. Before the Assessors complete the annual tax assessment, the Collector certifies to the Assessors the amount of any assessments committed on or before January 1 that are unapportioned and unpaid, with interest calculated from the 30th day after the commitment to October 1.
15. The Assessors add the apportioned and unapportioned assessments, including interest, to the annual tax bill.
16. In subsequent years, the Assessors add the apportioned amount, including interest on the unpaid balance from October 1 to October 1.

EXAMPLE
Betterment Or Special Assessment
Payment - Apportionment - Interest

- Sewer assessment \$4000 committed April 1, 2000 - Due May 1, 2000.
- Payment of \$1000 made April 21, 2000 (no interest due on \$1000) leaving balance of \$3000.
- On September 1, 2000, owner wants to pay an additional \$1000. Interest is owed on \$1000 from May 1, 2000 to September 1, 2000.
- **Unpaid balance of \$2000** must be added to a tax **no later than FY2002 actual tax bill** in fall 2001 with interest (Note assessors **may add** unpaid assessments originally committed during calendar year 2000 to **FY2001 actual tax bill** so long as property owners had at least 30 days to pay full assessment without incurring interest, as is case here)
- If entire unpaid balance of \$2000 is added to FY2002 tax bill, interest on that balance would run from May 1, 2000 to October 1, 2001. (If added to FY2001 tax bill instead, interest would run from May 1, 2000 to October 1, 2000).
- **Alternatively**, the \$2000 unpaid balance can be apportioned for up to 20 years, at property owner's direction, or if no directive is given, at the assessors' option.
- **If \$2000 balance is apportioned for 10 years**, assessors must add first \$200 no later than **FY2002** actual tax bill with interest on unpaid balance of \$2000 from May 1, 2000 to October 1, 2001. In second year, \$200 would be added to FY2003 bill with one year's interest (October 1, 2001 to October 1, 2002) on unpaid balance of \$1800 (\$2000 - \$200) and so on until the final \$200 portion is added to **FY2011** tax bill with one year's interest (October 1, 2009 to October 1, 2010) on unpaid balance of \$200. (Again assessors may add apportioned assessments originally committed during calendar 2000 to FY2001 tax bill so long as property owners had at least 30 days to pay the full assessment without incurring interest, as is case here. If first \$200 was added to FY2001 bill instead, interest on unpaid balance of \$2000 would run from May 1, 2000 to October 1, 2000, etc. until final portion is added to FY2010 tax bill with one year's interest on unpaid balance of \$200 from October 1, 2008 to October 1, 2009).
- **On August 20, 2003, property owner decides to prepay in full.** Assessors commit remaining unpaid balance with interest from October 1, 2002 to August 20, 2003. Assuming that the first \$200 was added to the FY2002 tax bill, the interest would have been calculated on an unpaid balance of \$1600.

- **If instead of prepaying in full, the property owner had decided to make a partial prepayment of \$500**, the assessors would commit \$500 with interest on that amount from October 1, 2002 to August 20, 2003. The \$500 prepayment reduces the unpaid balance to \$1100, but is applied to the portions due in the final years of the original 10 year payment period. **In this case, that credit would reduce the payment period by 2 years by eliminating the \$200 portions otherwise due in FY2011 and FY2010 tax bills, and it would reduce the \$200 portion due in FY2009 to \$100.** In the meantime, the assessors would continue to add the new reduced balance in \$200 portions to yearly tax bills, but with committed interest on that balance. Here, \$200 would be added to the FY2004 tax bill with committed interest on \$1100 from October 1, 2002 to October 1, 2003, to the FY2005 tax bill with committed interest on \$900 from October 1, 2003 to October 1, 2004, and so on until the remaining unpaid balance of \$100 is added to the FY2009 tax bill with committed interest on that balance from October 1, 2007 to October 1, 2008.

BETTERMENT PAYMENT SCHEDULE

G.L. Ch. 80 §13

First apportionment added to tax assessed as of January 1 of year betterment committed

LOAN AMOUNT \$10,000 TERM 20 years COMMITTED 4/1/2001				
A	B	C	D	E
FISCAL YEAR	UNPAID BALANCE	INTEREST (x%) (on B)	PRINCIPAL	ADD TO TAX BILL (C + D)
2002	10,000	5/1/2001 to 10/1/2001	500	
2003	9,500	10/1/2001 to 10/1/2002	500	
2004	9,000	10/1/02 to 10/1/03	500	
2005	8,500	10/1/03 to 10/1/04	500	
2006	8,000	10/1/04 to 10/1/05	500	
2007	7,500	10/1/05 to 10/1/06	500	
2008	7,000	10/1/06 to 10/1/07	500	
2009	6,500	10/1/07 to 10/1/08	500	
2010	6,000	10/1/08 to 10/1/09	500	
2011	5,500	10/1/09 to 10/1/10	500	
2012	5,000	10/1/10 to 10/1/11	500	
2013	4,500	10/1/11 to 10/1/12	500	
2014	4,000	10/1/12 to 10/1/13	500	
2015	3,500	10/1/13 to 10/1/14	500	
2016	3,000	10/1/14 to 10/1/15	500	
2017	2,500	10/1/15 to 10/1/16	500	
2018	2,000	10/1/16 to 10/1/17	500	
2019	1,500	10/1/17 to 10/1/18	500	
2020	1,000	10/1/18 to 10/1/19	500	
2021	500	10/1/19 to 10/1/20	500	

(over)

First apportionment added to tax assessed as of January 1 of year after betterment committed

LOAN AMOUNT \$10,000 TERM 20 years COMMITTED 4/1/2001				
A	B	C	D	E
FISCAL YEAR	UNPAID BALANCE	INTEREST (x%) (on B)	PRINCIPAL	ADD TO TAX BILL (C + D)
2003	10,000	5/1/2001 to 10/1/2002	500	
2004	9,500	10/1/02 to 10/1/03	500	
2005	9,000	10/1/03 to 10/1/04	500	
2006	8,500	10/1/04 to 10/1/05	500	
2007	8,000	10/1/05 to 10/1/06	500	
2008	7,500	10/1/06 to 10/1/07	500	
2009	7,000	10/1/07 to 10/1/08	500	
2010	6,500	10/1/08 to 10/1/09	500	
2011	6,000	10/1/09 to 10/1/10	500	
2012	5,500	10/1/10 to 10/1/11	500	
2013	5,000	10/1/11 to 10/1/12	500	
2014	4,500	10/1/12 to 10/1/13	500	
2015	4,000	10/1/13 to 10/1/14	500	
2016	3,500	10/1/14 to 10/1/15	500	
2017	3,000	10/1/15 to 10/1/16	500	
2018	2,500	10/1/16 to 10/1/17	500	
2019	2,000	10/1/17 to 10/1/18	500	
2020	1,500	10/1/18 to 10/1/19	500	
2021	1,000	10/1/19 to 10/1/20	500	
2022	500	10/1/20 to 10/1/21	500	

EXAMPLE

BETTERMENT OR SPECIAL ASSESSMENT PAYMENT SCHEDULE -*Semi-annual Tax Payment System* **

Total Assessment:	\$10,000
Apportionment Schedule:	20 years
Annual Principal Payment:	\$500
Interest Rate:	5%
Commitment Date:	4/1/2001

OPTION 1 - First Apportionment Billed in FY2002

	FY2001	FY2002	FY2003	FY2004	FY2005
Real Estate Tax	\$2000	\$2100	\$2200	2300	2400
Special Assessment	0	500	500	500	500
Committed Interest	0	208	475	450	425
		(5 months on \$10,000) (5/1/2001 to 10/1/2001)	(1 year on \$9,500) (10/1/2001 to 10/1/2002)	(1 year on \$9,000) (10/1/2002 to 10/1/2003)	(1 year on \$8,500) (10/1/2003 to 10/1/2004)
TOTAL DUE	2000	2808	3175	3250	3325
First Half Payment	1000	1758	2075	2100	2125
Second Half Payment	1000	1050	1100	1150	1200

OPTION 2 - First Apportionment Billed in FY200 (must begin billing no later than bill for taxes assessed as of January 1, 2002)

	FY2002	FY2003	FY2004	FY2005	FY2006
Real Estate Tax	\$2000	\$2100	\$2200	2300	2400
Special Assessment	0	500	500	500	500
Committed Interest	0	708	475	450	425
		(17 months on \$10,000) (5/1/2001 to 10/1/2002)	(1 year on \$9,500) (10/1/2002 to 10/1/2003)	(1 year on \$9,000) (10/1/2003 to 10/1/2004)	(1 year on \$8,500) (10/1/2004 to 10/1/2005)
TOTAL DUE	2000	3308	3175	3250	3325
First Half Payment	1000	2258	2075	2100	2125
Second Half Payment	1000	1050	1100	1150	1200

** Betterment May be Included in Preliminary Bill if Issued

EXAMPLE
BETTERMENT OR SPECIAL ASSESSMENT PAYMENT SCHEDULE -*Quarterly Tax Payment System*)

Total Assessment: **\$10,000**
Apportionment Schedule: **20 years**
Annual Principal Payment: **\$500**
Interest Rate: **5%**
Commitment Date: **4/1/2001**

FIRST APPORTIONMENT BILLED IN FY2002

	FY2001	FY2002	FY2003	FY2004	FY2005
Real Estate Tax	\$2000	\$2100	\$2200	2300	2400
Special Assessment	0	500	500	500	500
Committed Interest	0	208	475	450	425
		(5 months on \$10,000)	(1 year on \$9,500)	(1 year on \$9,000)	(1 year on \$8,500)
		(5/1/2001 to 10/1/2001)	(10/1/2001 to 10/1/2002)	(10/1/2002 to 10/1/2003)	(10/1/2003 to 10/1/2004)
TOTAL DUE	2000	2808	3175	3250	3325
<u>OPTION 1</u>	Q1	500	525	550	575
Preliminary - 50% Prior Year <u>Tax</u> Only	Q2	500	525	550	575
Actual - Current Year Betterment/Interest First Billed	Q3	904	1062.50	1075	1087.50
	Q4	904	1062.50	1075	1087.50
<u>OPTION 2</u>	Q1	854	1012.50	1025	1037.50
Preliminary - 50% Prior Year <u>Tax</u> Only <u>and</u>	Q2	854	1012.50	1025	1037.50
Current Year Betterment/Interest First Billed	Q3	550	575	600	625
	Q4	550	575	600	625
<u>OPTION 3</u>	Q1	500	702	793.50	812.50
Preliminary - 50% Prior <u>Total</u> Due	Q2	500	702	793.50	812.50
Actual - Current Year Betterment/Interest First Billed	Q3	904	885.50	831.25	850
	Q4	904	885.50	831.25	850

NOTE: All Examples Uses 50% of Prior Year for Preliminary Taxes, but May Increase to Reflect 50% of Annual 2.5% Levy Limit Increase, Overrides & Exclusions

(over)

FIRST APPORTIONMENT BILLED IN FY2003 (Must Begin Billing No Later Than Bill for Taxes Assessed as of January 1, 2002)

	FY2002	FY2003	FY2004	FY2005	FY2006
Real Estate Tax	\$2000	\$2100	\$2200	2300	2400
Special Assessment	0	500	500	500	500
Committed Interest	0	708	475	450	425
		(17 months on \$10,000)	(1 year on \$9,500)	(1 year on \$9,000)	(1 year on \$8,500)
		(5/1/2001 to 10/1/2002)	(10/1/2002 to 10/1/2003)	(10/1/2003 to 10/1/2004)	(10/1/2004 to 10/1/2005)
TOTAL DUE	2000	3308	3175	3250	3325
<u>OPTION 1</u>	Q1	500	525	550	575
Preliminary - 50% Prior Year <u>Tax</u> Only	Q2	500	525	550	575
Actual - Current Year Betterment/Interest First Billed	Q3	1154	1062.50	1075	1087.50
	Q4	1154	1062.50	1075	1087.50
<u>OPTION 2</u>	Q1	1104	1012.50	1025	1037.50
Preliminary - 50% Prior Year <u>Tax</u> Only <u>and</u>	Q2	1104	1012.50	1025	1037.50
Current Year Betterment/Interest First Billed	Q3	550	575	600	625
	Q4	550	575	600	625
<u>OPTION 3</u>	Q1	500	827	793.50	812.50
Preliminary - 50% Prior <u>Total Due</u>	Q2	500	827	793.50	812.50
Actual - Current Year Betterment/Interest First Billed	Q3	1154	760.50	831.25	850
	Q4	1154	760.50	831.25	850

DLS' UPDATE

Senior Citizen Deferrals

Local officials from a community that is constructing a new sewer system recently asked the Division about the administration of two local option statutes, M.G.L. Ch.80 Sec.13B and Ch.83 Sec.16G. If accepted, these two statutes will permit low income senior citizens to defer payment of betterments and other special assessments and sewer user charges. Specifically, the officials were interested in knowing how the local option deferrals for sewer user charges (or water user charges under M.G.L. Ch.40 Sec.42J) and for betterments and special assessments operate in relation to the property tax deferral provided by M.G.L. Ch.59 Sec.5 Cl.41A. The property tax deferral was discussed in detail in the November 1994 edition of City & Town (Vol. 7 No. 11).

The local option user water and sewer charge deferrals are both administered in conjunction with the Cl.41A property tax deferral. Eligibility to defer user charges is limited to those senior citizens who qualify for and are actually receiving a tax deferral. In the first year a deferral of user charges is sought, the ratepayer would apply to the water or sewer commissioners within the same time limit as for applying for tax deferral, i.e., by December 15, or three months **after the property tax bills** are mailed, whichever is later. If the ratepayer qualifies, the water or sewer commissioners notify the assessors of the amount of user charges to be deferred for the year. The assessors add those charges to and commit them as part of the annual property tax on the property, and defer them along with the tax.

Payment of the deferred charges is secured by the same lien statement recorded by the assessors under Cl.41A; no additional or separate statement is executed or recorded. The deferred charges are added to the Cl.41A tax deferral account established by the collector in the first year the tax deferral was granted. User charges in subsequent years are certified to the assessors by the water and sewer commissioners and deferred in the same manner so long as the ratepayer continues to qualify for a tax deferral. Deferred charges accrue interest at the same rate of 8% per year as deferred taxes and are due and payable at the same time as those taxes, i.e., upon the sale of the property or the taxpayer's death, unless the surviving spouse qualifies and enters into a new tax deferral agreement. However, unlike Cl.41A, there is no limit on the total amount of user charges that may be deferred. In addition, the deferred user charges added to the tax deferral account are not considered when determining whether the Cl.41A tax deferral cap, which is 50% of the taxpayer share of the full and fair cash value of the property, has been reached.

The local option betterment and special assessment deferral, on the other hand, is administered separately from the Cl.41A property tax deferral. Senior citizens do not have to be recipients of tax deferrals in order to defer a betterment or special assessment, but they must satisfy the same criteria as to age, ownership, domicile, residency and gross receipts. Moreover, even if they are receiving Cl.41A tax deferrals, they must enter into separate agreements with the board that assessed the betterment or special assessment for its deferral and recovery. A sepa-

rate lien statement to secure payment of the deferred assessment is also recorded and interest on the deferred assessment accrues at the same betterment and special assessment rate that applies to assessments for the project generally. As with the user charge deferral, however, no limit is placed on the amount that may be deferred.

There are also some differences between the collection procedures that apply to deferred user charges and deferred betterments and special assessments. Because the Cl.41A tax deferral account into which deferred user charges are added is treated as a tax title, the treasurer becomes responsible for collecting all user charges added to the account, as well as the deferred taxes, and the usual tax title interest rate of 16% applies to the charges after they become due and payable upon the sale of the property or the taxpayer's death. If the deferral account is not paid in full when due, the treasurer can proceed with foreclosure proceedings in the Land Court six months after the property sale or taxpayer's death. A deferred assessment account, however, does not have tax title status. Therefore, if the deferred assessment is not paid after it becomes due and payable, it would first have to be added to the next tax assessed on the property, along with the accrued interest, so that the collector could make a tax taking, or certify the amount to an existing tax title account. The treasurer could then proceed with the usual foreclosure process.

The Commissioner of Revenue has not prescribed separate forms for use in the administration of the user charge or betterment and special assessment

continued on page eight

Municipal Fiscal Calendar

February 1

Taxpayers: *Deadline for Payment of 3rd Quarterly Tax Bill Without Interest (if mailed before January 1)*

February 15

Treasurer: *2nd Quarter Reconciliation of Cash (due 45 days after the end of the quarter)*

February 28

Finance Committees: *Continue Budget Review and Develop Recommendations (This date will vary depending on dates of town meeting.)*

March 1

DOR/MDM-TAB: *Notification of Cherry Sheet Estimates for the Following Year (pending action taken by the Legislature)*

The Cherry Sheet is an estimate of: 1) Receipts - local reimbursement and assistance programs as authorized by law and appropriated by the General Court and; 2) Assessments - state and county assessments and charges to local governments. All amounts listed on the Cherry Sheet are estimates. Actual receipts and charges are based on formulas or guidelines for each program. Copies are mailed to all financial officials. If a member of a regional school district, municipalities also receive a copy of the region's cherry sheet and analysis sheet.

Personal Property Owners: Submit Form of List

This is a listing of all personal property filed by the owner with the Assessors each year for the purpose of taxes in the next fiscal year.

Non-Profit Organizations: *Final Filing Date for 3-ABC Forms*

These must be filed on or before March 1 or later if extended by the Assessors. In no event should they be filed later than 30 days after the tax bill is first mailed.

March 31

State Treasurer: *Notification of Quarterly Local Aid Payment on or Before March 31*

8.7M-7/95-12028

City & Town

Division of Local
Services
PO Box 9655

Boston, MA 02114-9655

Address Correction Requested

DLS Update

-continued from page six

deferrals. However, local officials may develop them by making appropriate modifications in the various forms used under CI.41A. Those forms include a deferral application (State Tax Form 97-1), deferral and recovery agreement (State Tax Form 97-2), lien statement and release (State Tax Forms 97-2 and 97-4) and deferral certificate (State Tax Form 97-3).

The accompanying chart on page seven summarizes the differences and similarities in the operation of the three types of deferrals available to senior citizens.

CITY & Town Editorial Board

Managing Editor: *Sharyn Adelman* Bureau of
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Regional Office: *John McAuliffe* Municipal
Data Bank: *John Sanguinet* Division
Contributors: *Kathleen Colleary* James
Crowley, Roger Hatch and Manellen Murphy



Senior Citizen Deferrals of Property Taxes — User Charges — Betterment Assessments							
Deferral Type	Local Acceptance	Application Procedure	Eligibility Criteria	Deferral Agreement and Lien Statement	Maximum Deferral Amount	Interest	Administration
Property Tax M.G.L. Ch. 59 Sec.5 (41A)	No	Annual Application by 12/15 or 3 Months After Tax Bills are Mailed	Be 65 or older as of 7/1 Domiciled in Mass. for Prior 10 Years Owned and Occupied Property as Domicile on 7/1, and Owned and Occupied It, or Any Other Property in Massachusetts, as Domicile for at Least 5 Years Annual Income of \$20,000 or Less (or Local Limit which Cannot Exceed \$40,000)	Deferral Agreement Signed First Year Only Unless Change in Persons with Property Interest Lien Statement Recorded First Year	Deferred Taxes and Interest Cannot Exceed 50% of Taxpayer's Share of the Full and Fair Cash Value of Property	8% Per Annum 16% Per Annum from Date Property Sold or Taxpayer Dies	Assessors Grant or Deny Annual Application, Sign Deferral Agreement, Record Lien Statement, Issue Deferral Certificate/Denial Notice to Taxpayer Collector Certifies Deferred Tax to Tax Deferral Account Treasurer Releases Lien Upon Payment of Entire Tax Deferral Account
Water/Sewer User Charge M.G.L. Ch. 40 Sec.42J M.G.L. Ch. 83 Sec. 16G	Yes	Application in First Year Deferral Sought by 12/15 or 3 Months After Tax Bills are Mailed	Must Receive 41A Tax Deferral for Year's Water/Sewer Bills to be Deferred	41A Deferral Agreement and Lien Statement Covers Deferred Water/ Sewer Charges	None	8% Per Annum 16% Per Annum from Date Property Sold or Taxpayer Dies	Water/Sewer Commissioners Grant or Deny Application, Notify Assessors Annually of Charges to be Deferred Assessors Add Charges to Year's Tax and Defer if Taxpayer Qualifies for 41A, Notify Sewer Commissioners if Taxpayers Does Not Qualify for 41A Collector Certifies Deferred Charges to Tax Deferral Account
Betterment/ Special Assessment M.G.L. Ch. 80 Sec.13B	Yes	Application to Defer Full Assessment by 6 Months After Assessment Bills Are Mailed Application to Defer Apportioned Assessment By 6 Months After Tax Bills on Which Apportionment Appears are Mailed	Must be Eligible to Receive 41A Tax Deferral	Deferral Agreement Signed First Year Only Unless Change in Persons with Property Interest Lien Statement Recorded First Year	None	Application Rate on Betterment/Special Assessment (5% or if Voted by Legislative Body, 2% Points Above Rate Paid by City/Town on Funds Borrowed for Project)	Officials Making Assessment Grant or Deny Application, Sign Deferral Agreement, Record Lien Statement, Issue Deferral Certificate/Denial Notice to Property Owner, Notify Assessors/ Collector of Assessment or Apportionment to be Deferred Collector Releases Lien Upon Payment of Entire Assessment Deferral Account

Compile Betterment Questions by Committee and Staff

Gary Beller:

1. How is the determination made as to whether an improvement expense is a general Island Wide expense or a local community expense?
2. Who can initiate a request for a betterment ? (A town official, a private citizen, renter, taxpayer, voter, a community association the Select Board ?)
3. Who needs to approve betterments? (Select Board, Annual Town Meeting, Community Association)?
4. How is the determination made as to the degree to which the improvement benefits individual homeowners?
5. How are betterments collected, only through tax assessments or by invoice ?)
6. Can betterments be assessed on a multi year basis?

Peter Brace:

1. How do payments work and what is the timeline- can you stretch them out over a number of years? Is there interest too?

Doug Rose:

- Please confirm my understanding of the following:
 - A municipality cannot impose taxes beyond what the state allows. Betterments are a local financing tool that is allowed by the state (see Section 97).
 - Betterments enable municipalities to offer financial help to homeowners (either individually or as groups) that can be used to repair, replace or improve infrastructure that directly benefits those homeowners.
 - Historically, betterments have most commonly been used to pay for one-time construction costs for improvements to a public road. Betterments do not apply to private roads.
 - These sorts of betterments are typically assessed based on square footage or linear footage of the benefitting property.
 - They can be paid in a lump sum, or over time, as a lien via property taxes (w/interest) — at the discretion of the taxpayer.
- On Nantucket, how have betterments been utilized in the past?
 - The only example I'm aware of is Sheep Pond Road (SPR), where homeowners who rely on SPR for access to their homes were assessed a betterment to pay for relocation costs. My understanding is this has worked successfully: all assessments have been paid by the homeowners. Is this accurate?
 - Are there any other examples where betterments have been instituted on the island?
- Comment: Every time we discuss betterments in the context of coastal resilience projects, we get hung up on the issue of operations & maintenance — specifically that while betterments can be used to finance capital improvements, they have not historically been used to encompass ongoing operations and maintenance. So let's focus on capital costs for now:
 - Question: Is there any reason why betterments could not be used to finance some or all of the **capital costs** of a localized resilience project? For example:

- To extend the service life of Ames Avenue Bridge?
- For the raising of Hulbert and Easton Streets?
- Providing alternative access to residents of northern Baxter Road?
- Extending the service life of the F Street Boat Ramp?
- Process questions:
 - In simple terms, what are the steps to initiate the creation of a betterment?
 - Is that process typically led "top down", i.e, by the municipality, or "bottom up", by a group of motivated taxpayers?
 - All betterments must be approved by a vote at Town Meeting?
 - Once approved, what administrative responsibilities does the Town have?
- Relative to the warrant regarding CRDs, does this chart accurately capture the differences vis a vis betterments?

Matt Fee:

Have asked for written staff (including legal) analysis of existing betterments and how they could be used to fund existing and future projects on a one time and yearly basis.

Have received info on why a coastal resiliency district could be better. But not a succinct, clear road map on how to utilize them today. That would be great for CRAC to understand.

Leah Hill

1. How can betterments be used to fund coastal resilience projects and specifically if operation and maintenance can be worked into them?
2. Have they been used in any other Towns/states for these types of projects? If so, give some examples.

Municipal powers needed to implement the Coastal Resilience Plan efficiently & fairly		Within TON's current authority ¹	May require General or Zoning Bylaw	May require Home Rule Petition to establish CRD status
1.	Define geographic area/s for resilience planning purposes.	Subject to SB/CC vote		
2.	Identify properties that will benefit from a CRP project and may be subject to betterments .	Subject to SB/CC vote		
3.	Assess capital costs of CRP projects through betterments to property owners who benefit.	Subject to TM appropriation		
4.	Assess operating costs ² of CRP projects through betterments to property owners who benefit.	TBD pending Town Council		yes
5.	Apportion costs of CRP projects (capital & operating) thru tiered betterments to property owners who benefit.	TBD pending Town Council		
6.	Assess road relocation/alternative access costs (including easements/takings) to property owners who benefit.	Subject to TM appropriation		
7.	Protect TON from financial loss if property owners fail to pay betterments.	Via lien on property		
8.	Prior to construction, secure hold harmless terms from property owners who benefit from a CRP project.	TBD pending Town Council		
9.	Discontinue maintenance/ownership of public roads subject to erosion/inundation.	Subject to SB/CC & TM vote	landlocked properties may be owed damages.	
10.	Update zoning as prescribed in CRP re: at-risk properties, (address set-backs, transfer of development rights, etc.)		yes	
11.	Update wetlands regulations as prescribed in CRP.		yes	
12.	Ensure and expand public access where possible in all CRP projects.	yes		
13.	Own the project: directly control all CRP projects with municipal benefit(s), (incl selection/oversight of contractors).	yes		
14.	Own the data: independently manage the monitoring of CRP projects, (incl selection/oversight of monitoring firms).	yes		

¹ TON Town of Nantucket, SB Select Board, CC County Commissioners, TM Town Meeting, CRP Coastal Resilience Plan, CRD Coastal Resilience District.

² Operating costs should include maintenance, mitigation, monitoring, and escrow funds for cover future removal costs.

Coastal Resiliency Issues and Recommendations for Updated Harbor Plan

The table below contains a summary of issues and recommendations to be considered for the 2024 Nantucket and Madaket Harbors Action Plan Update in the coastal resiliency and climate change section. The left side of the table contains general issues identified in public forums, committee meetings, and interviews during the planning process, while the right side contains potential solutions and recommendations to help address the issues.

Note: Coastal resiliency and climate change will also be discussed in other sections of the plan, as it relates to each section. The section below is primarily about coastal resiliency and the built environment/infrastructure. Coastal resiliency and climate change and how it relates to natural resources, fisheries, water quality, and other topics will be discussed in those sections.

This table is a working document in draft form and comments are encouraged.

Coastal Resilience - Infrastructure	
2023 Issues identified in public forums, committee meetings, interviews (will need to fit under a goal/objective statement)	Suggested solutions/recommendations (most heard from public or committee)
General Issues: 1. Cohesion Between Plans Nantucket Coastal Resilience Plan (2021) is the most recent Town plan with a comprehensive strategy and roadmap up to 2100 dealing with the effects of Climate Change and Sea Level rise in Nantucket and Madaket. The Nantucket and Madaket Harbor Plan should agree with and support other Town Plans.	Have inter-committee meetings to share objectives, challenges, and project prioritizations Work with partners to address identified data/planning gaps: Need Groundwater-SLR modelling, study for where wetlands will develop. Need Research on Floodwall locations. Need Jackson Point Boat Ramp Study. More planning for Alt. Steamship Authority Location. Need study for additional in-town boat ramp. Work with under-represented communities to address their climate needs/interests related to ecological restoration, coastal resilience, relocation, climate disruptions.
2. Rising Sea Levels Nantucket is already experiencing the effects of sea level rise. The NOAA tide gauge for Nantucket, located on Steamboat Wharf, has recorded eight inches of SLR (+0.14in/yr) between 1965 and 2019. Sea level rise is expected to worsen and exacerbate existing coastal problems of flooding and erosion in the future. Sea levels in Nantucket Harbor are projected to rise 2.5-3.2ft by 2100 on average. The Massachusetts Coastal Flood Risk Model by CZM and used by the State details extents and depths of flooding for 2030, 2050, and 2070.	Utilize CRP for flooding and erosion planning. Integrate MCFRM into policies and bylaws. Model wetland bylaw language is available through the Cape Cod Commission and can serve as an example. Model wetland regulations and zoning bylaws will be available through the Commission in the coming months.: https://capecodcommission.org/resource-library/file/?url=/dept/commission/team/projects/Project%20Files/MULTI-TOWN/EEA%20grant%20Responding%20to%20Climate%20Change/EEA%20Deliverables/ModelCoastalResilienceArticle.pdf could be used for many regulatory enforcement measures: bulkhead expansion if elevating houses

Sea level rise increases the probability of hazards such as Storm Surge, Coastal Flooding, Tidal Flooding, and Coastal Erosion, all of which Nantucket and Madaket experience.	Explore the opportunity for strategic retreat in extreme/high-risk areas (buyouts). Develop a stormwater management plan. As part of that, conduct Groundwater - SLR modelling. Join the Community Rating System of National Flood Insurance Program (Rewards communities for measures above federal minimums, discounts to policy holders, improve coastal resiliency, improved public awareness. Municipality - floodplain expert help, conserve resources, safer community).
3. Infrastructure Protection and Prioritization Large public desire to protect shared community infrastructure. General willingness to share costs associated with it. Need to prioritize flooding and erosion prevention projects Downtown, Steamship Wharf, and emergency services identified as most urgent attention	Adhere to project prioritization timeline from CRP. Wet/Dry Proof + Elevate Town Buildings: Harbor Masters, 37 Washington St, 16 Broad St, Downtown Police Station. Raise town dock to [MCFRM X% Y Year] or convert to floating docks.
4. Private vs. Public Cost Erosion and flooding are an island-wide issue Concerns on how the town will fund the projects in the CRP Rights of private landowners to protect property, high individual costs, potential hazards, private assumption of risk Responsibilities of Town to its citizens and historic conservation, high public costs	Explore potential cost-sharing models (assessments, etc.). Develop programs and policies through which homeowners assume risk due to erosion-caused loss of utilities or services. Clarify regulatory expectations for private property owners. Pursue funding opportunities: Increased embarkation fee, Ch91 non-compliance penalties, state and federal grants, coastal resilience districts. Increase Town Budget towards CR projects (current: \$1M/yr). Hire dedicated grant writer.

	Explore opportunities to modify regulations to promote resiliency and facilitate adaptation. As part of this, explore: • Modify zoning bylaws and regulations. Consider (1) adaptive zoning, allowing modifications as conditions change, (2) stricter requirements in environmentally-sensitive areas, (3) preventing 2-level basements with bigger footprints than zoning allows for above ground, (4) encouraging resilient designs, (5) preventing construction in CRP defined High or Moderate risk areas, (5) offering regulatory relief for coastal resiliency-focused building changes, (6) basing building regulations on FEMA rules, developing, prioritizing green infrastructure where appropriate new building regulations based on MCFRM • science-based triggers for policy updates Develop Coastal Resilience Districts at Town Level with specific policies addressing different risk exposure. Updated wetland regulations that (in addition to including MCFRM) (1) encourage resilient design, (2) prohibit development on bluffs, dunes and beaches; (3) limit pool installation; (4) Prevent construction in CRP defined High or Moderate risk areas, (5) prioritize green infrastructure where appropriate. Enforce laws and regulations to ensure compliance. Conduct education/outreach to ensure awareness of laws and regulations. Implement policy for town to take over flooded areas, provide relocation. Have coastal resiliency and public access regulations flexible to the specific uses of vulnerable areas. Prioritize solutions offering multiple co-benefits.
5. Community Involvement in Planning for Climate Change When deciding on coastal resiliency and adaptation policies or projects, there is support on both sides for public-led decision making (through voting/referendum) as well as expert-led approaches.	Incorporate community science into monitoring initiatives. Increase collaboration with On-Island Groups involved in coastal resiliency and adaptation (e.g., Conservation Commission with compensatory flood storage in Harbor, Nantucket Conservation Foundation with natural methods of sand-build-up, Land Bank with Housing crisis and

	Washington St. Resilience framework, Landscaping with Native veg, more salt tolerant).
6. Green vs. Grey Protections Flooding and erosion protections exist on a spectrum from 'Hard' to 'Soft' interventions, 'grey' to 'green' infrastructure, and 'engineered' to 'nature-based' solutions CRP states an emphasis on nature-based solutions where possible. Public support is mixed Requires a holistic comparison of alternative systems Research needed on long-term viability of each option Examples: • Green: Beach grass planting, saltmarsh/wetland restoration, eelgrass planting, living shorelines, oyster reefs • Grey: Dredging, concrete barriers, geotubes, groins, underwater wave breaks, bulkheads, rip-rap • Both: Harbor Barrier, artificial shoals, living seawalls	In vulnerable areas, conduct site-specific assessments for protections. Where appropriate, include potential hybrid approaches that incorporate both green and grey measures. Secure additional funding for natural solutions (oyster reefs, living shorelines, eelgrass restoration etc.). Conduct monitoring of resilience and adaptation projects to ensure effectiveness and to inform future projects. Create additional pocket Parks with native vegetation for stormwater holding. Conduct a study to quantify Blue Carbon Storage in eelgrass and marshes.
7. Education	Map vulnerable locations and make map publicly accessible online and through other means. Develop a Town-wide map with likelihood of future protection to inform current and future homeowners For example, 1. Developed (shore protection almost certain), 2. Intermediate (shore protection likely), 3. Undeveloped (shore protection unlikely), 4. Conservation (no shore protection). Hire education coordinator for coastal resiliency and natural resource projects w/ science background. Encourage property owners to take coastal resiliency steps (comment provided by public).

The table below contains CRP projects within the Harbor planning area, as well as the status of those projects as described by Leah Hill. We are seeking ideas/comments for ways the Harbor Plan/Committee can support projects and address potential barriers.

CRP Projects In Harbor Plan Area	Project Status	Recommendations
Updates to zoning bylaw	LH: not started but should start to encourage less development along the harbors	
Community outreach on property owner resilience best practices		
Strategic retreat and relocation program	LH: not started. Will include areas along harbors	
Stormwater management plan	LH: not started but Sewer Dept received funding to start a small portion of this. Coincides with Stormwater Bylaws assessment and regulations update	
Sediment budget	LH: Sand Feasibility study not started	
Downtown neighborhood flood barrier (both phases)	LH: Downtown Neighborhood Flood Barrier- Initial phase Underway. This project is a Select Board high priority, CRP and Hazard Mitigation Plan high priority too. Like I mentioned above we just had the kickoff meeting for this project. Funding is secured for developing 4 alternatives and the one that is picked through community and stakeholder engagement and the Town will be developed to 30% design. We will need to secure funding to develop the design further and for construction. Downtown Neighborhood Flood Barrier- Later phase Not started. Can't start until Initial Phase is complete.	KU: Changes should incorporate public access (maybe) Ensure that these changes maintain important services for the island such as transport of goods and people
Steamboat wharf resilience	LH: Not started. Conversations were had with the Steamship 2 years ago and they said they won't be able to start this for another 8-10 years because they need to finish their terminal in Woods Hole first before they can think about this one. I will be in contact with them since the initial phase of the Downtown Neighborhood Flood Barrier just kicked off and they will be major stakeholders for that project.	KU: Ensure that Steamship Authority Ch91 License promotes public access and is inline with Town Goals

Easton St and Hulbert Avenue Rd raising	LH: Not started	KU: Changes should incorporate measures to enhance pedestrian/bike use (we heard that parking and cars need to be addressed) and consider options to enhance visual access where appropriate? (not sure that's realistic)
Washington St. extension and consue springs walkway raising	LH: Not started. I imagine this happening once the Land Bank/Town Washington St resilience projects gets underway.	LH: Work with Land Bank to implement Washington St. Resilience Framework (Project)
Building scale resilience at 37 Washington st.	LH: Not started. I added this to your list because I believe it is in the boundary (its across from the Harbor Master's Building). I am planning to put this in for a local grant to get a risk assessment and feasibility study done first which will tell us what to do for this building.	
F street Boat ramp resilience	LH: Not started.	KU: As designs are developed, include exploration of measures to preserve (and increase if Jackson point sis going to lose service) parking, if needed. Develop plans to restore Jackson Point to natural state once it is no longer functional as a boat ramp.
Polpis Rd raising and bridge conversion at Folger's Marsh	LH: Not started. The planning phase of this is in for Capital request for this fiscal year 2025. This project needs to start because the culvert is undersized so its restricting the flow to the wetlands on the other side of the road. In addition the road is failing- there is a small sink hole.	KU: Consider designs that would allow the migration of the marsh system as sea levels rise
Coatue Erosion management and dune resilience	LH: I think underway. Nantucket Conservation Foundation and the Trustees of Reservation received a NFWF grant to start part of this project. I need to contact them to find out the exact location. I will be in touch with more information about this.	KU: The plan may think about how the above dune creation/maintenance will be funded – e.g., coastal resilience districts, fees related to con com permits, etc.
Numerical modeling study of Coatue breaching	LH: I added this in. Not started. This should start soon. We received a quote from Arcadis that it would cost \$300k for modeling of 1 breaching and \$800k for 5 breaching events.	

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Coastal Resilience

Issues

- 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

Erosion:

- Erosion and changing historical shorelines were identified as a priority concern; it is an issue best tackled as an island and community, not as individuals.
 - “If we don’t work together we are just fighting each other for sand.”
- Coatee is threatened by erosion and is important to the harbor
- Shorelines and shoreline access needs to be protected. Example methods such as controlling/limiting access points, maintaining/enhancing vegetation plantings.
- Erosion controlled through considering HOW public access and uses ecologically sensitive areas
 - Ex. IE hither creek at low tide and uneducated boaters not obeying NO WAKE, undermine the eel grass/grassy marsh creating damage to shoreline
- Improved signage to reduce people playing on dunes
- Suggestions for beach nourishment, usage of groins
- Need for an Island-wide sediment transport study
- Zig-zag fencing to catch/stabilize sand

Rising Sea Levels:

- Comments expressed a general agreement and acknowledgement of sea level rise,
- Post-storm town flooding is a concern
- Much of Nantucket coastline is at risk, saving entire island “as-is” may be impossible
- Speed of sea level is surprising
- Encourage awareness about sea level rise and promote behavior change

- Need to preserve wetlands to accommodate rising sea levels

Building Codes & Development:

- Development on bluffs and beaches should be stopped. Enforce no building in wetlands, ex. Grove Lane encroachment
- Homeowner desires for climate adaptation: raising homes and mechanicals
- Request for new building regulations based on FEMA regulations
- Suggested Regulations:
 - Beach nourishment, seawall fortification, higher fill regulations for waterfront properties, structure elevation to comply with FEMA, fortification of public infrastructure in flood zones.
 - Property owners should be able to raise the grade of existing bulkheads to prevent flooding/erosion.
 - Prevent construction, swimming pools, in CRP defined High or Moderate risk areas.
 - Have homeowners assume risk due to erosion-caused loss of utilities or services

Green vs. Grey Protections:

- Green:
 - Dune restoration, saltmarshes/wetland restoration, eelgrass planting
 - Example: "More fencing and beach grass planting would be beneficial to help build the dunes."
- Grey:
 - Dredging, concrete barriers, Geotubes, underwater water breaks, bulkheads, rip-rap
 - Hard armoring from Boat Basin to GHYC should be considered before road raising
 - Hard armoring should be "prohibited in active seaway areas"
- Both?
 - Harbor Barrier, artificial shoals

Wetlands Preservation:

- Need to protect waters from fertilizers, greater enforcement
- Fix/re-install waterway marking buoys in harbor to protect eelgrass in and out of moorings

Emotion vs. Science:

- Desire to follow science and eliminate emotion and hysteria from decision making
- CR measures must be equitably distributed
 - "Learn from the Sconset geotube debacle. CR has to happen for all of us not just the mega rich"

Climate Change & Global Warming

- Utilize the Coastal Resilience Plan
- Implement the priority projects ASAP

- Opinions on both sides
- Opinions supporting waiting until SLR due to CC becomes truly significant to make “great expenditures...[or] great changes to the waterfront in anticipation of what may take a very long time to occur”.
- “Let’s not get carried away with the hype about climate change please!”
- Concerns of wasting tax money on building raising, “it would be better spent getting ready to retreat”
- Reducing airline/private plane gas consumption
- Comments expressing concerns about the broader implications of climate change, its impact on Nantucket, and the need for real research.
- Example: "Let's not get carried away with the hype about climate change please!"

Development Restrictions & Zoning:

- Comments discussing the need for stricter zoning laws, especially in sensitive areas, and the impact of development on coastal resilience.
 - Example: "Coastal Resiliency is important yet with all the talk about it the town is allowing such density of building in sensitive areas."
- Restrict development on dunes, limit pool installation
- Prevent 2-level basements with bigger footprints than zoning allows above ground
- Limit hardscaping
- Policy for town to take over flooded areas, provide relocation for residents

Shared Community Infrastructure:

- Comments emphasizing the community priority of protecting shared community infrastructure and the costs associated with it.
 - Location Specific Requests
 - Madaket Requests
 - Proposal for town to purchase Madaket Trust Land on Baltimore Street to replace existing Madaket Beach parking on Macy Road; More available land, less erosion risk, better congestion/safety management.
 - Request to address flooding on Easy Street, Lower Commercial District
 - Need to maintain access to Steamboat Wharf
 - Need for second boat ramp
 - “Nantucket...has failed to respond to the most immediate threat at Baxter road in a comprehensive and collaborative manner”
 - “[Nantucket] failed miserably when rebuilding the jetty” – raised jetty is unsightly
 - Washington street wharves are vulnerable
 - Renovate harbor master building and bathrooms
 - Street and Bridge Raising: Washington Street, Easton Street, First Bridge, Second Bridge, N. Cambridge St., Millie’s Bridge, Jackson Point Pure, Madaket Rd
 - Smith’s point bridge replacing
 - Expressed interest in the dump
 - Getting rid of it

- Protect it
 - Example: "Planning for the protection/adaptation of shared community infrastructure should be our priority."

Public & Private Property Distinction:

- Private property owners should have the right to reinforce their property against erosion, ex. Install bulkheads
 - Private restoration products can be hazardous
- Comments discussing the distinction between public and private properties, the responsibilities of property owners, and the potential costs borne by them.
- Example: "We need to think hard about what portion of cost adaptations that benefit private properties must be borne by the property owners who have chosen to invest in high-risk locations."

Other:

"Rural" areas like Nantucket could be eligible for funding programs at the National League of Cities

Continue research process by ReMain

Fishing

Develop plan for scallop strandings, need a stormwater management plan

Recreational Boating

Boater training:

- Training and courtesy issue overall **(9)**
 - "Power-boaters" endangering sailors in Madaket harbor (2)
 - Basic boating safety course and navigation of local waters test prior to obtaining a vessel (3)

Speed/No-Wake Zone:

- Enforce boat speeds and wakes/lack of enforcement **(16)**
 - Boat speed entering harbor should be better policed (1)
 - Especially at Nantucket Harbor (1)
 - Especially in summer months (1)
 - There should be a speed limit all the way up Harbor. People with triple 250Hp at full speed are swamping smaller power boats and sailboats. (1)
- Better enforcement of no wake zone **(10)**
 - A boat representing the Harbormasters monitoring to enforce no wake and write tickets both for ferries and recreational boats (4)
 - Especially around Hither creek & Madaket harbor (1)
 - Especially in Nantucket Harbor (2)
 - Especially in the summer months (2)
 - Especially around Jetties beach (2)
- Expand the no-wake zone **(2)**

- more NO WAKE buoys in the main channel (1)
- Move the no wake buoy closer to the jetties **(4)**
 - Would love a "No wake" zone at the opening to the jetties and not at the Brant Point end of the jetties (1)
 - Increase no wake zone to end of jetties (1)

Ferry issues:

- Abuse of speed by ferries and commercial boats **(1)**
- Ferry services are never in compliance **(1)**
- Highline and fast ferries creating big wakes **(6)**
 - The Highline and the fast Ferry both seemingly throwing up bigger wakes (1)
 - Fast ferries should follow the no-wake zone, they kick up silt in the harbor when they speed up. (1)
 - No wakes on ferries coming into Nantucket starting at the end of jetties (1 hr ferries-make up speed in sound instead of jetting into the harbor). (1)
 - Ferries need to be held to the no wake zone and speed limits year-round. their wake is causing shoaling and destroying eelgrass beds along horseshed and hulbert ave (2)
 - SSA and Hyline also rip through our harbor during the off season months, this erodes Humberto ave area, they should not be able to throttle up before the no wake and shouldn't be able to throttle in pass the no wake (1)
- Maintain ferry service and access to ferry **(3)**
 - Protecting/improving access to the harbor for the Steamship Authority (1)
- Decrease the amount of ferries **(1)**
- Understand the discharge amount/frequency and area for ferries in the sound between Nantucket and Hyannis **(1)**

General Enforcement:

- Must enforce regulations. Harbormaster should be more active in citing violations. **(1)**
- Ban wave runners from speeding close to public beaches **(1)**
 - I was a member of the HPIC (harbor plan implementation committee) we set a rule to restrict waverunners no closer than 500 feet to a public beach!!! Now they are zooming everywhere. (1)
- Difficult to monitor all washdowns, sewerage, etc. **(1)**
- The size of the motor boats using Nantucket Harbor should be limited for safety sake. The wake can capsize a kayaker and be dangerous. **(1)**
- Enforce laws already on the books **(1)**
- Better regulation of expired/non-registered watercraft **(1)**
 - an issue in Polpis Harbour?

Boat capacity:

- Too many boats **(9)**
 - Too many boats in Nantucket harbor (1)
 - No more boaters/moorings/slips (3)
 - More boats means more pollution (1)

Navigation/markers:

- Need safer navigation **(2)**

- Poor visual navigation at Brant Point (1)
- **Maintain/improve navigation aids (11)**
 - Have Town navigation aids going up harbor and into Polpis (1)
 - Maintain channel buoys around and outside harbors (1)
 - Marking of channels (2)
 - Nantucket Harbor could use a few more buoys, especially near the points (1)
 - The marine department needs to go back and learn how to properly set Channel markers (2 in Madaket are still tied to the dock). One of the docks in Madaket is so far from the latter that it is dangerous. (1)
 - Better marking at Horsehead area to avoid boaters cutting across it when going into/out of the harbor (1)
 - Marking of shoals is inadequate, needs to be more markings (1)
 - Additional buoys should be placed to mark each of the points; especially, Pocomo point. There is only one red buoy on each side of the Pocomo point followed by two red buoys at the point and one pair of green and red buoys marking a channel between Pocomo point and 5th point. 5th point needs more markings as it extends far south under water. The contours of all the points are very difficult to see from the water.
 - Understand how coastal erosion structures in Nantucket harbor contribute sediment to the harbor more easily than natural erosion and how that's impacting navigation (1)
 - Keep harbor marked year-round (1)
 - Lighting the jetty (1)
- **Improve Hither Creek navigability (1)**
- **Channels are well marked (2)**

Access/Boat launches/Facilities:

- **Improve access at these locations: (5)**
 - to Madaket Rd. Ames Ave. (1)
 - Via Millie's Bridge (1)
 - Via Jackson Point (1)
 - to Madaket Marine via B (1)
 - to N. Cambridge St. (1)
- **Better access to where you put your boat in (6)**
 - Town harbor access for launching boats (1)
 - Better parking at Polpis Harbor and in town for access to boats (1)
 - Nantucket harbor needs 2nd boat ramp (2)
 - Alternative public boat access at Madaket with basic services (toilets, water, garbage cans) (1)
- **Nantucket is lacking public access for boating (3)**
 - I served on Land Bank from 2006-2011-we had plans for Petra's landing to be developed into a public landing area for visiting sail boats and power boats with free dockage (1)
- **Improve easy public access to moorings (1)**
- **Children's beach boat ramp is a joke, terrible slope and design. Needs a complete overhaul to actually have an angle friendly for launching during all tides (2)**
- **I like the 2 public ramps in Hither Creek (1)**
- **We need more access for commercial fisherman (1)**

- Sailboats and motor vessels over a certain size cannot access Madaket Marine **(1)**

Moorings/slips:

- Better regulation/removal of broken/ghost moorings **(2)**
 - to provide more access to those on the town waiting list, especially at Polpis (2)
 - cleaning these up in Polpis would create a great place to teach children how to sail (1)
- An accurate audit of moorings should be done. What's the upper limit? **(1)**
- Moorings/mooring fields need to be compatible with eel grass and environmentally-friendly **(5)**
 - Screw in moorings, better mooring for eel grass (1)
 - When it comes to mooring areas, protection of eelgrass areas should be a priority over convenience. (1)
- There are illegal moorings **(1)**
- More moorings/more options to moor **(19)**
 - Increase access and availability to moorings for year-round persons. **(1)**
 - interesting to explore a new mooring/anchorage field outside the east jetty, and the feasibility of launch service to that area (1)
 - More options for public, "non-club members" (1)
 - More deep-water moorings, especially Nantucket Harbor (1)
 - More moorings for boats over 30 ft. in Nantucket Harbor (1)
 - There is not anywhere in town you can motor/sail your boat and dock or moor it. Hard to believe on an island (1)
- Better planning for the addition of more moorings and space management **(2)**
 - Especially in Hither Creek. Many (30+/-) are unused all season (1)
- Mooring field overpopulated, dangerous, hard to navigate. **(2)**
 - Especially at Polpis (1)
- Need affordable moorings **(2)**
- Waitlist is too long **(7)**
 - Some families are allowed to have 5 moorings to their name (1)
 - Have been on waitlist for a mooring for 10 years. Will sell boat instead. Year-round residents for 30 years, but no consideration given to the fact that we would use the boat for 5 months instead of July/August only (1)
 - Limit amount of moorings to be held by one entity (1)
 - What are alternatives used in other confined harbors? (1)
- More slip space **(7)**
 - Especially Nantucket Harbor (1)
 - For Nantucket "year-rounders" (1)
 - Especially in town-owned Marina (1)
 - At Madaket (1)
 - At Town pier (1)
- Mooring and slip spaces are too political **(1)**
- Mooring sharing **(2)**
 - Mooring sharing is not available and/or politically controlled (1)
 - Mooring sharing program for July summer people and August summer people so that a mooring does not sit unused for half the summer (1)
- No more moorings. Too crowded. **(4)**
 - Too crowded in Nantucket Harbor and Madaket (1)

- Need to understand the carrying capacity of our mooring fields in Nantucket and Polpis Harbors. More moorings is not better. **(1)**
- Moorings placed too close together in Madaket Harbor **(1)**
- Mooring field needs to be dredged, expanded, gridded and policed better **(1)**

Piers and Dock Space:

- Manage dock space **(3)**
 - Prioritize dock space for residents (both summer and year-round) (1)
 - Local boats never move and take up all the space. (1)
- Build more public docks **(5)**
 - Public dock is jammed with dinghies, hard to maneuver around (1)
- Dinghy dock space **(4)**
 - Need a dinghy dock in Madaket (1)
 - Need more transient dinghy dock space (2)
 - restrict size of boats at dinghy dock (1)
- More dock/dinghy space would just bring more boats which would fill up again **(1)**
- Dinghy dock space taken up by boats that just sit there. One person gives following suggestions:
 - Have at least one large dinghy dock with NO OVERNITE DOCKAGE would free up dock for transients
 - Or, allow mooring owners, who would get an additional sticker with their mooring permit to place on their boat / engine, allowing them to use this dock.
 - Or, you could leave one of the docks as "anything goes". But now, ALL of the docks are "Anything Goes" and it is a real disservice to the legitimate users of the dinghy dock. I don't believe these docks were ever intended as free, season-long dockage for all comers.
- More short-term dockage for recreational and commercial boaters **(4)**
 - petrel landing (1)
 - Nantucket harbor (2)
- More options for boat storage **(1)**
- More piers **(2)**
 - Install pier at Polpis harbor (1)
- Town pier needs improvement **(2)**
 - The town pier needs to be a one main fixed pier, with cement floating docks fingering off the fixed pier. It's safer, more user friendly, and adapts better to storm surge and water rise (1)

Shoreside/Launch Services:

- Shoreside services are limited or bad **(4)**
- Additions **(11)**
 - Pier + development area that would add slips, low-cost eateries that could be boated to, year-round interests (ex: penny arcade, candy store, stickpin bowling) to be run for profit to benefit town. Could call it "throwbACK". (1)
 - Second terminal capable of receiving freight that is not located in Nantucket Harbor incase main access is cut off (1)
 - In Madaket at Walter Barrett there should be water spigots for Tuckernuck homeowners, fish cleaning stations at the town docks and all ramps with trash emptied daily during the peak season (1)

- Ship store and access to fuel for transient boats visiting Nantucket. (1)
 - As an island that caters to some of the worlds most wealthiest travelers and yachts, we need to be able to serve those visiting and contributing to our economy
- Anticipate need for charging stations for electric boat motors (1)
- Fish market at Madaket (1)
 - used to be a fish counter at Bartlett's
- Need landings where commercial fishermen have priority (3)
 - A place to load/unload catch, refuel, load/unload gear and boat, and not have to pay for use of the dock, to conduct their water-related businesses. (1)
- Enlarge Town Pier and put a chandlery store out on it (1)
- A new town harbormaster building with bathrooms (1)
- Prevent waterfront marinas from turning into private marinas or clubs. **(1)**

Fueling for Boats:

- Fuel costs are outrageous **(11)**
 - Monopolistic fuel pricing at boat basin. town should SUE to ameliorate fuel pricing (1)
 - Fuel costs at dock are more expensive than at gas station (1)
 - Should be competition for fuel, as was planned when GHYC was approved (1)
- The availability to fuel and services on the west end of the island is an issue **(1)**
- Chapter 91 needs to be enforced for fueling at great harbor yacht club **(1)**

General Maintenance/Improvements:

- Maintain main access channels **(1)**
- Maintain adequate draft in channels **(1)**
- Maintain Madaket harbor **(1)**
- Could use another commercial marina at Nantucket Harbor **(1)**

Environmental Protections and Restrictions:

- Protect/improve eel grass **(4)**
 - If eelgrass is starving for bottom nutrients, let's remove some sand down to muddy elements before we plant. (1)
- Protection of sensitive areas from boating **(6)**
 - ex: scallop beds, damage from wakes (1)
 - Better balance between boating services and protection to natural areas (1)
 - shifting sands and shoals, changes in shoreline (1)
- Erosion of inner harbor property has led to increasing shallow water **(1)**
 - Specifically at the head of Harbor/Pocomo where replenishment sand is required for the numerous coir structures owners have constructed to protect their banks. Forcing sand replenishment and then discussing dredging especially in that area is counterproductive.
- Boating harm to environment **(12)**
 - Boaters should be fined if they cause damage to the shore or other boats (1)
 - Concerned about boat emissions (1)
 - Concerned about fuel spills and flooding overflow when pulling in boats before the inevitable September storm (1)

- Prevent boat washing in harbor/boat basin (1)
- Amount of boats and mooring areas contributes to the degradation of the harbor ecosystem (1)
- Assess boating practices that physically damage habitat, cause sedimentation, mooring scour (1)
- Cleanup old block and tackle that's been abandoned to make harbor safer for boating (1)
- Large power boats that damage eelgrass (2)
- The tug boats brining in the barges are idling at the dock and kicking up silt while at steamship wharf (1)
- Watching mega yachts in the harbor drag their anchors and dredge up the bottom is sickening (1)
- Yacht clubs should not be allowed to set up lessons and races in a navigation channel. Makes it dangerous for other boaters. **(1)**
- Restriction on recreational boats in the great harbor area for summer visitors vs full time islanders **(1)**
- Oil based pollution appears to be coming out of a stormwater pipe at the corner of the harbor near the Landbank's proposed new drop off dock. It would be helpful to remove some of the muck in this part of the harbor. Also to stop the polluted storm water from entering the harbor **(1)**

Pump-outs/Boat Dumping:

- Pump outs should be kept clean as should fuel pumps. **(1)**
- Enforce/monitor boat dumping **(6)**
 - Stricter monitoring of grey water and black water (1)
 - Can the town and the coast guard team up? (1)
 - Penalties for dumping grey & black water into the harbor should be commensurate with the cleanup necessary to mitigate the damage (2)
- Increase pump out facilities **(1)**
 - Can the town and the coast guard team up? (1)

Yachts/Yacht-Clubs:

- Regulations for yachts and mega-yachts **(4)**
 - Yachts should be taxed more for their harm (1)
 - Watching mega yachts in the harbor drag their anchors and dredge up the bottom is sickening (1)
- Yacht clubs should not be allowed to set up lessons and races in a navigation channel. Makes it dangerous for other boaters. **(1)**
- Fishing boats used to line the wharfs but now space taken by yachts and mega-yachts; now we have a net loss of food supply **(1)**
- Access/service to yachts should not be a priority **(1)**

Dredging:

- Dredging needed **(32)**
 - In Madaket Harbour (9)
 - Dredge harbour, mouth, and channel (2)
 - Near Tuckernut (1)
 - Hither Creek (2)

- Hither Creek is silting up and shallow and it's a problem (2)
 - the "Crick" (1)
 - Regular dredging of Polpis (2)
 - Dredge Pocomo (2)
 - Dredge Monomoy (1)
 - Dredge Washington street area (1)
 - Dredge Children's beach (1)
 - Dredge Hulbert area (1)
 - Dredge Nantucket Harbor (1)
 - Dredge Public dock/town pier area (1)
 - Coatue point (1)
 - Dredge around Steamboat (1)
- Dredging suggestions: **(6)**
 - Maybe some kind of small fee could be levied on every boat docking or mooring in the boat basin and applying for an annual permit based on boat size. (1)
 - Barge operators that bring bulk materials need to contribute to cost of dredging their spillage (1)
 - Dredge in conjunction with eelgrass restoration project (1)
 - Dredge plan that uses shallow water to slow down boat speeds in the harbor is good. Not everything needs to be dredge for a clear fast channel right up the harbor. (1)
 - A created harbor like Nantucket Harbor needs dredging but anywhere else (east of main harbor) should be left "as is" and recreational boaters can use smaller craft to navigate (2)

Miscellaneous Comments:

- Harbormaster does a great job **(2)**
 - especially with marking the shoals every year (1)
- Since Nantucket has become so popular for boaters, this puts stress on maintenance and water services. It is irresponsible to expect our Harbormaster to respond to them and not get overtime. **(1)**
- Improve safety **(2)**
 - Improve safety at Town Landing and people swimming, and beach safety (1)
 - Overcrowded boats, paddleboarders etc. with no life preservers (1)
- I commercially scalloped fish and dredged up all kinds of trash **(1)**
- Equal inclusion of Madaket Harbour and Hither Creek in action plan **(2)**
- No issue with boating/navigation **(5)**
- Rec boating not an urgent concern **(2)**
- The Coast Guard does a great job being involved in the Nantucket community. **(1)**
- Marine Department/Harbor Master crew need more funding, to staff themselves. More funding and staff would mean more presence on the water, to manage vessels speeding during the summer months. **(1)**
- Sheila Lucy in the staff at the Harbor Master's office do a great job setting navaid and rock markers **(1)**
- Dogs off leash and not being cleaned up after by owners **(1)**
- New yacht club killed the Nantucket Harbor services **(1)**
- Nantucket was once a working waterfront, bring it back. **(2)**

- The water company did the mooring study years ago. Mark willett I believe still has it for town. More uniform boats in areas. Uniform pennant and chain lengths etc. (1)
- recreational use has pushed out traditional users (1)
- Community sailing has done a great job of making sailing resources available to local youth (and adults). Be great to have something similar for locals for powerboats - kind of a time share like the Hinckley Picnic Boat / White Elephant program but scaled down to affordable craft. Community Sailing has figured out how to make sailing for locals affordable and accessible. A similar program for powerboats would be great. A locked down GPS tracker can report in real time on misuse in terms of speed, location, and area of use. (1)

Public Access

- Public access is generally fine and should be preserved (31)
 - Continued equal access to harbor with exception of mega yachts
 - Preserve long existing paths between waterfront homes
 - Good along Wash St, Commercial Wharf, Brant Point
 - Good job by the land bank to acquire properties and make walking trails (2)
 - Plenty of access; just too many people there overall
 - Access to the beach on Madaket west of Madaket marine is important
 - Do not allow any to be taken away (4)
- High/low tide debate (35)
 - Don't want private access for beaches; don't want private entities to own to low tide mark (21)
 - Interested in legislation changes; law should be revisited to allow for more public access
 - Want beach access to be to high tide line, not low
 - Public access and use to/of beach front on all property should be pursued
 - No private entity should own to low tide mark
 - Everyone should have access to the beach
 - All beaches in shoreline should be open to the public, not just to low tide mark
 - Eliminate private property signs and ropes along the shoreline of Nantucket
 - Land owners should be in trouble who restrict access; some yell
 - Too many people are closing off private property to public access
 - Want more private access to beaches, want to own to low tide mark (7)
 - Need to be respectful of private property rights
 - Provide public access but respect property owner rights
 - Beach walkers should respect private property and also not walk on bluffs
 - Public has enough access to the waterfront
 - Want more information on where people can access
 - Need more signage showing permitted access points and where areas are private (many)

- Want more public access (28)
 - Should be strongly protected, preserved, and enhanced (many)
 - Better access for elderly and people with disability (2)
 - More affordable family friendly waterfront dining (e.g., sandbar)
 - Town should open up all beaches and make them accessible to everyone
 - Erosion is removing access to shorelines around the island, access should be prioritized; access is shrinking with coastal resiliency issues (3)
 - Fishermen, scallopers, oyster farmers are getting squeezed out of waterfront access because of no parking for trucks/boats, moorings, town slips, and pier access to unload catch
 - Beaches are too crowded, want more beach access, more beaches should be available with toilet, ample parking, and a shower
 - Public access point 50 – can you develop a small boat ramp at that location or down beach where there is a concrete slab submerged – would help with rec uses in madaket
 - Want a downtown harbor walk (many); an option is from Brant Point to the Creeks
 - Expand the town dinghy dock
 - Petrel Landing design plan by Land Bank should include commercial fishing loading and offloading; this project should be fast tracked (2)
 - Encourage Land Bank and other Conservation organizations on island to team with the Town to acquire more shoreline property
 - Allow tax breaks for owners like the ones between 40th pole and eel point
 - Another boat launch ramp (3); concern about sea level rise and hurricanes
 - Potential for a public fishing pier
 - More benches placed in public places, especially the Moors
 - More room for dinghies in Polpis Harbor; Storage is overly crowded
 - Reinstate public access that was removed at the end of Eel Point
 - Make dirt launch site on Tennessee Avenue accessible to all on Hither Creek – upgrade
 - Potential new public access points
 - First Bridge (Culvert) elevation
 - Seasons Bridge (Culvert) elev.
 - N. Cambridge St. (Culvert) elev.
 - Madaket, Smith Point Madaket Rd. Ames Ave current access becoming limited due to erosion
 - Millie's Bridge future access
 - Jackson Point Pier access
 - Millie's Bridge future access
- Chapter 91 access (9)
 - Want more chapter 91 access
 - Ch 91 easements need to be enforced (10), particularly in harbors for passive recreation; check great harbor yacht club's chapter 91 for need to sell fuel and have pumpout (many)
- Want more parking (8)
 - At pocomo and Monomoy
 - Parking to make access easier

- Should start ticketing and towing commercial and other vehicles in the Town Parking Lots on Washington Street and Sayles' beach (cars parked there for days at a time); makes access to harbor easier
 - Enlarge current parking spots
 - Can Land Bank purchase more properties for parking
 - As erosion happens, make sure parking lots stay in place
 - If everyone who has a boat in Polpis or Monomoy wanted to go boating they could not
- Drive-on access (6)
 - Want more drive on access to beaches (3); Smiths Point and 40th pole should not be closed to vehicles because of shorebirds (could put up temporary fencing if needed)
 - Want less drive-on access (3): should be ended in season during May 15 – Oct 1; too many people getting oversand permits; concerned about access to Smith Point, amount of vehicle use is high, can affect erosion, bird habitat, etc.
- Want more visual access (5),
 - A lot of the waterfront is now a private marina, making visual access difficult
 - Houses along Easton are getting too big; not much view left; want to keep visual access
 - Make sure visual access is being complied with chapter 91
 - Since late 1960s people have been increasingly blocked off from access to the harbor; the waterfront has turned into a private marina yacht club
- More information on where public access exists (13)
 - Hidden obscure paths
 - Public access and nesting areas
 - Well marked public access; more signage (4); many of the public access signage areas are overgrown and not seen
 - Provide information resources and signage so people know where the beach can be legally accessed
 - A number of access points are unmarked due to new neighbors not wanting the public to use them
 - Want more education about public access spots
 - The town needs to continue to identify access areas that are hidden by adjacent property owners
 - More information on areas that are allowable for fishing and shellfishing
 - Need more information around proper usage
- General
 - Seawalls and other hard armored resilience structures present serious access issues
 - Safety issues with opening up shoreline access where heavy marine/SSA vehicle traffic operates
 - Want continued access to shellfish grounds and areas for recreational fishing (2); Nutrition and provides form of environmental justice; Want access to beach areas for recreational fishing, often limited by protective measures for ground nesting birds
 - Need for more kayak racks (2), most are full and overloaded before summer
 - Need to keep up the collaboration with the Land Bank (many)
 - Provide stairs to prevent degradation of coastal banks

- Need second terminal capable of receiving freight
- Want access to kayaking, maintaining access to mooring sites
- Whole coastline should be public access except in case of security (e.g., coast guard area)
- Should continue preserving nesting areas for shorebirds
- Dangerous area at Town Landing in Monomoy – boats pulling in and out while people are swimming
- Pollution – need to clean up after using public beach (2)
- Storage of boats can block public access (along Hulbert where paths narrow)
- Want to fish Great Point where the rip hits the shore
- Create separate transient/no overnight dinghy dock distinct from resident dock where large dinghies take up too much room and don't move
- A lot of closures for birds in areas where there aren't birds (3) ; pay a lot of money for Great Point sticker and then can't use it (2)
- The Smith Point harbor beach has limited parking, but even still the beach can be crowded, so I would not want to see more parking spaces created. The parking lot at Jackson Point often seems to have more vehicles than those using the launch. Additionally, there needs to be "No Parking" signs in the area in front of the launch ramp.
- People that are allowed access need to preserve them as well; not damage them; there is littering on beaches and broken glass (2)

Natural Resources & Water Quality:

Green lawns and fertilizer concerns

- Very concerned about green lawns (7)
 - fertilizer runoff is a major issue (4)
- Stricter fertilizer regulations (13)
 - herbicide control and pesticide control
 - unauthorized fertilizer types not monitored
 - test loads of sod off barges/ferries - only allowing approved loads to be installed
 - someone should be checking nutrient levels of lawns by the harbors (1)
- More enforcement of fertilizers (29)
 - More staff to enforce fertilizer regs (2)
 - More funding to support enforcement (3)
 - Does anyone monitor the multitude of landscapers compliance (2)
- Fines for violation of fertilizer regs (2)
 - Violation penalties charged to the landscaping company which manages the lawn (1)
 - Fine homeowners for fertilizer use (2)
- No more fertilizer within a defined harbor protection zone (5)
- Ban all fertilizers (23)
 - Ban fertilizer mid-late June (1)
 - Ban all non-natural fertilizers (3)
 - No fertilizer use except for commercial agriculture (3)
- Promote/increase native yards (4)
 - Mount a natural Nantucket campaign (2)
 - Local nurseries should encourage native plants

- Regs for irrigation (3)
 - based on the number of gallons used per SqFt
 - Irrigation systems need monitoring downstream at property borders
- Approval should be necessary for all landscape plans, particularly those in sensitive watershed areas and near wetlands (1)

Septic and sewer

- More control of septic leachates (4)
- More enforcement of septic regulations (6)
 - Treatment and testing of septic systems should be far more carefully and rigorously done
- Sewer Madaket (5)
- Stricter septic regulations around harbors (5)
 - Higher standards for septic in A/B zones around harbors
 - Septic must be upgraded to newest standards up to 500 yards from the harbor and be pumped yearly
 - Mandatory testing of all septic systems within 100 yards of the water
- Expand town sewer (3)
 - phase out septic entirely
 - sewer in sensitive watershed/harbor areas
 - Subsidize residents to assist with conversion of septic to sewer
- Need to review septic regulations for their success and failures
 - It's unreasonable to expect residents to update septic when there's very limited land to do so (1)
 - The septic system rules and guidelines seem to be a failed approach and too broad sweeping and cost prohibitive (1)
 - Support alternative sewer systems including composting toilets and limit showers / GPM shower heads (1)
- Restrict new buildings not on town water and sewer (2)

Habitat/natural resource areas

- Increase coastal bird habitat (2)
- preserve outwash plains/ecology of island (1)
- Wetlands need to be preserved (5)
 - More education of wetlands
 - More identification, protection and monitoring
 - the wetlands protection proposal should move forward.
- Open great ponds, more should be opened annually (1)
- Maintaining opportunities for people to enjoy these ecosystems without impacting their long term viability and survival (1)
- Concern of the impacts of pools (e.g., chlorine and other chemicals) on natural resources (2)
 - Swimming pools should be banned anywhere near wetlands (1)
- update coastal survey (1)
- Conservation is important but practical conservation is more important (1)
- No driving on Smiths Point, at least in summer, as land is so narrow and the summer jeep rental/ other idiots have no idea or care about the grassy dunes. (1)
- Has any work been conducted to assess the aquifer and the amount of water available over time (1)

- Salt marsh restoration (2)
- Cormorant bird control (1)

Eelgrass

- Need to preserve eelgrass (6)
- Increased eelgrass restoration (11)
 - Funding for eelgrass restoration (1)
- Study scalloping techniques on impacts to eelgrass (2)
 - study scallop dredge damage to eel grass.
 - Study the impacts of push raking on eelgrass
 - 5 year ban on scalloping by boat with dredge to help with eelgrass restoration, make it a diving or take only commercial season for five years and see what happens
- Too much eel grass dies off each summer in the harbor, but that is likely water temperature driven, so any harbor plan involving a seawall will need to take into account water change-overs from the open sea.
- Eelgrass covered by sand from erosion is a concern that town is not addressing (1)

Water Quality

- Identify sources of pollution (2)
- Water quality improvement should be the highest priority (23)
 - Minimizing controllable pollutants should be a top priority.
- General stricter enforcement of regs on things that deplete WQ and NR (2)
- Reducing excess nutrients (reducing HABs) (4)
 - Preventing runoff that causes blooms
- More funding for water quality initiatives (3)
- More water quality education (3)
 - Show N concentration graphs by month
- More wq issue studies (4)
 - Study source of pollutants at children's
 - Study how much the boats and yachts contribute to pollution. Not just sewage, but greywater.
 - PFAS continues to be an issue - many residents no longer drink their water. (1)
- Concern for deteriorating water quality on animal and habitat loss (1)
- WQ testing lab on the island (1)
- I would also love to see someone concerned about water usage and how much is being wasted on lawns and spilling into roadways and eventually running off into storm drains. the content of the slurry that is spread and more importantly, who is regulating it? (1)

Shellfish

- Build oyster castles (1)
- Why are areas with superior water flow (near the harbor's main channel) not producing scallops? i.e. Hulbert Avenue and the Horseshed. Let's make the channel slow speed for this reason and for safety reasons (1)
- More scallop and oyster seeding (1)

Invasives

- Invasive eradication (14)
 - Support bounty program for removal of green carbs and include in composting
 - Increase eradication of green crabs
- Green crab fertilizer (1)

Landfill

- Monitoring water around landfill for harmful leachates (1)
- Landfill is source of pollution and is a concern and needs more attention (7)
 - source of PFAs in groundwater
- Mitigate impact of landfill on Madaket harbor (4)
 - Clean up Long Pond and dump area.
 - Move landfill

Harbor Infrastructure/operations

- Invest in harbor infrastructure (2)
- Deal with increased boats and horsepower in harbor (1)
- the water flow in Nantucket Harbor needs to be improved (3)
 - a second cut / culvert / in flow pipes would improve the health of the harbor
 - Underground in/out flow pipes in Wauwinet and Coatue to inject fresh sea water to the harbor.
 - Cement 6' diameter pipe go from the south end of Hither Creek 100 yards into the ocean so that natural currents could purge nutrients in the Creek. Same goes for opening the NE corner of the town harbor to allow nutrients to purge.
- fishing boats running diesel overnight - is power available to them? (1)
- Better policing of boats using holding tank (1)
 - illegal yacht and boat releases of contamination (1)

Outreach and education

- Increased/better education and educate regularly on water quality, natural resource importance, eelgrass preservation, and expansion on island (13)
 - About importance of wetlands and eel grass preservation and expansion to protect island
 - More education, maybe more signage, going beyond x is wrong, or x is invasive, or x is polluted, and sharing what causes x issue, what is being done about it, and what the public can do
 - More on prevention of overuse and waste of water
 - Educate regularly on water quality and natural resource importance
 - Education about the responsibilities of everyone who visits or uses coastal resources
 - Increased education around native lawns and native pollinator gardening
 - More education on not dumping filleted fish carcasses into the harbor
 - More education for children
 - Need for more repetitive education and outreach on impacts of fertilizers, storm run, offs and septic
- More education and communication
 - With homeowners along the waterways (3)
 - With landscape business owners and workers (4)
 - Education on alternatives to grass (1)

Stormwater management

- Storm water runoff needs serious work (4)
 - Outflow from drains need to be maintained and maybe a type of bag/net put over the outflow to collect garbage
 - pretreat stormwater before enter harbor (system is poor all over island)

- Need stormwater management plan (1)

Chemical pollutants

- Ban oil based paint (suppose to happen years ago) (1)
- Paint thinner a huge pollutant (1)
- ban toxic chemicals used in everyday products. (1)

General

-
- Implementation of completed studies (2)
 - what happened to the blue pages that the HPIC spent hundreds of hour composing & \$5000 to be produced?
 - Harbor management plan has not been adequately implemented
- Overdevelopment is a concern (8)
 - Overbuilding is threatening water supply
 - Worried that sewer will increase island's building capacity and increase fertilizer use
 - Also, overdevelopment/fertilizing threatening aquifer
 - Shoreline is overbuilt
 - Regulate land use
- limit anthropogenic sources of pollution (3)
- Culling the seal population (2)
- Identify/determine pollutant inputs and amts before policy change (2)
 - try and get an accurate daily load amount from each source (e.g., fertilizer, septic) before measures are taken to police specific industries
- Ecosystem accounting study on Nantucket natural resources and good water quality. Add monetary value to our ecosystem services derived from specific ecosystem functions to show citizens the value of protecting everything (1)
- Town tax budget and overall draw to the island needs to be weighed because some funds used to make certain entities will disappear if the island is made undesirable
- Solar panels over the aquifer are concerning for toxics into groundwater.
- Eliminate overflow into the harbor esp. at Children's Beach
- Incentivize electric boats – give them dock and mooring priority at lesser cost
- The hatchery tour should be mandatory for homeowners.

Infrastructure/economic vitality:

General

- Infrastructure is showing signs of strain; general interest in improved/updated/new infrastructure that minimizes damage to the environment
- More waterfront, family friendly businesses and restaurants
- Improving health of harbor will be good for economy
- Need infrastructure plan to address island's various needs
- Island is already overextended (17)
 - Tourism shouldn't be our highest priority when considering infrastructure and economic vitality; island is already overextended
 - Can't keep increasing rec use of harbors and expect to avoid environmental harm

- Economic viability is very important but that is not a license to develop the waterfront. In madaket, the rural nature and clean water IS the economic viability.
- Nantucket has used sewer system as a catalyst for growth and island is over developed; sewer system is stressed, and more sewer infrastructure will be built, supporting more development
- Many wealthy people have moved to island in past few years and limitations need to exist and be clear to protect harbor and waterfront habitats
- Infrastructure should not impose on water quality
- Concern over size of visiting yachts and how they may impede marine traffic
- Commercial water activities should not displace residential use and access to docks

Docks

- More docks (15)
 - Need to manage growth and ever increasing demand for boat slips
 - Large need for more dinghy docks (10); amount of dinghies have increased since covid, dinghy docks are very overcrowded; would be good to have somewhere to boat from harbor to town and tie up for a few hours
 - Large need for more dock space for fishermen (10); place for commercial guys to use as a landing and take off spot for waterfront businesses
 - Need more shoreside access
- Piers (town pier needs a remake; danger) (2)
 - Double size of town pier by including more floating docks; Reorganize the mooring fields around the town pier to add in another floating dock (2)
- Docks are in good shape but need to be maintained
- More clarity on prohibition to new docks
- Want less docks (3); specifically for private homes

Marinas

- Desire for another commercial waterfront marina in Madaket; Strange that Hither Creek is the only commercial waterfront marina

Moorings

- Limit number of mooring permits per person, more clarity on waterfront homes/deeded access to moorings
- Increase public mooring field areas
- Issue permits to transient boaters from rental moorings
- Mooring wait list is very long

Storage

- Increase access and storage for small simple cheap rowboats and sailboats and other family friendly craft instead of just powerboats

Ramps/launch site

- Desire for another boat launch site in town (15)
 - Could have boat ramp on Otisin property off the rotary that could be used for boats 25 feet and under
 - Town boat ramp pier is incorrectly built; with the puling being placed inside the decking so there is no protection for your boat (grinds the hull on decking)
 - Another dock would help with rapid removal of boats from harbor for hurricane (4)
 - Possible launch site at great harbor yacht club

- East side of main street
- Children's beach is tidally dependent
- Corner of commercial and new whale street
- Mooring list is very long so need another option like a ramp
- Want ramp in Polpis Harbor and pier
- Commercial pier with a boat ramp to the east of the west jetty would allow for both access for the Steamship Authority too
- Install a berm at Children's Beach boat ramp rather than closing it when water gets too high

Parking

- Need for more parking/parking issues (9)
 - To Baltimore Avenue
 - More parking downtown (alleviates traffic congestion) – replace oil tanks downtown with parking, not hotels and stores
 - Potential parking garage? Current lot much too expensive for short town visits – maybe also needs hourly or time fees
 - Limit Overnight and weekend parking by island contractors in the stop and shop (2)
 - Need more parking at Children's beach
 - More parking at F street
 - More parking to access certain beaches
 - Need another place to park boat trailers and tow vehicles

Stairways

- Stairways (want stairways that don't damage marshes)
- Build walkways over wetlands on Washington Street
- Need for ramps/steps to avoid sliding down and destroying wall at Madaket

Bridges

- Complete design and repairs needed for bridges (2)
 - Massasoit Bridge and Ames Avenues Bridge (Access to Smith Point is in jeopardy if the Ames Avenue access fails)
 - Raise first bridge, second bridge, millie's bridge

Other amenities

- Need access to ice
- Fish processing/cleaning stations (2)
- Need working shipyard infrastructure
- Hold Great Harbor Yacht Club to Ch 91 requirements
- Need more affordable housing so the town can staff positions that support critical infrastructure and services (4)
 - Could land bank provide some?
- Provide water taxis to designated areas like docks and beaches to help tourism; allow food vendors there
- Need new harbormaster office with updated bathrooms and facilities (2)
- Need power at town pier, or adequate lighting
- Need for chandlery when Tidal Creek closes

Funding

- Expand grant writing to access federal and state funding (refer to National League of Cities detailed information on newly available funding sources)

- Can Land Bank Money be used to support better beach facilities, better docks, and research
- Lower fees for locals and increase docking fee for guests, and designate funds for preservation and public schools
- More resources should be allocated to harbor health

Ferry/freight boat related

- Need more room for freight boats and a higher flood resistant route to and from SSA (4)
 - SSA is very behind in planning for resilience and need to move forward with this (2); also same with Hyline
 - Need to expand to accommodate steamship freight activity
 - Are there alternatives to the steamship dock to reduce commercial traffic through town
- Need better connections to mainland and worried about supply chain issues (2)
 - Without ferry access, how will the island survive
 - Add another terminal capable of receiving freight that is not in Nantucket Harbor in case main access is cut off (2)
 - Require Hyline to work with Town to provide a better drop off and pick up; also should have night time lighting for loading/unloading luggage carts; straight wharf needs better access (4); general traffic from the ferry is terrible; very little infrastructure
 - Vehicle ferry traffic (6)
 - Move vehicle ferry further up harbor to avoid traffic
 - Allow fewer visiting vehicles on island (4)
 - Limit vehicle ferries to short time window (7 am to noon)

Bike paths

- Concern about safety on bike paths (2)
 - Lots of ebikes and car crashes
 - Washington Street is a nightmare for biking with small kids (getting in and out of town on a bike is daunting)

Flood related concerns

- Fortify and elevate all important infrastructure in flood zone (1)
 - Washington St, Easton Street, wharfs, lower downtown commercial district, utilities, seawalls, etc.
 - Change laws and local code to allow for fill and elevation
- Improving and raising roads (2)
 - Elevating sections of Madaket Road
- Need to raise roads, bridge repair, ferry infrastructure

Energy

- Desire for installation of solar (2)

Fishing

- Need more research to address issues in the harbor (7)
 - Science based data to show impacts of fertilizer and septic runoff
 - Improve water quality through research
 - Improve eelgrass beds through research

- Increased shellfish propagation (9)
 - More distribution of seed
 - Establish more oyster beds
 - More funding for shellfish seeding
 - Would like to see propagation of more soft shell clam areas.
- Enhancing scallop fishery (5)
 - Keep seeding scallops
 - More research for seeding scallops
 - More funding
- Water quality improvement in harbors is critical to commercial and recreational fishing (30)
 - Poor implementation of recommendations for water quality improvements
 - Poor monitoring of activities impacting water quality
 - Algae pollution
 - Prevent pollution
- More initiatives to reduce fertilizer use (17)
 - Reduce fertilizer use to reduce nitrogen runoff
 - Stricter enforcement of fertilizer regulations for properties abutting the harbors
 - No fertilizer use for properties around the harbor
 - More limits for landscapers
 - Monitoring and inspection of fertilizer use
 - There are many studies addressing fertilizer runoff but not enough action
 - Action to ensure no nitrogen fortified fertilizer use other than for commercial agriculture
- More enforcement of fertilizer regulations (17)
 - Property owner should be responsible for violations and penalized financially
 - Fines for fertilizer use
 - Need more staff to enforce regulations
 - Landscaping hurting ecosystem shellfish rely on
 - Need enforceable law to regulate nutrient/effluent runoff
- Address runoff (residential, commercial, roadway) into harbors (35)
 - Ban all fertilizer
 - Reduce nitrogen loading into harbors
 - Address fertilizer runoff (12)
 - More action to limit leaching of dangerous chemicals
 - Address natural pond nitrogen runoff
 - Address septic runoff
 - Address illegal boat discharge
 - Concern of swimming pool installation in brant point flood zones because of chemical runoff into harbor
- More eelgrass restoration efforts for shellfish (14)
- Address eelgrass degradation (12)
 - Impacts of irrigation system runoff of eelgrass
 - There should be minimal mooring in eelgrass beds
 - Investigate/address negative impact of shellfish dredges and general dredging activity (for navigation/water flow) on eelgrass habitat
 - Move to low weight dredges for scalloping to reduce impact
 - Power boats digging up shallow eelgrass beds

- Address coastal erosion control efforts (2)
 - Requirement for thmoore erosion control systems to dump massive amounts of sand on their barriers needs to be revisited. Rules of erosion control are old text book ideas that are not researched
- Need to improve public access along waterfront (13)
 - Improve access/ability of for recreational shellfishing
 - Increase public access for fishing
 - Specific docks/bridges for crabbing
 - Easy and affordable access to the waterfront for fishing
 - Improved access for oyster fishermen in Polpis Harbor - needs a temporary dock for loading and unloading
- Monitoring fishing and shellfish harvests (8)
 - Reduce scallop harvests
 - More info on harvest amounts
 - Track commercial and recreational catch
 - Need annual scallop data for fishers
 - Need enforcement of regulations
- Reviewing shellfish regulations (9)
 - Consider oyster leases on western harbor of Madaket
 - Closure of accessible shellfish ground in summer is an issue
 - Incorporate yearly quota for shellfishing
 - Need easier regulations to increase, basic recreational shellfish farming
 - Address overfishing
 - Shellfish catch quotas should be reduced to reflect closures
 - Soft shell regulations revised to allow for clamming on Saturday/Sunday during winter months to allow recreational clammers to take soft shell clams when weather and daylight to not cooperate with the tide schedule.
 - Need easier regulations to increase basic, non-commercial oyster/scallop farming e.g. - the town should be able to add oysters to a reef to improve water quality - need to have regulations understand the difference between commercial and restoration shellfish aquaculture.
- Expand invasive eradication (7)
 - Expand green crab harvesting program
- Overbuilding and overdevelopment of the island is a threat (10)
 - Extend sewage system but in a way that doesn't lead to acceleration of new residential development
 - Less development near water boies
 - New homes on septic are too close to the water
 - Too much boat traffic, moorings, and cokage
 - Implement a building cap
- Sustainability of fisheries (commercial and recreational) for islands culture, economy and health (12)
 - Protect local fisheries against climate change
 - Harbor plan should support fishing industries
 - Preserve local fishing industry because people's livelihood depend on it
- Stormwater runoff is a major issue (6)
 - Town doesn't properly maintain storm drains which clog and then pollutant runoff into harbor

- Pretreat stormwater
 - Find out and map old or new sewer emptying into harbor
- More control of septic systems and regulations to reduce pollution in harbors (9)
 - Insufficient regulation enforcement
 - Extend the sewage system
 - Require all septic systems to be inspected/tested on a regular basis and maintained (test septic systems of those within 100 yards of water)
- Seals are impacting fish population (5)
 - Get rid of moratorium on seals
 - Impacts beach fishing
 - Disturbs eelgrass beds
- Landfill pollution into Madaket harbor (1)
- Increased education and outreach (5)
 - Boater education regarding running on flats
 - Homeowner fertilizer education
 - More community engagement in adhering to fishing/shellfish regulations
 - More education/signage regarding testing of shellfish sites
 - Incentives to fishery participation
- Need to improve waterfront infrastructure to support fishing (17)
 - Funding to support new/updates to infrastructure for working waterfront
 - Prohibition on new docks hurts local fisheries
 - Need a commercial pier for unloading ice, catch, gear, etc.
 - Commercial fishing processing facility
 - Town pier needs renovation
 - Fisheries/fuel coop

Other

- Enforce dinghy dock size limits (1)
- Dredging in harbors to improve waterflow (2)
- Need for inspections on boat washing and discharge in harbors (1)
- Continue to permit commercial farms (1)
- Over regulation (1)
- Policing of violations of all regulations (1)
- Advanced mooring technology (1)
- Recreational boats are out of proportion in size and speed
- More commercial fishing activity in the marina. Apply for a means of selling local catch at the dock. Need true commercial fishing venue for island for fishermen. Ability of restaurants to buy direct to get locally sourced fish/shellfish (1)
- More dinghy dock space (1)

General significant comment/recommendations from survey that were hard to group

- Revitalization and incentives to fishery participation, grants to support a working waterfront and residents that make a living off of the water.
- Public access at Madaket Smith Point, end of Madaket Road and Ames Ave, Millie's bridge, Jackson point pier
- Specific docks/bridges (Ames ave/ Smiths point) for crabbing. Perhaps even scheduled classes or public events.
- The upper harbor has a lot of that black gooey weed in the eel grass. Is there some form of floating rake system that can collect it?

- The requirement for the erosion control systems to dump massive amounts of sand on their barriers needs to be revisited. Though the concept is valid along the ocean shores, in the harbor it is not. Sand just fills the harbor. The rules for erosion control are old text book ideas.
- A multi-faceted approach for all types of runoff (fertilizer, septic, stormwater, pond runoff) should yield the highest success
- Waterfront infrastructure - I believe it's important to maintain the prohibition on new docks, as there are many new waterfront home owners who would like to install new docks, but it will impact / take away from the habitats of the local fisheries
- The facilities at the town dock are disgusting. Mildewy shower curtains. We eschew bathing on board and suck it up to take showers on land there. Sometimes we'll trek to the boat basin showers. I'd happily volunteer as part of a work crew to fix up the bathrooms.
- Fish cleaning: There used to be a sign in the public bathroom asking that people not clean fish in the hand sink. Perhaps put up a fish cleaning station if this is an ongoing issue?
- Suggest one dock be "no overnight parking" so that getting back and forth to land might be a bit less of a hassle at peak seasons. Some docked vessels are green with algae and filled with rain for clear lack of use.
- Water stations: Thank you for the refill stations. Would it be possible to add one near the Hyline?
- I think a licensed scalloper should have a quota of boxes to fill every month and if you don't make it you are done for the year. Exceptions could be made. The leasing of any waters/beds should be regulated to achieve a fair balance for all other uses.
- Reopen summer season clamming on the large flats off Coatue across from Brant Point, as well as Monomoy (one of the few productive areas reachable by car). Their closure has had a major impact on recreational clamming. They were closed because of water zoning issues, not because of water quality issues.
- If you swim in the water off the North shore or Coatue, you will see that there is nothing alive there. No fish, no shellfish not even a fiddler crab.
- Concentration of pleasure boats in both harbors leads to contamination. It's difficult to quantify the various types of discharges from these vessels in terms of oil leaks etc., and illegally pumped out waste and gray water.
- Harbor near Pocomo beach has diminished. Have had to replant the eroding dunes and, add seasonal truckloads of sand - per the the Conservation Commission. The addition of sand to this northern portion of the harbor has had a negative effect- the shallowing of the waters - especially at Pocomo Point which hasn't been dredged in years. More concerning for us is that our beach has no dune - just vegetation between the beach and our home. The easy solution would be some sort of hard armoring which is not permitted in Nantucket
- Madaket Harbor, the trend of private security on beaches and homeowners denying recreational use of beaches in contrast of that of an open relaxed sense of community is shocking to me.
- Within the last 8-10 years, the scallops are scarce and finding even a dozen or so of legal size is rare – Pocomo is imperative that the Town be given the option to override the Commonwealth's "one size fits all" harbor management regulations, which currently prohibit shellfishing in areas which are proven to be perfectly safe in water quality but run afoul of their "too many moorings so close this down" prohibition.
- We should incorporate a wild oyster program like some of the cape towns so that recreational clammers like myself could pursue another species.

- It would be great if there could be some sort of ecosystem accounting study that could add monetary value to the ecosystem services derived from bay scallops and their critical habitat. This would be very important in emphasizing the significance the bay scallop and their habitat have on our island community, economically, environmentally, and culturally.
- **Gotta change the State ban taking clams at Horseshed/ Brant Pt area**
- The creep of new moorings on Hussey Shoal should be stopped.
- Cleaning up debris on the harbor bottom near town could be accomplished with some cooperation.
- No building allowed to be built on old gas tank areas in Nantucket Harbor. Review other places with combination of resident houses, and commercial and how to accommodate both with need for water influx areas. Lowlying areas already in existence and how they work.
- Locking of all waste water tanks on boats in the both harbors. Having an inspector full time during summer months for random inspections from Harbor Master office or NRD
- Unlimited amount of shellfish for residents over 70 with special permit (in person only) . Unlimited Saltwater fish to keep (in person only). Background: People over 70 have very limited physical ability to harvest anything, so whatever they catch has virtually no impact.
- Much stricter enforcement of large boats east of 1st point/ horse shed. Ie: this season, NY yacht club
- Commercial shellfishing isn't a naturally sustainable practice for Nantucket harbor and requires vast resource allocation to replenish eel grass and scallops. I think those resources would be better suited elsewhere, instead of propping up a tiny commercial industry.
- We need to keep the Tidal Creek boat store running and the building.
- Petrel landing needs to happen to ensure future generations of Nantucketers the ability to work the sea and keep island traditions alive. I'm in favor of some research being done on the feasibility, as well as consequences/benefits of a culvert/pipe to the east side from coskata pond to allow better flow.
- More research re blue crabs and nitrogen in harbors
- **Open up the horse sheds in town for shell fishing!**
- Too many recreational boats and huge increased in ferries seems to be beyond the capacity of the harbors to flush themselves - does anybody measure the quality of the harbor waters with respect to fuel /oil that seeps into the water / also the churn in the harbor floor with huge ferries must have a huge impact
- Very frustrating to have the area across from Brandt Point closed to shell fishing. This area appears to flush out better than other areas where shellfishing is allowed.
- Island is eroding 6-12 ft annually on south shore. Increased coastal flooding has mobilized contaminants and sediment that enter waterways and impact eel grass and aquatic organisms. Constant construction is not helping erosion.
- MAKE the wealthy, visiting, yachting, public seal their waste tanks, use the town's tank pumping service "locally known as "the head hunter", and have the head hunter crew place a dye tablet in the holding tanks of the yachts, so if they flush them while anchored in the harbor, it will be easily spotted, and the owner can be dealt with accordingly.

Coastal resilience _ raw comments

- Mother nature always wins. Don't fight mother nature.
- Planning for the protection/adaptation of shared community infrastructure should be our priority. We need to think hard about what portion of cost adaptations that benefit private properties must be borne by the property owners who have chosen to invest in high-risk locations.
- ToN should dedicate additional staff and resources to coastal resilience, take advantage of significant federal grants, and follow through on the priority projects identified in the CRP. I believe this to be the most important issue facing Nantucket
- I don't know
- The Coastal Resilience Plan is epic. Use it.
- barrier beaches breaching and affecting flooding and flow patterns around the harbor and residential areas is a necessity to understand. Sea Level rising Planning and understanding of risk are crucial.
- Plan and implement and prepare ASAP.
- Allow homeowners to raise their home and mechanicals along waterfront. Install sewer to Madaket.
- Without it, we will literally sink... in every way. Our shore is our livelihood. Everyone who cares about this island should have coastal resiliency in the forefront of all decisions. Sadly, right now, it seems to be money and power. We are in trouble
- Caveat Emptor
- Protection of the environment: preventing beach erosion, protecting the waters from fertilizers, etc.
- Parking for Madaket Beach -- Taking a Long-Term Approach Respecting Erosion/Coastal Resilience Realities:
- The approach parks a handful of vehicles in a small parking lot that each year seems to erode and might eventually disappear into the sea. The remaining parking for Madaket Beach occurs at Macy Road. This is a triage solution at best. It creates a lot of congestion. That congestion could turn into a more significant traffic snarl if erosion eats away more of the small parking lot and parking only becomes available for Madaket Beach on Macy Road (effectively turning Macy Road into a cul-de-sac). The amount of parking available on Macy Road may prove inadequate to meet the overall demand for parking at the beach, Millie's, etc. Finally, the crammed space on Macy Road is likely to lead to safety issues—unintended car-on-car or worse car-on-human encounters.
- We understand Madaket Land Trust lands were purchased by the town to create the current parking arrangements on Macy Road. To the extent that's true, we would posit that the town simply purchased the wrong stretch of Madaket Land Trust to achieve its goals for Madaket. The land between Madaket Beach and Baltimore Street is marked with signage indicating it is owned by the Madaket Land Trust. The town has already shown its willingness to purchase Madaket Land Trust land to meet its objectives for parking in Madaket, and this Baltimore Street space is far more promising as a long-term solution:

- The far greater amount of available land ensures the town will be able to flex up or down the size of the parking lot to meet all relevant needs (beach, Millie's, and other common interests in the Madaket area) for years to come.
- The erosion risks are far fewer in this space and would allow the town to build a new access point to Madaket Beach that, unlike the current one, is not a few bad storms away from permanent elimination. That new access point off Baltimore Street could erode for many lifetimes before it would ever encroach on the parking space or on Baltimore Street.
- The congestion and safety risks would also be far better managed. Foot traffic to the beach would go only from a parking lot to the beach. There is no risk of a driver hitting/hurting someone walking along the path from the parking lot to the beach. Contrast that with the current approach in which walking from a parking spot on Macy Road to the beach often leads to beachgoers walking several hundred yards as cars whiz by--it seems like just a matter of time before someone gets hit.
- I don't know.
- Continue to support private/public partnerships focused on this pressing issue.
- Continue research and discussion of coastal planning
- I don't know
- 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 lost a home to erosion. It is not preventable. Ideally homes should not be constructed on the shoreline. Right now raising roads that provide access to police, fire, hospital and boats/ ferry Hyline etc are the priority. Then access to areas with homes. Bridges where needed
- I don't know
- I urge the Town to secure the services or grant writers to access the wave of Federal and State funding being made available for direct and indirect mitigation of erosion, flooding, etc. and protecting critical infrastructure. Nantucket is missing out on finding that targets these local concerns simply because we are not aggressively pursuing available funding.
- See the National League of Cities website for the spectrum of funding programs awaiting application from "rural" areas like Nantucket.
- We must learn from the Sconset geotube debacle. Coastal resilience has to happen for all of us not just the mega rich.
- I don't understand why easy street basin is worse after the reconstruction.
- Erosion
- Hard to control Mother Nature... do what able to to protect
- I don't know
- Nantucket's perimeter is everchanging with erosion, so it's hard to run up against Mother Nature. With global warming rising water levels and increasing flooding, Nantucket has to find ways to deal with all of that.
- Shorelines need to be protected from degradation by controlling/limiting access points (for instance providing stairs when coastal banks are exposed so that they aren't worn away by beach-goers) and maintaining/enhancing plantings. We need another boat launch site for Nantucket Harbor, especially since we're anticipating increased storm activity due to climate

change. We need to plan for a second terminal capable of receiving freight that is not in Nantucket Harbor in case our main access is cut off. We need to address flooding on Easy Street and figure out how to maintain access to Steamboat Wharf.

- Erosion is an issue that needs to be tackled as an island and community otherwise we let individuals take on the problem for themselves, often at the expense of others - both in terms of community impact and adjacent erosion. If we don't work together we are just fighting each other for sand.
- I think more funding needs to be dedicated towards coastal resilience ... without it there is no Nantucket.
- Clean water is life blood of the island
- Focus on infrastructure to minimize damage to populated areas and wetlands caused by storm surge, ground water rise and changing sea level. Start NOW
- Hard to imagine how Nantucket will manage adaptation when it has failed to respond to the most immediate threat at Baxter road in a comprehensive and collaborative manner.
- You can waste our tax monies on raising those buildings up ... but it would be better spent getting ready to retreat because it's coming ... fast . The town failed miserably when rebuilding the jetty , I mean seriously the idea was to raise it up above the high king tides , so that you could see the dang thing ... take that as a how much faith at my belief in the "towns " competence in forethought and planning . Your best bet is to can the town manager for gross mismanagement , and get a qualified candidate , or better yet an elected position that can be held directly responsible by the people
- One of the most important things.
- I don't know
- Reducing airline/private plane gas consumption would be a more realistic goal. Don't allow planes to idle on the tarmac? Limit number of planes allowed to land? We have a lot of half empty jets in the shoulder seasons.
- 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.
- Without coastal resilience measures, Nantucket won't be a very pleasant place to live or visit. Certainly the in-town wharves are most important, but Washington Street is incredibly vulnerable. In my own time, I have seen a large sailboat sitting in the middle of the intersection at Francis Street. The overflow garden behind the theater proves that amelioration can be made visually acceptable and provide a good social resource, but that's what, 100 feet?
- I don't know
- Mother Nature will rule
- Global warming
- N/a

- I've seen many people allowing their children to play in fenced off areas in the dunes. Particularly in the off season. I realize it would be impossible to police this entirely. Maybe better signage explaining the importance of preserving the dunes.
- Bottom line, if we don't pay attention and take precautions we'll lose our beloved island
- The homes that landscape away the natural vegetation which serves as a protective barrier are doing a disservice to the coastline and resilience of the waterfront,
- The post- storm flooding in town is concerning.
- I don't know
- Local government needs to guide new regulations based on FEMA regulations including allowing beach nourishment, seawall fortification, higher fill regulations for all waterfront properties, elevation of all structures to comply with new FEMA flood elevations, all flood zone public infrastructure needs elevation and fortification. This includes Washington Street, Easton Street, lower commercial district, etc. CONCOM needs a totally new game plan based on saving the physical island. Other waterfront cities and states are years ahead of Nantucket. Miami is in the process of elevating road infrastructure. Palm Beach is in the process of under grounding all utilities, etc.
- Our island is a giant sand bar, we need to protect it.
- Mother nature is always in command.yet we can try
- I don't know.
- In order to make decisions about how to approach coastal resilience for either Nantucket or Madaket Harbor it is ESSENTIAL that the Town FIRST engage in an ISLAND WIDE sediment transport study. It is impossible to study isolated parts of the island without understanding the entire system. The future of the entire Town is at stake if Coatue and the harbor are not better understood based on a genuine island wide sediment transport study.
- UNSURE
- mother nature is a very tough adversary. Probably needs a better understanding of long term impacts of actions we take push the balloon here where and what's the action there
- We need to realistic about to what degree we can chance nature's course and will.
- Lack of Storm water management is a sever problem creating erosion and fertilizer runoff
- We should obviously invest heavily in coastal resilience because retreat isn't really an option. We're an island. There is nowhere to retreat to.
- Mother nature bats last.
- Erosion here is a big problem. Homes should not be allowed close to bluff area or beaches. Beach rebuilding only works short term.
- No more docks! These areas have flooded for generations. What's new is all the expensive building and people not wanting their expensive things flooded. My grandmother told me back in her youth (early 1900's) land down on the point was cheap because it flooded every year.
- I don't know.
- we've got to keep this island viable as long as we can, we have to work together to do it. solutions can't be zero sum, for example you can't protect one person's place while undermining someone else's place.
- Again, reduce, regulate, and enforce fertilizer usage.

- The selectboard getting rid of Erisman on ConCom is extremely problematic for the future of coastal resiliency, if you are denying a scientist a spot, then what will be next?
- Madaket Public beach require immediate attention
- all of the above
- Erosion, flooding, storm protection, piers/dock damage are all critical. If we ultimately lose significant portions of the Town of Nantucket to coastal flooding, Nantucket will lose one of the most important elements which make it special.
- Raise First Bridge (Culvert)
- Raise Second Bridge (Culvert)
- Raise N. Cambridge St. (Culvert)
- Protect Madaket Rd. Ames Plan for adjusting access
- Raise Millie's Bridge
- Raise Jackson Point Pier
- Every shoreline on the island is going to face rising-sea challenges and "saving" the entire island as-is may be impossible. I think it would be best to focus on the historic areas that would be most vulnerable, including downtown, Brant Point, Baxter Road in 'Sconset, Quidnet and the old part of Madaket, plus key infrastructure like the ferry terminal. Don't rule out doing what Baxter Road did successfully for so long — it was working!
- As sea level continues to rise and warm so remarkably fast, we must all do things to encourage changed behaviors & increased awareness.
- We need to pivot from following con com rules rigidly and think about protecting the quality of life for island residents
- don't know
- The natural build up of dunes can only help protect and minimize the damage done by flooding. Climate change impact is another story that this space does not have room for
- Not helping to build back the shoreline is absolutely ridiculous. Houses are lost by all this erosion as well as beaches for public use. Many older adults cannot climb up and down these steep cliffs to get to the shore. Groins have been successfully used along the south shore of Long Island to fill sand back onto the shore. Why not here.
- I don't know
- More can be done to better recoup from these winter storms that seem to wash away our favorite places... but with the current climate I don't know what
- Erosion must be a primary concern for us. We're too small to be losing so much beach, so quickly.
- Erosion in the harbor should be stopped by any means! The side effects of hard revetment need to be considered and studied.
- The dredging of the channels going up the harbor might increase water flow or consider a pump system under the beach barrier between the harbor and the ocean.
- Idk
- I don't know
- Erosion and flooding will continue to increase so resiliency is of high importance.
- Coastal Resilience is very important, but some of the preventative measures also seem extreme at this time (the photo in page 23 with a break wall surrounding the harbor in particular).

- N/A
- I am not sure what can be done to address the rising seas other than moving people as events happen
- My concern is there isn't enough being done to protect N. Harbor, and Coatue.
- sea level rise will happen very slowly over time but we need to plan ahead
- I believe any property owner who abuts the harbor should have the right to reenforce their property against erosion.
- The town should allow a more aggressive strategy for property owners in low lying areas to, not only, raise the structures but to raise the grade and existing bulkheads. This problem is not going away and will certainly only get worse. Late reaction to the problem will be a disaster.
- Expending funds for 2070 now is simply wrong headed.
- For coastal resiliency, I think we should continue to bolster the erosion plan by building up the dunes and planting more grasses on them to stabilize them.
- Please God, get our town legislators and municipal leaders to prioritize this effort.
- It's shameful!
- The impact of rising sea level on Nantucket is projected to be dramatic. The response requires both lots of money and the political will to take prompt action. Neither approach is popular on the island. If this id t overcome...
- Resiliency of the town pier and dinghy dock is important- however flooding of Washington st is going to happen constantly. Hard armoring from Boat Basin to GHYC should be considered before trying to "raise" the road.
- We can't stop mother nature
- Implement downtown plan for flooding etc
- Beach erosion is natural so hard to control the only thing I know off is to control new house development in areas with bad erosion
- We should be (to the extent it's possible) be moving as much infrastructure as far away from the coastline as possible
- Costal resilience is the most critical threat to our harbor front areas. Developing a plan of action now is of utmost importance to ensure that our waterfront areas will continue to be available to us with the continued rise of water and increased frequency of large storms
- Not sure how far out you can plan this one but critical infrastructure needs to be kept in mind
- Continue research process by ReMain
- Change building codes: no point to building in high or even moderate risk areas (as defined in CRP) only for the Town to be required to rescue people later and/or pay to repair/provide services to an eroded area. No swimming pools in high risk areas. It's insanity. Also, owners who buy property in high risk areas should be required to sign a document acknowledging their risk, and holding the Town harmless for loss of utilities or service should erosion cause damage.
- Protecting Coatue so that we continue to have a harbor is critical.
- No more restoration projects, when one person puts something up to protect their property they affect someone else down the line. My life was put in extreme danger when I was disabled in my boat after hitting a sandbag that washed away from the Ratner property in Madaket years ago in October
- Can't consider options soon enough. The Coastal Resilience Plan is a great starting point

- Need to insure wetlands are preserved for rising water tables and remove invasive species that inhibit resiliency.
- Eliminate the emotion and hysteria, and actually study and follow the certified legitimate science.
- Improve ability of natural features especially saltmarshes and dunes to move inland in order to absorb and protect us from rising seas and storms
- Protect against erosion
- Stop building new houses, restrict the use of fertilizers and get rid of the dump.
- Such a vulnerable island. Rising waters will just continue to rise. I understand priorities need to be set.
- Erosion, flooding, storm protection
- Erosion is a fact of nature and a fact of life. This issue is not nearly as important as the others listed
- How the Town addresses rising seas will impact all other aspects of life on Nantucket.
- Need to take this into account so that both harbors are still around in the future.
- The town should continue to purchase coastal properties to create larger buffers for rising seas levels.
- I feel that we have done a good job getting the conversation going in this area. Envision Nantucket was very helpful to start the ball rolling. The more people who are talking about it hopefully more people will be educated and join the team in making the difficult and costly decisions for the future of the island.
- There seems to be much less effort to help with the threat to property owners from erosion than places like Long Island, Jersey Shore or even Carolinas. In Madaket the towns first impulse seems to be destroy your house instead of how can we help. In town there is a much more forgiving attitude towards flooded structures. I think that if given the opportunity the birds would also like to be in town.
- No hard armoring please! Storm fencing works in some situations as does dune restoration
- Erosion is a major threat to Nantucket and anyone living along our coastlines. Yet, in Nantucket, for no known rational reason, we continue to forbid any type of hard armoring of our beach fronts.
- A proactive approach to researching and preparing for the eventual Flooding of certain areas is definitely needed.
- I think global warming will change the face of our shoreline and we should do more to protect our harbor but not with man made things like geo tubes.
- Until such time as the rising water level due to climate change becomes truly significant, NO great expenditures should be made nor great changes to the waterfront in anticipation of what may take a very very long time to occur.
- Coastal Resiliency is important yet with all the talk about it the town is allowing such density of building in sensitive areas. Why in the world are pools not considered ground cover. If you are talking about coastal resiliency nobody should be building closer than 100' from the shore. There is a lot of talk but no serious action being taken.

- Maintaining an undeveloped barrier around our harbors is an effective strategy for storm protection, as well as piers/dock damage. Constructing a new, expensive Harbormaster building on water-side of Washington Street next to the existing Town pier should be reconsidered, and the building moved back or another location identified. Moving forward with these plans would be short-sighted and ill-informed.
- We should encourage natural flooding/storm protection, such as salt marshes and wetlands, wherever possible.
- I don't know
- While it's a fact that sea temps are rising, I haven't seen a noticeable change in sea level in my 44 years
- on Nantucket Harbor. While I have seen some devastating storms, I don't think spending (or studying about spending) ungodly sums of money will provide a different outcome.
- supportive of efforts to increase/revive salt marsh areas to assist with flooding.
- hopefully all the new houses along the Easton Street waterfront have been designed to be the bulwark against rising harbor waters.
- Addressing issues of erosion, flooding, storm protection is critical
- Harbor dredging should be investigated responsibly
- Coastal resiliency is very important in the Town and harbors regions for continued ability to get to the island via water and to save our primary historic area--Town. Storm protection and resiliency planning, like the current Land Bank/Town plan for Washington Street, are essential. Saving all shorelines from erosion is not feasible, but where Town will be responsible for moving utilities in a small area of the island at the cost of the Town/taxpayer if erosion cannot be kept at bay, then efforts should be made to slow erosion--example geotubes on Baxter Rd.
- retreat is not a desired option without the willingness to sacrifice ownership thus protection is necessary.
- Important to make homeowners on the waterfront realize it's at their own risk. Taxpayers shouldn't bail out structures flooded . They should retreat.
- Rising sea levels and the impact of storms on the harbor-front properties (ex. Old North Wharf) are of great concern to me. Protecting these areas is extremely important.
- We are living in a time of climate change and need to turn our attention to adaptation rather than mitigation.
- Wetlands protection in lower harbor. Marked by buoys waterways again to protect algae and eelgrass in and out of moorings.
- Concerns about Millie's bridge
- Consider artificial shoals to protect against erosion and provide habitat for marine life.
- Coastal resiliency is a must I would like to studies from Holland as a successful plan. Erosion of our beaches is huge, perhaps study the use of underwater buffers to decrease water impact. Decrease building of piers, and pools on the coast weakening the surrounding land
- Erosion must be dealt with or we should be allowed to protect our properties that's are subject to erosion.

- 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.
- but we can't control nature
- Let Mother Nature decide
- We need a new harbor master building/bathrooms and it needs to stay in the same spot. Also maybe added some more floating docks. This is all us islanders have left and it would be a shame if it was taken from us.
- I don't know.
- I believe we need a second boat ramp in town. It's too congested and busy when there is an impending storm. If we can't have a second boat ramp... I think children's beach should be turned into a parking lot for boats and trailers, and the existing ramp should be widened.
- not sure who isn't very worried about this topic. Just don't know a solution.
- We need to figure ways for the Town to take over areas that will be overtaken by flooding and storm erosion and rising tides and provide those owners/residents opportunities to relocate on Island.
- You can't stop it. Mother Nature unfortunately.
- Make a larger budget and take better care of the town pier, for one of the most expensive waterfronts in the world our water front is embarrassing. The town dock should be 2x to 3x the size and the buildings and bathrooms should be a lot nicer.
- nature does what nature does
- More fencing and beach grass planting would be beneficial to help build the dunes.
- Change zoning to prevent 2-level basements with bigger footprints than zoning allows above ground. Start limiting hardscape, which has an impact on water quality.
- I don't know
- Everything - biggest issue is the amount of time it takes for the town to adapt the measures we have already determined are needed.
- The Town, County and State urgently need to find a way to fund the implementation of coastal resiliency plans on Nantucket. The downtown area is already threatened, beach erosion is accelerating, the bridge leading to Smith's Point needs to be replaced and the narrow stretch of Madaket Road separating Long Pond from the Upper Long Pond has to be elevated soon!!!!
- We need to assure that passenger and freight boats aren't impacted by sea level rise during extreme weather events, otherwise, if you live on the coast, enjoy it while you can but don't try to stop nature.
- I don't know
- Address flooding along Washington and Easy streets.
- I don't know
- You cannot fool mother nature she's going to take what she wants when she wants it
- I do not have that much knowledge on this matter.
- Nantucket faces rising sea levels and probably more violent storm events. As a sand island, it is wholly vulnerable to erosion and storm damage. Protecting our vital infrastructure is paramount. Protecting private property must be a secondary concern for public funding.
- I don't know

- It seems like plans are underway on Washington Street
- It's completely unattainable. Be more realistic. 900 million? The creeks will still flood, up to and across orange st, behind hatches, behind Nantucket auto, the valley behind the muse, all the way to miacomet pond....
- I don't know
- Same as previous
- There's only so much we can do. Development has taken over and the absorbing marshlands have been severely restricted. Mother Nature will eventually win.
- erosion happen
- I'm very concerned for our downtown area and the ferries and boat docks. It already floods way too often and with out intervention it will get worse. For the south and east sides we can't stop Mother Nature we can only manage our own decisions
- I don't know
- We should do as much as possible for protecting our coastline.
- we are headed for a disaster with climate conditions--storm protection, while important, just isn't going to save much of the overbuilt shoreline, planning needs to be in place for the inevitable and where (if any) to draw the line on costal erosion for, say, he next 100 years based on best predictions
- I don't know
- I don't know
- All of the above
- Hard armoring to be prohibited in active seaway areas. Otherwise, restrict development along the shoreline.
- Let's not get carried away with the hype about climate change please!
- The island needs Madaket Marine.
- No comment
- We should work towards using less fossil fuels and become conserve the energy we do use but should not spend money on fighting nature.
- I think real research needs to be done instead of scaring people with the "simulations" circulating...funded by what billionaire? The data available indicates way less rise and renewable energy will not solve or even help if anyone bothers to read their construction and operations plans. Climate hysteria....only thing being circulated on the news to bolster the investments in them for their stakeholders. The production and materials to make them is overlooked in assessing their usefulness in the end.
- Flooding and all of the above.
- Continue planting dune grass to help mitigate
- Erosion steps to follow accepted scientific recommendations including geotubes and breakwaters
- I don't know
- We need to consider impacts of rising sea levels on more vulnerable coastal areas and especially on infrastructure zones in Nantucket Harbor so that the town will be able to function with a new and more inland coastal area.

- I believe that the island needs to be educating homeowners on beaches that fencing needs to be zig zag and not straight across.
- It has been evident that zigzag fencing is effective in catching sand and in a small way helps stabilize the dune areas.
- The Conservation Commission has been negligent enforcing no building in wetlands. Example is Grove Lane which I was appalled to see has encroachments all around the sanctuary there. The road no longer goes through. These wetlands are being enclosed and they will not function as needed to help absorb the water. Why developers are winning this war is beyond me. The town needs to hire more enforcers of codes.
- The fertilizer run off and swimming pool draining continue to degrade water quality as is evident by the increase of algae sludge smothering eelgrass and an increase of jellyfish. Laws are not enforced and it is a huge frustration. More education is needed for homeowners especially seasonal owners.
- The island is really a giant sandbar, we need to plan to protect it.
- Definitely need more protection from flooding. Also, maybe "wave breaks for town pier, boat basin and GHYC docks is a great idea. Every NE and Hurricane causes catastrophe damage.
- We need to plan for impact of climate change. All parties need to work together with the same goals.
- I hope Nantucket will plan to raise certain shared areas onto high pylons or floating docks against rising sea levels. Flooding and storm protection are crucial. Erosion seems to be a red herring consuming energy better spent elsewhere.
- Woods Hole seems to think this becomes a real issue in about 50 years. Let's not
- Perhaps the town can dredge areas that are too shallow for boats and redistribute that sand in vulnerable areas to build it up
- We need to be more proactive about storm protection. Coattue/Coskata must be protected. I don't know the solution, but it should be a priority.
- The initial plan for the town waterfront looks very exciting, though will require an extremely long time for implementation.
- Probably impossible to prevent erosion in Sconset and the south shore - so work on a plan for key areas - downtown especially - this will be hugely expensive by itself.
- erosion should be lessened by considering HOW the public accesses and uses areas where there is significant ecologically sensitive land (IE hither creek at low tide and uneducated boaters not obeying NO WAKE, undermine the eel grass/grassy marsh creating damage to shoreline)--piers and docks made from more substantial materials (other than wood) and removed prior to storm events, etc...
- I don't know
- I don't know.
- I am very worried about erosion and how that can effect access to Madaket.
- I don't know.
- Erosion happens as it has for hundreds of years on the rock
- the endless legal and political wars about the coastal conditions are an embarrassment and totally off point. there needs to be a few adults to sit down and have a factual and rational conversation about what to do about a sandbar in the ocean that will in time wash away.

- I don't know.
- Protection of our existing shorelines and properties is vital to the health of Nantucket. Historically it has been an expensive fight w/con com for residents to attempt to
- Protect property. ToN should encourage public and private efforts to
- Preserve property and allow bulkheads To be built. The Cape, the Vineyard and shorelines in Mass allow. The alternative is massive loss of waterfront properties and resulting tax base
- I don't know
- Good to limit / ban docks and to limit / ban rip-rap and other beach reinforcements that tend to have negative effects.
- I don't know
- find opportunities for green infrastructure to prolong the life of current infrastructure and delay the need for eventual retreat.
- Encouraging healthy wetlands & marshes to temper flooding & storm surges ... Developing an effective plan for handling scallop strandings ... Administering for weather resiliency in new construction & major renovations
- Please see comment from question about impacting shellfish. We need the town to develop a stormwater management plan.
- Coastal resiliency is a left leaning creation. Is there erosion, yes, and there always has been since Nantucket was formed 18,500 years ago. Is there flooding, yup, but the island is made of sand, and is extremely porous. As far as storm protection is concerned, when you're on an island 30 miles in the North Atlantic, when Mother Nature wants to deal the island a blow, it's going to happen no matter how prepared we are.
- Unless we build the docks out of steel and cement, there's going to be storm damage to wooden structures. Period!
- Starting to think about how our harbor will change is extremely important. Anything near the waters edge will need to reevaluate its position and its impact on the harbor and the shoreline. We should think about doing things before it's too late or too rushed.
- Support protection of coast but don't have specific recommendations
- I don't know.
- More public pier or docks should be installed. If there were a reorganization of the current pier to add floating docks. It would fit more boats, make them more user friendly with the tides... It would help with the traffic through town if people had a place to tie up their boat instead of trailering them every time
- projected sea level rise of up to 6 ft by 2100 necessitates action to ensure coastal resilience
- Town Pier needs to be designed and protected from worsening storms. Town should discourage further development in flood prone areas rather than building new elevated structures.
- Very very important to save our island including transportation to and from and inside the island, police, hospital and all essential services

Compiled CRAC Priorities 2024-2030

Matt Fee

- #1. Not listed. Betterment - CRD payment modeling and regulations.
- #2. 1-2 Zoning
- #3. 6-2 Sewer
- #4. 1-4 Retreat
- #5. 1-11 Sediment budget
- #6. 2-1 SSA
- #7. 3-5 Landfill Resilience
- #8. 3-2 Ames Ave
- #9. 3-4 Madaket Erosion pilot
- #10. 6-4 Surfside Emergency Access

Gary Beller

- 1-2
- 7-2
- 1-11
- 1-10
- 1-4
- 2-1
- 1-12
- 1-13
- 3-5
- 3-1

Jen Karberg

- Strategic Retreat and Relocation Program
- Zoning updates
- Steamboat Wharf Resilience
- Madaket rd raising and bridge conversion
- Surfside Treatment plant
- DPW and landfill resilience
- Codfish park dune restoration
- Storm water updates and management plan

Rachael Freeman

- 1) Surfside Wastewater Treatment Plant Dune Restoration & Nearshore Breakwater Study (consider this here and not Sconset but information may be slightly transferable efforts in Sconset)
- 2) Updates to Zoning by Law
- 3) Strategic Retreat & Relocation Program (include Surfside Emergency Access Planning & Ames Avenue Bridge)
- 4) Stormwater Management Plan, By-Laws Assessment & Regulations Update
- 5) Numerical Modelling Study of Coatie Breaching
- 6) Sediment Budget
- 7) DPW Resilience – How much of an issue is this right now? I have seen the flood predictions but what are they seeing on the ground today?

Peter Brace

1. Surfside Wastewater Treatment Plant Dune Restoration
2. Steamboat Wharf Resilience
3. Updates to Zoning Bylaw
4. Strategic Retreat & Relocation Program
5. Madaket Road Raising & Bridge Conversion
6. Stormwater Management Plan
8. Numerical Modeling Study of Coatie Breaching
9. Department of Public Works Facility & Landfill Resilience
10. Siasconset Bluff Dune Restoration

Leah Hill (Staff)

1. Strategic retreat and relocation
2. Surfside wastewater treatment facility dune restoration
3. Steamboat Wharf resilience
4. Stormwater management plan, stormwater by-laws assessment, stormwater by-law and regulations update
5. Updates to zoning by-laws
6. Building scale resilience at 37 Washington St.
7. Madaket road raising and bridge conversion
8. Numerical modeling study of Coatie breaching
9. Surfside emergency access

10. Ames Ave Bridge resilience, Madaket Erosion management plan and Ames Ave Bridge protections
11. Added 2-23-24 Polpis Rd at Folger's move implementation year up

Compiled Recommendations with Tallies

Not listed. Betterment - CRD payment modeling and regulations. = **1**

#1-2 Zoning = **6**

#1-4 Retreat and relocation program = **6**

- Include Ames Ave bridge and Surfside emergency access

#6-2 Surfside wastewater treatment plant dune restoration = **5**

#2-1 Steamboat Wharf Resilience = **5**

#3-5 DPW and Landfill Resilience = **5**

#1-10 Stormwater Management Plan = **5**

#1-12 Stormwater by-laws assessment = **4**

#1-13 Stormwater by-law and regulations update = **4**

#3-1 Madaket road raising and bridge conversion = **4**

#1-11 Sediment budget = **3**

#4-4 Numerical model of Coatue breaching = **3**

#3-2 Ames Ave bridge resilience = **3**

#6-4 Surfside Emergency Access Planning = **3**

#3-4 Madaket Erosion pilot = **2**

#7-2 Sandpumping feasibility = **1**

#5-2 Codfish Park dune resilience = **1**

#5-4 Sconset Nearshore breakwater study but do in front of Sewer plant = **1**

#5-1 Sconset Bluff dune restoration = **1**

#2-5 Building scale resilience at 37 Washington St. = **1**

CRP Recommendation Ranking by Staff Based on CRAC's Compiled Responses

1. #1-3 Retreat and relocation program
 - a. #1-2 Zoning bylaw updates
 - b. #6-4 Surfside emergency access
2. #6-2 Surfside wastewater treatment plant dune restoration
3. #2-1 Steamboat Wharf Resilience
4. #3-5 DPW and Landfill Resilience
5. #1-10 Stormwater Management Plan
 - a. #1-12 Stormwater by-laws assessment
 - b. #1-13 Stormwater by-law and regulations update
6. #3-1 Madaket road raising and bridge conversion
7. #3-2 Ames Ave bridge
8. #4-4 Numerical model of Coatue breaching
9. #1-11 Sediment budget
10. #3-4 Madaket Erosion pilot

Discussion to add?

- Funding mechanism for coastal resiliency projects
- Bridge conversion at Folger's Marsh- move up timeline to 2025 because risk increased

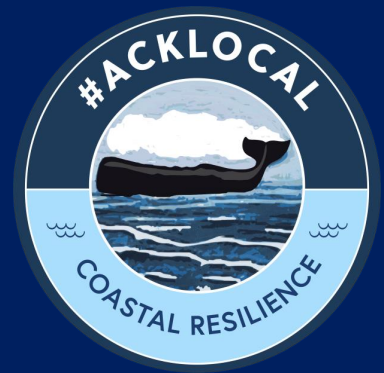
Coastal
Resilience
Advisory
Committee
(CRAC)

4th QUARTER
REPORT TO SELECT
BOARD FOR
OCTOBER-
DECEMBER 2023

**COASTAL
RESILIENCE
ADVISORY
COMMITTEE**

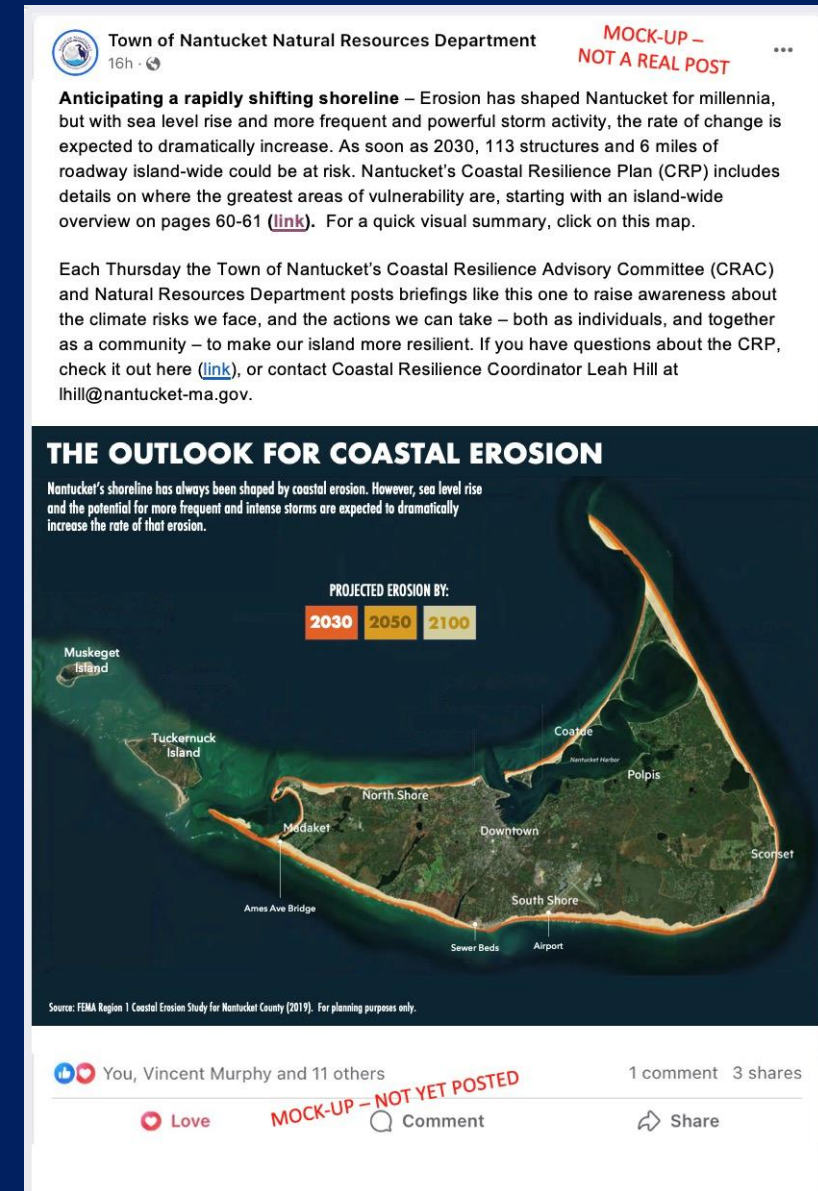
HIGHLIGHTS FROM THE QUARTER

- CRAC started to work on high priority #1-1 Outreach on Property Owner Resilience Best Practices
- Wrote a broad support letter for updated Wetlands Regulations as it aligns with CRP recommendation #1-3
- Produced annual report
- Developed outreach plan
- Given multiple presentations by regional experts



Public Outreach

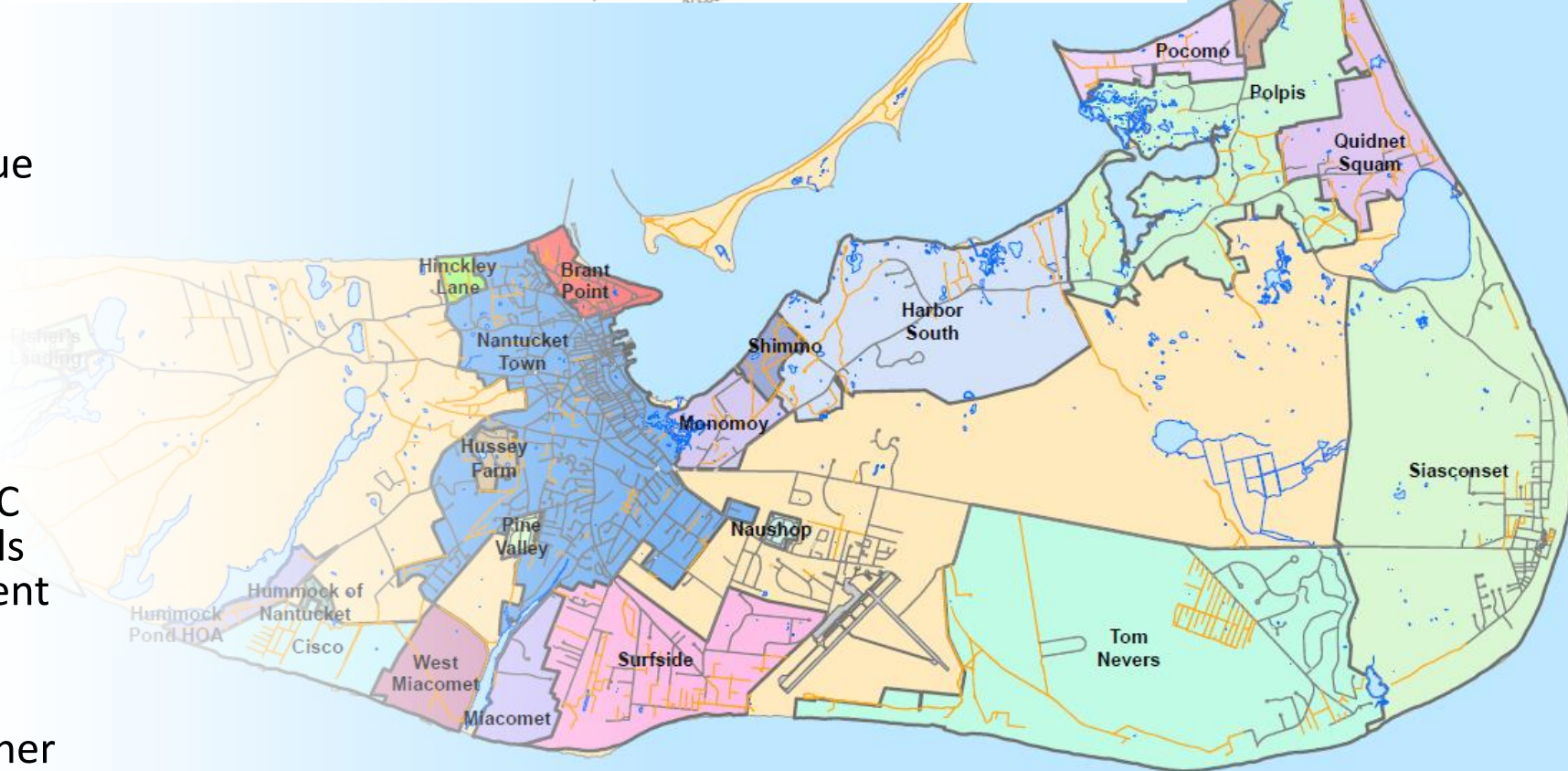
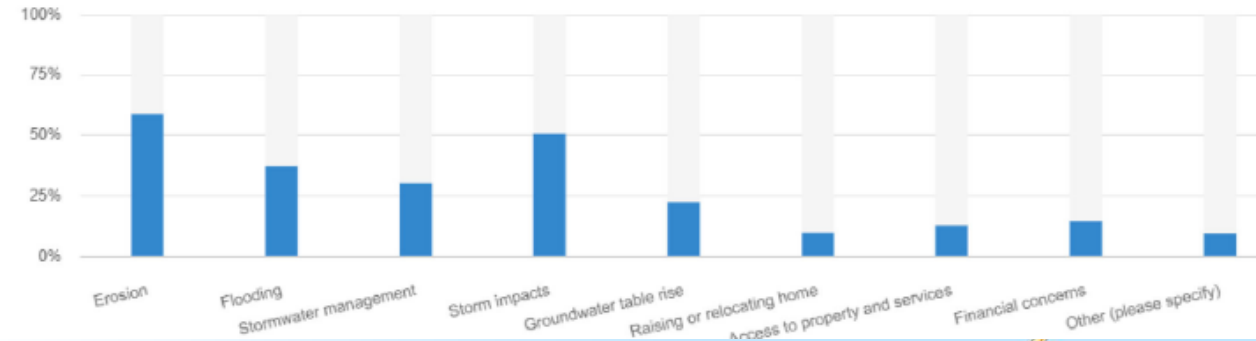
- Working on CRP recommendation #1-1
- Created a schedule and content with coastal resiliency related topics for social media
 -  @NRDACK
 -  Town of Nantucket Natural Resources Department
 - Posts are translated into Spanish
 - Aligned organizations share on their accounts too
 - Weekly scorecard to track impressions
- Content in aligned organization's newsletters
 - ACKlimate, Nantucket Land Bank, Town of Nantucket
 - Nantucket Chamber Members, Nantucket Coastal Conservancy
 - Linda Loring Nature Foundation, Conservation Foundation
 - Nantucket Land & Water Council, The Maria Mitchell Association
 - Nantucket Field Station, Remain Nantucket/ Envision Resilience
- Update coastal resilience webpage so relevant and easy to navigate
- Developing informational brochure for real estate agents and homebuyers



DEVELOPED SURVEY QUESTIONS FOR HOMEOWNER'S ASSOCIATIONS

- Implement CRP high priority #1-1 Community Outreach on Property Owner Resilience Best Practices
- Worked with Nantucket Civic League to distribute surveys to its 25 homeowner's associations
 - Over 300 participants!
- 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

What are your biggest concerns today regarding coastal hazards related to sea level rise on your property or within your neighborhood?



Example Presentation Given to Homeowner Associations by Leah Hill

- Summer 2023 gave 4 presentations
- Generally structured the same:
 - ID coastal risks
 - Future flooding probabilities
 - Future erosion probabilities
 - CRP overview
 - Dive into CRP recs in their area
 - CRAC overview
 - End with what homeowner's can do to make their property more resilient



Higher Cost Options

- Elevate property
- Relocate home



Elevate Structures



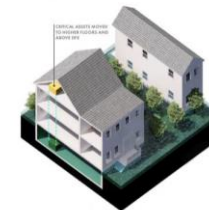
Relocate Structures



Land Acquisition

Lower Cost Options

- Elevate appliances and utilities
- Seal foundation and basement walls
- Use flood-resistant building materials
- Install flood vents



Elevate Utilities



Seal Foundation



Install Flood Vents

23 August 2021

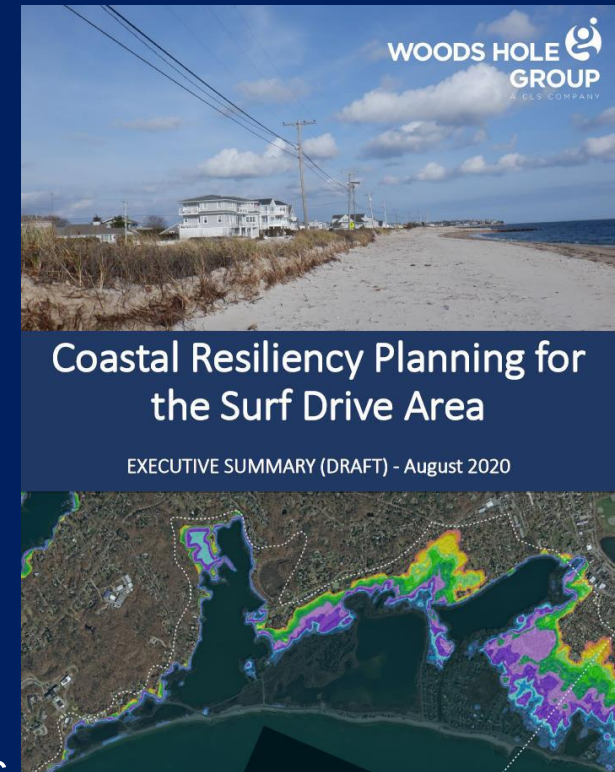
23 August 2021

Dynamic Adaptative Policy Pathways (DAPPs)

by Kurt Bosma



- Senior Coastal Engineer/Vice President of Innovation at the Woods Hole Group
- DAPPs are a phased management approach for complex projects such as coastal resilience projects
 - Buys time and removes pressure
 - Reduces uncertainty by using events not time for decisions
 - Flexibility to reflect changing circumstances, doesn't box you in
 - Keeps options open until there is more information, funding, or support
 - Allows for learning along journey
 - Can handle complex decision making
- DAPPs process:
 1. ID problem
 2. ID key assets
 3. Develop regional themes (managed retreat, natural resources, protection, connection, etc.) and potential actions short, mid, and long-terms
 1. Access efficacy of actions
 2. Develop DAPPs map and route to take

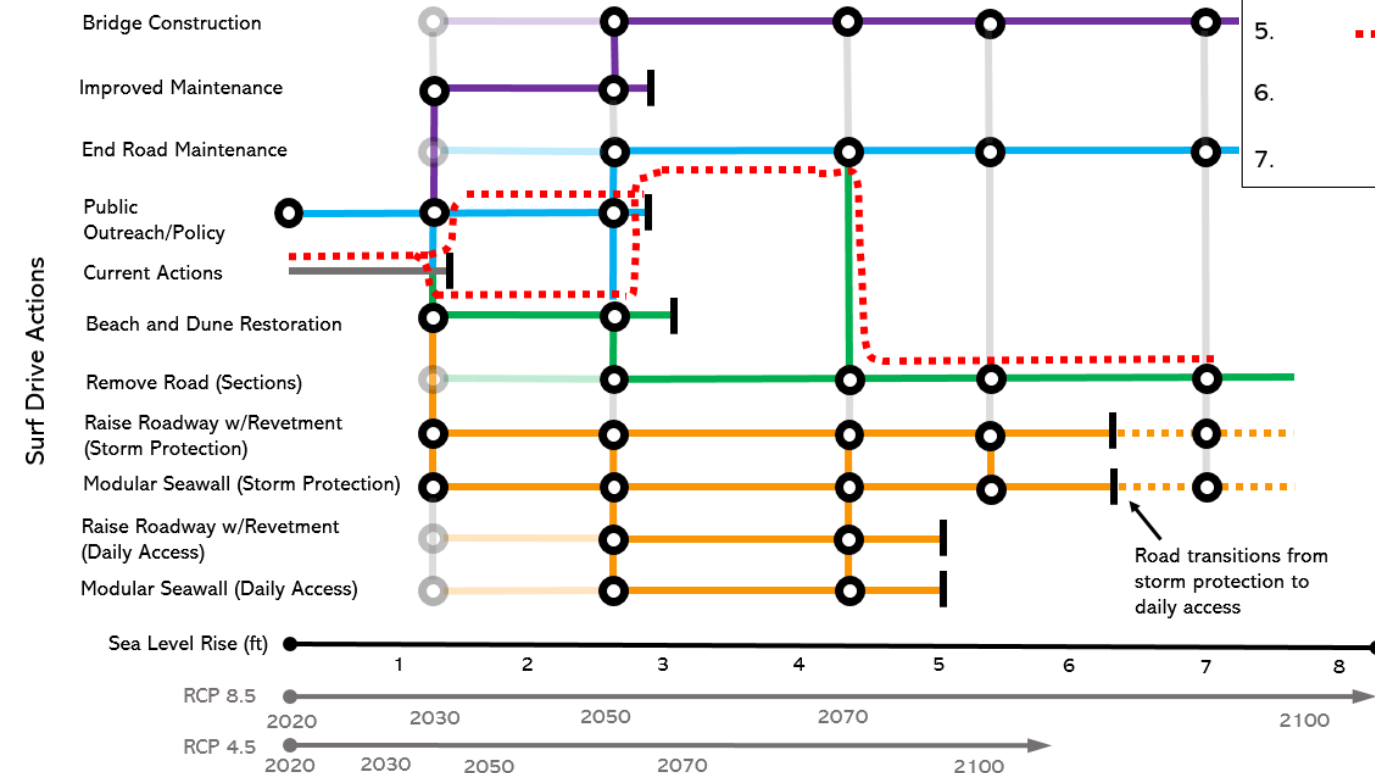


Dynamic Adaptive Policy Pathways (DAPPs) Cont.

- Used in Falmouth, MA for Surf Drive
- Allowed Town an initial action plan with flexibility to switch “paths” in the future if goals, funding, conditions change; build consensus; define key triggers to adjust planned timeline in future

Pathway Scorecard

	Path Actions	Relative Costs	Target Effects	Side Effects
1.	Managed Retreat	+	Balances present uses with increased costs and risks in the future through a multi-phase retreat plan	Loss of Homes No Connection via Surf Drive Loss of Accessible Beach
2.	Protection	+++++	Protects operational capacity of existing Infrastructure and features	Loss of Accessible Beach Aesthetics/Visuals
3.	Natural Resources	+++	Preserves and enhances coastal and marine ecosystem functions	Loss of Homes No Connection via Surf Drive
4.	Connection	++++++	Maintains important public access, utility Connections and transportation corridors	Loss of Homes
5.	Preferred	+++	Balances present uses w/increased costs and risks in the future through a multi-phase retreat plan, while enhancing ecosystems	Loss of Homes No Connection via Surf Drive
6.		+++	Improved maintenance for short-term uses w/a long-term focus on ecosystem restoration	Loss of Homes No Connection via Surf Drive
7.		+++++	Coastal habitat restoration in the short term, w/protection of existing infrastructure in the long-term	Loss of Accessible Beach Aesthetics/Visuals



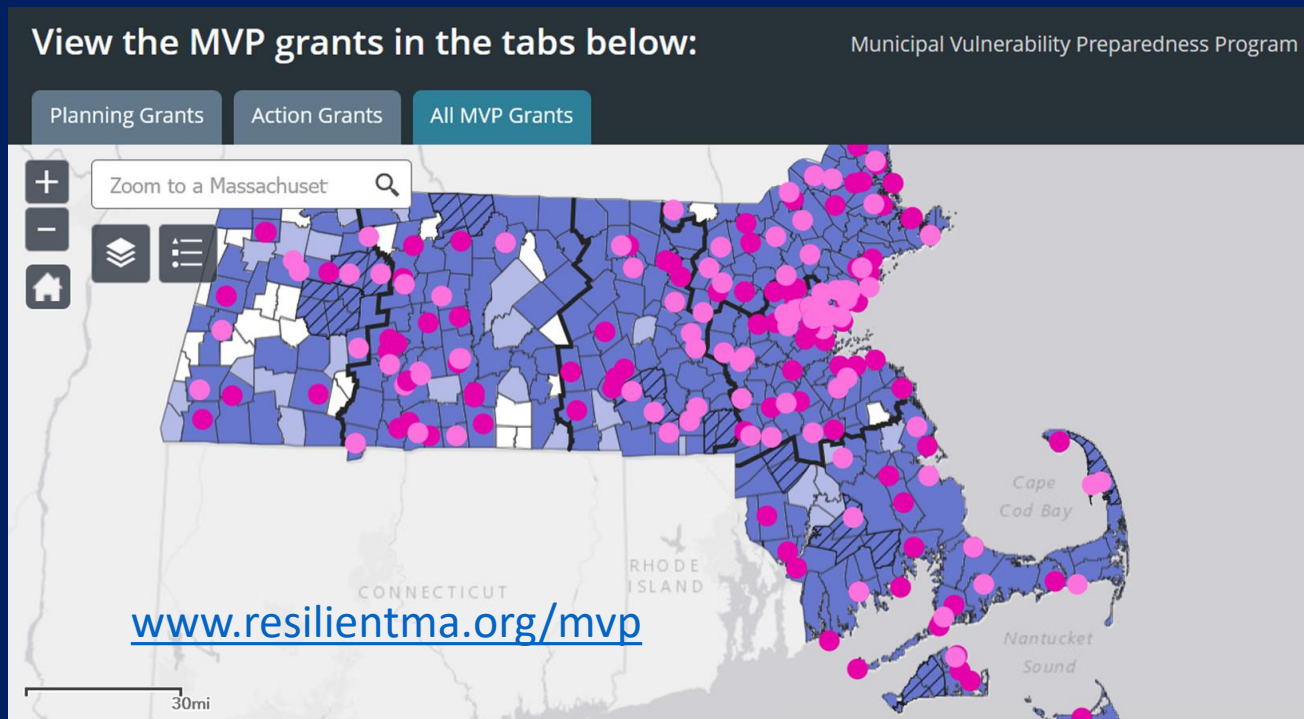
KEY:

- Transfer Station (can change to a different adaptation action)
 - | Adaptation Tipping Point (Terminal – Adaptation no longer meets goals)
 - Natural Resource theme focused pathway
 - Connection theme focused pathway
 - Protection theme focused pathway
 - Managed Retreat theme focused pathway
 - ... Preferred Path
- Change in action function



Municipal Vulnerability Preparedness Program

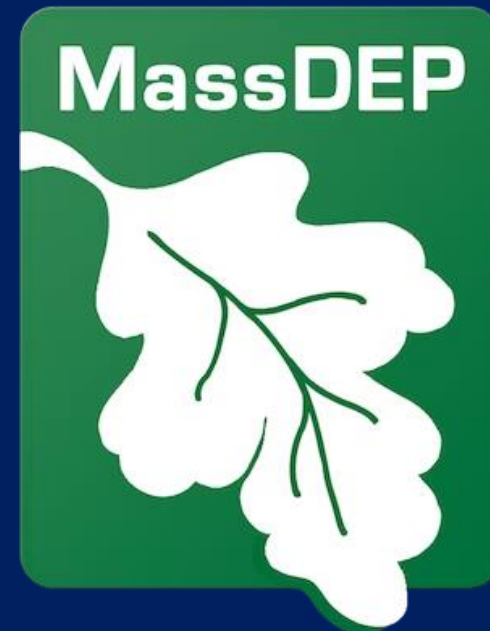
By Courtney Rocha



- Overview of MVP's Action Grant Program
- FY25 out now and generally \$100-\$200K per project but up to \$3M per project
- Planning, capacity building, regulatory/zoning updates, design & permitting, infrastructure improvements
- Gave examples of projects
- Looked over CRP recommendations to see which would qualify & be competitive
 - 1-1: Community outreach re Property Owner Best Practices
 - 1-4: Strategic Retreat and Relocation Program
 - 6-2: Surfside Wastewater Plant - relocation alternatives



Discussion with Daniel Padien



- Waterways Program Chief at Division of Wetlands and Waterways Massachusetts Department of Environmental Protection
- In 2022, CRAC sent a letter to DEP regarding Ch.91 licenses
 - For seawalls and revetments, property owners required to maintain public access for fishing, fowling and navigation
 - Erosion and sea level rise can result in no fronting beach for public access
 - CRAC requested that applicants be in compliance with existing license criteria in advance of going to Conservation Commission for reconstruction permits
- Gave an update about the proposed Ch. 91 and Waterways regulation updates that now include planning for sea level rise in projects, encouraging nature-based solutions, use [Resilient.ma.gov](https://resilient.ma.gov) for best available data, new coastal floodplain standards

Offshore Wind Grant Discussion

- Sunny Daily, Executive Director of the Community Foundation outlined the goals and application process
- CRAC expressed interest in submitting an application
- CRAC members put a list of potential Coastal Resilience Plan recommendations to move forward in an Offshore Wind Grant application
- Submitted one for CRP translation into Spanish and produce a video about coastal resiliency on Nantucket



Harbors Sediment Transport Study Update by Vince Murphy

- For Nantucket, Polpis, and Madaket Harbors to understand sediment movement and address navigational needs
- Priority recommendation in CRP
- Create a sediment transport model to help guide resilient decision-making by:
 - Identifying sediment resources
 - Prioritizing erosion management locations
 - Potential to create an island sand bank & ID a location
 - Understand and protect sensitive habitats
- 8 months into the project and collected water level data, bathymetric surveys, eelgrass bed mapping, and sediment sampling (appears to be free of pollutants and appropriate for re-use)
- Due to be completed in October 2024
- Questions regarding a need for a south shore study
 - Should be undertaken in segments and tied directly to a specific CRP recommendation; expensive; south shore very dynamic

Coastal Zone Management Grant Update



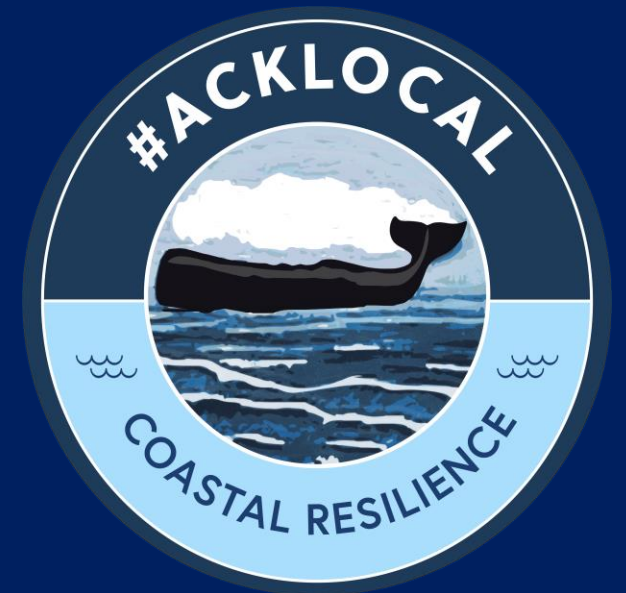
- Awarded **\$421,875** (total **\$532,500**)
- Town contribution **\$30,000** (in-kind staff time) + **\$110,625** cash (Article 10)
- Task 1: Existing Conditions and Flood Risk Assessment
 - Data Collection and Gap Analysis
 - Coastal and Stormwater Risk Assessments
 - Existing Conditions and Flood 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

REQUESTS AND RECOMMENDATIONS

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



CRAC CRP AWARENESS CAMPAIGN - MEDIA SCORECARD

WEEKS 1-18: 10/25/23-2/29/24

TOTAL IMPRESSIONS TO DATE: 167,592

