Beach Committee

Vision 2030 Update

Green Hill
Civic Association

Beach Committee

Leader: Maureen Morse

Members: Evan Jackson, Linda O'Connor, Don Geissler

NOTE:

Early work led by Dan Tanona

Strong Guidance and Input from Mal O'Connor and AJ Emanuel

Survey Data

- ***Improve sand conditions***
- ***Provide improved beach access for GHCA members***
- ***Preserve and respect for natural shoreline and wildlife habitats***
- ***Continued private, safe, family friendly atmosphere***

Scope of Work

In Scope
(Geography)

- Beach east of Beal property
- Beach west of Beal property

In Scope
(Including but not limited to)

- Beach access
- Beach/sand restoration
- Natural environment preservation
- Potential longer term beach property ownership
- Deeper understanding of Federal/State/Local regulatory efforts

Out of Scope

- Pond, kayak launch area
- Recreational area
- General community health & safety
- Social activities at beach and pond
- Actual legal representation of association with respect to beach issues

Note: Beach vision work is complex and less easily solved with a set of tangible actions and costs/ investments. The work you see in this presentation will reflect this.

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Research – Initial Path

- **Improve what we have:** Identify short term improvements to beach east of Beal property
- **Build on what we own:** Investigate current GH coastal property ownership to identify long term potential for land purchase and uncover potential public access points
- **Build relationships with key stakeholders:** Identify other GH beach associations and targeted private residents and develop strategies to build joint partnerships/ coalitions
- **Explore government support:** Identify and understand government legislation, planning and funding available to address shoreline erosion issues

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Research – Pivot Point

Research repeatedly led to bigger questions about the viability of our shoreline:

- What is the past, current and future trajectory of our shoreline?
- Are we relying on a data based understanding of our coastal erosion issue?
- What do we know/need to know? What experts can we access?

Given the importance of the beach to our association we felt it our fiduciary responsibility to step back, educate ourselves and then use that framework to inform our decision making

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Research – Revised Path

Conducted a deep dive to explore the following questions:

1. How has the shoreline changed over the past several decades?
2. What are the causes of this change and what can we expect in the future?
3. What strategies are available to address the problem?
    - What are the pros and cons of these strategies?
    - Where have they been/are currently being deployed and with what result?
4. What is the team's recommendation given this research?
5. Other ways residents can get involved?

Research – Highlights

Conducted ***our own*** research to develop deeper understanding of Green Hill's coastal erosion issue:

- Green Hill's average rate of erosion over past 80 years is 0.88 feet /year; over past 9 years is 1.3 feet/per year
- Our GH coast is low lying and flat, prone to hurricanes and nor'easters and is exposed to significant offshore wave energy from the open ocean
- The earth's atmosphere and ocean water are warming at an unprecedented rate driving a rising ocean level and more frequent/ intense storms
- All data sources suggest a similar trajectory looking forward
- Various strategies can be deployed to address erosion with varying costs, shelf life and results
- Our coast line is particularly hostile to most strategies; decision making will ultimately depend on cost vs. benefit

Research – Highlights

Met with ***external research firm*** (Adam Finkle, Woods Hole) to validate our preliminary thinking and provide directional insights:

- Validated that many soft structure strategies are not viable for our shoreline
- Beach east of Beal property: Consider installing more cobble to protect against land erosion
- Beach west of Beal property: Strong case for sand replenishment solution to build up dune & beach system across multiple properties; additional study required for best ROI
- It is not advisable to purchase land to west of Hill Beach (marsh prohibits any use)

Phase 2: Options / Cost/ Timing

We recommend a Phase 2 to further explore the following options. Due to the complexity and high $ amounts associated with this work, we recommend 1) our line of sight extends only to June 2025 at this point and 2) a strong team of association members tackle Phase 2.

	Cost	Timing	Comments
1 Engage external expertise to assist team	$3K (initial)	24-25	• Placeholder if/when needed
2 Short term sand replenishment at beach west of Beal property	$25,000 (min)	24-25	• Requires increased dues or fundraising • Requires strong partnership w/ Hill Assoc. • Decision must be made early 2025 • Potential vendors: Sherman, Larlham
3 Retain research expertise (or URI graduate keystone project) to further study broader dune replenishment solution across multiple properties west of Beal property	$40-60K (TBD)	24-25	• Requires significant funding exercise • Requires full commitment/contract with multiple properties/ associations
4 Cobble nourishment at beach east of Beal property	TBD	TBD	

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Next Steps

Build/Strengthen Beach team for Phase 2 research

- Explore options with further recommendations in 2025
- Launch “education component” using Research Summary from Phase 1
- Further engage beach neighbors to build collaboration and goodwill
- Monitor CIVIC beach “platform” restoration
- Track and support local, state and federal legislative activity (e.g. RI Beach Erosion Commission, South Kingstown and Charlestown Municipal Resiliency Planning)

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Questions / Feedback

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Back Up Information

Note: A research summary exists (a large reference deck) detailing the answers to all the questions we researched. Includes descriptions of all strategies, with photos, pros, cons etc.

Research – More Detail

We met with ***external consultant*** (Adam Finkle, Woods Hole) to validate our preliminary thinking and provide early, directional insights:

- Validated that many soft structure strategies (grass planting, coir envelopes) are not viable for our shoreline, too exposed to direct, high energy wave environments
- Beach east of Beal property - if goal is to protect against further land erosion, consider installing more cobble that matches existing material and remain above high tide line to keep project outside of army corp jurisdiction; strong case with CRMC for permit due to "public right of way"
    - If goal is sandy beach, requires a larger scale sand & cobble nourishment program further seaward beyond high tide line; need federal permit – much larger and more costly project, with limited longevity
- Beach west of Beal property - strong case for a sand replenishment solution to build up the dune and beach system, would require deeper research to fully understand sediment transport trends, optimal solution design and literal shelf life (multiple property effort creates more favorable outcome)
    - Sand would likely come in from inland source as pumping from off shore is not permitable in Mass/ RI because areas offshore are considered fisheries habitat
- It is not advisable to purchase land to west of Hill Beach – marsh means not even viable for a parking lot AND it sits in a direct line to wave action resulting from rip rap

Research – Highlights

Example of multiple property dune/ beach nourishment:

Research – Expert Resources Consulted

- Adam Finkle, Woods Hole
- J.P. Walsh, URI, Professor of Graduate School of Oceanography & Director of Coastal Resource Center
- Bryan Oakley, Eastern CT U
- Sue Anderbois, Director of Climate at Nature Conservancy
- Topher Hamblett, Save the Bay
- RI CRMC (Coastal Resources Mgmt. Council)
- NOAA (National Oceanic & Atmospheric Administration)
- UM Intergovernmental Panel on Climate Change
- US Global Change Research (5th National Climate Assessment)
- Exec. Climate Change Coordinating Council
- EPA
- Providence Journal
- NYTimes
- Charlestown Residents United.org
- Delaware.gov
- NASA

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