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15 State Street Suite 1100  
Boston, MA 02109  
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[bostonharbornow.org](http://bostonharbornow.org)

February 25, 2022

MassDEP Waterways Program  
Attn: Chapter 91/Resiliency  
1 Winter Street, 5th Floor  
Boston, MA 02108

Via email: [DEP.Waterways@mass.gov](mailto:DEP.Waterways@mass.gov)

Re: Chapter 91 / Resiliency

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Dear Mr. Padien and the Waterways team,

Thank you for the opportunity to comment on Resiliency Regulatory Updates proposed for Chapter 91. Boston Harbor Now's mission is to ensure that Boston's waterfront, harbor, and islands are accessible and inclusive and that these assets are **properly adapted to the risks of climate change**. We do this in order to realize our vision of a vibrant, welcoming, and **resilient Boston Harbor, Waterfront, and Islands** for the benefit of everyone. We are encouraged by DEP's willingness to work with us and a range of stakeholders to update the Public Waterfront Act (G.L. c. 91, §§ 1, 2, 14 & 18) to address the coastal impacts of climate change and the need to build new resilience and adaptation measures. We hope that these changes will help to advance climate prepared designs in the same way that the regulations have historically ensured greater public access.

Boston Harbor Now, and our predecessor organization The Boston Harbor Association, has historically used the Chapter 91 comment process at the Massachusetts Department of Environmental Protection (MassDEP) to ensure that private and public property owners provide a Harborwalk along the shoreline, facilities of public accommodations, and other amenities when they develop or modify property with non-water-dependent uses. Recognizing that the risks of coastal flooding are increasing as a result of sea level rise and that the existing Chapter 91 regulations do not reference resilience, we have expanded our commenting process considerably beyond Chapter 91 to other regulatory processes ensure that projects are prepared for the anticipated impacts of climate change. We look forward to having new regulatory tools within Chapter 91 that better define the expectations for future projects and ensure that public benefits created today are not underwater in 2070 or 2100.

*Engineering and Constructions Standards – 9.37*

We agree with the use of future sea level projections rather than historic flood data in reviewing projects and believe that projects need to show how they will address future sea level rise. The Boston Planning and Development Agency



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(BPDA) has established *Coastal Flood Resilience Guidelines & Zoning Overlay District*, which have expanded the geography of the areas projected to be subject to future flooding and established safe elevations to above the anticipated water levels of a flood with a 1% chance storm event in 2070 with 40-inches of sea level rise. This serves as a model for clear regulatory guidance for project review.

MassDEP should establish a methodology for collecting and sharing consistent projections and projection-related standards that applies across state agencies. The design flood elevations and the scope of anticipated flooding should extend beyond the historic flood maps and incorporate sea level rise models to anticipate the future realities of climate change. Specific requirements should be differentiated by use and location as non-water-dependent uses have different considerations than docks, piers, and other water-dependent uses, which may also need to adapt to higher tide levels.

Finally, the process for establishing and updating the projected elevations is also critical. Regular MassDEP reviews of the relevant climate science, observed trends in sea level rise, and other parameters should be conducted on a regular basis, perhaps at five year intervals. As an example, the original Boston Research Advisory Group projections that provided the foundation for the Climate Ready Boston work in Boston are now being updated, with a new report on the most recent five-year update expected shortly. The City of New York has a similar process in place.

#### *Building Height Provisions – 9.51*

MassDEP should clarify how building heights are to be measured—specifying that they should be measured from a standardized design flood elevation (DFE) rather than from the existing grade. The BPDA’s new Waterfront Zoning Overlay does a good job of clarifying the impacts of needed resiliency improvements and providing elevations. Other state and municipal zoning may need to be updated to include such a number and establish a new resiliency height standard.

In preparation for flood risks, an increased number of building owners and developers are moving mechanical systems to the upper floors of the building rather than installing them in basements and on the ground floor. Since building heights are measured to the highest occupiable floor, there is not a need for MassDEP to provide additional height allowances to accommodate these design changes in new buildings, though collaboration with municipalities can allow for changes in existing buildings.



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### *Expiration and Renewal – 9.25*

Every license renewal should consider projected sea level rise. Given the uncertainty of sea level rise and other climate projections, licenses should be consistent with the design life of the project, and the design should reflect plans to adapt over time if necessary. There should be clear consequences for non-renewal and non-compliance as well as clear public processes for changes. Projects that need to be adapted to meet the new standards defined above should be informed of these changes and have a clear community process for renewing the license.

### *Extended Term Licenses – 9.15*

New projects and those subject to renewal will need to go through a process that demonstrates that both the structures and the corresponding public amenities will remain accessible during future persistent flood events. For example, new Harborwalk segments along the water's edge should be elevated above future high tides while alternate pedestrian routes and indoor amenities should be accessible during storms. The 30-year license term is appropriate for projects designed to address 2070 climate change projections; however, extended term licenses should require that sea level rise be considered intentionally and proactively.

Proponents requesting longer license terms should demonstrate that they have taken more forward looking flood projections into account and that public benefits will still be usable in the extended term, which may not be a consideration in the typical zoning or municipal review process. There may be compelling reasons to grant a 65-year license, but without clear climate change projections beyond 2100, we are concerned about the issuance of long term licenses.

We also support the recommendation of the Conservation Law Foundation that proponents requesting extended term licenses put funding into escrow accounts to cover the cost of additional climate change adaptations and site modifications.

### *Minor Project Modification – 9.22*

Modifications to projects that address sea level rise should be allowed under the new regulations. Nevertheless, all modifications and minor modifications should include a public process. In particular, while relocating building systems from the ground floor for flood resilience may be a minor change, any new ground floor spaces available in non-water-dependent structures on Commonwealth tidelands should be redesigned with the community. Where flood risks or persistent flooding threaten existing ground floor and outdoor public spaces, the scope,



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scale, and intent of Facilities of Public Accommodation may need to be physically changed and must be maintained during the term of the license and or design life of the project in order to address climate change impacts.

*Definitions (Coastal High Hazard) – 9.02*

We support changes to clarify definitions so that “Coastal High Hazard” is replaced with “Velocity Zone” for consistency with Wetland Regulations. We also recommend de-designating dilapidated pile fields from “existing” piles, consistent with MassDEP’s 2017 decision in the North End.

*Long Term Considerations*

MassDEP has an opportunity and obligation to work within the agency and across other state environmental offices to find ways to encourage nature based solutions for shoreline protection and flood control. By tracking existing and proposed projects with living shorelines, such as Clippership Wharf, Encore, and Stone Living Lab research, regulations for these adaptation measures can be improved and more consistently permitted.

MassDEP has the potential to do for climate resiliency what it has done for public access through the process of updating these regulations. We look forward to further opportunities to comment on the forthcoming draft regulations and to the next conversation about longer term changes to Chapter 91. We appreciate the opportunity to work in partnership with MassDEP and other federal, state, and municipal agencies, as well as the private sector, to provide input into these regulatory changes in order to create the accessible and resilient waterfronts that are envisioned by the public trust doctrine and codified in the Public Waterfront Act.

Thank you for your consideration of these comments. We look forward to continuing to be involved in the process as changes are considered.

Sincerely,

A handwritten signature in black ink, appearing to read "Katherine F. Abbott".

Katherine F. Abbott  
President and CEO  
Boston Harbor Now