# Town and County of Nantucket
# Select Board • County Commissioners



16 Broad Street
Nantucket, Massachusetts 02554

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C. Elizabeth Gibson
Town & County Manager

*AGENDA FOR THE MEETING OF THE*
*SELECT BOARD*
*JUNE 29, 2021 - 3:30 PM*
*REMOTE PARTICIPATION VIA ZOOM*
*NANTUCKET, MASSACHUSETTS*

Join Zoom Meeting
https://zoom.us/j/92219157140?pwd=d3k3OUhBamp2K290V3VqL08xZ0c4Zz09

Meeting ID: 922 1915 7140
Passcode: 392217

## *WORKSHOP MEETING WITH COASTAL RESILIENCE ADVISORY COMMITTEE AND TOWN STAFF WITH ARCADIS REGARDING BAXTER ROAD ENGINEERING FEASIBILITY ASSESSMENT*

This Workshop will not feature Public Comment.

1. Introduction: Recap of Project, Project Status and Overview of Anticipated Progress for this Workshop.

2. Vision: Explore Desired Outcomes at Different Planning Horizons.

3. Alternatives: Review Preliminary Results and Considerations for Each Alternative.

4. Review/Discuss: Perceived Points of Disagreement.

5. Review/Discuss Potential Implications of Alternatives.

6. Adaptation Pathways: Potential Future Scenarios.

# BAXTER ROAD, NANTUCKET

## Feasibility Assessment and Solutions

**Date: June 22, 2021**

Photo Baxter Road
and Sconset Bluff
Stabilization Project
Nantucket, MA
EEA No. 15240
Available HERE

# Today's Facilitation Team


**KEREN BOLTER, PHD**

Senior Resilience Planner

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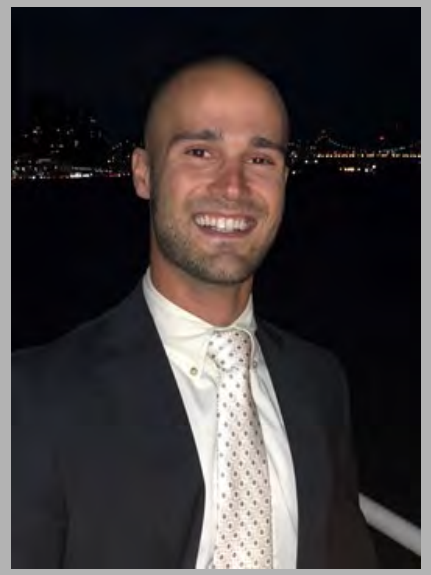


**RYAN BRONG, EIT**

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**KATHRYN EDWARDS, PE**

Principal Engineer / Project Manager

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**IRENE WATTS, PHD**

Senior Coastal Modeler

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# Today's Discussion:

- What is the vision for our desired outcomes?
- What are the considerations for alternatives assessed in the **Baxter Road Feasibility Assessment**?
- What are the associated implications for potential scenarios?
- How can we plan out potential future scenarios (**adaptation pathways**) for addressing bluff erosion on Baxter Road along planning horizons?

# Ground Rules & Instructions

1

Stay mentally and physically present and **listen actively**

2

Contribute to meeting goals by **sharing ideas and asking questions**

3

For best experience, participate positively

And join the polling if you can!

**pollev.com/kbolter833**

# Polling Questions

Share your feedback and upvote entries that you think are most important

1. What is your short-term desired outcome for Baxter Road?
2. For the long term, what does a resilient Baxter Road look like to you?
3. Why is the outcome of this project important to you?

# Project Mission

*The PROJECT NAME will create a community-supported actionable roadmap to implementation of short- and long-term solutions for the Baxter Rd area that help the community respond to rising seas and eroding coastlines through adaptation practices such as protection, accommodation, shoreline realignment, or no action.*

**Goal - to compare alternatives and develop a concept plan for moving forward based on analysis and community engagement**

**Challenge – finding a solution that is supported throughout the community.**

Photo: https://nantuckettodayonline.com/archives/the-battle-for-the-bluff

# Project Name

- **We will vote on these**

1. Future of Sconset Bluff and Beach
2. Baxter Road Long-term Planning
3. Baxter Road Neighborhood Adaptation Plan
4. Baxter Road Adaptation Pathways (BRAP)

Photo: https://nantucketodayonline.com/archives/the-battle-for-the-bluff

# Baxter Road Engineering Feasibility Assessment

1 – Review of Existing Information *(>500 documents)* *(complete)*

2 – Stakeholder Engagement *(partially complete)*

3 – Alternatives / Feasibility Analysis *(partially complete)*

4 – Summary of Findings & Recommendations *(incomplete)*

# PROJECT UPDATE: SELECTION AND ANALYSIS OF ALTERNATIVES

# Approach to the Selection of Alternatives

- The alternatives analysis was performed from an engineering and coastal process perspective
- Bluff protection cannot be achieved without toe stabilization, so alternatives that provide bluff protection include toe stabilization.
  - We explored other forms of innovative protection methods but some would not provide toe stabilization. – Nantucket is unique
  - Removal of the current system and replacement with another form of toe stabilization would also have environmental and cost impacts.
    - Will take time for the system to establish a new dynamic equilibrium
- With these considerations, analysis was completed with the existing system in place for most alternatives, with a single variable changing each time.

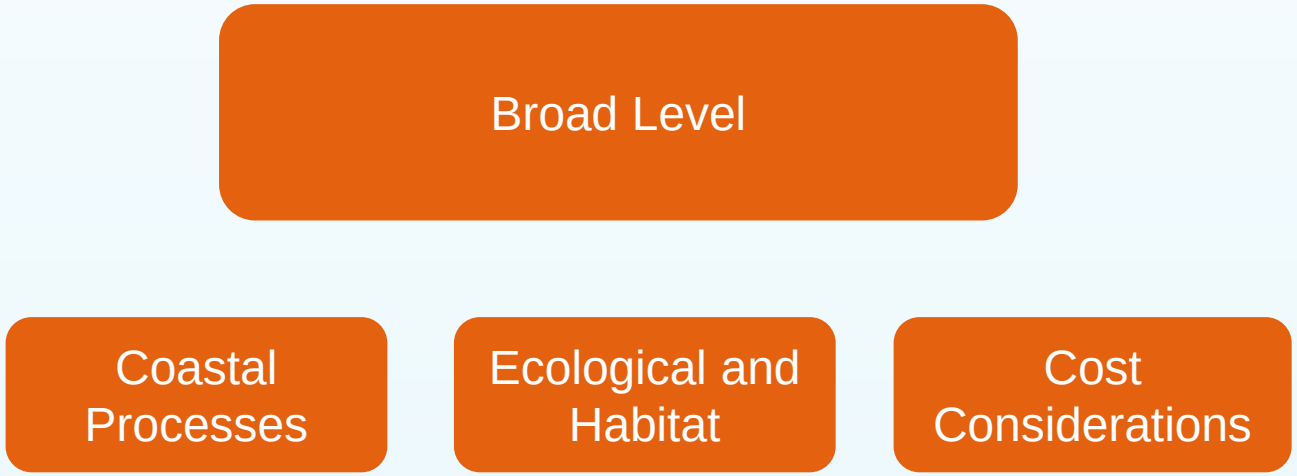
# What does the current system address?

- Must account for existing system: its primary function is to provide toe protection
- Toe Protection:  Protects toe of bluff from wave action which can erode leading to episodic collapse of the bluff
- Dune Nourishment
  1. Adds material to the littoral system/sediment budget
  2. Acts as a buffer to the geotubes
- Bluff Stabilization
  1. Aeolian or Wind Transport
  2. Best Management Practices for managing surface drainage

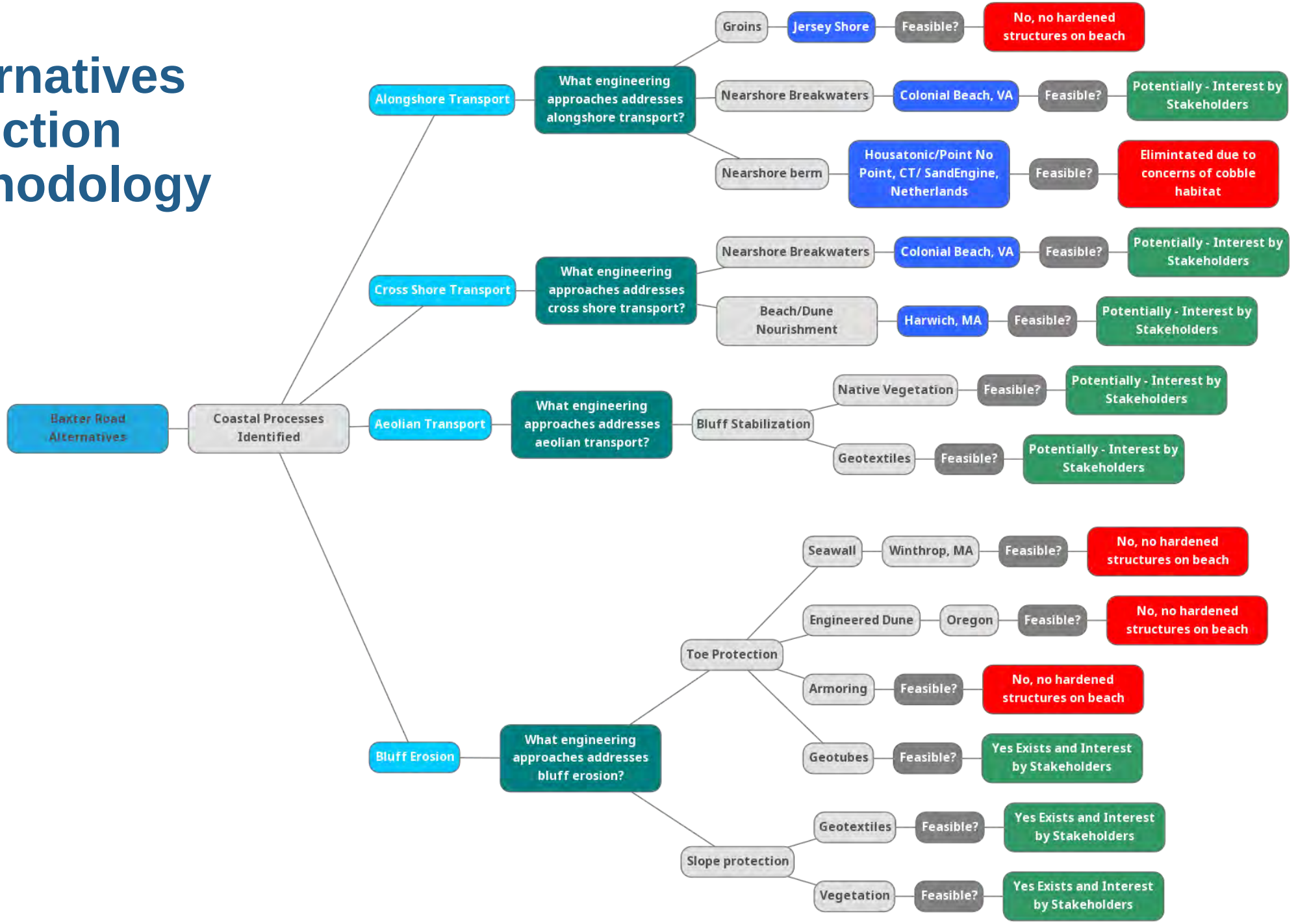
(Epsilon, 2018)

# Approach to Evaluating Alternatives

- Tiered approach to reflect broad and specific categories and provide the ability to examine primary drivers between categories
- Altering a single parameter between each alternatives to examine the differences between each alternative clearly
- All changes are closely linked to the coastal process being addressed and its function
- Broad categories:
  - Functional coastal process
  - Ecological and Habitat Considerations
  - Cost Considerations
- Matrix is a tool to assist in examining trends and agreements between alternatives



# Alternatives Selection Methodology



# The team considered 5 alternatives, which included:

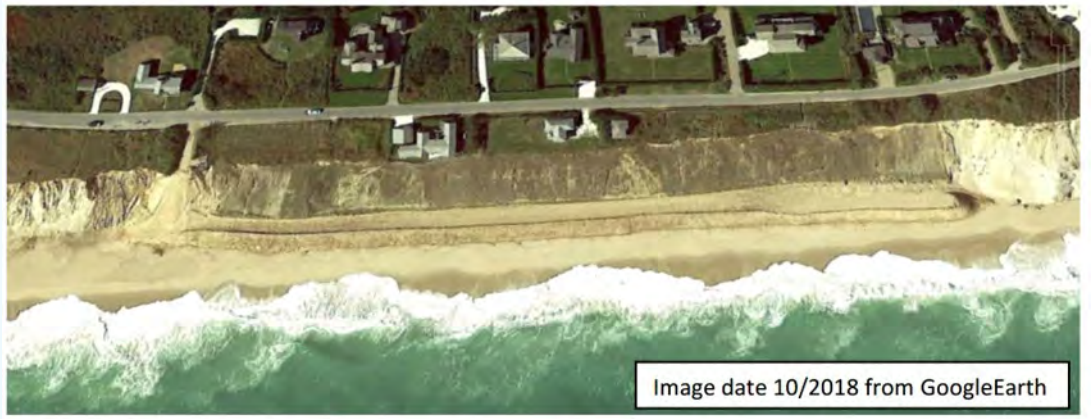
| Alternative Name | Description | Coastal Process |
|---|---|---|
| No change in existing system and O&M Activities | Baseline | Current |
| Adaptive dune nourishment with existing system | Incorporate an adaptive management approach to the sediment placed on the dune | Optimize placement volumes to variations in erosion and accretion to the template |
| Expand existing system | As previously designed | Greater alongshore distance protected |
| Removal, retreat and Baxter Road relocation | Relocate/abandon utilities and access to homes and lighthouse | Return to pre-construction conditions |
| Nearshore breakwaters with existing system | Add nearshore breakwater structures seaward of existing project | Add a wave attenuation component to reduce sediment movement in the lee side of the structure |
| No Action | Remove system and no additional activities | Current |

# No Change in existing system and O&M Activities

- Serves as baseline alternative for comparison
- Proposes no change to system or its maintenance

<u>Existing Primary Components:</u>

- Dune Nourishment: 22 k cy/lf/yr with a total of 20,834 cy
- 947 ft alongshore geotextile tube



# No change in existing system and O&M Activities

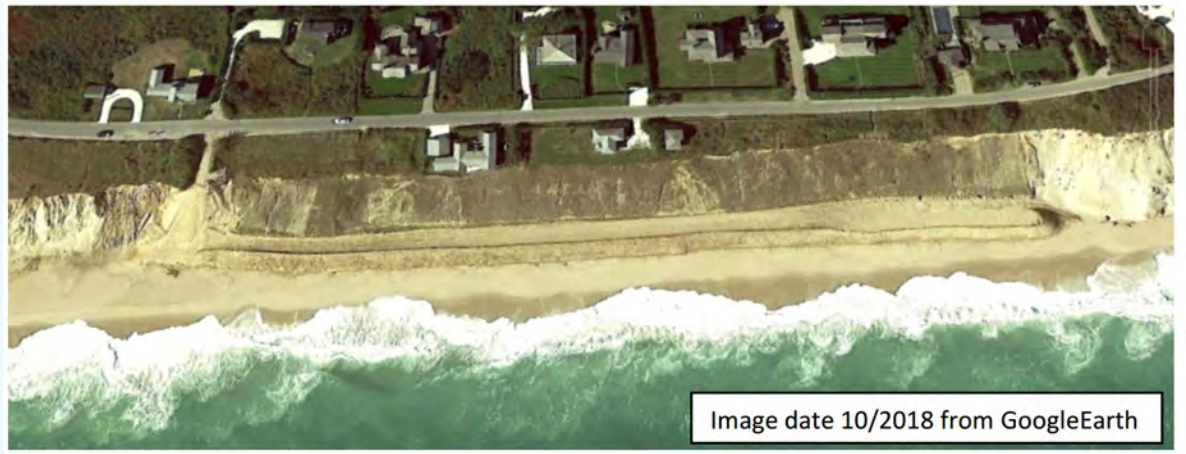
| Target Effects | Side Effects |
|---|---|
| Continue protection for homes and infrastructure alongshore | Continued cost of sand and monitoring |
| Continue contributing sediment to the littoral system through nourishment | Aesthetic concerns |
| Constructability | Overfilling beyond erosion rate creates a surplus of sand in the template, may have adverse impacts |

<u>Existing Components</u>

Current dune nourishment permitted: 22 cy/lf/yr with a total of 20,834 cy

947 ft alongshore geotextile tube

Drainage system



# Adaptive Nourishment with Existing System

- Incorporate adaptive nourishment strategy
- After springtime survey, determine volume necessary to refill template to design
- Optimizes sediment needs and addresses variability in sediment transport
- Prevent overfilling template
  - Has already occurred by 2020 (Epsilon, 2021)
- Minimizes potential to impact nearshore cobble habitat and fishing industry
- Potential Approach: Refill template to design after the spring survey

**Chatham, MA Nourishment Events**

| Year | Length (ft) | Volume (cy) | Cost | Sand Source |
|---|---|---|---|---|
| 2009 | 2,376 | 11,745 | $59,754 | Aunt Lydia's Cove Channel |
| 2008 | 2,376 | 6,000 | $210,555 | Aunt Lydia's Cove |
| 2007 | | 6,600 | | Chatham Harbor Channel Morring Basin |
| 2007 | 2,376 | 5,000 | | Aunt Lydia's Cove |
| 2006 | 2,376 | 8,000 | | Aunt Lydia's Cove |
| 2005 | 2,376 | 10,228 | | Aunt Lydia's Cove |
| 2005 | 3,704 | 9,922 | | Stage Harbor Inlet |
| 2004 | 3,704 | 16,446 | | Stage Harbor Inlet |
| 2004 | 3,704 | 2,000 | | Stage Harbor Inlet |
| 2003 | 3,704 | 1,683 | | Stage Harbor Inlet |
| 2001 | 2,376 | 7,281 | | Aunt Lydia's Entrance Channel |
| 2000 | 2,376 | 7,295 | | Chatham Harbor |

National Beach Nourishment Database
https://gim2.aptim.com/ASBPANationwideRenourishment

# Adaptive dune nourishment with existing system

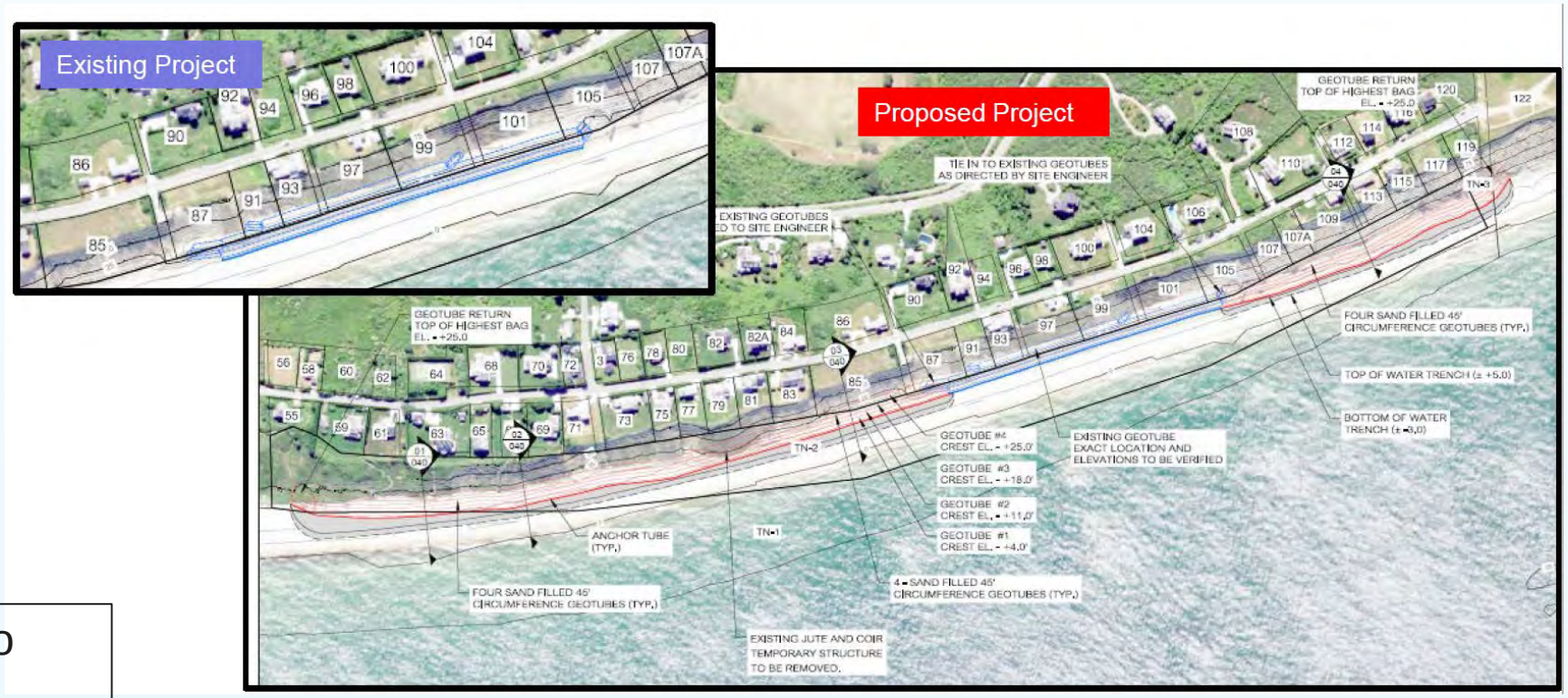
| Target Effects | Side Effects |
|---|---|
| Optimizes sediment needs to environment | Variability in budgeting can be challenging |
| Prevent overfilling template beyond design | Does not address sand compatibility |
| Optimizes cost | Only protects a small portion of the road |
| Minimizes potential cobble habitat impact | |

Dunes near Sesachacha Pond (FEMA, 2020)

Considerations – Variability in sand needs year to year; permitting considerations, may help beach access

# Expand Existing System

- Lengthen system with additional 2,873 ft alongshore
- Include four tiers of toe protection to provide resiliency from the 100 to 200-year storm
- Bluff face vegetated with American beachgrass or other native vegetation
- Dune nourishment to cover toe protection for longer length
- Continue monitoring program




Source: https://records.nantucket-ma.gov/WebLink/ElectronicFile.aspx?docid=125433&dbid=0&repo=TownofNantucket

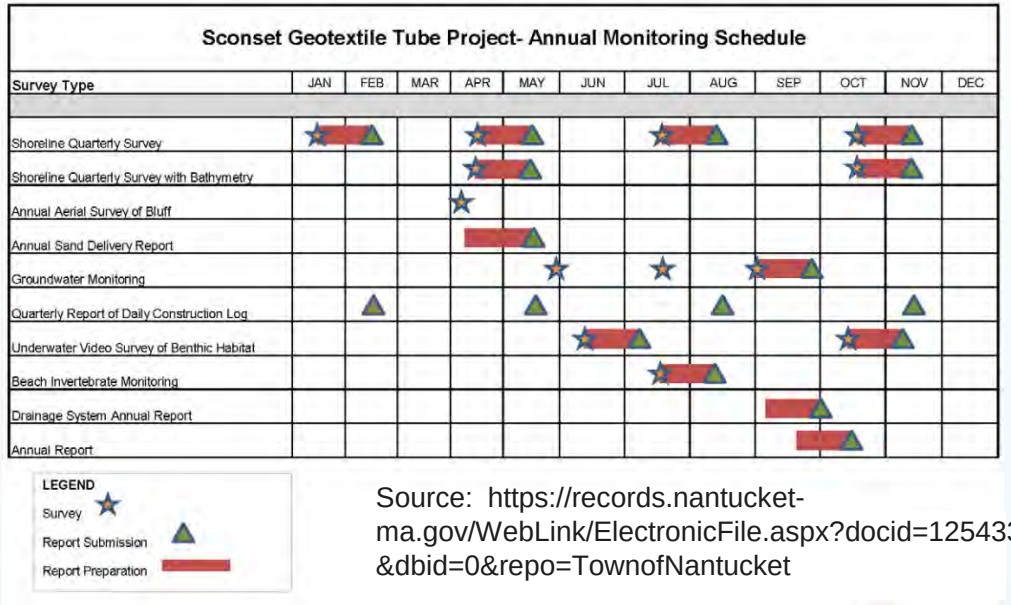
Upper: Existing protection from 59 to 119 Baxter Rd

Proposed greater distance protected
- North to 119 Baxter Rd = 895 ft
- South to 59 Baxter Rd= 1,978 ft

# Expanded existing system

| Target Effects | Side Effects |
|---|---|
| Increased protection alongshore | Increase cost of maintenance with increased sand and monitoring |
| Ample monitoring funded by homeowners | Potential Aesthetics concerns |
| Increased sediment availability for the littoral drift | Increased sediment needed to fill new larger template |

Considerations – Sediment sourcing, permitting




Source: https://records.nantucket-ma.gov/WebLink/ElectronicFile.aspx?docid=125433&dbid=0&repo=TownofNantucket

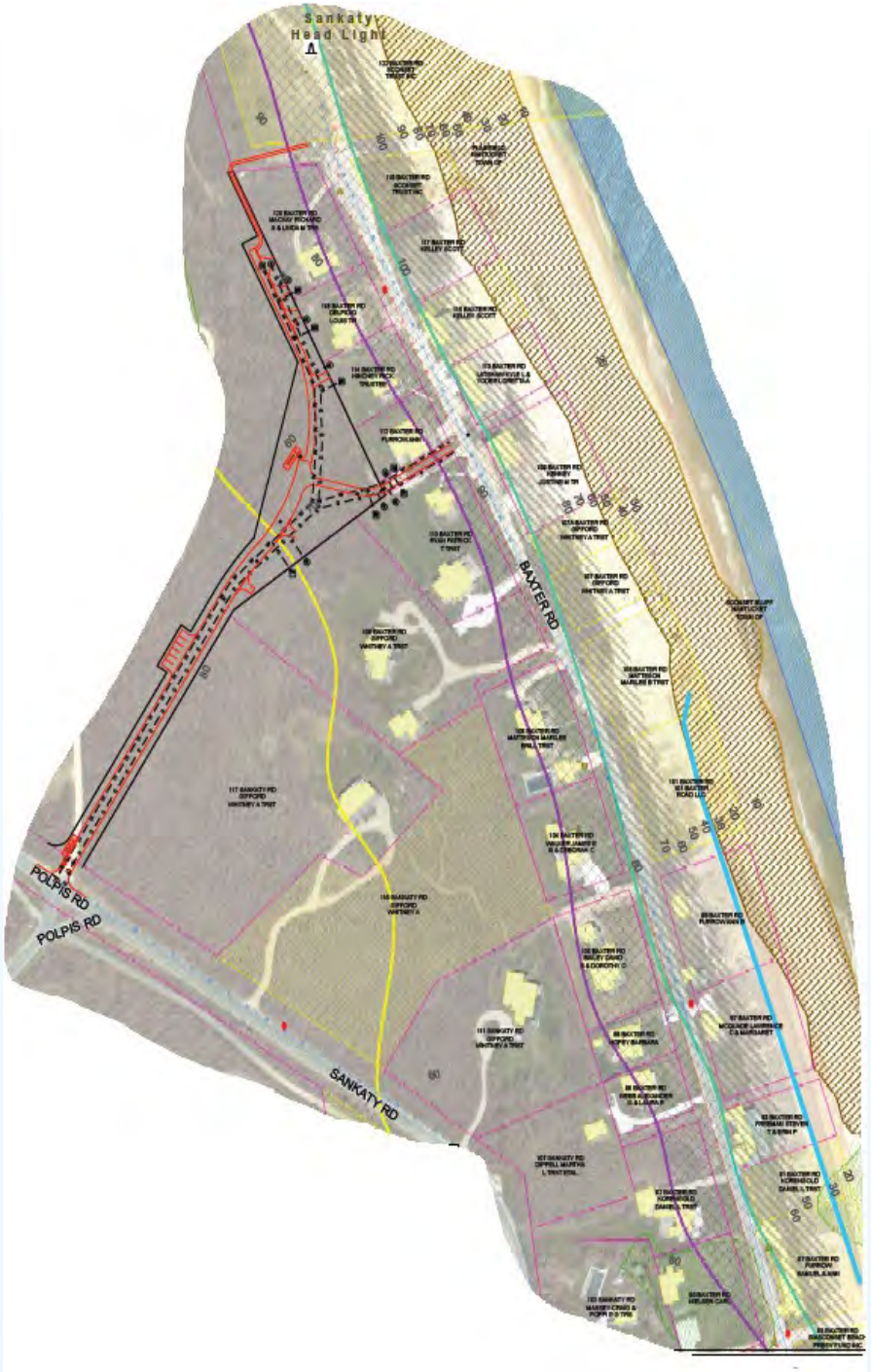
Source: Baxter Road and Sconset Bluff Stabilization Project, Nantucket, MA, EEA No. 15240
Available HERE

# Removal, retreat and Baxter Road relocation

| Target Effects | Side Effects |
|---|---|
| Return system to natural state | The cost of moving a home is a minimum of $500k |
| Cease maintenance activities | Utility and road relocation cost |
| | Bluff will erode |
| | No longer supplying additional sediment to the littoral system – loss of bluff walk, narrowing of beach |
| | System may take a long period of time to return to a new equilibrium |

Considerations – Where can homes/utilities/the road be relocated to?

# Road Relocation Considerations




**Legend**

**S.B.P.F. BAXTER ROAD ALTERNATIVE ACCESS PLAN (2018)**

- CATCH BASIN
- DRAIN MANHOLE
- STORMWATER LEACH PITS
- SEWER SERVICE SHUT-OFF VALVE
- WATER SERVICE SHUT-OFF VALVE
- UTILITY POLE
- D — PROPOSE DRAIN PIPE
- S — PROPOSED SEWER PIPE
- W — PROPOSED WATER MAIN
- EDGE OF ROADWAY
- RIGHT OF WAY

**EXISTING UTILITIES**

- PUBLIC WATER SUPPLY
- HYDRANT
- SEWER MANHOLE
- W — WATER MAIN
- S — GRAVITY SEWER MAIN
- LOW PRESSURE FORCEMAIN
- SANITARY FORCE MAIN
- GEO TUBE

**TAX PARCELS**

- OCCUPIED PARCEL
- MUNICIPAL PARCEL
- VACANT LAND PARCEL

- LIGHTHOUSE
- TOPOGRAPHY CONTOURS

**COASTAL EROSION HAZARD AREAS**

- 2030 INTERMEDIATE-HIGH
- 2050 INTERMEDIATE-HIGH
- 2100 INTERMEDIATE-HIGH

**PROJECT EROSION HAZARD AREA**

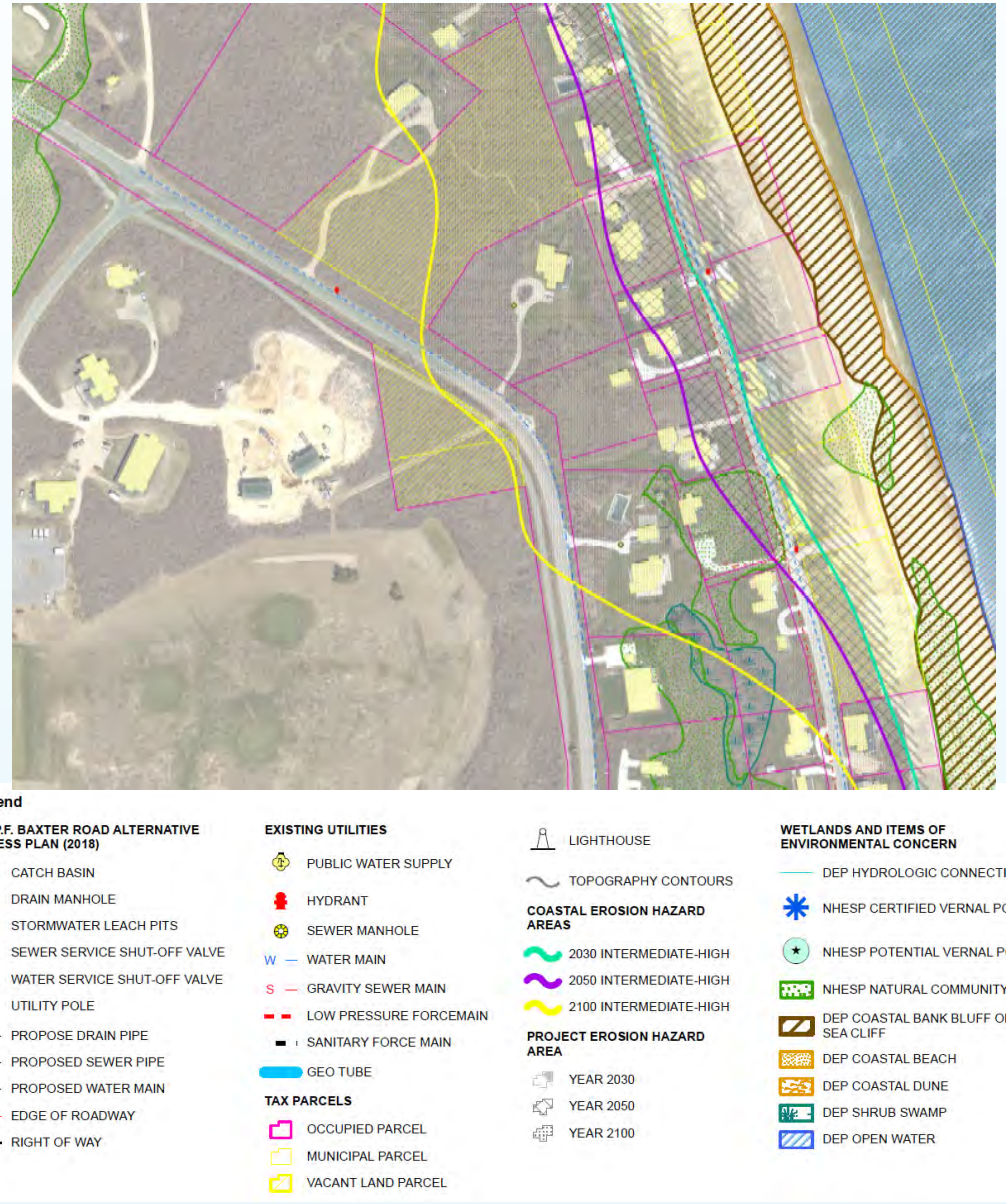
- YEAR 2030
- YEAR 2050
- YEAR 2100

**WETLANDS AND ITEMS OF ENVIRONMENTAL CONCERN**

- DEP HYDROLOGIC CONNECTIONS
- NHESP CERTIFIED VERNAL POOL
- NHESP POTENTIAL VERNAL POOL
- NHESP NATURAL COMMUNITY
- DEP COASTAL BANK BLUFF OR SEA CLIFF
- DEP COASTAL BEACH
- DEP COASTAL DUNE
- DEP SHRUB SWAMP
- DEP OPEN WATER

# FEMA Erosion Projections

- Analysis is largely statistical in nature and are most appropriate for longer term look
  - Linear Regression Rates (LRR) using multiple historic shoreline data points
  - May be more appropriate for longer term projections by removing short term variations (seasonal changes)
- Did not include geotubes or any shoreline protection in analysis
- Used variety of data sources including historic surveys (T sheets) and Lidar data 1846 - 2010
- FEMA Lines are conservative

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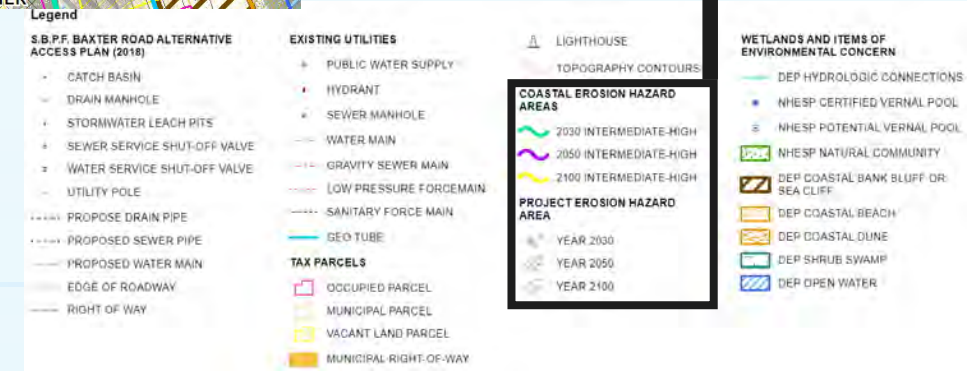

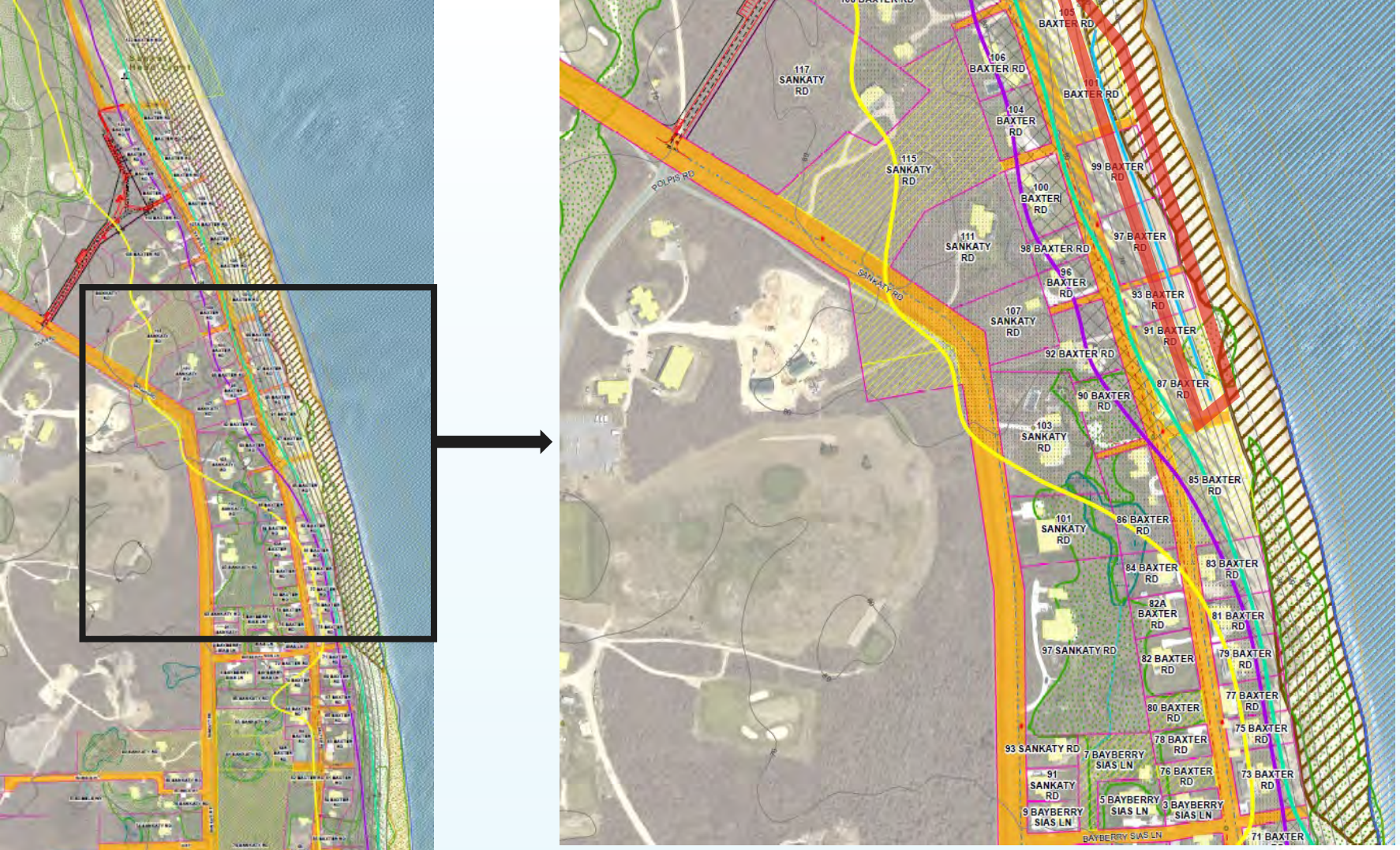


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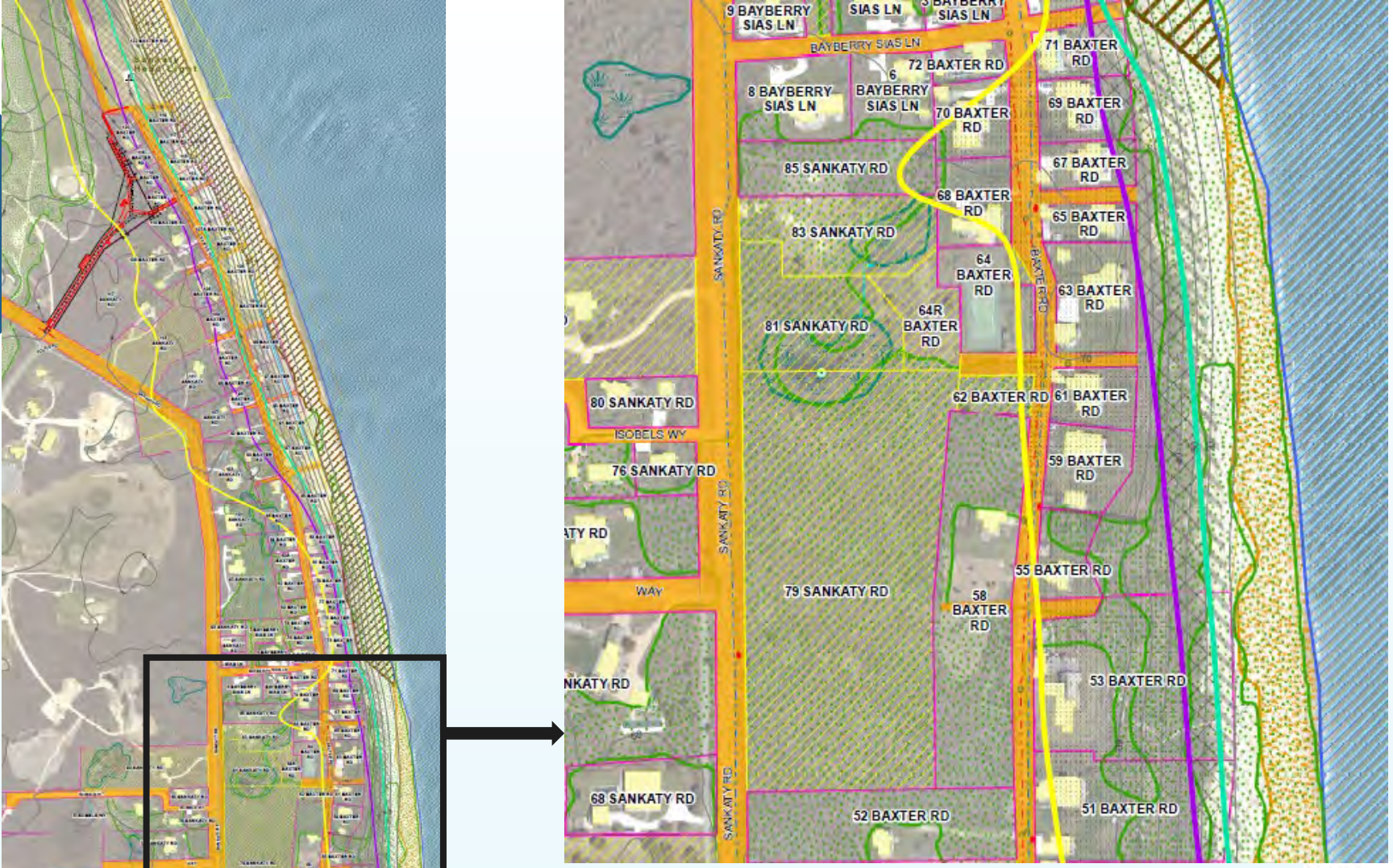


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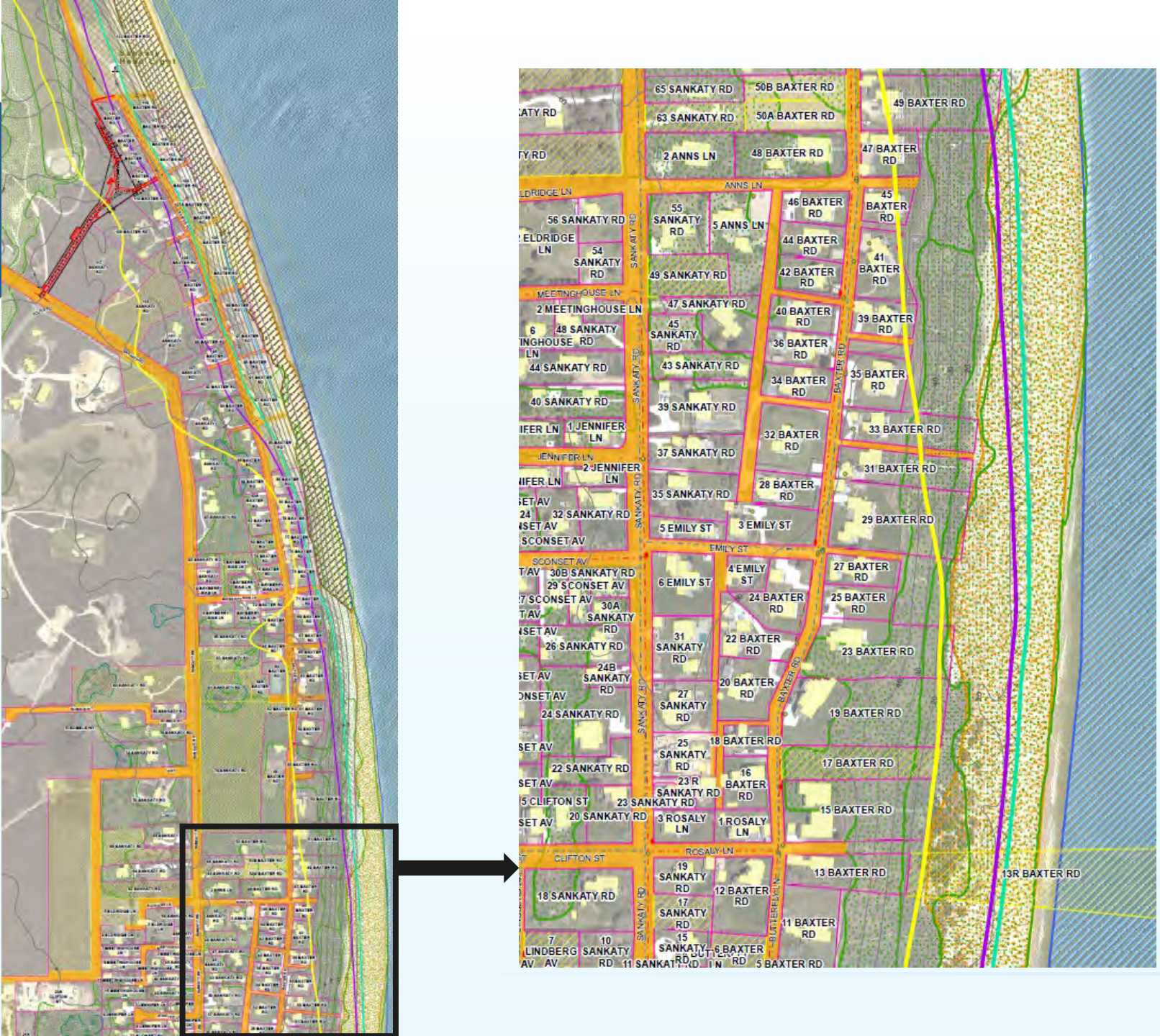


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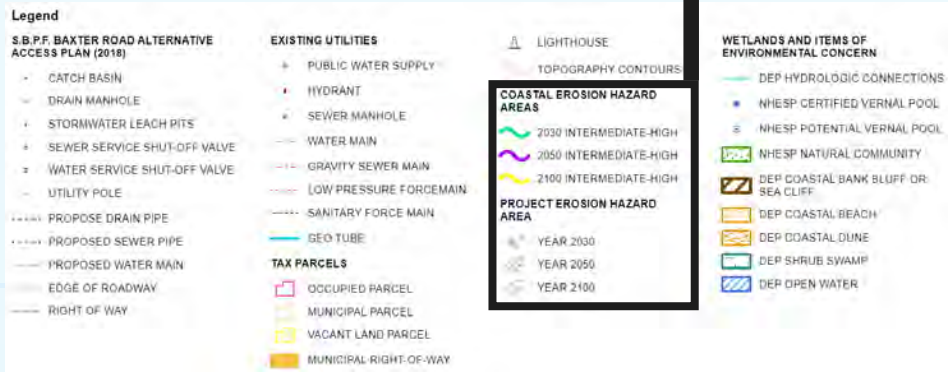


# Relocation Options and Obstacles

- Options will require land acquisitions
- Wetlands limit cross access
- Erosion will eventually affect non-Baxter homes and utilities

# LIVE EXERCISE – RELOCATING BAXTER ROAD

# Cost Estimate for removal and relocation of Baxter road and utilities

| FEMA Year | Southernmost boundary of Road Relocation | Linear Feet of Roadway & Utilities | Utility Relocation Estimate | Estimate w/ other costs |
|---|---|---|---|---|
| 2030 | 87 Baxter Road | 2600 | **$6M** | **> $12M+** |
| 2050 | 85 Baxter Road | 2600 | **$8M** | **> $16M+** |

**Includes:**

- **Sewer Relocation**
- **Water Relocation**
- **Relocation of Other Utilities (assumed to be a shared cost)**
- **Engineering fees**
- **Contingencies**

**This does not include cost of moving/demolishing houses, lighthouse, and acquiring land

# Nearshore Breakwaters with existing project

- Add nearshore breakwaters seaward of existing project or an elongated project
- Attenuate wave energy
- Assist in maintaining dune nourishment and encourage sediment deposition on the lee (shore) side of the structures

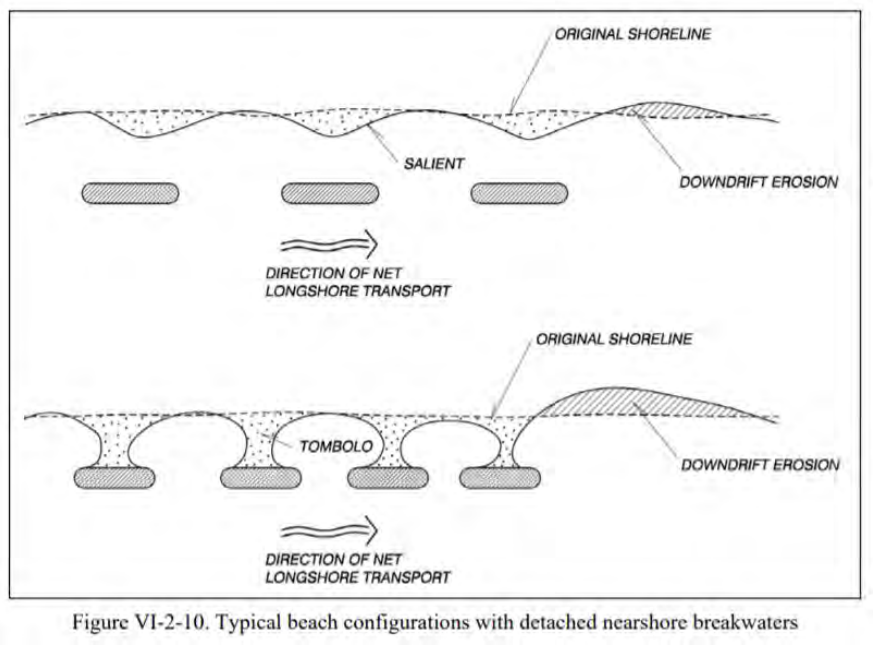


Figure VI-2-10. Typical beach configurations with detached nearshore breakwaters

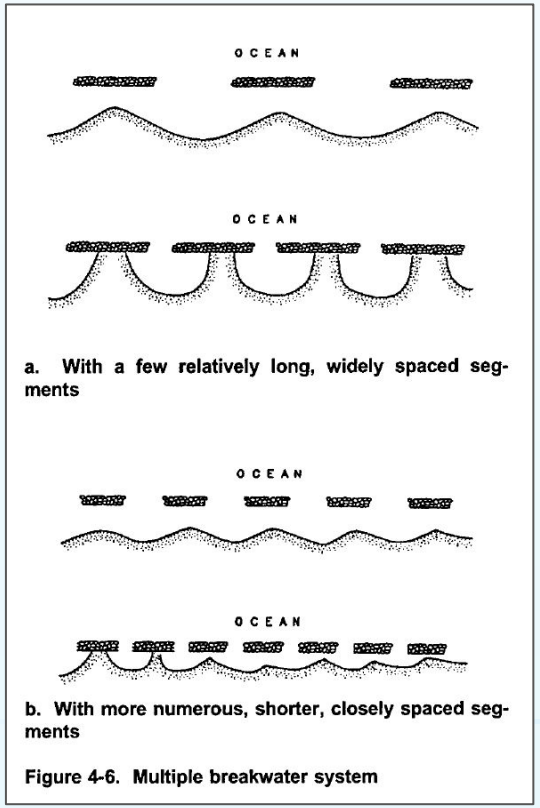
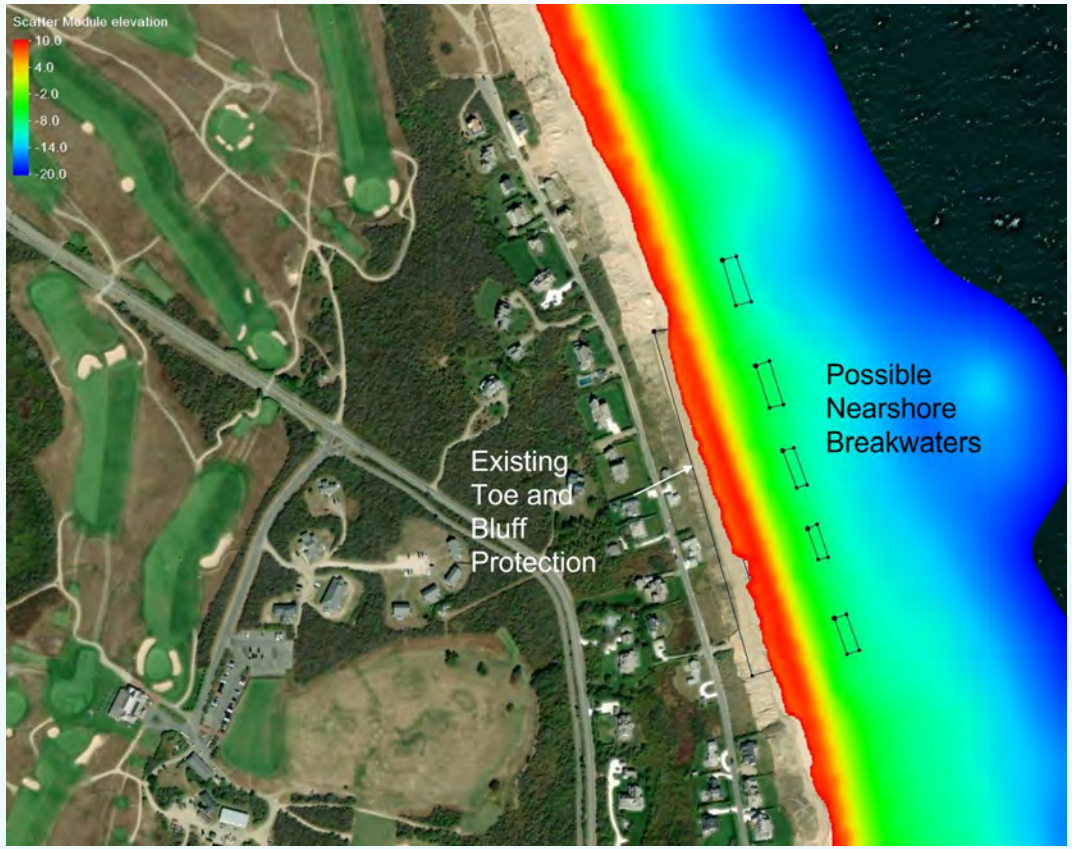
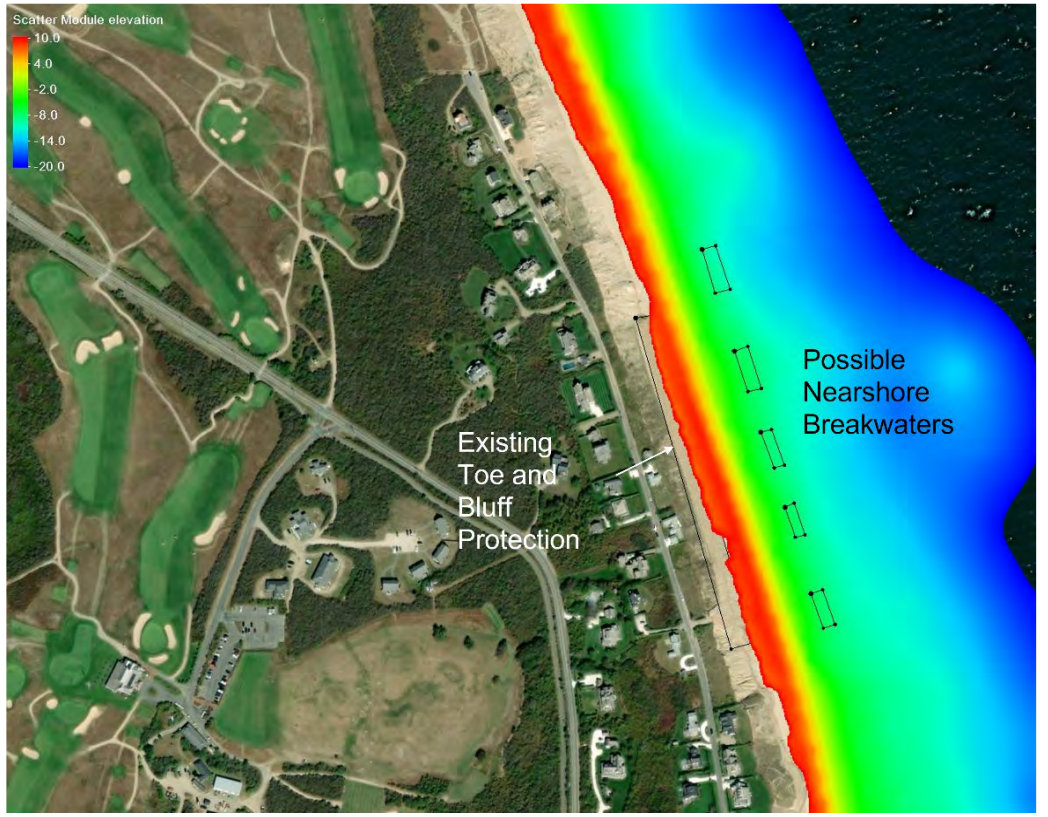


Figure 4-6. Multiple breakwater system



# Nearshore breakwaters with existing system

| Target Effects | Side Effects |
|---|---|
| Helps with erosion | Less protection with extreme surge |
| Helps with sediment transport | Potential concern for downdrift beaches |
| Helps with waves & reduces rip currents | Potential aesthetics concern |
| Can be beneficial habitat for marine life | Cost and Time |




Considerations – Safety, navigation, removal, structure lifetime can be 50+ years

# Best Management Practices and Standards of Practice for bluff stability

Homeowner/Community Outreach on SOP (Standards of Practice) & BMP (Best Management Practices)

- 2 Guidance Documents for Homeowners
  - Controlling Overland Runoff Specific to Coastal Bluffs
  - Planting Vegetation to Reduce Erosion and Storm Damage

Beach Grass with Jute Mesh, Siaconset Bluff, Nantucket (WPI, 2014)

# Relative Costs

| Alternative | Relative Construction Costs | Relative Maintenance Costs |
|---|---|---|
| Adaptive dune nourishment with existing system | $* | $* |
| Current dune nourishment with existing system | $$ | $ |
| Expanded existing system | $$$ | $$ |
| Removal, retreat, Baxter Road relocation | $$$$ | $ |
| Nearshore breakwaters with existing system | $$$$ | $ |

**Cost may be higher in some years when extreme events occur*

# DESIGN TENSIONS AND KEY CONSIDERATIONS

# What we have heard:

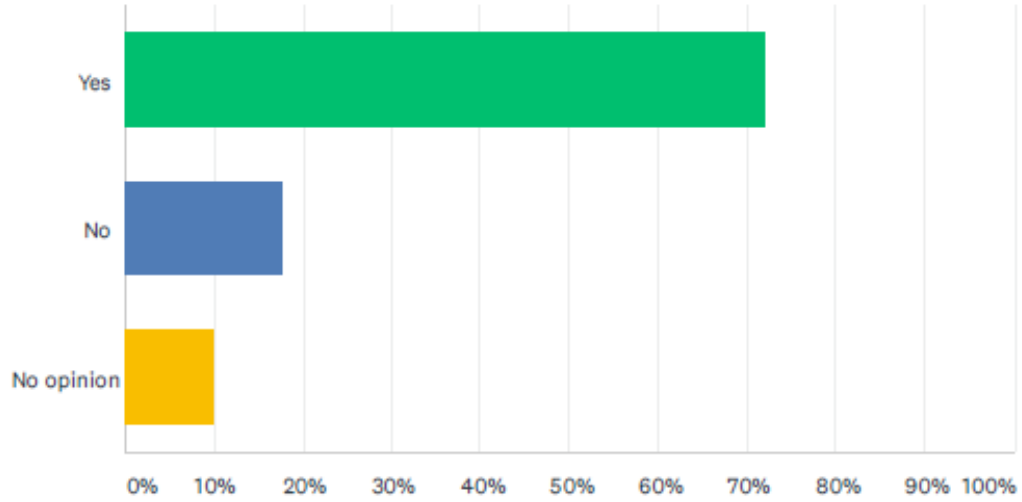
- Focus Groups
  - Beauty, nature, and history of the area - lighthouse, beach, bluff
  - “Erosion has eliminated half of the Bluff Walk”
  - Accusations of cherry-picking – stick to facts/science
  - Desire for “subway” adaptation path for alternatives
- Design Tensions and Key Considerations
  - Sand volume and source, erosion rates, failure criteria
  - Environmental Impacts – cobble bottom
  - Where could the homes/infrastructure be moved to?
  - Wetlands protection act and Nantucket bylaws


Source: https://www.siasconsetcivicassociation.org/Bluff-Walk-Etiquette

# Survey

Q35 EROSION: Baxter Rd has suffered from bluff erosion and several houses have had to be moved as a result. If the bluff continues to erode, access to Sankaty Head Lighthouse via Baxter Road may become impossible. Currently there is only a privately funded effort to protect the bluff and Baxter Rd. Do you think the Town should support actions to try to prevent further erosion of the bluff?

Answered: 526 Skipped: 4




| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| Yes | 72.05% | 379 |
| No | 17.87% | 94 |
| No opinion | 10.08% | 53 |
| TOTAL | | 526 |

**Survey by the Siasconset Civic Association.**

**Question/Answer used with permission.**

# How is the volume calculated?

- 7 Years post construction:
  - SBPF delivered 133,398 cy of sand to the template
  - 91,279 cy has been contributed off the template as littoral drift
- Average contribution rate: **14.3 cy/yr**
- Volume of sand placed on the template over the past 7 years exceeds standard mitigation of sand volume of 80,186 cy
- SBPF has managed the template to provide a greater volume of sand to the littoral system than the bluff would have contributed over the 7-year period had the existing system not been in place
  - Can result in a surplus of sand that could have unintended negative consequences
- Recommended an adaptive sand management approach of refilling template annually to 22 cy/lf

$$Volume = length \times height \times retreat\ rate$$

$$length\ of\ project = 947\ ft$$

$$height = 71\ ft$$

$$retreat\ rate = 4.6\ \frac{ft}{yr}$$

$$Volume = 947\ ft \times 71\ ft \times 4.6\ \frac{ft}{yr} = 309{,}290\ \frac{ft^3}{yr}$$

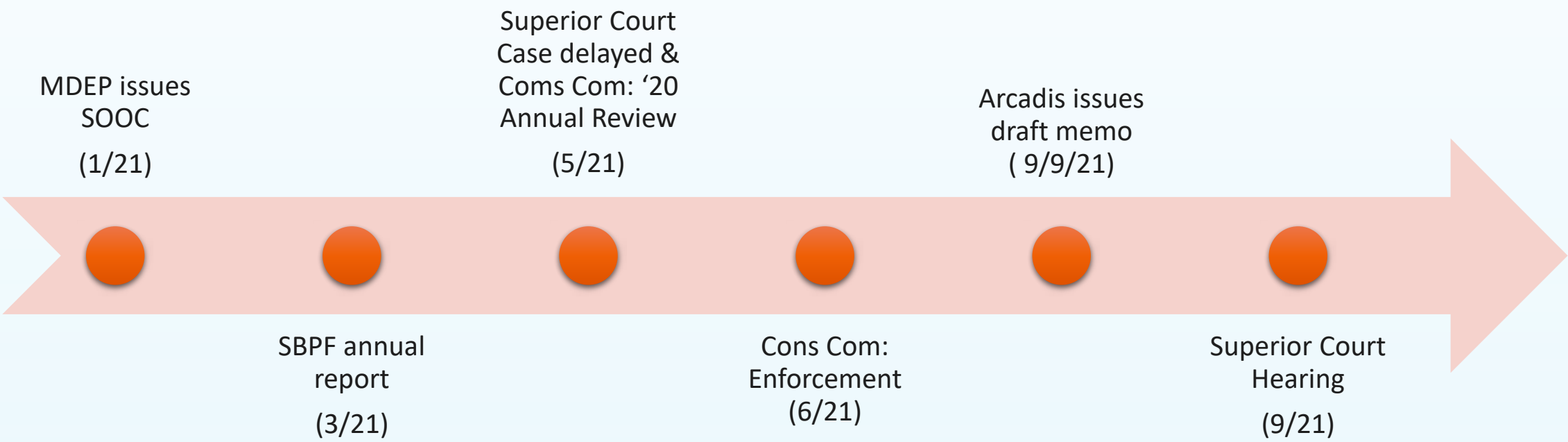
$$Convert\ from\ ft^3\ to\ cy\text{: } 1\ cy = 27\ ft^3$$

$$Volume = 309{,}290\ \frac{ft^3}{yr} \times \frac{1\ cy}{27\ ft^3} = 11{,}455.2\ \frac{cy}{yr}$$

$$Total\ Volume = 11{,}455.2\ \frac{cy}{yr} \times 7 years = 80{,}186.2\ cy$$

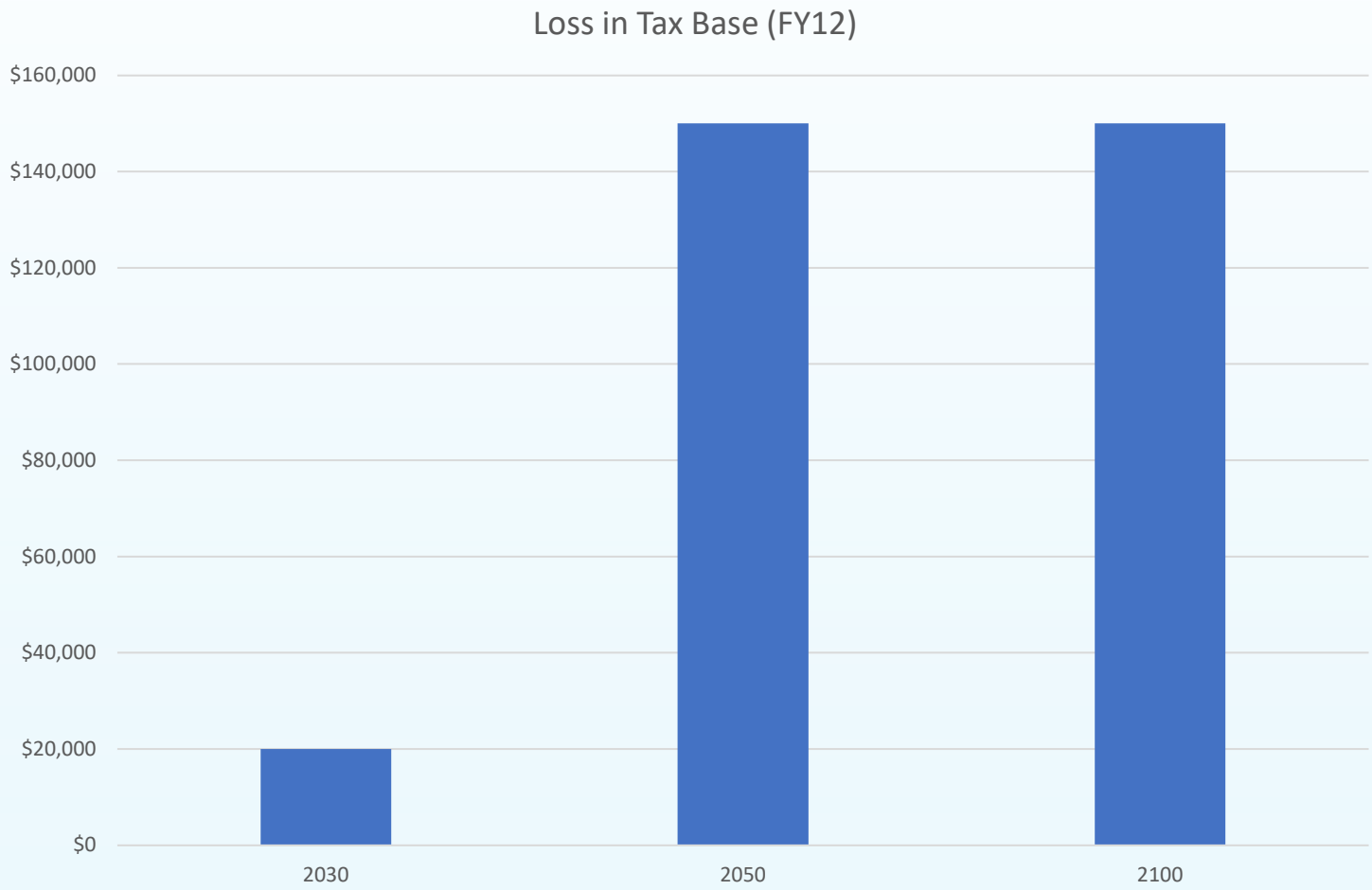
# VARIOUS IMPLICATIONS

# Recent and Future Events



# Tax Implications

**Estimated from 2013 taxes**

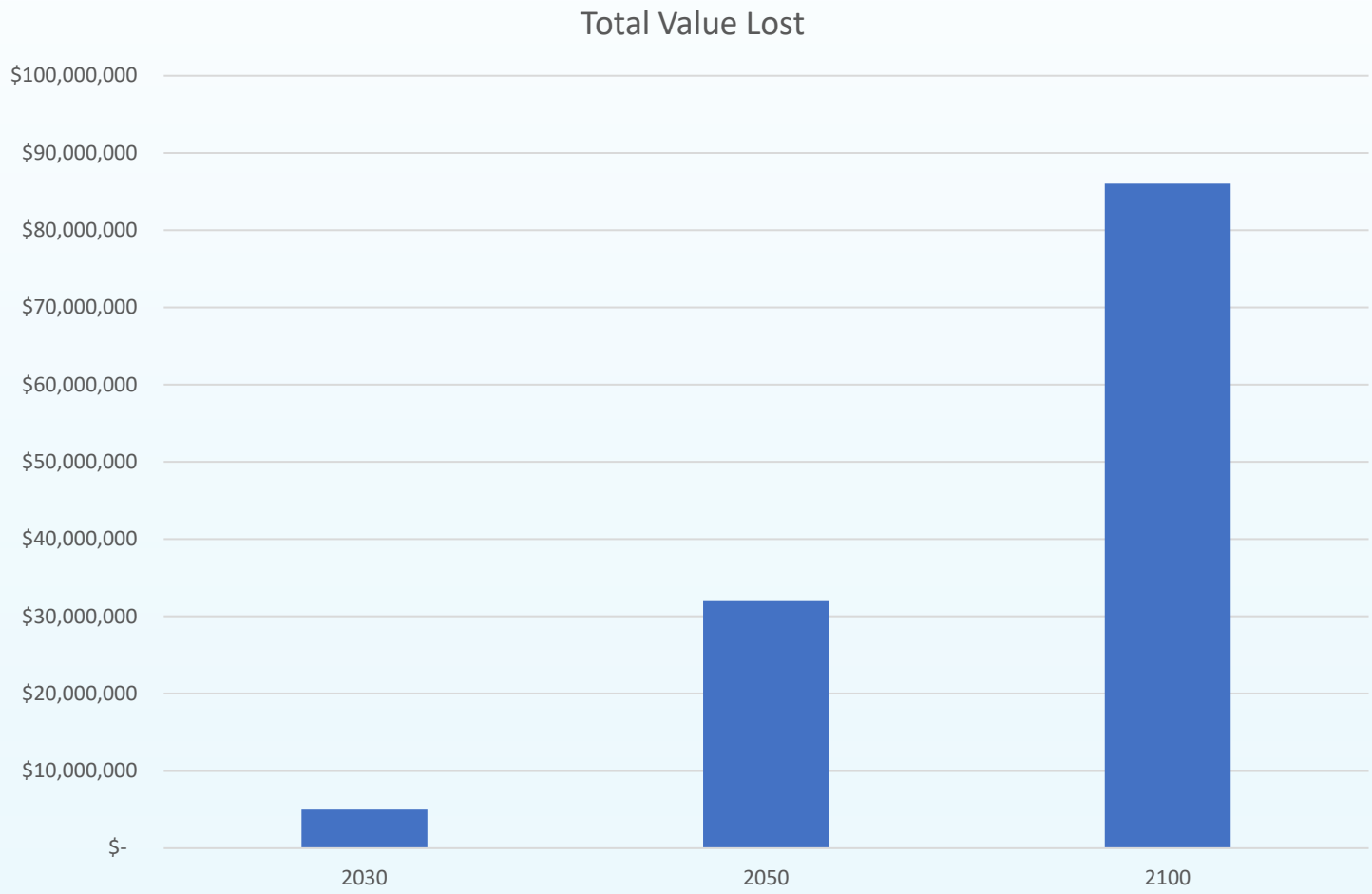


# Quantifying Loss of Homes

**Building & Content Replacement**

**Estimated based on various factors – order of magnitude**

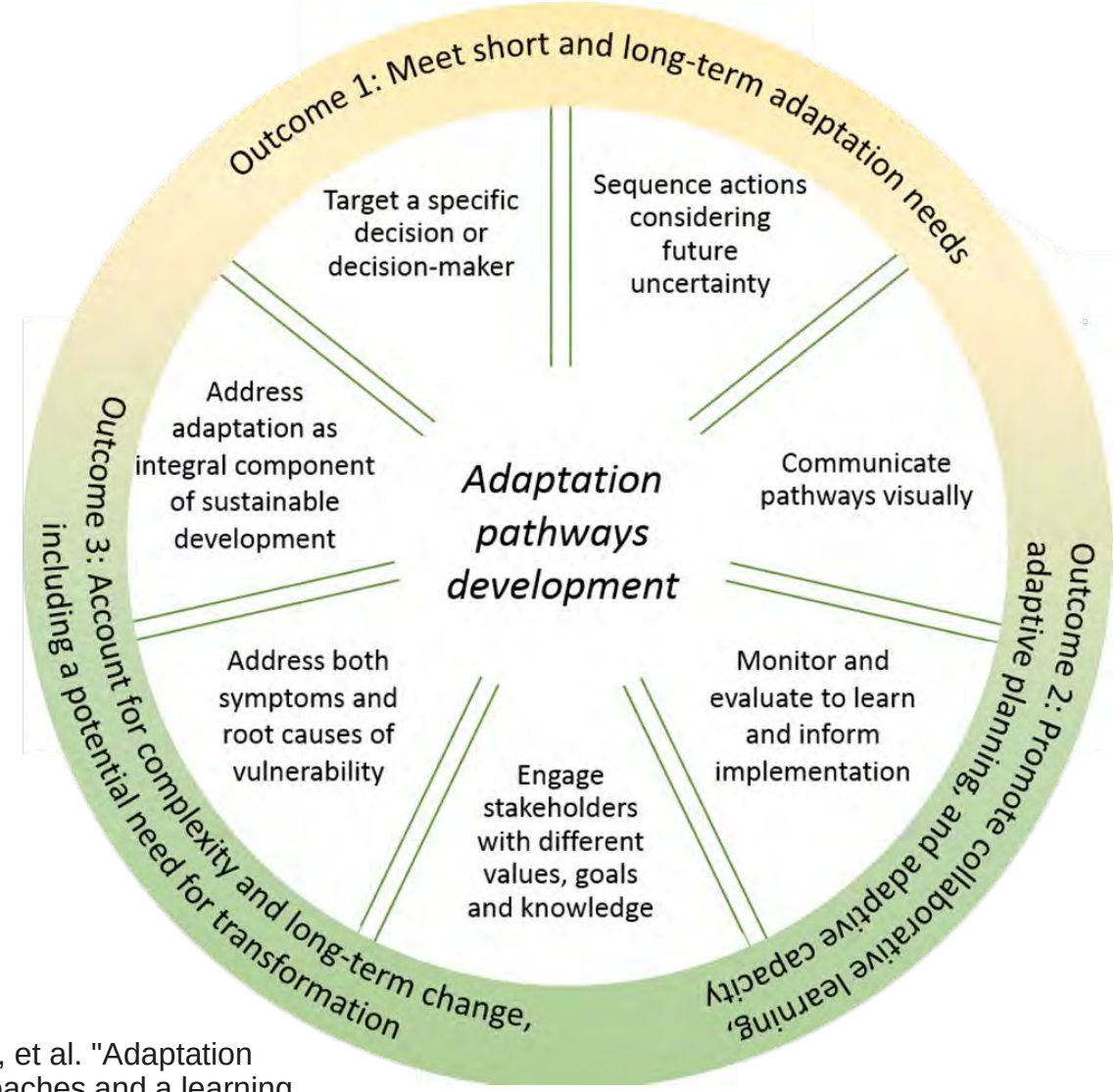
**Homes only – no utilities, no land**



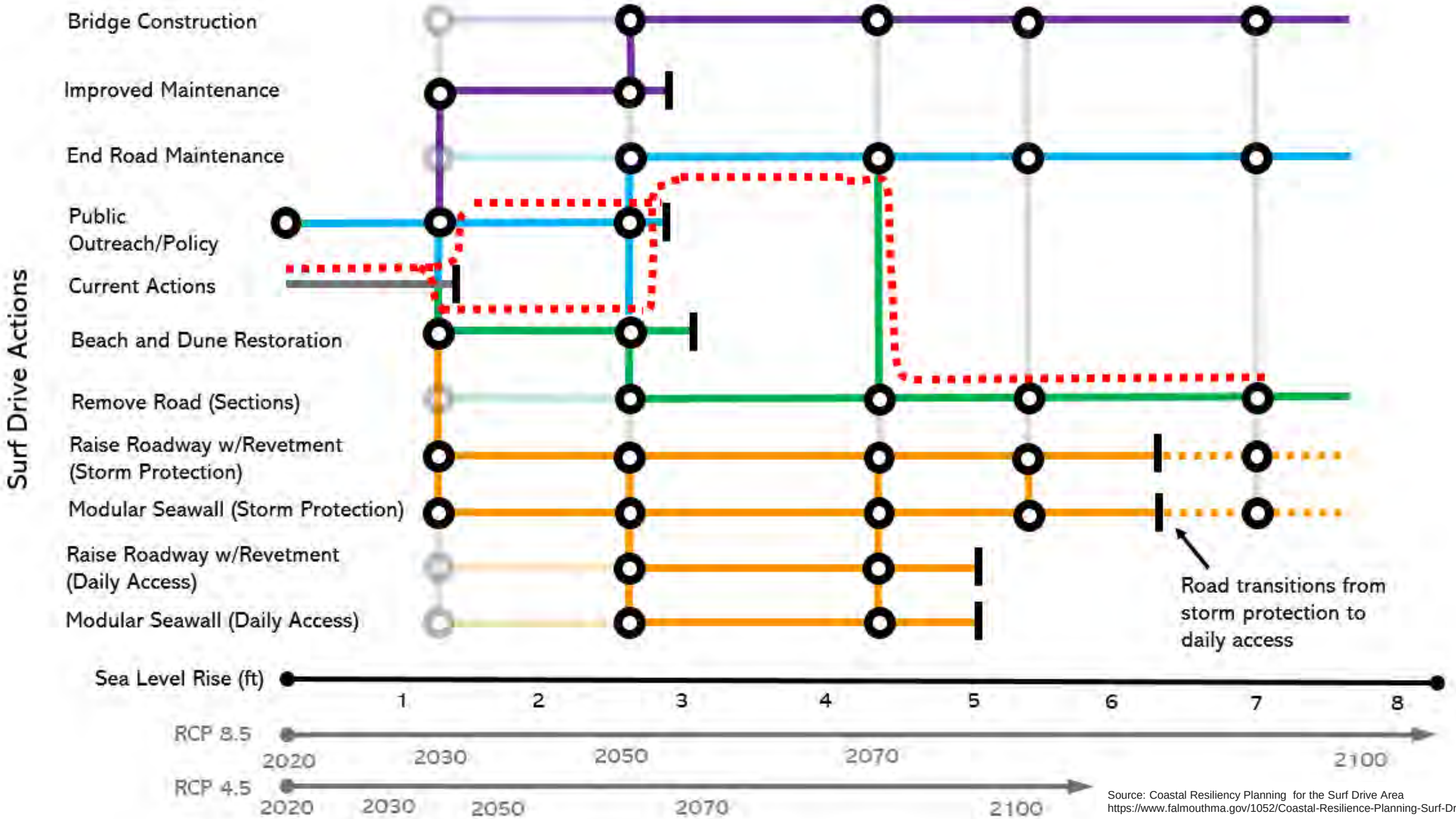
# POTENTIAL FUTURE SCENARIOS

# Decision Focused Adaptation Pathways

- sequences of actions, which can be implemented progressively, depending on future dynamics
- oriented around performance-thresholds & multiple-stakeholders




Source: Werners, Saskia E., et al. "Adaptation pathways: A review of approaches and a learning framework." Environmental Science & Policy 116 (2021): 266-275. View HERE




Source: Coastal Resiliency Planning for the Surf Drive Area
https://www.falmouthma.gov/1052/Coastal-Resilience-Planning-Surf-Drive-A

# 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<br>No Connection via Surf Drive<br>Loss of Accessible Beach |
| 2. | Protection | +++++ | Protects operational capacity of existing Infrastructure and features | Loss of Accessible Beach<br>Aesthetics/Visuals |
| 3. | Natural Resources | +++ | Preserves and enhances coastal and marine ecosystem functions | Loss of Homes<br>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<br>No Connection via Surf Drive |
| 6. | | +++ | Improved maintenance for short-term uses w/a long-term focus on ecosystem restoration | Loss of Homes<br>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<br>Aesthetics/Visuals |

Source: Coastal Resiliency Planning for the Surf Drive Area https://www.falmouthma.gov/1052/Coastal-Resilience-Planning-Surf-Drive-A

# Pathways scorecard

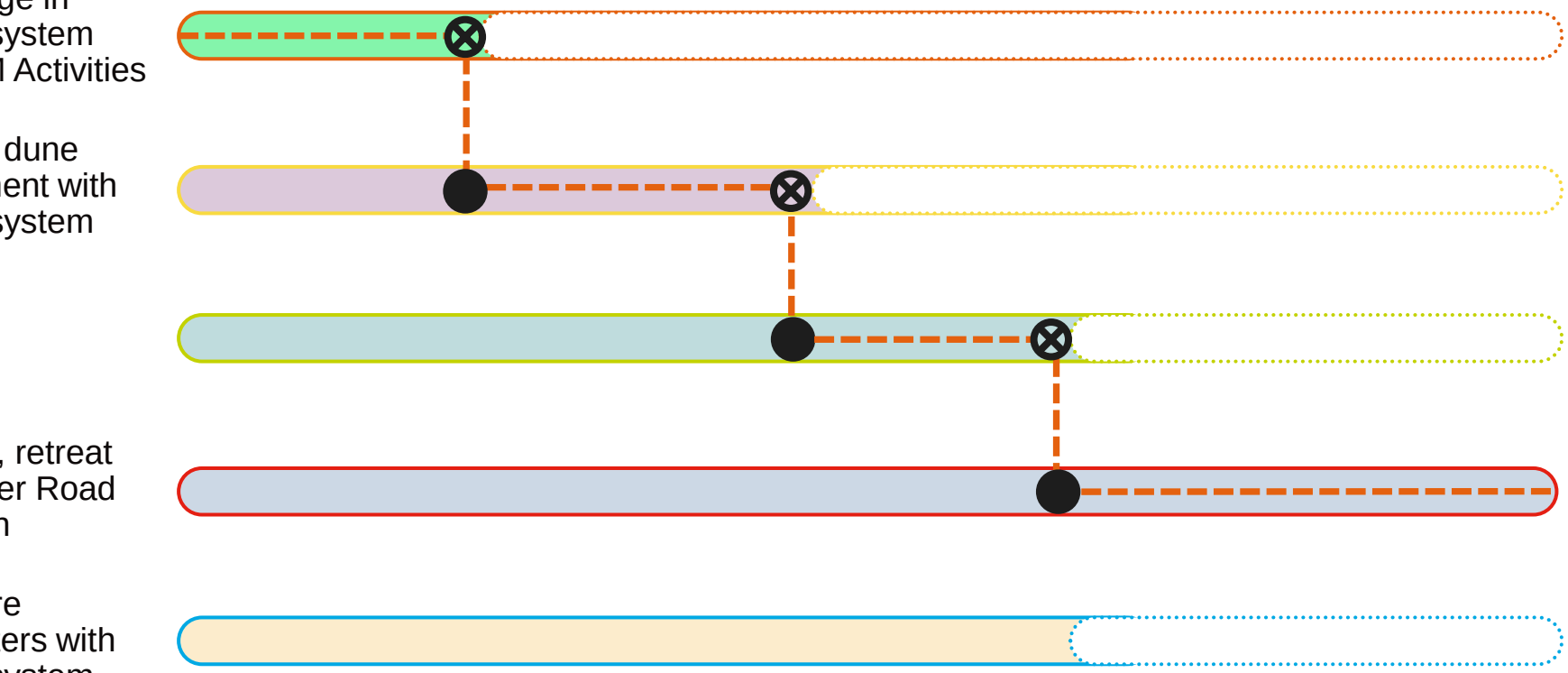
| Path Actions | Relative Costs | Target Effects | Side Effects |
|---|---|---|---|
| Current dune nourishment with existing system | $$ | Toe/Bluff Protection | Current |
| Adaptive dune nourishment with existing system | $ | Toe/Bluff Protection | Sand budgeting challenges |
| Expand existing system | $$$ | Extended Protection | Need for more sand |
| Removal, retreat and Baxter road relocation | $$$$ | Retreat | Loss of homes/tax/ bluff walk |
| Nearshore breakwaters with existing system | $$$$ | Protection & Wave Attenuation | Less protection for extreme surge |

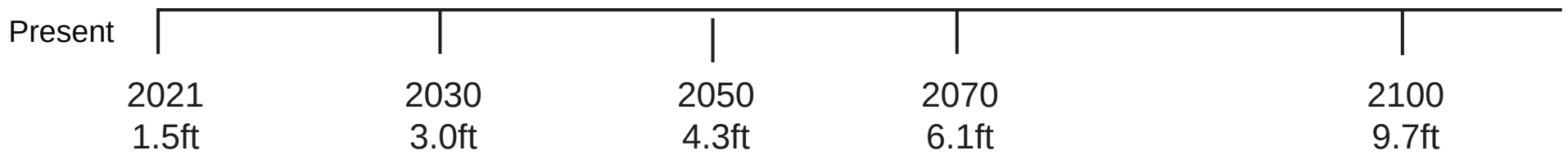
# EXAMPLE Pathway

Tipping Point Due to:

- Sediment Availability
- Extreme Erosion Event
- Bluff within 25ft of Rd

1. No Change in existing system and O&M Activities
2. Adaptive dune nourishment with existing system
3. Expand existing system
4. Removal, retreat and Baxter Road relocation
5. Nearshore breakwaters with existing system






Implement Adaptation

# Example Pathway

Tipping Point Due to:

- Sediment Availability
- Extreme Erosion Event
- Bluff within 25 ft of Rd

1. No Change in existing system and O&M Activities
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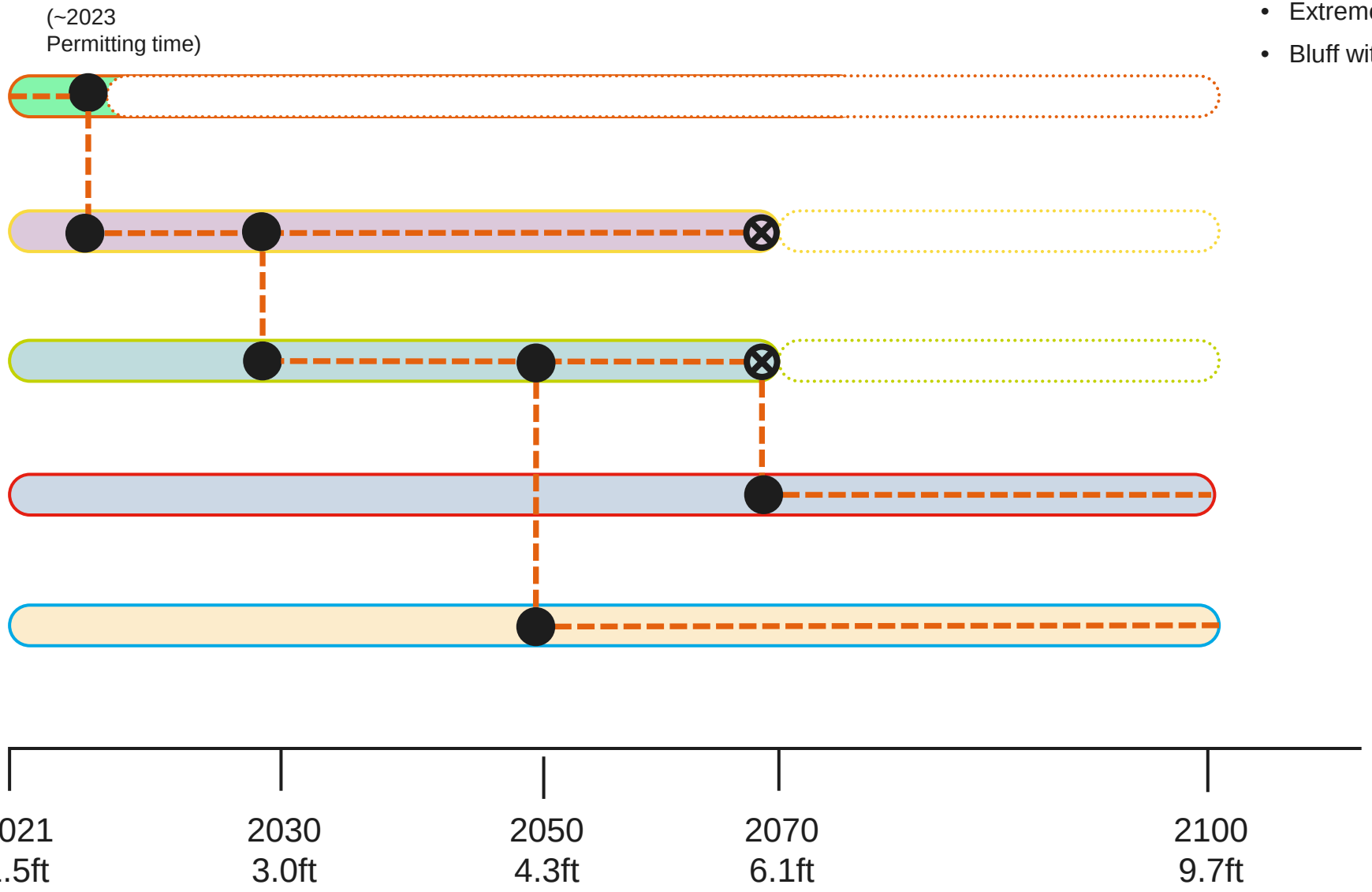


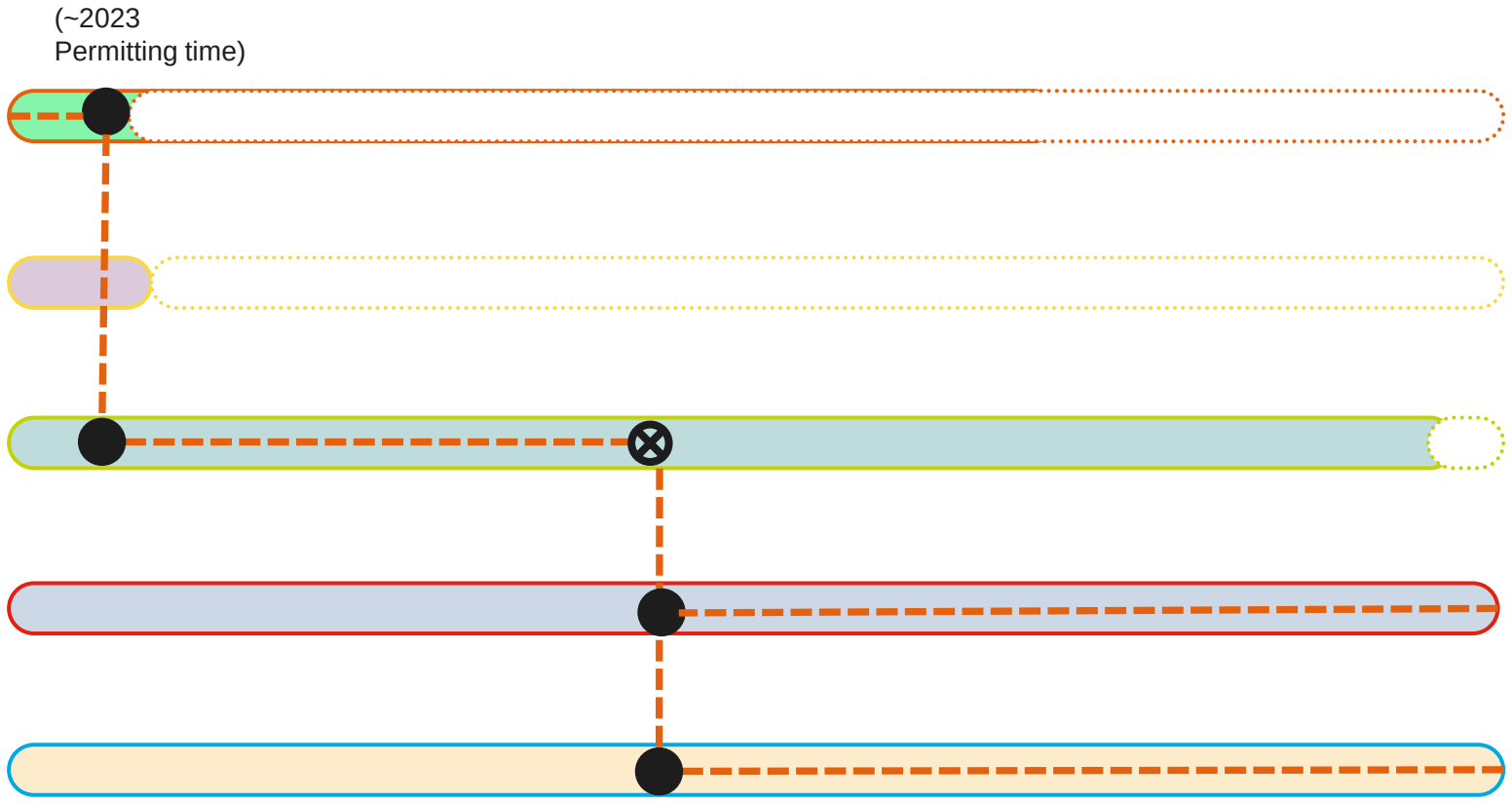

transfer station

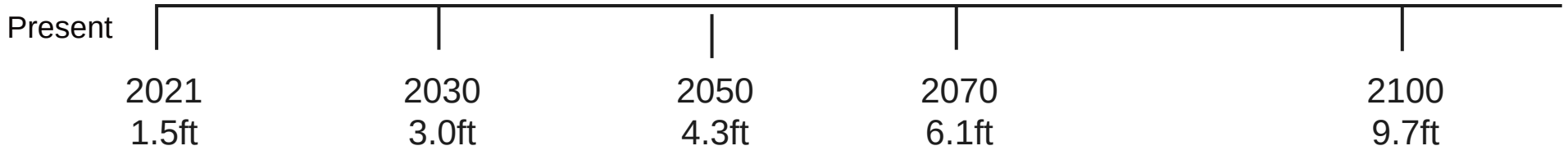
# EXAMPLE Pathway

Tipping Point Due to:

- Sediment Availability
- Extreme Erosion Event
- Bluff within 25 ft of Rd

1. No Change in existing system and O&M Activities
2. Adaptive dune nourishment with existing system
3. Expand existing system
4. Removal, retreat and Baxter Road relocation
5. Nearshore breakwaters with existing system



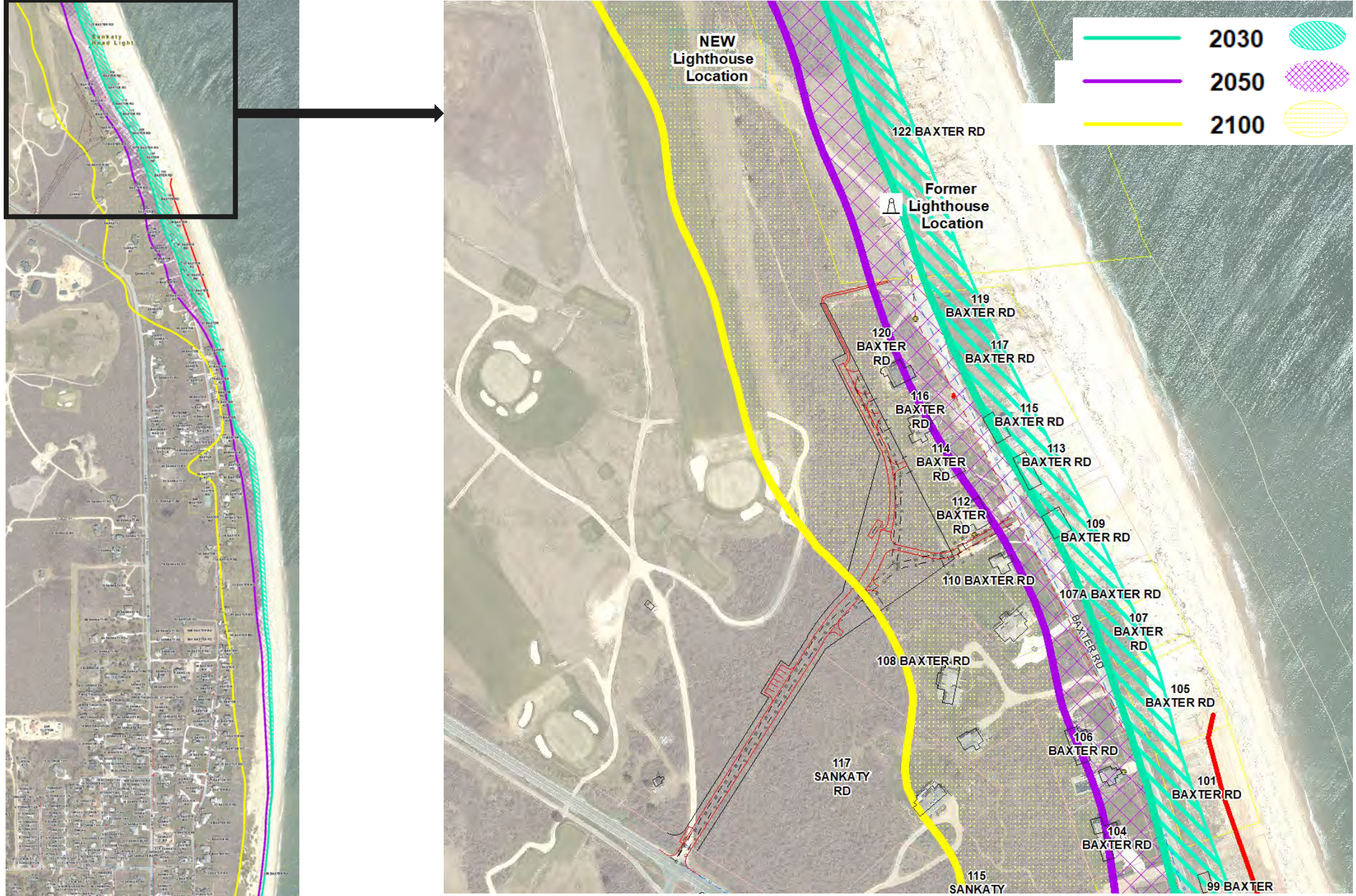



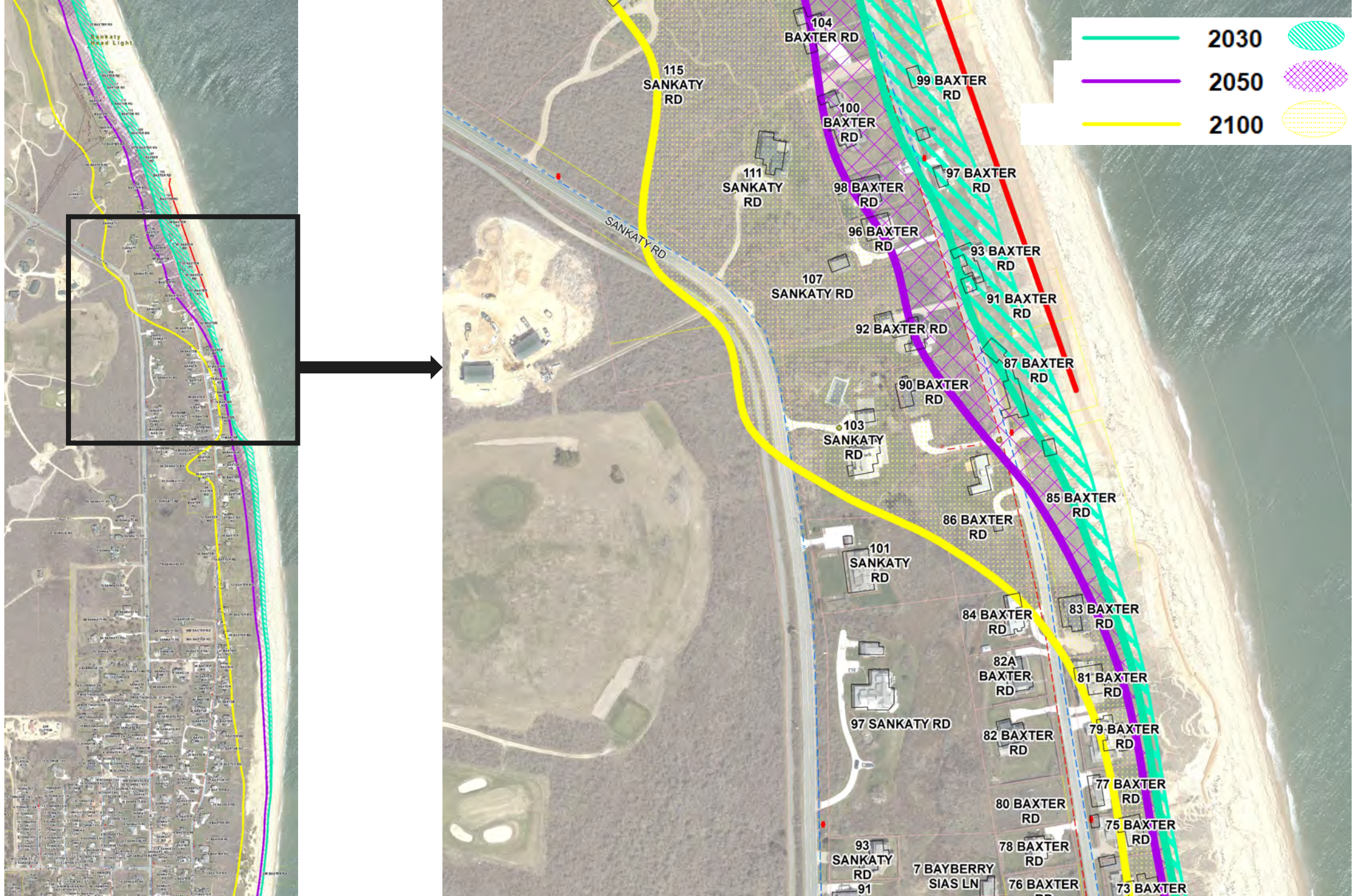

● Implement Adaptation

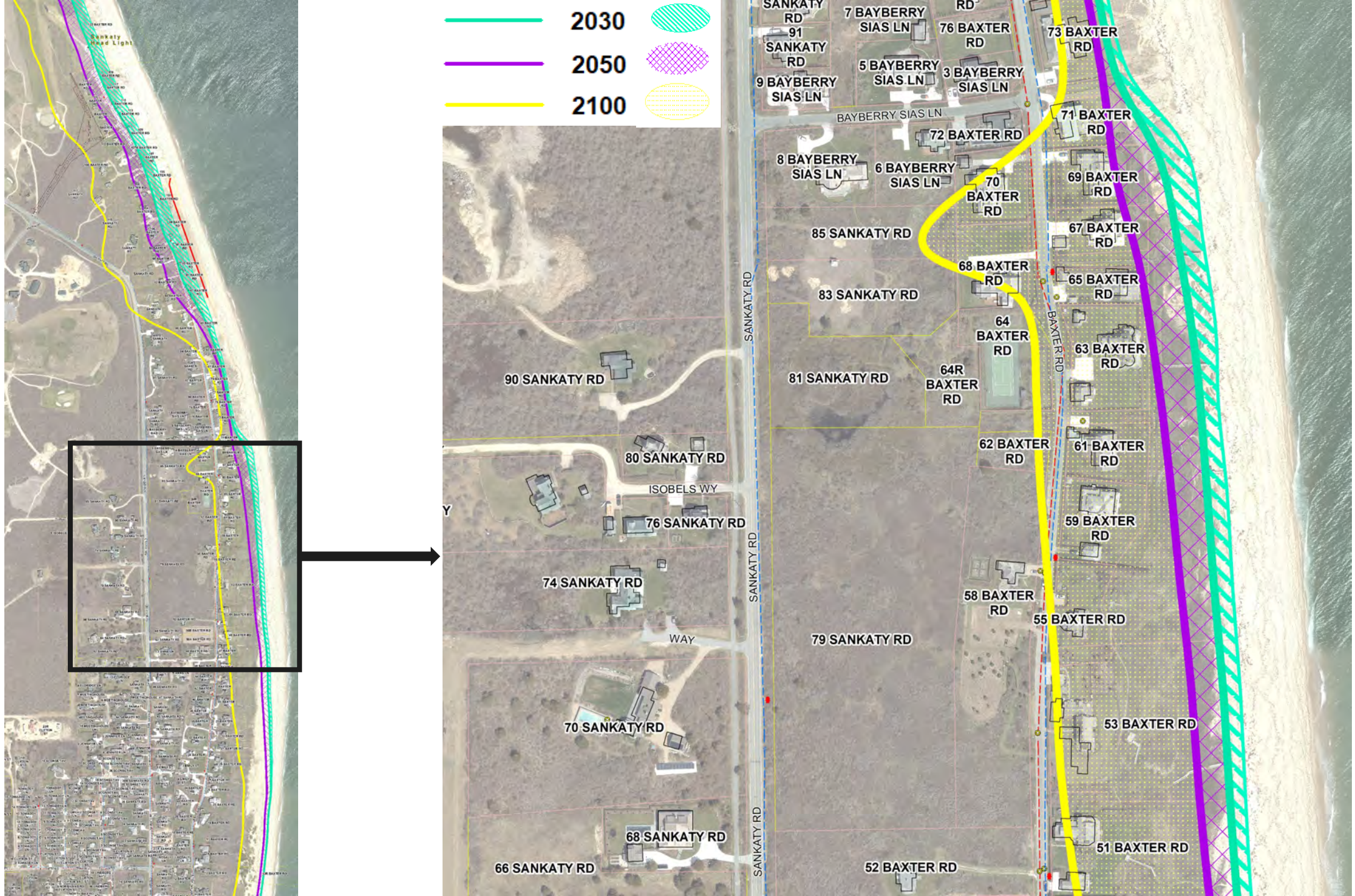
# Sea Level Rise Projections for Nantucket MHHW

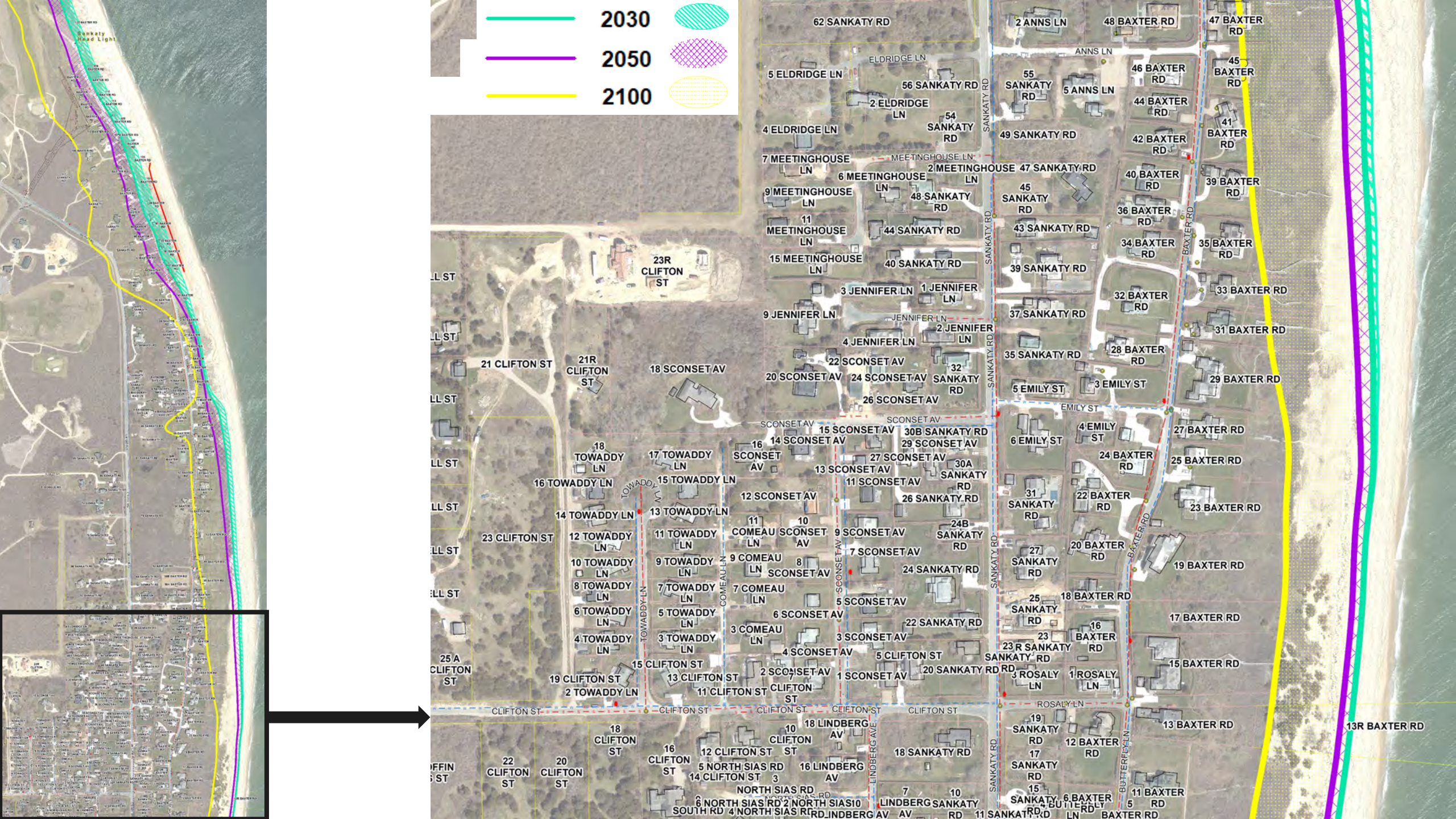
| Scenario | Today | 2030 | 2050 | 2070 | 2100 |
|---|---|---|---|---|---|
| High (ft) | 1.5 | 3.0 | 4.3 | 6.1 | 9.7 |

Relative Annual Sea Level Rise and Future Scenarios for Nantucket, MA from Massachusetts Statewide Climate Projections (Northeast Climate Science Center, UMASS Amherst) March 2018


Sankaty Head Light
NEW Lighthouse Location
Former Lighthouse Location
2030
2050
2100
122 BAXTER RD
119 BAXTER RD
120 BAXTER RD
117 BAXTER RD
116 BAXTER RD
115 BAXTER RD
114 BAXTER RD
113 BAXTER RD
112 BAXTER RD
109 BAXTER RD
110 BAXTER RD
107A BAXTER RD
107 BAXTER RD
108 BAXTER RD
105 BAXTER RD
106 BAXTER RD
101 BAXTER RD
104 BAXTER RD
99 BAXTER
117 SANKATY RD
115 SANKATY


2030
2050
2100
104 BAXTER RD
115 SANKATY RD
99 BAXTER RD
100 BAXTER RD
111 SANKATY RD
97 BAXTER RD
98 BAXTER RD
SANKATY RD
96 BAXTER RD
93 BAXTER RD
107 SANKATY RD
91 BAXTER RD
92 BAXTER RD
87 BAXTER RD
90 BAXTER RD
103 SANKATY RD
85 BAXTER RD
86 BAXTER RD
101 SANKATY RD
84 BAXTER RD
83 BAXTER RD
82A BAXTER RD
81 BAXTER RD
97 SANKATY RD
82 BAXTER RD
79 BAXTER RD
77 BAXTER RD
80 BAXTER RD
75 BAXTER RD
78 BAXTER RD
93 SANKATY RD
7 BAYBERRY SIAS LN
76 BAXTER
73 BAXTER


2030
2050
2100
Sankaty Head Light
SANKATY RD
7 BAYBERRY SIAS LN
76 BAXTER RD
73 BAXTER RD
91 SANKATY RD
5 BAYBERRY SIAS LN
3 BAYBERRY SIAS LN
9 BAYBERRY SIAS LN
BAYBERRY SIAS LN
71 BAXTER RD
72 BAXTER RD
8 BAYBERRY SIAS LN
6 BAYBERRY SIAS LN
70 BAXTER RD
69 BAXTER RD
85 SANKATY RD
67 BAXTER RD
68 BAXTER RD
65 BAXTER RD
83 SANKATY RD
64 BAXTER RD
63 BAXTER RD
90 SANKATY RD
81 SANKATY RD
64R BAXTER RD
62 BAXTER RD
61 BAXTER RD
80 SANKATY RD
ISOBELS WY
76 SANKATY RD
59 BAXTER RD
74 SANKATY RD
58 BAXTER RD
55 BAXTER RD
WAY
79 SANKATY RD
70 SANKATY RD
53 BAXTER RD
68 SANKATY RD
51 BAXTER RD
66 SANKATY RD
52 BAXTER RD


2030
2050
2100
Sankaty Head Light
62 SANKATY RD
2 ANNS LN
48 BAXTER RD
47 BAXTER RD
ANNS LN
ELDRIDGE LN
5 ELDRIDGE LN
56 SANKATY RD
55 SANKATY RD
5 ANNS LN
46 BAXTER RD
45 BAXTER RD
2 ELDRIDGE LN
54 SANKATY RD
44 BAXTER RD
4 ELDRIDGE LN
49 SANKATY RD
42 BAXTER RD
41 BAXTER RD
7 MEETINGHOUSE LN
MEETINGHOUSE LN
2 MEETINGHOUSE LN
47 SANKATY RD
6 MEETINGHOUSE LN
40 BAXTER RD
39 BAXTER RD
9 MEETINGHOUSE LN
48 SANKATY RD
45 SANKATY RD
11 MEETINGHOUSE LN
44 SANKATY RD
43 SANKATY RD
36 BAXTER RD
34 BAXTER RD
35 BAXTER RD
15 MEETINGHOUSE LN
40 SANKATY RD
39 SANKATY RD
23R CLIFTON ST
3 JENNIFER LN
1 JENNIFER LN
32 BAXTER RD
33 BAXTER RD
9 JENNIFER LN
JENNIFER LN
37 SANKATY RD
2 JENNIFER LN
31 BAXTER RD
4 JENNIFER LN
35 SANKATY RD
28 BAXTER RD
21 CLIFTON ST
21R CLIFTON ST
18 SCONSET AV
22 SCONSET AV
32 SANKATY RD
20 SCONSET AV
24 SCONSET AV
3 EMILY ST
29 BAXTER RD
5 EMILY ST
26 SCONSET AV
EMILY ST
SCONSET AV
15 SCONSET AV
30B SANKATY RD
4 EMILY ST
27 BAXTER RD
14 SCONSET AV
29 SCONSET AV
6 EMILY ST
18 TOWADDY LN
17 TOWADDY LN
16 SCONSET AV
27 SCONSET AV
24 BAXTER RD
25 BAXTER RD
30A SANKATY RD
13 SCONSET AV
16 TOWADDY LN
15 TOWADDY LN
11 SCONSET AV
TOWADDY LN
12 SCONSET AV
26 SANKATY RD
31 SANKATY RD
22 BAXTER RD
23 BAXTER RD
14 TOWADDY LN
13 TOWADDY LN
11 COMEAU LN
10 SCONSET AV
9 SCONSET AV
24B SANKATY RD
23 CLIFTON ST
12 TOWADDY LN
11 TOWADDY LN
7 SCONSET AV
27 SANKATY RD
20 BAXTER RD
10 TOWADDY LN
9 TOWADDY LN
9 COMEAU LN
8 SCONSET AV
24 SANKATY RD
19 BAXTER RD
8 TOWADDY LN
7 TOWADDY LN
7 COMEAU LN
5 SCONSET AV
25 SANKATY RD
18 BAXTER RD
6 TOWADDY LN
5 TOWADDY LN
6 SCONSET AV
17 BAXTER RD
4 TOWADDY LN
3 TOWADDY LN
3 COMEAU LN
22 SANKATY RD
3 SCONSET AV
16 BAXTER RD
23 R SANKATY RD
4 SCONSET AV
5 CLIFTON ST
25 A CLIFTON ST
15 CLIFTON ST
20 SANKATY RD
15 BAXTER RD
19 CLIFTON ST
13 CLIFTON ST
2 SCONSET AV
1 SCONSET AV
3 ROSALY LN
1 ROSALY LN
2 TOWADDY LN
11 CLIFTON ST
7 CLIFTON ST
ROSALY LN
CLIFTON ST
CLIFTON ST
CLIFTON ST
CLIFTON ST
CLIFTON ST
18 LINDBERG AV
19 SANKATY RD
13 BAXTER RD
18 CLIFTON ST
10 CLIFTON ST
12 BAXTER RD
16 CLIFTON ST
12 CLIFTON ST
18 SANKATY RD
17 SANKATY RD
22 CLIFTON ST
20 CLIFTON ST
5 NORTH SIAS RD
16 LINDBERG AV
14 CLIFTON ST
3
NORTH SIAS RD
15 SANKATY RD
6 BAXTER RD
11 BAXTER RD
6 NORTH SIAS RD
2 NORTH SIAS RD
10 SOUTH RD
4 NORTH SIAS RD
7 LINDBERG AV
10 SANKATY RD
5 BAXTER RD
11 SANKATY RD
BUTLER LN
BAXTER RD
13R BAXTER RD
SANKATY RD
BAXTER RD
LINDBERG AVE
TOWADDY LN
COMEAU LN
SCONSET AV

# Polling Questions

Share your feedback and upvote entries that you think are most important

1. Which alternatives do you prefer to pursue in:
    a. the near term
    b. 2030
    c. 2050
    d. 2070

# WRAP UP AND NEXT STEPS

# THANK YOU