

5TH ANNUAL CAPE COASTAL CONFERENCE

Developing a Consensus- Based Coastal Adaptation Strategy and Next Steps for Brewster

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Committee



Develop a Coastal Adaptation Strategy for Brewster to guide future decisions regarding access and management of coastal areas in light of future coastal change, sea level rise (SLR), and erosion.

Established the Brewster Coastal Advisory Group (BCAG)

Engage residents and stakeholders in a public process – incorporating vulnerability and risk information with public needs, concerns, and values – and develop and publicly present a set of strategies and mechanisms to address key community vulnerabilities, issues, and priorities and to identify the community’s preferred adaptation strategies.

BCAG Development

- Interviews with 45 individuals to hear community perspectives (Fall 2015)
- Applications of Interest for BCAG Membership, representing a range of perspectives, demographics, and points of view within the community (Dec-Jan)
- Selection of 23 BCAG members, including all members of the Town's established Coastal Committee, and Liaisons from related Town bodies (January 2016)

BCAG Process

- Held 8 3-hr meetings and a 2-hr public visioning session, (mostly) televised and open to the public (Feb – Sept 2016)
- Examined coastal conditions & threats and community needs.
- Identified, refined, and reached consensus on a set of guiding principles
- Explored potential strategies for applying these at both the town-wide and landing-by-landing levels.

BCAG Data and Inputs

- **Technical and Scientific Analysis:** Technical experts presented data on coastal threats faced by the Town, identified specific challenges and issues town-wide and landing-by-landing, and helped frame potential interventions and actions to be considered
- **Town Survey:** Town online coastal access survey on the use of public coastal beaches in the ‘summer’ season.

BCAG Process

- Reached consensus on many town-wide approaches for coastal adaptation and a set of recommendations to guide next steps and implementation
- Collected a set of additional suggestions – including ideas for landing-specific approaches – developed in assigned smaller working groups or as individuals.

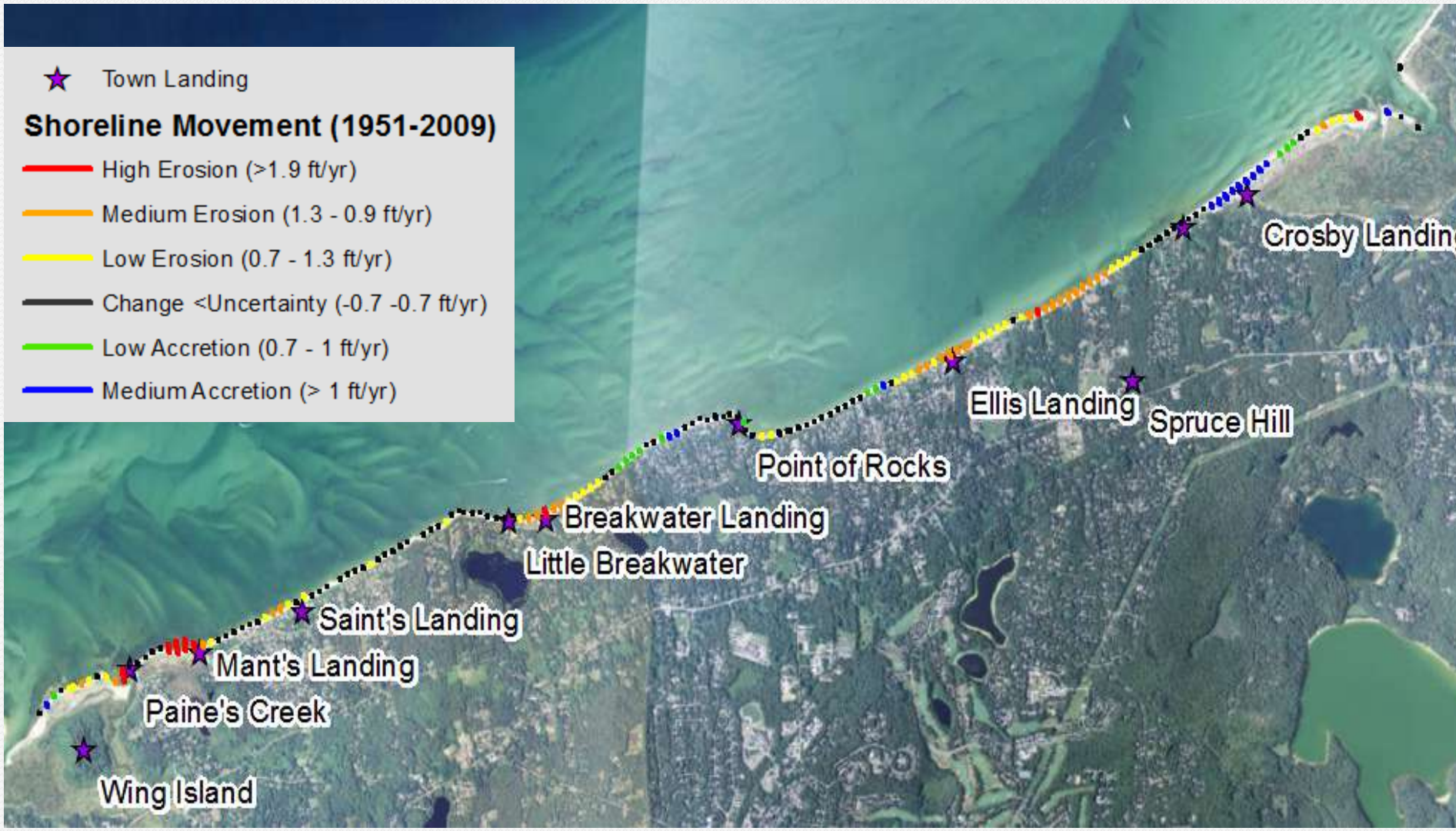
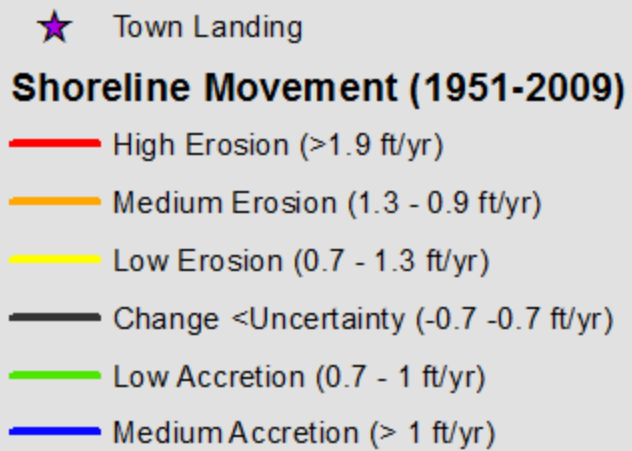
Survey of Brewster Taxpayers

6,841 resident and nonresident taxpayers received link to on-line survey. 2,060 (29.5%) responses.

- 93% said they have an excellent or good experience at Brewster's beaches
- 90% drive to the beach; and 52% said lack of parking was a frequent challenge
- More than a third of survey respondents indicated a willingness to use a shuttle and about 20% said they would walk or bike a half to 2 miles to the beach from a satellite parking area

Sediment Budget and Shoreline Change

- Sediment budget identified west to east movement of sand
- Overall sediment deposition dominates over erosion, most deposition is occurring offshore, not on the beaches
- Deposition on the flats is keeping up with current rate of sea level rise



Planning Scenarios

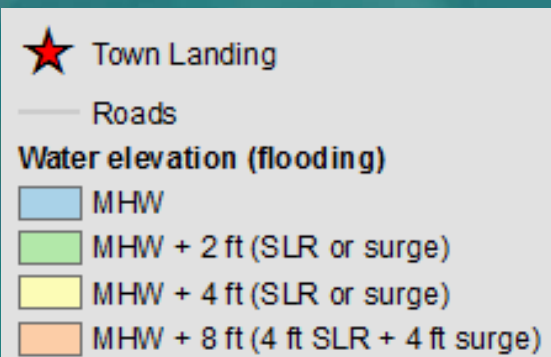
Time horizons:

20 years and a 1 foot rise in sea level

40 years and a 2 foot rise in sea level

60 years and a 4 foot rise in sea level

Storm surge levels of 2, 4 and 8 feet



**Paine's Creek, Mant's Landing, and Wing Island
 All Flooding Scenarios**



**Spruce Hill, Linnell and Crosby Landings
All Flooding Scenarios**

Vulnerabilities and Impacts

- Loss of parking at 3 three beaches with 4 feet of SLR or 4 feet of storm surge and loss of access to beach parking
- Inundation of wetland systems

Consensus Vision

The Town of Brewster will preserve and protect the community's coastal resources and expand access to its public beaches through public consensus, and in ways that preserve the natural habitat and peaceful character of the coastal environment and coastal neighborhoods, respect the overall coastal and land-based ecosystem, and adapt to long-term projections for coastal change.

Guiding Principles (in alpha order)

- **Access:**
 - Maintain and expand the opportunities for all to access Brewster's public beaches year-round.
 - Meet peak season access needs by exploring opportunities at all public access points, and through alternative means, including off-site parking, improved biking and pedestrian access, and investigation of shuttle options.
 - Consider those with limited mobility and users of wheelchairs, families, commercial and recreational shell-fishermen, and emergency access, and the safety needs of providing and balancing this access for all.

Guiding Principles (in alpha order)

- Adaptive: Recognize that the changing nature of coastal resources requires flexibility and adaptive planning, with ongoing monitoring of changing conditions and community needs, to best respond to new technologies, opportunities, and scientific uncertainties.
- Consensus-based: Provide for public input and build community consensus through all phases of the planning and implementation of the Coastal Adaptation Strategy.

Guiding Principles (in alpha order)

- **Holistic:** Protect the whole coastal system, including beaches and dunes, wildlife habitat, salt marshes, and other ecosystem services. Seek actions appropriate to coastal projections and community needs that build on and enhance the coast as well as the ecosystem as a whole.
- **Natural Beauty:** Protect and maintain the natural beauty, non-commercial, peaceful, quiet, spacious, and “small feel” of Brewster’s coast, beaches, and coastal neighborhoods, and safeguard their long-term significance for town residents and visitors.

Guiding Principles (in alpha order)


- **Science-based, innovative, and realistic:** Seek long-term solutions based on the best available science that are innovative, realistic, and achievable; that work along with nature and build climate resiliency today and into the future; and that are both environmentally and fiscally sustainable.



Consensus Adaptation Strategy Recommendations

- Evaluate, expand, and explore alternative access to town landings (via public and public-private means)
 - Bicycles and Pedestrians
 - Shuttle
 - Satellite Parking
- Seek and evaluate new access locations
- Maintain access for emergency vehicles and shellfishing
- Broaden and improve access (including visual) for individuals with limited mobility

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- **Continue beach management and restoration efforts, with periodic review**
 - **Promote and support wetland resource adaptation**
 - **Continue analysis of climate impacts**
 - **Implement ongoing adaptive management**
 - **Prioritize future projects on underutilized beaches to avoid overcrowding**



Consensus Implementation Strategy Recommendations

Update Coastal Committee charge to:

- Develop a Brewster Coastal Resource Management Plan (BCRMP), drawing on this Strategy and evaluating actions based on the guiding principles
- Integrate robust public participation in all phases of its work and in the development of the Management Plan
- Coordinate planning and implementation across institutional silos, involving appropriate town bodies, to incorporate climate change and adaptation strategies into policies, plans, and regulations

- Monitor changing coastal conditions and evolving community needs
- Monitor and evaluate implemented adaptation strategies.

After completing the Brewster Coastal Resource Management Plan (BCRMP):

- The Town should have the proper institutional structure to ensure that it is implemented.

- **The Select Board or the Town Administrator should form a task force to review the parameters of the existing Coastal Committee to ensure sufficient staff, capacity, authority, and membership from other relevant town boards and community representation.**
- **The body in charge of implementation of the BCRMP should have sufficient staffing and financial resources, as well as the appropriate authority, scope, and membership.**

When developing significant coastal projects:

- The Town should engage in a pre-regulatory and pre-decisional public process as early as possible in the development of the project. Best practices for public engagement include:
 - engaging members of the public and interested stakeholders in constructive and exploratory discussion of project goals
 - exploration of a range of potential strategies


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- evaluation of options using the guiding principles; and
 - collaboration to seek an approach that balances across the priorities and trade-offs

Observations on the Process

- Participants dropped out along the way
- Needed more time to complete consensus process
- Great value to having facilitator; however there were interactions between BCAG members and the facilitators outside of official meetings

What been going on since Adoption of the Brewster Coastal Adaptation Strategy?

- Coastal Committee charge was amended by Select Board consistent with the BCAG recommendations.
- Coastal Committee developed project criteria that trigger more in-depth pre-regulatory public discussion. These are now being used by the Town Administration

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- **Hiring consultant to assist the Coastal Committee in developing the Coastal Resource Management Plan.**
 - **Learning how to conduct and participate in a robust public discussion early in the project development process**