



Perspectives on Managed Retreat in Massachusetts Coastal Communities

Results of a Survey of Municipal Representatives

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URBAN HARBORS INSTITUTE

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Executive Summary

Coastal municipalities nationwide are working to understand and address the impacts of climate change. Having observed a growing interest in the concept of managed retreat both locally and nationally, the Urban Harbors Institute at the University of Massachusetts Boston conducted a survey of staff in coastal municipalities throughout Massachusetts to learn more about how the strategy is perceived.

Responses from 47 municipalities in Massachusetts showed that while some communities are considering managed retreat to mitigate flooding and sea level rise impacts, few are implementing the strategy. Survey respondents noted several logistical and financial barriers to retreat, including a lack of sites for relocation, the cost of purchasing land, the cost to move or demolish a structure, and loss of tax revenue. Concern about public acceptance, another prevalent barrier, included factors such as the loss of community character, the importance of property rights, and a lack of concern about climate impacts.

Despite the many barriers, respondents also recognized benefits associated with retreat, such as reduced flooding of structures, reduced maintenance of municipal infrastructure, and enhanced natural resources.

The study highlights the opportunity to educate people—especially the general public, property owners, elected officials, and municipal staff—about the risks of flooding and the potential role of managed retreat. Additionally, there is a need for regulatory tools and funding for the planning and implementation of managed retreat. Survey participants are looking to government and non-government organizations, academics, professional associations, non-profit organizations, and communication professionals to provide assistance and tools.

While managed retreat is not widely employed in Massachusetts today, the strategy will likely become more prominent as climate impacts worsen. Adoption of retreat will require tools and resources to overcome barriers and realize benefits. This study provides insights for practitioners engaged in developing those tools and resources.

Introduction and Purpose

Around the country, discussions are underway about how to address the impacts of sea level rise and storms. When communities and individuals understand what is at risk—homes, roads, city blocks, fishing piers, ferry terminals, burial grounds, beaches, wetlands, flora and fauna—they must choose whether to defend, adapt, or retreat.

These choices can be difficult to make and will require consideration of more than just physical assets. A community's history, economy, and social fabric may be influential drivers of its decisions. Different planning horizons, value systems, geographic scales, flooding events, and levels of decision-making can complicate efforts.

There is no universal approach to address flooding in coastal areas; instead, communities should evaluate a variety of strategies. Among the less-utilized options is managed retreat, which this report defines as the movement of infrastructure, people, and/or property out of vulnerable coastal areas through processes and programs such as voluntary buyouts, relocation of roads, and zoning overlay districts.

The purpose of this study is to better understand the potential for managed retreat in coastal municipalities in Massachusetts. The research sheds light on whether managed retreat is being used or considered, the perceived benefits of and barriers to this strategy, and the level of interest in tools and resources to facilitate greater understanding and/or use of retreat. The research results can be used to inform future planning, education, and research.

“ *This report defines [managed retreat] as the movement of infrastructure, people, and/or property out of vulnerable coastal areas through processes and programs such as voluntary buyouts, relocation of roads, and zoning overlay districts.*

Methodology

An online survey was distributed to municipal conservation agents, planners, mayors, and town managers/administrators in 72 of the 73¹ coastal municipalities in Massachusetts². In some communities, contact information was unavailable for one or more positions and/or positions were vacant, resulting in variability between the number of people contacted in each municipality.

Developed using Qualtrics, the survey consisted of several multiple choice, ranking, and open-ended questions designed to gather specific information while allowing participants to provide explanations and additional context. Survey questions can be found in Appendix A.

The survey was distributed via email on October 27 and 28, 2022 and responses were collected through December 14, 2022.

Image: MyCoast Massachusetts King Tide Photos



¹ The MA Office of Coastal Zone Management identifies 78 coastal communities, but this study did not include Milton, Peabody, Norwell, Pembroke, or Rehoboth, where the primary shorelines are along rivers.

² No contact information was available for Gosnold, but regional representatives did participate.

The online survey was distributed to the following communities:

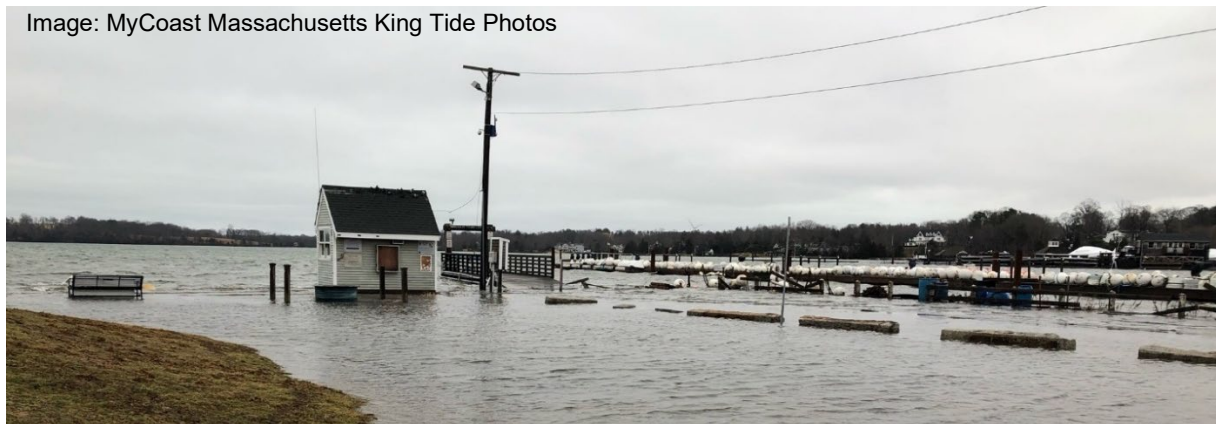
Acushnet	Amesbury	Aquinnah*	Barnstable*
Berkley	Beverly	Boston*	Bourne*
Braintree	Brewster*	Chatham*	Chelsea*
Chilmark*	Cohasset*	Danvers*	Dartmouth
Dennis*	Dighton	Duxbury	Eastham*
Edgartown*	Essex*	Everett	Fairhaven
Fall River	Falmouth	Freetown	Gloucester*
Gosnold* **	Hanover	Harwich*	Hingham
Hull*	Ipswich	Kingston*	Lynn
Manchester-by-the-Sea*	Marblehead	Marion*	Marshfield*
Mashpee*	Mattapoissett*	Nahant	Nantucket*
New Bedford*	Newbury*	Newburyport*	Oak Bluffs*
Orleans*	Plymouth*	Provincetown*	Quincy
Revere*	Rockport*	Rowley	Salem*
Salisbury*	Sandwich*	Saugus	Scituate
Seekonk*	Somerset	Swampscott	Swansea*
Tisbury*	Truro*	Wareham	Wellfleet*
West Tisbury*	Westport*	Weymouth*	Winthrop*
Yarmouth*			

**Indicates a municipality with at least one survey response*

***No contact information was available for any municipal representative, though regional representatives did participate*

Responses were analyzed using Excel. Responses to open-ended questions are included as Appendix B in this report and will be coded and further analyzed in subsequent phases of this research.

Image: MyCoast Massachusetts King Tide Photos



Results

The following subsections describe the survey results, including (1) survey respondents, (2) use of managed retreat, (3) perceived barriers to and benefits of managed retreat, (4) perspectives on tools and resources, and (5) terminology.

Survey Respondents

Seventy officials and staff responded to the survey. Of those 70, five respondents were from regional entities within Massachusetts, such as regional planning agencies, suggesting that the survey was forwarded to others by original recipients. In total (including regional responses), respondents represented 47 municipalities, or 64% of the coastal municipalities surveyed (Figure 1).

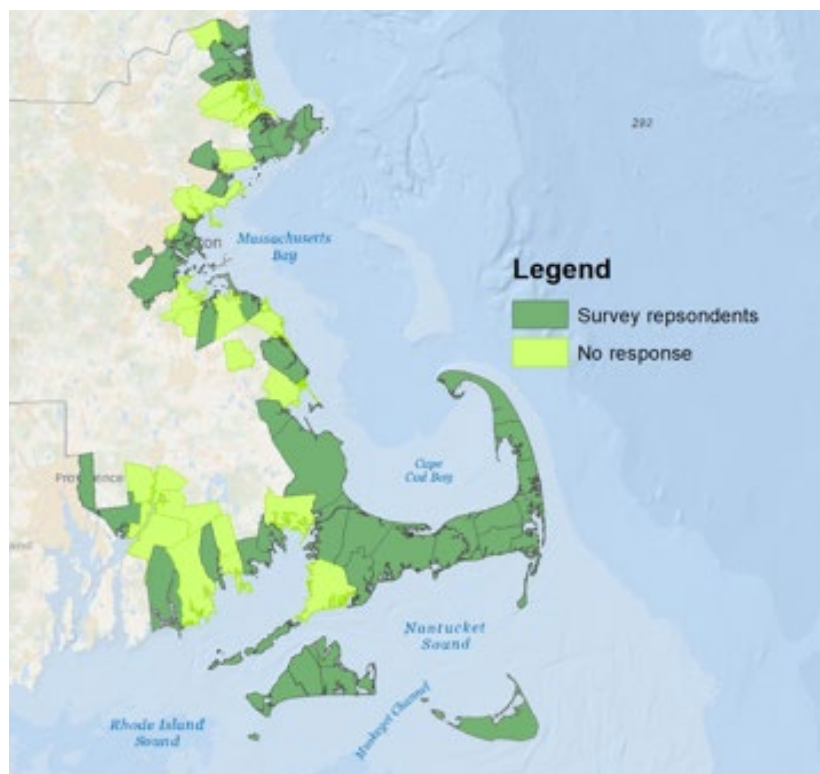


Figure 1: Map of Communities Represented in Survey Responses

Fifty-six survey respondents provided their job titles, which are listed in Table 1. Most participants were town managers and administrators, conservation commission members and staff, and planning staff. The diversity in job titles further indicates that original recipients may have forwarded the survey to colleagues.

Table 1: Number of Survey Participants with Respective Job Titles.

Job Title	Responses
Assistant Town Planner	2
Building Commissioner/Flood Plain Manager	1
Climate Change Planner	1
Coastal Resilience Coordinator	1
Commissioner	1
Conservation Administrator	3
Conservation Commission, chair	1
Conservation Agent	6
County Commissioner	2
Director of Coastal/Natural Resources	4
Director of Health & Natural Resources	1
Director of Marine and Environmental Affairs	1
Director, Climate Adaptation & Conservation	1
Department of Natural Resources Director	2
Economic Development Planner	1
Engineering Department Head	1
Environmental Planner & Conservation Agent	1
Health & Conservation Agent	2
Natural Resources	1
Resilience Manager	1
Town Manager/Administrator	11
Town Planner/Planning Director/Planning & Zoning Director/Planning Board Administrator	10
Volunteer	1

Use of Managed Retreat

Thirty-nine respondents, representing at least 26 municipalities, replied that their municipalities had considered managed retreat.³ The survey did not define the term “considered” and was left to the interpretation of the survey respondent.

In some municipalities, more than one person completed the survey. Of those municipalities with multiple respondents, there were nine instances in which at least one person reported that

³ At the maximum, these respondents represent 32 municipalities. Some participants represented multiple municipalities but it is unclear how many of their municipalities have considered managed retreat.

the municipality had considered managed retreat and at least one person reported that the municipality had not considered managed retreat. When these conflicting responses are excluded, at least 17 municipalities reported “yes”, that their municipality had considered managed retreat.

Thirty-one respondents, representing 24 municipalities, replied that their communities had not considered managed retreat. After excluding the conflicting responses noted above, 15 municipalities reported “no”, indicating that their municipality had not considered managed retreat.



Image: MyCoast Massachusetts King Tide Photos

Some respondents provided information about completed managed retreat projects in their municipality. The projects, as described by respondents, include:

- Brewster: The town removed parking areas from a former dune at two coastal beaches/landings and reconstructed the parking areas inland. One project constructed a dune (for resilience purposes) over the former paved parking area.
- Dennis: The town moved the local aquaculture company away from the shoreline on Cape Cod Bay.
- Hull: Hull residents have taken measures to elevate and move homes to less flood prone areas on their typically small properties.
- Nantucket: The town has relocated roads which were in erosion zones.
- Orleans: The town has removed parking and constructed dunes to allow for the natural migration of the beach.
- Truro: The town has removed sections of the public parking lot at Ballston Beach.

Though not a recent managed retreat project, a respondent noted that homes and businesses located in a vulnerable area in Provincetown were moved around 1850.

Perceived Barriers to and Benefits of Managed Retreat

While many communities noted they have considered managed retreat, many have still not implemented the strategy. To explore this issue, respondents were asked to identify applicable barriers to managed retreat from a pre-populated list assembled based on the literature.

“ While many communities noted they have considered managed retreat, many have still not implemented the strategy.

As noted in Table 2, the most common barriers included lack of sites for relocation, cost of purchasing land, concern about public response, cost to move or demolish a structure, and loss of tax revenue. Very few respondents noted concerns about equity.

Table 2: Number of Times a Barrier was Identified as Relevant.

Barrier	Cumulative Responses	Retreat not Considered (N=26)	Retreat Considered (N=33)
Lack of site(s) for relocation*	39	18	21
Cost of purchasing land	35	12	23
Concern about public response	34	14	20
Cost to move or demolish structure on vulnerable property	31	11	20
Loss of tax revenue	29	13	16
Lack of political will	28	12	16
Lack of public interest	22	12	10
Cost of restoring vacated property	17	8	9
Lack of sufficient data to inform decisions	15	9	6
Need to maintain water-dependent use(s)	15	5	10
Perceived negative cultural impacts	13	2	11
Equity concerns	11	3	8
Other	7	3	4

**While the intent of this barrier was to reflect a lack of areas to relocate to, it may have been interpreted as a lack of sites in need of relocation.*

Survey respondents provided additional information about barriers. Where retreat had been considered, people highlighted:

- insufficient space and funding to facilitate retreat,
- impacts to historic structures and community character,
- the influence of a vocal minority of individuals,
- private property rights,
- a reactive (rather than pro-active) perspective on resilience measures,
- a need for education,
- outdated and insufficient regulations,
- short-term planning perspectives,
- competing priorities for municipal resources, and
- a focus on individual impacts as opposed to community impacts.

Where retreat had not been considered, people highlighted:

- a lack of places to retreat,
- the need to protect important tax bases,

- short-term planning perspectives within town,
- other local issues taking priority,
- permitting challenges, and
- a lack of need to consider managed retreat.

As noted in the “terminology” section of this report, comments made in response to other survey questions highlighted the fact that emotions can also be a barrier. (The complete set of responses to all open-ended survey questions can be found in Appendix B.)

As shown in Figure 2, the relevance of barriers was not uniform across all municipalities. Where retreat had been considered, people were more likely to identify the following as barriers: perceived cultural impacts, equity concerns, the need to maintain water dependent uses, the cost to move or demolish a structure, the lack of political will, the cost of purchasing land, and concern about public response. Where retreat had not been considered, people identified cost of restoring vacated property, lack of sufficient data to inform decisions, lack of public interest, loss of tax revenue, and lack of sites for relocation as common barriers.

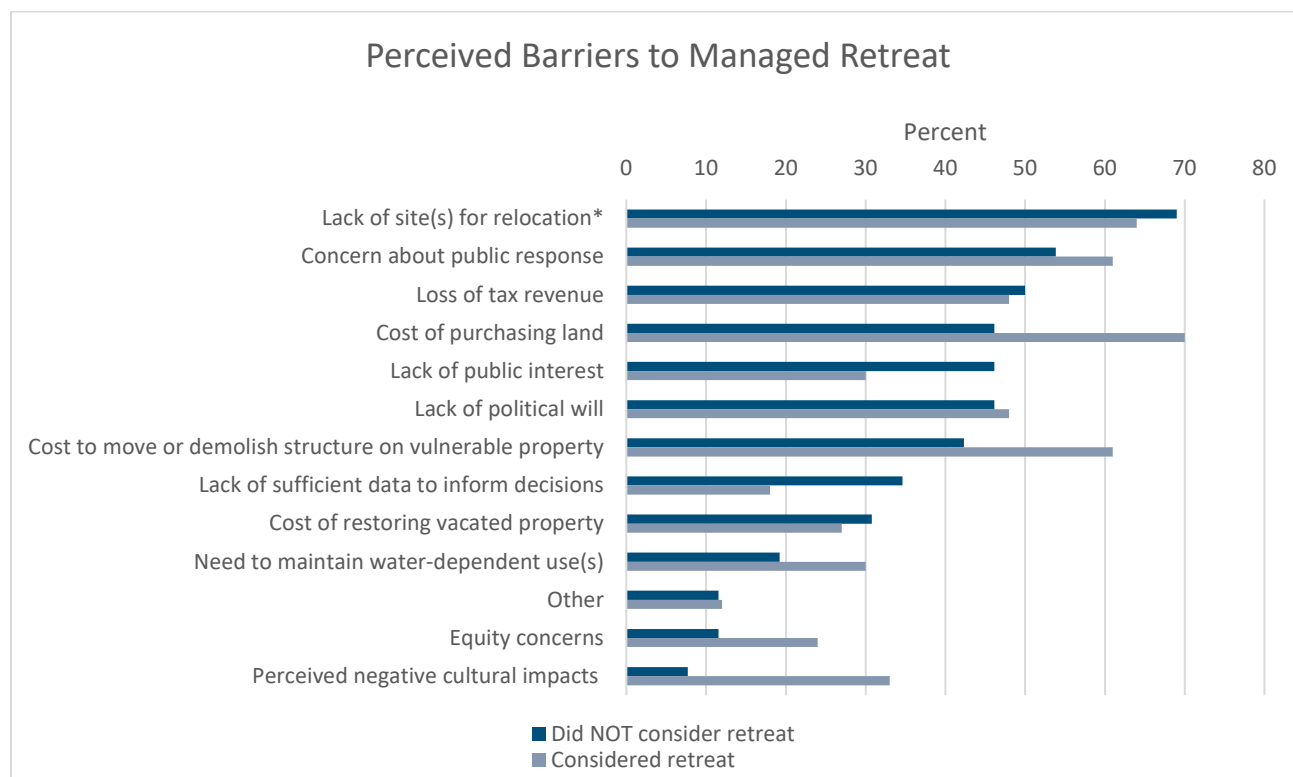


Figure 2: Perceived Barriers to Managed Retreat.

Though differences in the relevance of barriers existed based on whether retreat had been considered, the differences were relatively small for some barriers including the lack of political will, loss of tax revenue, cost of restoring vacated property, and lack of sites for relocation. The greatest differences were for perceived negative cultural impacts, the cost of purchasing land, the cost to move or demolish a structure, the lack of sufficient data, and the lack of public interest.

This study does not explore the relationships between barriers and interest in retreat. For example, it is not clear whether communities with sufficient data considered managed retreat more often than those without sufficient data or if communities that considered managed retreat found the availability of data not to be a key barrier to their decision-making process. Additionally, respondents did not often identify equity concerns as a barrier, but it is unclear whether the municipality already addressed equity concerns or if equity concerns were not considered important.

Survey respondents were asked to identify anticipated benefits of managed retreat from a pre-populated list assembled based on a review of the literature. The most common benefits included reduced flooding of built structures, reduced maintenance of municipal infrastructure, and enhanced natural resources. The ability for managed retreat to address equity concerns was the least cited benefit. Of the 38 people that responded to this question, only seven reported being from municipalities that had not considered managed retreat. Table 3 displays the results.

Table 3: Number of Times a Benefit was Identified as Relevant.

Anticipated Benefit of Managed Retreat	Responses (N=38)
Reduced flooding of built structures	27
Reduced maintenance of municipal infrastructure	25
Enhanced natural resources	25
Reduced demand on emergency response services	20
Preservation and/or creation of new public space	15
Other	4
Addresses equity issue(s)	3
No benefits were anticipated	1

Tools and Resources

Survey respondents were asked to identify levels of interest in tools and resources related to managed retreat. Respondents were most interested in funding strategies and budget tools, community education/outreach/engagement tools, and regulatory tools, as seen in Table 4.

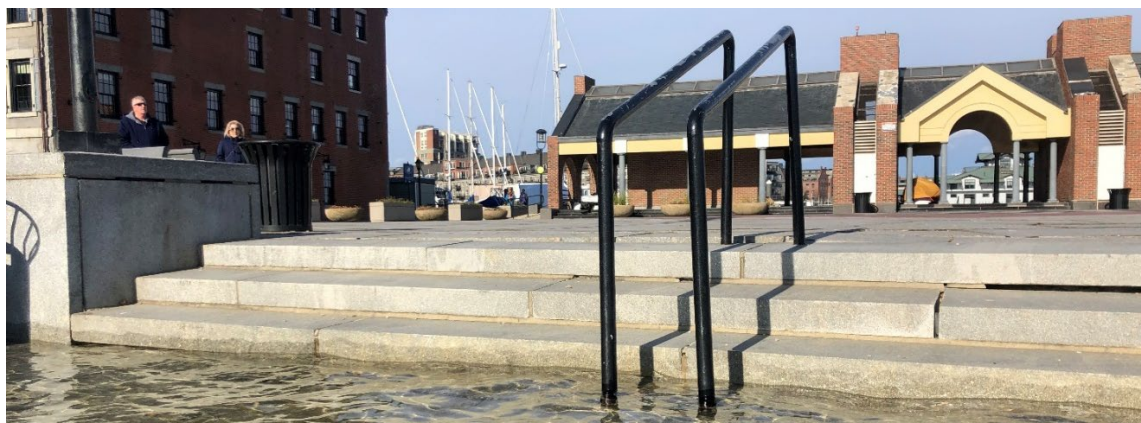


Table 4: Number of Survey Respondents Interested in Each Tool or Resource.

Tool/Resource	Highly Interested	Somewhat Interested	Not Interested
Funding strategies/Budget tools (e.g., grants to purchase land)	41	12	2
Community education/outreach/engagement tools	38	14	3
Regulatory tools (e.g., model bylaws)	36	14	5
Trainings and workshops	28	20	7
Legal assistance	26	22	7
Planning assistance	25	27	4
Participating in a community of practice (e.g., quarterly meetings to share lessons learned, resources, etc.)	20	27	8
Other	4	5	15

For those interested in “Other” tools and resources, the following comments were made:

- Tools and resources for defense/living shorelines
- Web development help
- Management of retreat area
- New, more enlightened town governance

When comparing interest levels based on whether the respondent reported their municipality had considered managed retreat, interesting results emerge, as shown in Figure 3:

- Interest in *all* tools and resources was lower among those who reported that their municipality had not considered managed retreat.
- The same three tools and resources—community engagement/education/outreach tools, regulatory tools, and funding strategies/budget tools—were of greatest interest to respondents regardless of whether their communities had considered managed retreat, but the level of interest varied.
 - Where managed retreat was considered, the tools/resources of greatest interest were community engagement/education/outreach tools (78% were “highly interested”), funding strategies/budget tools (78% were “highly interested”), and regulatory tools (69% were “highly interested”).
 - Where managed retreat was not considered, the tools/resources of greatest interest were funding strategies/budget tools (71% were “highly interested”), regulatory tools (63% were “highly interested”), and community education/outreach/engagement tools (58% were “highly interested”).

“Municipalities are interested in community engagement, regulatory, and funding tools to assist in managed retreat consideration.”



Figure 3: Interest of Survey Respondents in Managed Retreat Tools and Resources.

The same three tools and resources—legal assistance, trainings and workshops, and community of practice—were of least interest regardless of whether managed retreat had been considered, but the level of disinterest varied.

- Where managed retreat was considered, the lack of interest in legal assistance, trainings and workshops, and community of practice was the same across all three tools and resources, with 9% of respondents reporting that they were “not interested”.
- Where managed retreat was not considered, the lack of interest in legal assistance and trainings and workshops was the same (17% were “not interested”), and community of practice was of least interest (21% were “not interested”).

Open-ended comments (see responses in Appendix B) provide insights that could inform the development of tools and resources. For example, in the context of community engagement/education/outreach tools, comments highlighted that managed retreat is not being discussed or planned for in some places because people—including elected officials—lack basic concern for the risks presented by climate change. Beyond that, others noted a need for people to visualize what managed retreat might look like locally. Several people noted an interest in case studies and examples of where managed retreat has occurred, including lessons learned.

For funding strategies/budget tools, comments highlighted the need for a variety of funding sources including federal and state programs, grants, and incentives for property owners. Some responses highlighted the need to fund regional and neighborhood-scale projects, and others focused on funding for individual properties.

Comments about planning and regulatory tools highlighted a need for bylaws and regulations that facilitate the process of retreat and prevent continued development and redevelopment in coastal resource areas. Additionally, there is interest in regional planning as well as local planning—including at the parcel level—to identify vulnerabilities, options, and impacts

associated with specific strategies. Respondents also identified cost-benefit analyses as a useful tool to understand the impacts of various actions as well as inaction.

Participants were also asked to identify partners that could provide tools and resources. Responses included government, academic, and non-profit entities, as well as professional associations and communications professionals. Specific partners are listed in Table 5. Additionally, responses highlighted the need for partners to be trustworthy, qualified, transparent, cost-effective, and competent across disciplines such as planning, regulating, and communicating. Complete responses are in Appendix B.

Table 5: Partners for Providing Tools and Resources.

Category	Partners
Federal	Federal Emergency Management Agency, Army Corps of Engineers, Cape Cod National Seashore, Waquoit Bay National Estuarine Research Reserve, National Park Service
State	Massachusetts Bay Transit Authority, Massachusetts Department of Transportation, Massachusetts Department of Environmental Protection, Massachusetts Office of Coastal Zone Management, Massachusetts Department of Conservation and Recreation, Massachusetts Emergency Management Agency
Regional	Cape Cod Commission, Martha’s Vineyard Commission, Barnstable County Cooperative Extension
Municipal	Building Departments, Zoning Boards
Academic	Land grant universities, Public universities, UMass Dartmouth-SMAST, Woods Hole Oceanographic Institution, Urban Harbors Institute (UMass Boston), Cape Cod Community College, Massachusetts Maritime Academy, Upper Cape Regional Technical School
Professional Associations and Networks	Massachusetts Municipal Association, Cape Cod Conservation Agent Network
Non-Profits	Conservation Law Foundation, Center for Coastal Studies, Buzzards Bay Coalition
Other	Communication and media outlets, Website development firms, Residents, Businesses

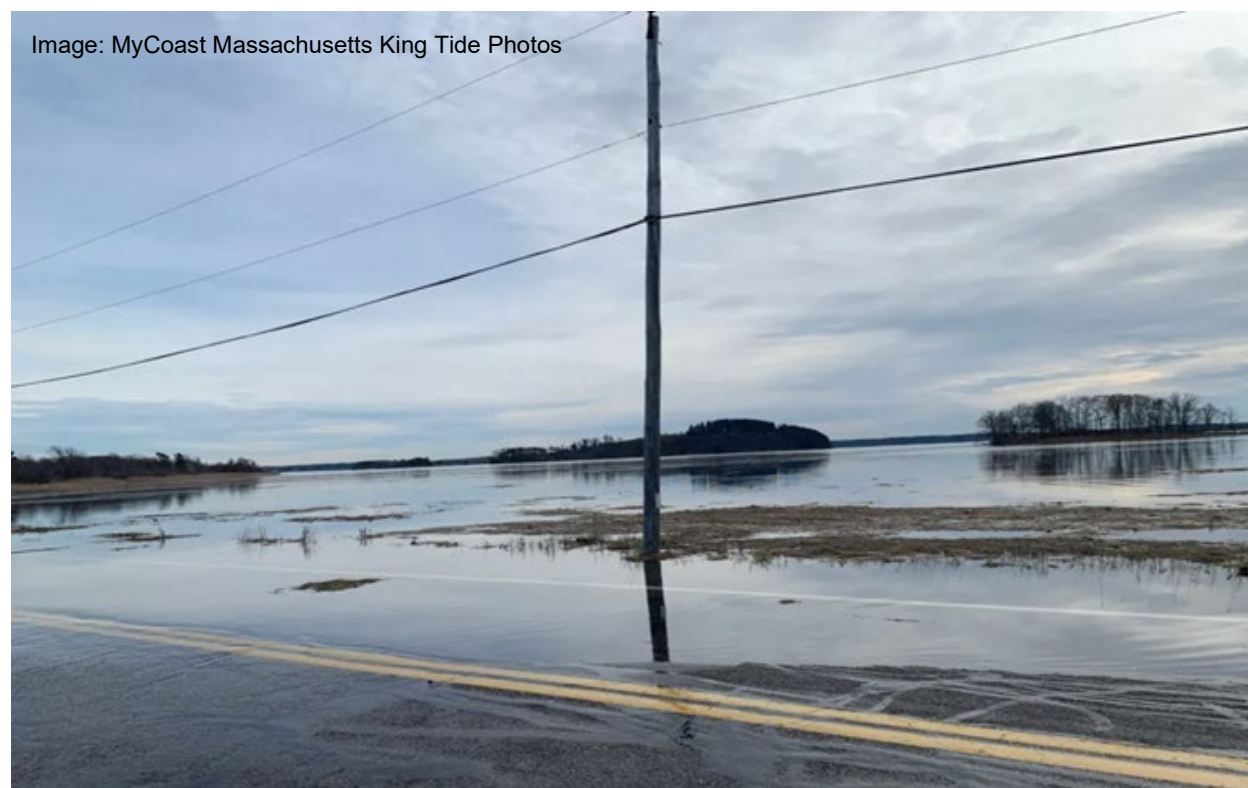
Terminology

People were asked if they had experienced any issues with the term “managed retreat”. Of those that responded, 22 said they had encountered issues with the term, and 33 had not, as shown in Table 6. Responses differed depending on whether retreat had been considered by the municipality. Specifically, where retreat had not been considered, the term was identified as an issue by 26% of the respondents. Where retreat had been considered, the term was identified as an issue by 50% of the respondents.

Table 6: Issues with the Term "Managed Retreat" Based on Whether a Municipality had or had not Considered Managed Retreat.

Municipality Considered Managed Retreat	Issue with Term	No Issue with Term	No Response
Yes	16	16	7
No	7	17	7

Participants were invited to provide additional observations about the term “managed retreat”. Comments (see Appendix B) highlighted the lack of understanding about what the term means and the association of “retreat” with failure or giving up. Most comments, however, focused on barriers to managed retreat and not on the terminology itself. Within those comments, some new insights on barriers emerged including the perception that retreat is more difficult than other options, and that retreat evokes emotions including doubt, fear, rage, loss, mistrust, frustration, and denial.



Discussion

The survey results illuminate the complexity of managed retreat as a tool for addressing climate change impacts in coastal communities. Generally speaking, any response to a climate change impact must first acknowledge the existence of the impact. Several municipalities noted that they are still struggling to build awareness of the flooding risks associated with climate change. Even when municipalities are aware of flooding risks, many are not using managed retreat.

Logistically, municipalities may lack the funds, land for relocation, bylaws and regulations to facilitate retreat, and/or data to inform decision-making. Community support is also a challenge and is influenced by factors such as political and fiscal interests, vocal minorities, short-term planning horizons, and a sense of loss and anger if retreat occurs. On a more philosophical level, managed retreat seems to conflict with mainstream beliefs related to property ownership, individual rights, and timeframes for decision-making.

“ *The survey results illuminate the complexity of managed retreat as a tool for addressing climate change impacts in coastal communities.* ”



The barriers to managed retreat are not uniform across municipalities. Comparing perceptions of barriers where retreat has and has not been considered highlights differences that could be explored in future research. Specifically, a lack of public interest was a higher barrier where managed retreat had not been considered. It could be useful to explore what drives public interest or disinterest in managed retreat and how that might change over time.

Additionally, a lack of sufficient data was perceived as a higher barrier where managed retreat had not been considered. All surveyed municipalities can access the Flood Insurance Risk Maps (FIRMs) produced by the Federal Emergency Management Agency (FEMA). Further, these communities have

participated in the state's Municipal Vulnerability Preparedness (MVP) program which involves a data-informed planning process. Recognizing the availability and use of data in other contexts, it would be interesting to understand what data are required to guide managed retreat decisions. As an example, at the time of the survey, not all municipalities had access to the Massachusetts Coastal Flood Risk Model (MCFRM) data which, among other things, models flooding risk for the 0.1% storm in 2030, 2050, and 2070. When all communities have access to these data, will this barrier be reduced? If not, what other data are needed or how do we encourage communities to use the data available?

The cost of purchasing land, the cost to move or demolish a structure, perceived negative cultural impacts, and the need to maintain water-dependent uses all ranked higher as barriers where retreat had been considered. Further research could explore how these barriers align with factors such as municipal finances and the market value of vulnerable properties to clarify whether these barriers are tied to land use and budgets or if this reflects other insights only realized as retreat was explored. Understanding how, when, and why barriers are perceived may inform strategies to proactively address them.

“ *Managed retreat may not be widely implemented in Massachusetts in the near future; however, there is interest in developing resources and strategies to advance the concept.* ”

Given the obstacles identified, managed retreat may not be widely implemented in Massachusetts in the near future; however, there is interest in developing resources and strategies to advance the concept. Specifically, survey results indicate a high level of interest in outreach and education, funding strategies, and regulatory tools. Information about the most sought-after tools and resources are contextualized and synthesized below. In addition, the concept of equity received little attention by survey respondents and was not seen as a barrier or benefit, yet equity should be a key element of any

successful managed retreat effort. For that reason, this section also highlights information about equitable retreat.

Funding

The need for funding for Massachusetts' communities aligns with the high cost of managed retreat programs elsewhere in the country. For instance, since 2019 the Charlotte-Mecklenburg Storm Water Services (CMMS) program in Mecklenburg County, North Carolina has been investing \$4 million annually in buyouts to acquire flood-prone properties and restore floodplains.⁴ Additionally, in 2022, the federal government provided \$25 million to the Quinault Indian Nation in Washington State and another \$50 million to Network Village and the Native Village of Napakiak (both in Alaska) to initiate “community driven relocation”.⁵

⁴ Georgetown Climate Center. 2020. Managing the Retreat from Rising Seas: Lessons and tools from 17 case studies. Online at: https://www.georgetownclimate.org/files/MRT/GCC_20_FULL-3web.pdf.

⁵ U.S. Department of the Interior. 2022. Biden-Harris Administration Makes \$135 Million Commitment to Support Relocation of Tribal Communities Affected by Climate Change. Online at:



Funding for managed retreat is needed to cover costs such as purchasing property, moving or removing built infrastructure, relocating people and activities, managing properties, and retaining planning and legal services. Some potential funding sources include municipal options such as Community Preservation Act funds; federal options including the Federal Emergency Management Agency’s Hazard Mitigation Grant Program and the U.S. Department of Housing and Urban Development’s Community Development Block Grant-Disaster Recovery Program, and initiatives such as a buy-to-rent program where a municipality or other entity purchases coastal dwellings to rent and then removes them once a vulnerability threshold has been reached.

Survey comments noted the important role of state and federal funding in facilitating managed retreat. One respondent noted the need for a grant-writer to help apply for funding. Additionally, though not linked specifically to the topic of funding, several comments noted the need for proactive, rather than reactive, retreat—which is an important consideration for funding programs that allow communities to retreat before damage occurs.

In addition to the funds spent, managed retreat can have implications on a municipality’s budget in the form of lost revenue—especially lost property tax as coastal structures are removed or future development is prohibited.

When considering costs of managed retreat, it is important to explore how those costs compare with alternative actions and inaction. This accounting should address the fact that some costs can be difficult to quantify, including impacts to natural resources, community character, and sense of place.

<https://www.doi.gov/pressreleases/biden-harris-administration-makes-135-million-commitment-support-relocation-tribal>.

Outreach and Education

Survey participants identified a need for outreach and education tools targeting the general public, property owners, elected officials, and municipal staff.

Partnerships in developing and delivering outreach and education may take many forms and involve many constituents. Media, state and federal entities, non-profits, academics, and others can all play a role in communicating about managed retreat, but information needs to be accurate, accessible, and trusted.

For communities interested in implementing managed retreat projects, outreach and education is critical throughout the entire process to ensure that the effort reflects multiple perspectives, is adaptable, and is successful. Further, education and outreach must be tailored to the areas considering retreat. For example, where retreat has not yet been considered, outreach may focus on the local vulnerabilities to climate change as a first step. Where vulnerabilities are already understood, outreach might focus on different planning and funding options.

Survey respondents expressed a need for education about the impacts of climate change, details on the benefits of proactive planning, case studies of successful managed retreat, strategies from a community perspective rather than an individual perspective, and clarification of the term “managed retreat”.

As noted previously, the term was reported as an issue in 26% of responses where managed retreat had not been considered and in 50% of responses where it had been considered. Where terminology was an issue, people associated the strategy with concepts such as failure, abandonment, loss, anger, and mistrust. As one person wrote, “The term ‘managed retreat’ can be a barrier itself due to its lack of clarity and connotations of failure, giving up, and loss of community. Other terminology may help reduce negative perceptions of the concept.” Alternatives such as “climate-driven relocation”⁶ have been proposed, but additional work is needed to understand the best ways to communicate the concept of retreat, recognizing there may not be a term that works equally well in all communities.

“*Media, state and federal entities, non-profits, academics, and others can all play a role in communicating managed retreat, but information needs to be accurate, accessible, and trusted.*”

Policies, Laws, and Regulations

Policies, laws, and regulations to facilitate managed retreat are lacking nationwide and may be difficult to implement given psychological, institutional, and practical barriers⁷. Appendix B features comments that touch upon several specific challenges to developing new laws and regulations. In addition to the emotions involved in retreat, participants highlighted issues such

⁶ The Urban Ocean Lab uses “climate-driven relocation” as an alternative to “managed retreat”. Additional information is available at: <https://urbanoceanlab.org/climate-driven-relocation>.

⁷ Siders, A.R. 2019. Managed Retreat in the United States. *One Earth*. 1(2), 216-225. <https://doi.org/10.1016/j.oneear.2019.09.008>.

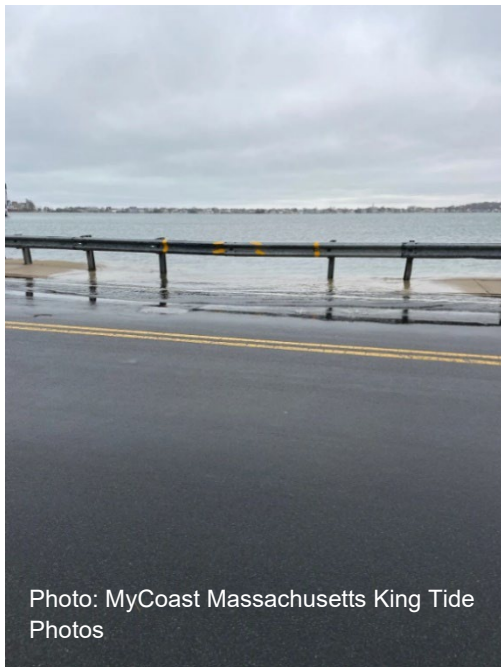


Photo: MyCoast Massachusetts King Tide Photos

as expectations associated with property rights, small parcels that prohibit on-site retreat, and a lack of concern for increased coastal flooding. For example, a few people noted that current property owners are not motivated by future impacts they will not personally experience, making it challenging to generate interest in retreat.

Even where new laws and regulations can be implemented, there is a misalignment between typical planning horizons and the timeframes necessary to account for longer-term climate impacts. When coupled with the fact that laws and regulations to address flooding often rely only on data and maps of historic and existing conditions, the ability to plan for future flooding is further hindered.

Efforts to develop policies and regulations for managed retreat would benefit from state and federal-level support in various forms. Those efforts will need to

engage a variety of perspectives to be responsive to different needs and interests.

The Georgetown Climate Center's Managed Retreat Toolkit⁸ may be useful to communities looking to better understand their options. In developing policies and regulations, tools such as multicriteria decision analysis (MCDA) may help to incorporate different values and perspectives into the design of strategies⁹. Further, monitoring successes and challenges of managed retreat projects to understand their social, economic, cultural, and natural impacts will help inform future efforts.

Equity

Managed retreat programs can have significant climate justice implications^{10,11}. Retreat efforts could improve or worsen social inequities both directly and indirectly. For example, a decision not to relocate a vulnerable population could expose them to future impacts of climate change; however, relocating them in a way that disrupts community and social structures or causes

⁸ Georgetown Climate Center. Managed Retreat Toolkit. Online at: <https://www.georgetownclimate.org/adaptation/toolkits/managed-retreat-toolkit/regulatory-tools.html>.

⁹ Skidmore, T.A., Cohon, J.L. 2022. A Multicriteria Decision Analysis Framework for Developing and Evaluating Coastal Retreat Policy. *Integrated Environmental Assessment and Management*. 19(1), 83-98. <https://doi.org/10.1002/ieam.4662>.

¹⁰ Siders, A.R. 2018. Social Justice Implications of US Managed Retreat Buyout Programs. *Climatic Change*. 152, 239-257.

¹¹ Tubridy, F. Lennon, M., Scott, M. 2022. Managed Retreat and Coastal Climate Change Adaptation: The environmental justice implications and value of a coproduction approach. *Land Use Policy*. 114. <https://www.sciencedirect.com/science/article/pii/S0264837721006839?via%3Dihub>.

Photo: MyCoast Massachusetts King Tide Photos



financial strain can create new challenges. Managed retreat efforts should center equity as a guiding principle and ensure that all barriers to participation are minimized, *e.g.*, ensuring that information is available in multiple languages, that impacted people are engaged to help develop the strategy, and that financial requirements for participation are not discriminatory.

Equity concerns ranked low on the list of potential barriers *and* benefits identified by respondents, yet the reasons for the low rankings are not clear. The state's record of Environmental Justice populations from 2020¹² lists 49 out of the study's 73 coastal municipalities (67%) as having at least one environmental justice community.¹³ Survey responses on the topic, though few, illuminated specific equity concerns such as the need to relocate vulnerable populations, the risk of policies resulting in gentrification, the loss of low-income housing, and the idea that loss of property rights and buy-outs of coastal homes for those in lower-income brackets may result in the loss of financial security and/or waterfront housing for subsequent generations. Additional research is needed to clarify perceptions about the relationship between equity and managed retreat.

¹² Massachusetts Executive Office of Energy and Environmental Affairs. 2022. 2020 Environmental Justice Populations. Online at <https://s3.us-east-1.amazonaws.com/download.massgis.digital.mass.gov/shapefiles/census2020/EJ%202020%20updated%20municipal%20statistics%20Nov%202022.pdf>.

¹³ Of the 47 municipalities providing survey responses, 32 of them (or 68%) are municipalities with environmental justice populations.

Conclusion

This survey was an initial exploration of perceptions of managed retreat in Massachusetts coastal communities from the perspective of municipal staff. While benefits to retreat are anticipated, very few projects have been implemented to date. Participants identified several barriers to retreat and their comments suggest that the strategy is difficult to implement under current conditions; nevertheless, there was interest in tools and resources to advance the concept.

To the extent that interest in managed retreat may grow, those involved in addressing climate impacts can help create a pathway for the strategy. That pathway should include multiple strategies such as efforts to (1) identify and secure funding for coastal resilience, (2) develop and implement outreach and engagement programs that promote awareness of climate impacts and engage multiple perspectives, and (3) lay the foundation for equitable and effective policies, laws, and regulations to facilitate managed retreat.

The study results represent municipal perceptions as they exist today. It will be useful to re-survey these communities in subsequent years to understand if perceptions are shifting and, if so, what support is needed. Similar surveys of those who live, work, and recreate along the coast could provide additional perspectives on managed retreat and help more fully understand the potential use of and barriers to the strategy.



Appendix A: Survey Questions

Note: Depending on responses, some of these questions may have been skipped.

1. Has your municipality considered managed retreat as an option for addressing areas vulnerable to flooding?

If no,

Please identify reasons why managed retreat has not been considered in your municipality (check all that apply)

- Lack of site(s) for relocation*
- Cost of purchasing land
- Concern about public response
- Cost to move or demolish structure on vulnerable property
- Loss of tax revenue
- Lack of political will
- Lack of public interest
- Cost of restoring vacated property
- Lack of sufficient data to inform decisions
- Need to maintain water-dependent use(s)
- Perceived negative cultural impacts
- Equity concerns
- Other

Please share any additional information about barriers to managed retreat in your municipality in the space provided below.

If yes,

Please identify any barriers to implementation of managed retreat project(s) in your municipality (check all that apply).

- Lack of site(s) for relocation*
- Cost of purchasing land
- Concern about public response
- Cost to move or demolish structure on vulnerable property
- Loss of tax revenue
- Lack of political will
- Lack of public interest
- Cost of restoring vacated property
- Lack of sufficient data to inform decisions
- Need to maintain water-dependent use(s)
- Perceived negative cultural impacts
- Equity concerns
- Other

Please share any additional information about barriers to managed retreat in your municipality in the space provided below.

2. When considering managed retreat in your municipality, which benefits were anticipated (check all that apply)?

- Reduced flooding of built structures
- Reduced maintenance of municipal infrastructure
- Enhanced natural resources
- Reduced demand on emergency response services
- Preservation and/or creation of new public space
- Other
- Addresses equity issue(s)
- No benefits were anticipated

3. Please briefly describe the managed retreat project(s) that occurred in your municipality.

4. Moving forward, which, if any, of the following tools or resources about managed retreat are of interest to you?

- Funding strategies/Budget tools (e.g., grants to purchase land)
- Community education/outreach/engagement tools
- Regulatory tools (e.g., model bylaws)
- Trainings and workshops
- Legal assistance
- Planning assistance
- Participating in a community of practice (e.g., quarterly meetings to share lessons learned, resources, etc.)
- Other

Please share any information about specific tools and resources that would be most or least useful to you.

5. Are there any specific partners you'd like to see involved in providing tools and resources for managed retreat (e.g., state or federal entities, non-profits, academic programs, media outlets)? If so, please list them in the space provided below.
6. Please explain any issues you encountered with the term "managed retreat".

Appendix B: Responses to Open- Ended Survey Questions

This appendix contains the answers to many of the survey's open-ended questions, providing additional context and detail to the analysis above.

Survey Question (where managed retreat has been considered): Please share any additional information about barriers to managed retreat in your municipality in the space provided below.

Responses included (note: some responses are paraphrased to preserve anonymity):

- A vocal minority is concerned about changing the aesthetics along a section of road. This will likely complicate permitting and right of way acquisition.
- Most of the Town is owned by a federal entity. The remaining portion is densely developed, and lot sizes are small. Accordingly, there is insufficient room to move structures laterally out of the floodplain, so the only retreat option available is to elevate. Complicating matters is the fact that the structures most vulnerable to flooding and sea level rise are within our historic district.
- Triggers for movement will only be after a catastrophic events, and not proactive
- With only a few square miles of land, we intend to defend it to the maximum extent possible.

- Private property rights. 2) Allowance for shorefront homes originally built prior to 1978 to be grandfathered to install hard structural shore protection even if house is substantially renovated/rebuilt.
- It would have to be regulation driven
- The public and town leaders needs to be educated about the value of managed retreat
- Climate Deniers, retired resident lack of concern about future impacts, "won't happen in my lifetime"
- Neighbors to public beaches often do not want to replace lost parking spaces or allow offsite parking that will bring people into/through their neighborhood
- Need to start a managed retreat program for flood zones, particularly as sea levels rise.
- Cost to acquire land is too high; housing is a hot commodity that defeats threats to perceived long-term horizon issues and perception that flood insurance will be there to help restore/elevate homes
- Space/cost is the main barrier to entry for the town to use managed retreat principles. Constraining factors like these and lack of strong public support and desire to use these management practices make it hard to utilize them in our community. As well our small stretch of coastline is primarily residential, private property which present many other problems. And means that coastal issues are felt individually and not as a whole community.
- grant-writing capacity, funding for land acquisition & moving structures
- Value of asset even when located on sensitive resource area
- Pushback from private property owners is high. They see even a discussion about retreating a threat to their property values.
- We are pretty close to build-out so there aren't many places to put people that won't create more destruction
- Small undersized lots with former summer cottages that have been become McMansions. Retreat on lots of 4,000 to 10,000 sq.ft. not possible. TDR with property owners being moved away from the water not going to happen.
- Municipality has implemented managed retreat in a very limited way (just a handful of properties that were badly damaged in past storms). In most cases, it seems like retreat is only seen as a serious option after a storm/flood has caused damage and homeowners are deciding whether to rebuild or leave. We are not yet at a point when people are proactively considering retreat.
- Loss of user fees
- We have considered it and have no plans to implement it this century. We are instead looking at defenses and managing the shoreline.
- Limited options to relocate in close proximity to asset

Survey Questions (for those who had not considered managed retreat): Please share any additional information about barriers to managed retreat in your municipality in the space provided below / Please identify reasons why managed retreat has not been considered in your municipality.

Responses included (note: some responses are paraphrased to preserve anonymity):

- Shorefront property is the majority of our tax base
- There is no place to retreat

- The Federal Government - nearly 75% of the Town is within the Cape Cod National Seashore
- We need to complete the MVP planning, only having done the preliminary workshop 5 or 6 years ago. Much of the town's revenue is derived from infrastructure in the floodplain. There is no 100-year plan for resiliency for a thriving community. Tourism and summer/retirement properties is the only objective. Short term treading water vs long-term goal-oriented strokes.
- There is insufficient land for municipality to move landward. There are also permitting difficulties with adjacent land.
- A new town committee has finally formed and is working diligently to get caught up!
- Don't know
- Haven't really considered it as an option
- As noted, we haven't considered it a necessary option for the community at this time. However, I think it would be worth it for our community to investigate the viability of a managed retreat.
- Denial.
- The town has several higher more immediate priorities, in reaction to wastewater and housing needs. So we are not currently being proactive on managed retreat options.
- The 'Powers that Be' are not willing to seriously address Climate Change, and how it is affecting our town

Survey Question: Please share any information about specific tools and resources that would be most or least useful to you.

Responses included (note: some responses are paraphrased to preserve anonymity):

- I don't know if they will be helpful. Managed retreat isn't even being considered.
- Money. Specifically for elevating whole neighborhoods, including buildings, roads, and infrastructure; burying utility lines; wet floodproofing; beach nourishment; permanent and temporary barriers; and floodgates.
- Hoping for Federal FEMA construction funding.
- Financial assistance to homeowners to offset the cost of elevating structures; guidance on how to communicate the concept of managed retreat/ structural elevation to community members
- Educational tools for political leaders and the public.
- Most useful: immediate zoning and bylaw changes to prevent continued development/redevelopment in coastal resource areas. Also, help for the whole community for envisioning a future community here when coastal changes have occurred.
- I think we need to see examples of post catastrophic event response...when our Hurricane Sandy comes thru, how can we permit the same level of development? We need a formula, or examples of communities that pre-planned this event to ensure that what was built back was more resilient, including being built back in a way that maximized resource area restoration- even at the expense of the built footprint.
- Stormwater drainage into rising seas. Design and operation of tide gates, sluice gates, pump stations
- A planning effort for each vulnerable town parcel would be helpful, as well as options for the town to consider, and a general idea when access, parking, etc, will be impacted.

- Case examples; examples of model bylaws;
- Most important: public and government education on the values of managed retreat, including the non-monetary benefits of coastal natural resources as opposed to the loss of tax income. On the Vineyard there is a Land Bank that is willing to purchase land for retreat, so the purchase of property won't cost the towns money, but still there is a knee jerk reaction to the concept.
- An overview assessment of managed retreat strategies, where in the Commonwealth it makes sense, and targeted resources to implement, network, and evaluate emerging strategies and lessons learned.
- I believe that the most useful tool at this stage is community education. If residents and businesses in harm's way do not believe in sea level rise or believe that the City can/should protect them through infrastructure improvements/capital projects, then managed retreat will never happen. It is too political at this point. Residents must understand and agree on their own that this is a necessary process and that can only happen through a concentrated public education effort.
- Resources and/or educational opportunities to start the conversation among municipal staff and/or selectboard members re: managed retreat would be great - it's not even on the table at this point (just a very niche interest among individuals).
- Updated regulations, funding incentives to homeowners.
- Assistance with obtaining grant funding to undertake some of the managed retreat works.
- Public workshops in the retreating community to educate people on the issues regulatory tools to limit development and begin retreat works foster partner organizations to undertake land swaps with.
- Town could have an appetite for this but seeing it play out in surrounding Towns first would be helpful. Lessons-learned would be extremely helpful as the expertise and staffing are a struggle for us. Town getting this correct the first time would be important in furthering the program. Failing on the first try could bury this concept for generations.
- Cape Cod and the community north of Boston that did that large study of its sea level rise and resiliency threats seem to be good models of what could be done if communities work together - we don't have an organizing tool, incentive or mechanism to create that on our own and competition is fierce for grant funding.
- regional planning
- model bylaws would be the most useful as they would provide a framework for us to develop clear, efficient bylaws that are enforceable.
- Anything would be useful
- We want to create an online educational resource that is separate from the town website, which does not have high usage. We have excellent content but can use anything that will help citizens, students, educators, visitors, voters, businesses. All will be impacted by this issue, and we will create our own local content as well. Our issue is lack of technical web-development personnel to design it, once we have it built, we think our town IT group may be able to maintain it.
- Planning assistance, Assessment
- Most useful would be concrete tools for Bylaw and regulation adoption at the local level.
- Examples in the Commonwealth.
- Trainings on community engagement in discussions and planning of managed retreat would be most helpful, as well as resources on funding managed retreat plans
- Regional communication regarding value of considering manager retreat as an option
- Successful case studies

- Cost projections of NOT retreating vs retreating
- Flood Zone management and modeling tools. Velocity Zone visuals and alternative land use benefit analysis
- I would love to start getting familiar with the nuts and bolts of how managed retreat can happen -- the topics on the previous page would be a great start. I also really like the idea of a community of practice, since this is such a difficult topic to bring up and is often at odds with the goals of other municipal staff.
- Grants and funds

Survey Question: Are there any specific partners you'd like to see involved in providing tools and resources for managed retreat (e.g., state or federal entities, non-profits, academic programs, media outlets)? If so, please list them in the space provided below.

Responses included (note: some responses are paraphrased to preserve anonymity):

- Cape Cod Commission
- Land grant management like we have seen historically on a grand scale would be the first thing that comes to mind (many of the public colleges for instance). Education, water resources, infrastructure have all been viewed as necessities for land acquisition in the past. As coastal retreat seems to be important enough for water quality, public safety, and equity I think it would be best to continue the conversation of State-run solutions to retreat (with funding and options).
- MBTA and MassDOT. They have been very opaque on their long-term plans for coastal assets
- Martha's Vineyard Commission, DEP
- MassDEP and Chapter 91 program.
- The MA Municipal Association maybe? Associations that aren't just focused on hazard mitigation/flood plain management, but governance/planning in general that the town administration would be open to listening to.
- Professional communications/web development firms, non-profits, academic programs, media outlets
- Non-profits, academic programs
- Any qualified, third party organization that would help corroborate our justification for the project's need would be appreciated.
- MA CZM, DCR Floodplain Management, MA DEP, and maybe partners familiar with litigation on these matters, possibly the Conservation Law Foundation or other
- Marketing and outreach to get behavior to change is needed and is not the role of local government on small town scales (no staff or political support to take it on). We have no local media coverage anymore - the papers are online and news seems to be from software that looks for individual interests for local news or social media. We need help with this from other sources - but first we need funding, and a structure in which the concept of managed retreat can be organized, understood and incentivized.
- Residents, state, non-profits, and businesses
- Studies using high priced consultants are difficult to fund. Teaming up with academia and student projects can be a cost effective way to get important information.
- FEMA with Funding
- It would be great if the state advocated strongly for the concept of managed retreat

- It would be great to see MassDEP provide some assistance and update regulations to streamline the process. In addition coordinating state agencies to provide clear guidance on green infrastructure. Example creating shellfish habitat or reefs, etc. and not getting guidance or permission from Marine Fisheries. More regulatory flexibility for innovative ideas.
- All of the above. Not just to sell a story to the media, but to gain understanding of why retreat is the better option of protections of an area. Tools for assisting with project narrative in the public sphere.
- Army Corps, UMass Dartmouth-SMAST, Woods Hole Oceanographic Institute
- Media outlets could help a lot. The more information presented and the more formats it is presented in, the better.
- Cape Cod Commission, Barnstable County Cooperative Extension, DCR Flood Hazard Management Program, Cape Cod National Seashore, Center for Coastal Studies, MassCZM, WBNERR, UHI
- The National Park Service
- It is hard to say who the towns' people are going to listen too. If there is no money to bail out all the continuous bad ideas, then there might be change. But, there is a lot of money in real estate and development. That is only increasing dramatically and consistently. Until there is a change in that, it isn't real to anyone. What I've heard in answer to the question of how much it costs to keep up maintenance on infrastructure in harm's way: it doesn't cost the town anything--DPW can do the work and they are on salary. There is a lot of bad thinking here that needs replaced.
- MEMA, Cape Cod Commission, Cape Cod Community College, MA Maritime Academy, Upper Cape Vocational Technical School.
- FEMA/MEMA; non profits;
- I think having a uniform (county-wide) response plan makes the most amount of sense, so that the "build-back" plan is consistent.
- MA DEP, MA CZM, Cape Cod Conservation Agent Network, Building and Zoning Boards
- Buzzards Bay Coalition
- FEMA/MEMA
- non-profit (no entity specifically)
- Urban Harbors Institute (would be interesting)
- Cape Cod Commission

Survey Question: Please explain any issues you encountered with the term “managed retreat”.

Respondents were invited to provide any additional information about issues with the term “managed retreat”. Responses included (note: some responses are paraphrased to preserve anonymity):

- Lack of understanding
- Perception/reality that retreating is generally more difficult and costly than holding the line. High property values make buy out options difficult or unlikely.
- Lowlands tend to have been used for subsidized housing. Managed retreat appears to accelerate gentrification.
- It's just not the conversation at all.

- The use of "Managed Retreat" evokes heightened interest and is often a gateway to the opportunity to discuss what managed retreat might mean. Dr. A. Siders recently presented at the MACC annual conference on a managed retreat "toolbox" and how MR is a series of options. I often refer to that when talking on MR.
- People have spent a lot of money and taxes on their seaside homes, and will fight to the end to keep that location viable, they presently work in a "we will sue you" or "we will get rid of you" (or actually do fire public officials for not "cooperating" with looking the other way) atmosphere of rage, mistrust, denial and threats when communicating with local officials about this type of interference with their quiet enjoyment.
- Property owner fears of lost value are real and lead to strong resistance. We secured grant funding to study managed retreat in one area but residents lobbied so hard against the effort that the Select Board returned the grant funds rather go ahead with the study.
- Our Select Board and residents do not want to leave their waterfront or close to the water homes.
- We will lose a majority of our taxes
- In this country the word "retreat" is associated with failure. There must be a better term. We often call it undevelopment, which is somewhat better, but not great.
- Some in our community look at this term as giving up or believe that it is unnecessary as the threats of sea-level rise and climate change are "not true"
- Not feasible in many ways. Some land acquisition of waterfront properties by local land trust
- People that fear losing their property or sense of community. Generally, has negative connotations, which is not the case. Need to change the narrative and the positive outcomes for recreating natural habitats and resilient habitats in the retreat areas.
- Typically it's just an overall lack of interest from the public - people questioning whether we need to save that as an option and plan for it, people getting upset at the notion of losing their homes/businesses, people questioning why we aren't doing more to stop or mitigate the issues that may warrant an eventual managed retreat
- Many of those who live in and/or represent districts that would be affected by managed retreat are resistant to the discussion. It is political and still too easy for people to believe that sea level rise will not impact them.
- Lack of political will or support to undertake such endeavors or to have such a discussion.
- It is not possible here.
- People fear that "managed retreat" means "back to nature," and that "back to nature" means all the houses and infrastructure are suddenly and abruptly removed. That happened here and it could not be undone, once fixed in peoples' minds. I have heard the term "managed realignment" to reflect coastline changes, but no one wants that term either, it would seem.
- This past year we had a town wide survey for our MVP grant and asked questions about managed retreat. We have over 400 residents respond with 80% stating that they were against managed retreat for either public or private property. Several participants in our MVP workshops expressed negative thoughts about managed retreat.

Survey Question: Is there anything else you would like to share about managed retreat that we did not capture in the questions above? If so, please feel free to use this space below for any additional comments you would like to make.

Respondents were invited to provide any additional information about managed retreat that was not captured in the survey questions. Responses included (note: some responses are paraphrased to preserve anonymity):

- People still question need for coastal resiliency
- Land rights are a very important issue for everyone. Private rights and public rights have long been wrestled and managed retreat sees the same issues as the FEMA NFIP in regards to gentrification. Families who would take a buyout may not see coastal homeownership for the next generations but yet the wealthy would continue to remain? This is a tough social question as well.
- Federal & State funding for town "buy-outs" of imperiled properties
- Any are other communities considering managed retreat?
- Waterfront property owners are in dire need of targeted education about flooding and future potential impacts to their property, and practical things they can do to buffer stormwaters, etc.
- I have not really heard the topic in our municipality
- Welcome the dialogue on how to approach this difficult but necessary topic!
- The loss of property tax income is a huge burden to overcome when trying to sell the concept of managed retreat. Towns need to realize that the income is going to be lost one way or another and that they need to come up with new sources of revenue. But town leaders don't think long term. Managed retreat is a hard sell. We actually did a study that identified the homes that would be in the salt marsh migration zone on one of our coastal ponds. Instead of supporting managed retreat a key member of the town staff recommended replacing the onsite septic systems with a neighborhood sewer so the homes could remain in place.
- I'm in the initial phases of developing a retreat and relocation program for our community, as described in the coastal resilience plan finished earlier this year. I would be interested in the results of this survey to see how I can best develop the retreat and relocation plan community-wide. Please send results and contact me as I would like to get some feedback.
- What are the possibilities for utilizing nourishment and seafloor reclamation in certain scenarios? The Netherlands have done incredible work in ocean engineering that is both ecologically sensitive but also creates more space for development within the coastal zone.
- Once the community has been convinced of the necessity of retreat from certain areas, the main problem will be funding. Funding will be needed for studies, assistance, land purchases, relocations, etc.
- There needs to be an emphasis on the benefits and cost savings of such a plan
- I have heard people in town say that we are not ready to think about managed retreat. I have also heard an official from another town say the same. In these communities, and probably many other MA coastal communities, development is going full steam ahead. The focus is on the immediate financial gain and not the long term financial crippling.
- Would like to see general information about it disseminated to the public. And it would be helpful to use the latest projections, say from the Trustees of Reservations, when get an idea of where we should be retreating from.
- The more help the better!