



An Emerging Vision for Scituate's Coast in 2070

Why create a vision for Scituate's coast in 2070?

Given the challenges facing Scituate's coastline due to intensifying storms, sea level rise, and erosion, what is our vision for a vibrant and resilient coast in 50 years? A vision articulates our hopes for the future. The Scituate 2070 Coastal Vision seeks to describe the kind of community we want to create over the next 50 years. It will set a target – a set of goals, values, and ways of living along the coast – that the Scituate community can look toward as we make investments and planning decisions today and over the coming decades.

What is this document?

This “emerging vision” is a compilation of input gathered in February and early March from more than 200 community members regarding their vision for Scituate's coast in 2070. This input was gathered through 11 in-person Neighborhood Gatherings in living rooms, at Scituate Library, and at Scituate High School, as well as virtually via a forum at <https://www.scituate2070vision.org> and an online Zoom meeting.

How should I read this document?

Please review the summary on page 2. This is the draft summary of the key themes of the vision. Does it resonate with you? What would you change? What's missing?

On the following pages you will find a more detailed synthesis of community feedback, paired with information from expert advisors on legal, regulatory, funding, and environmental challenges that the community may need to consider as you refine the vision.

What can I expect from the workshop in April?

During the virtual workshop we will review the key themes from the vision, talk about some of the challenges to realizing the vision, and then break into small groups to discuss each of the four themes in more detail. Your participation in this community-led effort is deeply appreciated and we look forward to meeting with you and your friends and neighbors.



Summary

Our emerging vision for Scituate's coast in 2070 is primarily focused on two features: **beaches** and **Scituate Harbor**. We also want the coast to include a **mix of developed and natural areas**, with residential property, wetlands and salt marshes, and trails that connect the natural spaces to each other and to the harbor, allowing for foot traffic between them. We want the **coastal community character** in 2070 to maintain its typical New England, small-town, family-friendly look and feel and to be welcoming to people from many walks of life.



BEACHES: We want Scituate to have several beautiful, clean, well-maintained, and accessible beaches, each with their own character. Most, if not all of the beaches should be accessible to the whole Scituate community.



THE HARBOR: We want the Harbor to continue to be a gathering place and an attraction, primarily in the summer, for both year-round and summer residents, and for tourists. We envision places in the harbor to meet up with others and to sit and enjoy the ocean views. We picture a small, but thriving harbor economy on land and sea. We picture local businesses that cater to summer crowds, including restaurants, cafes, and gift shops that accommodate and attract foot traffic.



COASTAL DEVELOPMENT: Beyond the beaches and the harbor, we imagine a 2070 coast with developed areas that are safe from storm and flood damage. We want our critical infrastructure, such as utilities, water, and wastewater facilities, to be resilient and safe. We want our natural spaces, including beaches, marshes, ponds, and trails to be thoughtfully maintained and connected to each other.



COMMUNITY CHARACTER: Scituate is a little off the beaten path and we hope it maintains its appeal as a year-round bedroom community, with a sufficient local economy, easy access to Boston, and coast-driven uptick in activity and population in the summer. We envision a coastal community that is family-friendly and socio-economically diverse. We hope in 2070 the coast maintains its New England look and feel, even as it modernizes and improves.

Beaches



The community's vision:

Beaches are an important part of Scituate's identity and way of life. They are a source of recreation, protection, habitat for wildlife, and economic activity through tourism and local businesses.

- Beaches are valued because of the memories made there, both for recreation and quiet reflection.
- Beaches are a key source of protection from storms and sea level rise. They make Scituate safer.

- People come to Scituate for the beaches (both to live and as tourists), so they are a major economic driver.
- Beaches provide natural habitat for wildlife.

The vision for Scituate's coast in 2070 is to have multiple beaches, each with their own "personality," that are clean, easy to get to and use (e.g. parking or shuttles), and accessible to people of all abilities (e.g. wheelchairs and strollers, young and old).

Ideas and questions raised in the first round of community engagement.

To discuss further:

- Which beaches should be prioritized to save/maintain/expand in the next 50 years?
- How do you think about the trade-off between public access to beaches and public funding to maintain those beaches?
- Should the beaches be connected to other attractions in town? If so, how? (e.g. by a boardwalk to the harbor)
- Should the beaches be connected to each other? If so, how?
- Should the beaches be connected to other natural resources, such as marshes and trails? If so, which ones and how?
- How can the beaches be economic assets to the Town in 2070?

Key considerations to meet the vision (expert advice/insight):

In order for Scituate to have several beautiful, accessible beaches in 2070, the community will need to think about the following considerations:

Purpose of beaches

- In addition to being a recreational resource, beaches provide long-term shore protection and associated coastal resilience for infrastructure and dwellings fronted by the beach.
- Public funding for beaches tends to be much more focused on their resilience value than their recreational value.

Coastal Processes

- Typically, open ocean beaches can only remain stable if they have a consistent unimpeded sediment supply from adjacent areas or through nourishment. Coastal armoring along the shoreline can inhibit and/or eliminate sediment sources to the beach. Long-term erosion of beaches is due to lack of sediment supply and ongoing sea-level rise.
- Beaches need space to move (erode and rebuild) naturally. You can create that space by removing existing structures/infrastructure on the shore, or pushing the beach out farther into the water through engineered beach nourishment.

Beaches (continued)

- For armored sections of the coastline, loss of sediment supply and ongoing sea level rise leads to loss and lowering of beaches. During storms, this leads to deeper water in front of seawalls/revetments, creating bigger waves and more storm damage.
- Engineered beach nourishment is a process that involves bringing in sand to rebuild a beach to a specific profile. The goal may be two-fold: to dissipate storm wave energy, and to increase the recreational benefits by making a wider, more stable beach.
- Due to the high cost of beach nourishment, it is cost-prohibitive to enhance beaches everywhere in Scituate. The community will need to determine where to focus energies on rebuilding beaches.
- With sea level rise, the space between current development and the water will shrink. To maintain or increase the buffer between the water and development, some areas will need to retreat; others can be nourished, and some may need both.
- Seawalls can increase wave energy and erosion. Boulders and other mechanisms to reduce wave energy may be more effective.
- Some places along Scituate's coastline are better suited for beaches than others. In general, areas where beaches exist today are likely the best places to maintain and/or enhance beaches.
- Salt marshes are important natural protective systems. They provide coastal protection and commercial fish habitat and should not be neglected in envisioning a resilient future for Scituate's coast. They are currently eroding and degrading. If they continue to degrade, they will become mud flats, and then eventually shoreline that will become a velocity zone for coastal storms. The loss of salt marshes would be the loss of another flood protection measure and could have implications for other coastal systems and processes. Marshes need to migrate with sea level rise. This is a consideration for future coastal land use regulations.

Funding

- Public funding is used to nourish and/or maintain public resources. Public access easements, at a minimum, will be required to receive public funds for beach projects.
- As communities everywhere experience sea level rise and ongoing storm impacts, the competition for public resources will increase.
- Public funding flows to projects with high public value and high community consensus (i.e. those that involve good planning and demonstrated support among the local population.)

Enjoyment/Use

- The vision should articulate the community's expectations for features that make the beaches usable, such as parking, shuttles from the commuter rail, accessibility needs like ramps, restrooms and showers, etc.
- The vision should articulate the community's expectations for public use versus private, taking into account the fact the funding challenges associated with beaches that do not allow for public access.

Rules

- A majority of the Scituate shoreline is privately owned. This ownership significantly restricts the government's ability to fund shore protection projects unless public access is granted through an easement or taking. Two examples are MannHill/Egypt Beach Cobble Berm Nourishment funded by FEMA, where the private lots were skipped and North Scituate Beach, where the Town nourished the property fronting the seawall in 1959.
- Future beach nourishment and beach preservation efforts need to ensure environmental considerations are taken into account, specifically how the nourishment will enhance or affect overall habitat quality.

The Harbor



The community's vision:

Scituate's vision for the harbor in 2070 is that it is still the focal point for public gatherings, shopping, eating, and viewing the water. The harbor should primarily be a place for "things to do" in the summer for both tourists and the local population. This includes:

- Businesses that support a fun destination "sense of place," such as restaurants and boutiques.
- Places for people to eat, walk, meet up, and stop and enjoy views of the water.
- Places/services that support maritime tourism so people can approach the harbor from the water, as well as the land.
- Places to park or shuttles to get people to and from the trains and the harbor. Also, bikes and bike infrastructure and other modes of transportation.
- Easy, walkable connections from the harbor to the beaches.

Ideas and questions raised in the first round of community engagement.

To discuss further:

- Make a plan to migrate businesses up the hill?
- Reimagine the border between land and sea as a public boardwalk - somewhere that everyone can enjoy in the summer, but can flood in storms without being damaged?
- In general, rethink the design of the areas that immediately border the water so they can serve one purpose in dry times and hold or take on water in storms?
- A concerted effort to move year-round businesses to North Scituate (such as the post office, pharmacy, eye doctors, real estate) so they are out of harm's way and to bring energy and economic activity to North Scituate?
- Raise the harbor on platforms?
- Focus on rebuilding the working waterfront (maritime industry, including fishing fleet, lobsters, oysters)?
- Recognize that the businesses are moving themselves, out of their own self-interest. If we don't plan for a different mix and make it worth it, they won't be there.



The Harbor (continued)

Key considerations to meet the vision (expert advice/insight):

In order for Scituate's Harbor in 2070 to remain the focal point for public gathering along the coast, the community will need to think about the following considerations:

- Water access for boating – The relationship among water access to boating, a changing coastline, and potential migration of uses need to be considered in the future. As the sea level rises, water will cover the existing land, but the infrastructure that supports water-dependent activities won't necessarily move landward without significant re-engineering of the harbor. Boats still need certain depths to access docks and the infrastructure on the land to support those water-dependent uses need to be close to where the boats are. How are support, infrastructure, and amenities for boating maintained at coastal access locations when these areas may be shifting in the future? The waterside implications of coastal resilience solutions should be considered for impacts to boating that may impact navigability, water current velocity, or other characteristics.
- Currently, the Scituate Harbor business district is tied to water access (not just viewing/seeing the water, but actually being able to transfer goods and people between land and water. This assumption could be uncoupled in the future to improve resilience. It would allow main street activities to either migrate to higher ground or to another commercial activity center in the town. It would also allow the district to transform over time to maximize the asset of water access and the economic and tourism benefits associated with that access. Managing the parking needs in the district should also become easier if such an uncoupling were to occur. If such a concept were to be pursued the receiving area(s) for Scituate Harbor main street activity would need to be defined and incentives or regulations put in place to encourage this transition.
- Consider new management structures – for a coastal business district such as Scituate Harbor, a coastal Business Improvement District may be a great response to support resilience improvements. The district would need to respond collectively and work together and this would provide a mechanism for collaboration and funding. This level of management and stewardship may also help to bridge the inevitable gap in the Town government's ability to respond to the amount of coastal maintenance and response that is required by the current patterns of coastal development. The town staff are very engaged in the wellbeing and protection of the entire community but have to consider trade-offs and resources across the whole town.
- "Smart" development right along the water so places can serve the dual purposes in dry and wet times is wise. An example is a park with salt tolerant plantings.
- Scituate could focus economic development efforts for "locals" in North Scituate and along 3A, and economic development for summer tourism in the harbor. One major consideration is the transition period. How can the Town support businesses while this transition takes place?

Coastal Development



The community's vision:

Living right on the water has been one of the great jewels of Scituate's coastal community. But the community is all too aware of the risks (we have seen the water rise over the last many decades and we have experienced the storms). We envision a safer future, which includes:

- Coastal homes, businesses, and critical infrastructure are protected from the water by natural buffers.
- Utilities are out of harm's way so they don't fail, and don't exacerbate dangers (e.g. power lines in the water, wastewater backup and salt water infiltration into drinking water supplies)
- Roads that are raised out of the floodplain so distinct areas of town don't get cut off from one another

Ideas and questions raised in the first round of community engagement.

To discuss further:

- Can we harness the power of the waves and storms or otherwise see the ocean as an economic asset, e.g., use the waves to create energy, desalinate the water for drinking and/or grey water?
- Do we need rules that prohibit new building and rebuilding in high-risk flood areas?
- How are our drinking water supplies impacted by saltwater intrusion and do we need to move any drinking water infrastructure?
- Coastal homes in Scituate used to be smaller and were easier and less expensive to repair when they got damaged. Should we transition back to smaller houses on the coast?
- How do we keep our stormwater systems working so they can run into the ocean and not get backed up as the sea rises?



Coastal Development (continued)

Key considerations to meet the vision (expert advice/insight):

In order for Scituate to have the kind of coastal development described here, the community needs to think about the following considerations:

Coastal Processes

- See notes on Coastal Processes for BEACHES (pages 3-4)

Rules

- See notes on Rules for BEACHES (page 4)
- Due to the high cost of shore protection, it will be cost-prohibitive to maintain a reasonable level of storm protection everywhere in Scituate. The community should determine where to focus energies for shore protection.
- Funding and community support for long-term coastal resiliency efforts is likely to flow toward protecting areas with high public value, such as commercial areas, landmarks and historic areas, and important public services and infrastructure (not private dwellings)
- Elevating dwellings is a reasonable shorter-term option in some areas.
- Beyond seawalls and beach nourishment, other methods for dissipating wave energy should be considered including reducing/flattening the slope of armoring, cobble dune construction, increasing the height of shore protection, and utilizing other “natural” structures to break waves in the nearshore area.
- The community should consider the option of long-term leases for waterfront/beach property in the summer for mobile, seasonal dwellings that can be removed in the off-season.
- The Town should investigate and make clear the legal rights of all stakeholders related to managed retreat for both infrastructure and private/public structures, and engage the community in the process so it is a transparent and collective

community endeavor. Some considerations that should be explored/understood include:

- **Voluntary incentives.** Currently, limited incentives and funding are offered through FEMA and there is no statewide buyout or other managed retreat program, so the burden to create voluntary incentives rests with the Town. Some ideas might be zoning relief for property owners relocating inland, such as construction or renovation with greater height or square footage than is permitted by right, or exemptions for some permitting restrictions, or streamlining variance procedures. The Town could reduce or eliminate the building permit fee. The Town could offer property tax relief at the new location within a given allowance.
- **Mandatory requirements.** Given the scale of the challenge with development all along the coasts (in MA and throughout the US), federal, state, and local agencies are increasingly debating the outlines of a regulatory framework to manage retreat. Some considerations the Town should be aware of include regulatory enforcement through local zoning or wetlands rules that could prohibit rebuilding dwellings that are repeatedly damaged. Public health and safety emergencies could trigger requirements to permanently vacate properties. Eminent domain could be employed to buy out properties.
- Prohibition on new development, substantial expansion, or restoration after storm damage can be implemented through changes to Zoning Bylaws and Scituate’s Wetlands Rules. A majority of Scituate’s coast has dwellings that are in high-risk flood zones *now*, so these changes could be substantially impactful over the near-term if implemented.

Coastal Development (continued)

- The regulatory environment could pose significant challenges to attempts to increase the overall size of coastal armoring and/or roadway footprint. There are regulatory obstacles under c. 91, Army Corps Section 401 and 404 and the Wetlands Act that could affect road expansion or raising, or coastal armoring includes placing fill material (including extensive cobble) in the water.
- Land use regulations that improve health, safety, and welfare are well within the bounds of zoning. The community could use the Coastal Vision to build support for stricter regulations in zones that flood to protect the public good.
- Local rules, such as the Flood Plain District Overlay may need to be refreshed based on the coastal vision to refocus the management of coastal areas to be consistent with the vision.

Funding

- See notes on Funding for BEACHES (page 4)
- Cost Benefit Analysis – Building on the work in the 2016 coastal processes study and the Peggotty Beach Managed Retreat Feasibility Study, the Town should plan for additional cost benefit analyses to examine the trade-offs associated with protecting coastal development versus relocating or undeveloping certain areas. These analyses could provide important information for future decision-making
- A holistic understanding of costs and benefits is needed to make informed decisions and to set specifics for potential programs, such as a coastal buy-out program.



Community Character



The community's vision:

Scituate residents value the small-town, family-friendly feel of their coast and harbor and are generally pleased to be a little “off the beaten path.” The community wants the coast to continue to be the Town’s main asset. They say the coast is the main reason people live in Scituate, even if they don’t have homes right on the shore. The coast is the reason

people summer in Scituate, and the beaches, the Lighthouse, and the harbor are the tourist attractions that bring visitors and economic activity. A key part of the vision for 2070 is that Scituate’s coast should be able to accommodate a dramatic resident and tourist population increase in the summer.

Ideas and questions raised in the first round of community engagement.

To discuss further:

- The coastal community should be a green community - with strong environmental consciousness and practices (e.g. using solar and other non-polluting energies, water conservation techniques, etc.)
- The coastal community should have residents and tourists from a variety of socioeconomic backgrounds
 - School teachers, police officers, plumbers, electricians, etc.) can afford to live in the community.
 - There are more affordable accommodations near the water
- It should still look and feel like a quaint New England town.
- Scituate should actively embrace a more ethnically diverse community.

Key considerations to meet the vision (expert advice/insight):

In order for Scituate to have the kind of coastal identity and reputation described here, the community needs to think about the following considerations:

- See all comments on the previous three themes, then think about:
 - Which options described above may ultimately impact the Town’s coastal community character?
 - What kinds of decisions focused on beaches, coastal development, and the Harbor should be significantly influenced by the community character vision?
 - Which options are more likely to result in the community character described in the vision?

