

Public beach stewards bracing for 'obvious destruction' of rising seas

By Sam Doran | July 11, 2023

After focusing earlier this year on whether people of all races and abilities feel welcome at public beaches in the Boston Harbor region, the Metropolitan Beaches Commission is turning its attention to defending those spaces from the rising tides of climate change.

The commission held the first in a series of hearings Tuesday to gather input on a [preliminary report](#) on "balancing coastal defense and public access."

The study looks at the conditions and potential for flooding at 14 area beaches, along with elements like seawalls, dunes, and breakwaters that could be suitable in some of those places.

"Although there is a hope that all facets of the harbor will thrive equally, climate change has placed unprecedented challenges upon the city to reevaluate a future Boston negotiating sea level rise and increased storm events," the report says.

"We've spent 30, 40 -- longer -- years investing in these recreational resources, cleaning them up," Chris Mancini, executive director of Save The Harbor/Save The Bay, said in the virtual hearing. "Now we're looking at this ... existential threat to these resources."

And those rising waters also pose a threat to "our lives" in extreme cases, Mancini added.

As agencies plan for the future, state government is "focusing on the high emissions scenario" for possible sea level rise, said Julia Knisel, coastal shoreline and floodplain manager for the state Office of Coastal Zone Management. That scenario projects 1.2 feet by 2030, 3.2 feet by 2060, and 7.6 feet by the year 2100.

Nick Connors of the Department of Conservation and Recreation said his agency is operating with the same climate projections and flood risk models, and upcoming revisions to Hull's Nantasket Beach's master plan will be made "with sea level impacts in mind."

There are seawalls and other structures in place, meant to hold back tides and surges, but Knisel said many of them were built more than 100 years ago -- when sea levels were a foot lower than they are today. So in addition to looking at the physical condition of aging infrastructure, Knisel called for assessing the height of those structures compared to where sea levels are at today, and where they'll be in the future.

Sen. Brendan Crighton said one of the new "pastimes" in his city is "going down to the seawall all along from King's Beach all the way to Nahant, any time there's a storm, and watching the waves crash over."

"It's a beautiful sight but a very troubling sight. And it draws crowds, but at some point that's going to lead to obvious destruction and certainly changing our infrastructure around," Crighton said.

Knisel shared a photo of a beach parking lot full of sand and gravel that had washed over a seawall. She said major storms push that debris off the shoreline and the result is that beaches lose "volume."

"What we really need to start talking about is beach lowering, not just beach erosion back into the community. We are losing beach volume and that's something we really need to address," Knisel told the

commission.

The toolkit for dealing with these issues can include raised harborwalks, raised sand dunes and berms, and vertical floodwalls, said Catherine McCandless, the City of Boston's climate resilience project manager.

She pointed to Constitution Beach in East Boston, where a system of dunes and berms with a "reinforced core" have been proposed to help protect the MBTA's Blue Line from flooding.

And Delaney Morris from the Boston Planning and Development Agency said climate resilience work at Tenean Beach in Dorchester will not only preserve the space for public enjoyment, but also close a potential "flood pathway" that would put neighboring properties and Morrissey Boulevard at risk.

Knisel lauded "good work" down in Hull, where the "dune grass is filling in, and we have a nice growing coastal buffer here to help address coastal storm impacts in the community."

Christian Krahforst, Hull's climate adaptation and conservation director, said the dunes are sacrificial -- "they're the physical entity that bears the brunt of overwashed storm surge."

An Office of Coastal Zone Management grant program aimed at addressing erosion and flooding issues has given out more than \$37 million to projects since launching in 2014, Knisel said, and the program was expanded this year to allow indigenous tribes to apply in addition to coastal municipalities and land-owning nonprofits. Sen. Nick Collins harkened back to his teenage years, when he learned about the reputation of Boston's once-polluted shoreline.

"The song 'Dirty Water,' which was popular across the world and particularly in the United States, was all about our Boston Harbor and Charles River," the South Boston senator said.

The effort to clean up Boston Harbor cost billions of dollars. Bruce Berman, the Metropolitan Beaches Commission's lead consultant, recalled how the project was paid for by dozens of cities and towns in the region.

Turning to the 21st century's project -- coastal resilience work -- Berman flagged one big question: "What's it going to cost?" The key, he said, is "managing and planning a way for the city, for the state, and frankly for the federal government resources to come into play here." Collins agreed that "federal funding is going to be key." Crighton, whose Senate district includes Nahant, recalled a recent trip to that beach with his young son Nate.

"And my son said, 'Dad, can you imagine if the whole world was water?'"

"And at first, I started thinking of 'Waterworld,' the great Kevin Costner film, and then I thought, 'You know what, Nate? Actually, your little fantasy is not that far-fetched. And I'm sorry to break it to you, but your generation is going to be dealing with some serious issues around that, and we're already actually dealing with it now,'" Crighton said.