Climate Resiliency Guidance

In October 2017 in conformance with the Mayor's 2014 Climate Action Plan and the 2016 Boston Research Advisory Group and the Climate Ready Boston recommendations, the Boston Planning and Development Agency (BPDA) updated the Climate Change Review Policy. All development projects subject to Boston Zoning Article 80 Large Project, Planned Development Area, and Institutional Master Plan review, including modifications and updates, are to consider and analyze the impacts of future climate conditions and to incorporate measures to avoid, eliminate, or mitigate greenhouse gas emissions and impacts related to climate change in project planning, design, and construction.

Climate Change Research and Information

Following are links to information about the City of Boston's climate change policies and practices including:

- *"Climate Ready Boston",* the 2016 update of the City's climate action plan.
- *"Climate Change and Sea Level Rise Projections for Boston"*, 2016 report of the Boston Research Advisory Group
- *"Climate Change and Extreme Weather Vulnerability Assessments And Adaptation Options for the Central Artery"*, MassDOT-FHWA Pilot Project, June 2015
- *"Building Resilience in Boston: Best Practices for Climate Change Adaptation and Resilience for Existing Buildings"*, Linnean Solutions, The Built Environment Coalition, The Resilient Design Institute, 2013.
- *"Enhancing Resilience in Boston: A Guide for Large Buildings and Institutions".* A Better City. 2015.
- *"The Commercial Net Zero Energy Building Market in Boston",* A Better City, 2017
- *"The Power of Zero, Optimizing Value for Next Generation Green"*, BNIM, Integral Group, Davis Langdon / AECOM, and AIA COTE, 2015 (cost study of net zero energy buildings).

For additional information visit boston.gov/climate-ready.

Climate Resiliency Checklist Report

A completed Climate Resiliency Checklist (Climate Resiliency Report) is due with each of the following Article 80 or similar filings as deemed appropriate by the BPDA and the IGBC:

- Initial Filing – with a Project Notification Form, Notice of Project Change, or other initial project filing or similar update; provide a Climate Resiliency Report reflecting the proposed project and specific commitments.
- Design / Building Permit Filing – in conjunction with BPDA final design submission but prior to requesting a building permit; provide an updated Climate Resiliency Report reflecting final project planning.
- Construction / Certificate of Occupancy Filing – in conjunction with construction competition but prior to requesting a final Certificate of Occupancy; provide an updated Climate Resiliency Report reflecting actual built conditions.

Climate Resiliency Reports are to be completed online

To better capture response data, the Climate Resiliency Checklist is provided as an online fillable form. A blank Checklist is provide in pdf and word format to support off-line work and preparation. When the online form is completed and submitted, the "Filing Contact" will be emailed a (pdf) copy of the Climate Resiliency Report **AND** a link to the online form that will allow Report editing and resubmission. A (pdf) copy of the completed Climate Resiliency Report should be included with each BPDA filing.

The Climate Resiliency Report, along with Article 37 submission materials, will be reviewed by the Interagency Green Building Committee (IGBC). See [Boston Zoning Article 37 Green Buildings] for additional guidance and related materials.

Greenhouse Gas Reduction

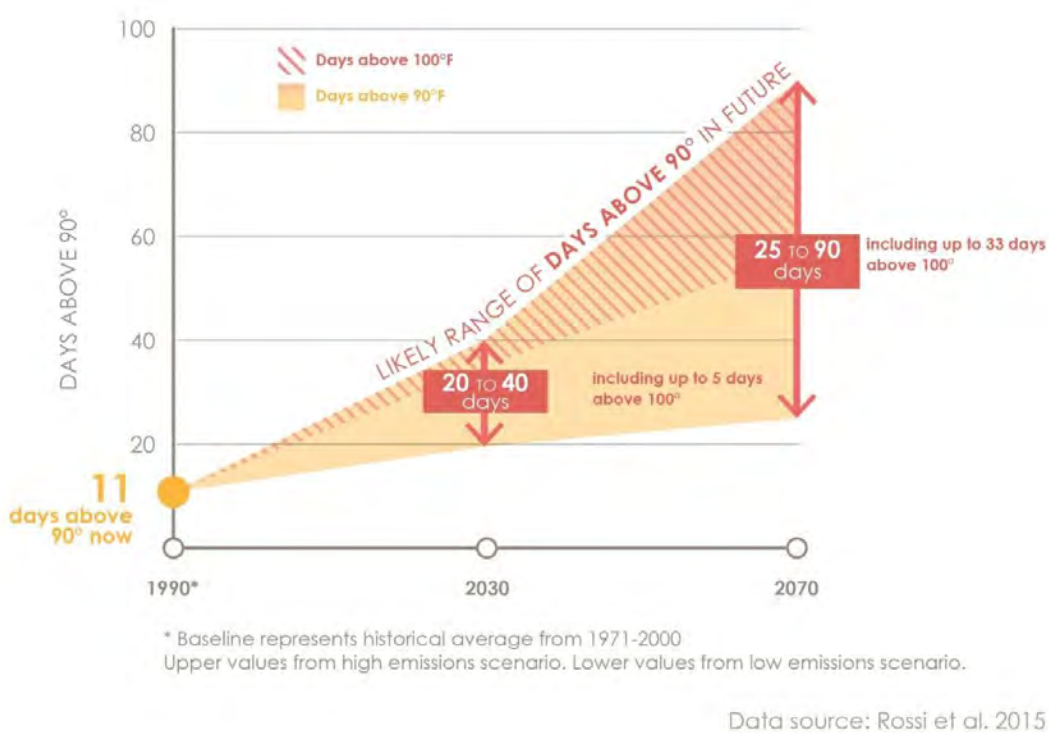
Reducing greenhouse gas emissions is critical to avoiding more extreme climate change conditions. In response Mayor Walsh has set a goal for Boston to be carbon neutral by 2050.

New building projects should employ an integrated planning and design approach to maximize building energy efficiency and include onsite clean and renewable energy solutions to ensure the constructed building has minimized greenhouse gas emissions.

Additionally, project planning should identify future adaptation strategies for increasing building energy efficiency, clean and renewable energy production, and other measures for achieving carbon net zero / net positive performance by 2050. Projects should use the [Massachusetts Environmental Policy Act Protocol] when calculating greenhouse gas emissions.

Extreme Heat

The annual average temperature in Boston increased by about 2˚F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could increase to 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90 days per year.



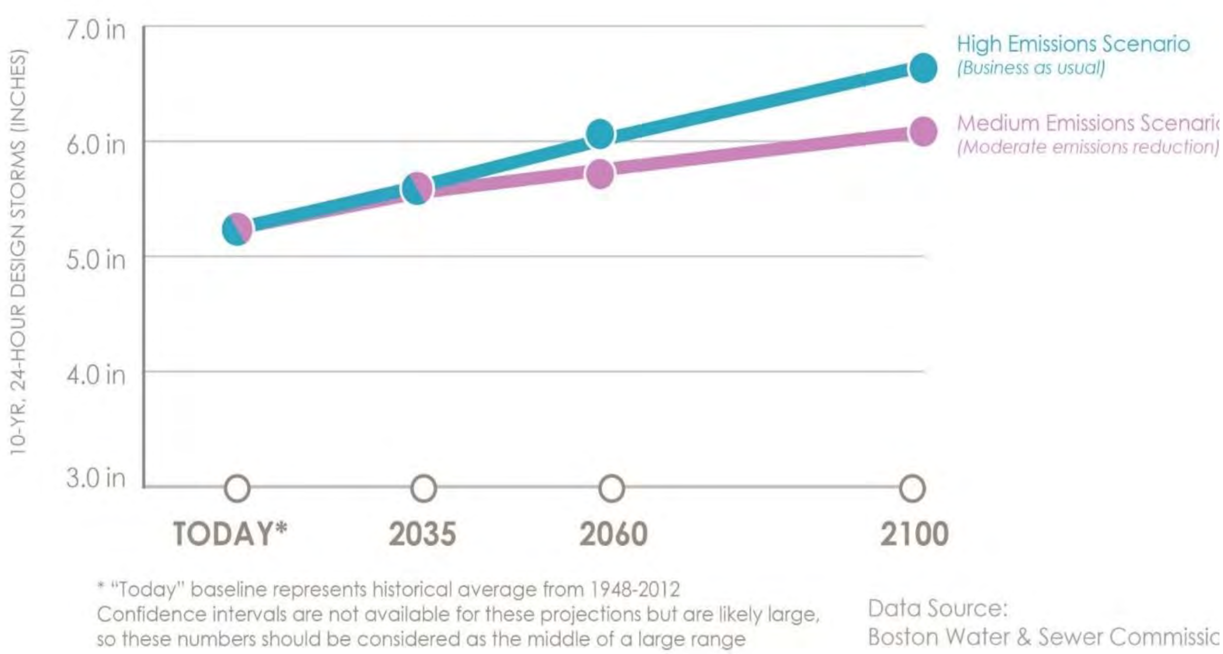
56° and 90 days above 90° should be used as the minimum performance target for future Extreme Heat and for reducing or eliminating the risks and impacts of increasing temperatures.

New building projects should be planned and designed to minimize thermal cooling and heating requirements. Passive strategies, including building siting, orientation, fenestration and envelope design, should be prioritized over active mechanical system solutions. Building mechanical systems should be designed to meet present and future conditioning requirements without diminishing system efficiency.

Additionally, project planning should identify future strategies for adapting to higher annual temperatures and more extreme heat waves including both building envelope and mechanical systems.

Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.



The 6" 10-Year, 24-Hour Design Storm precipitation level should be used for the minimum performance target for Extreme Precipitation Events and for reducing or eliminating flood risk and potential damage.

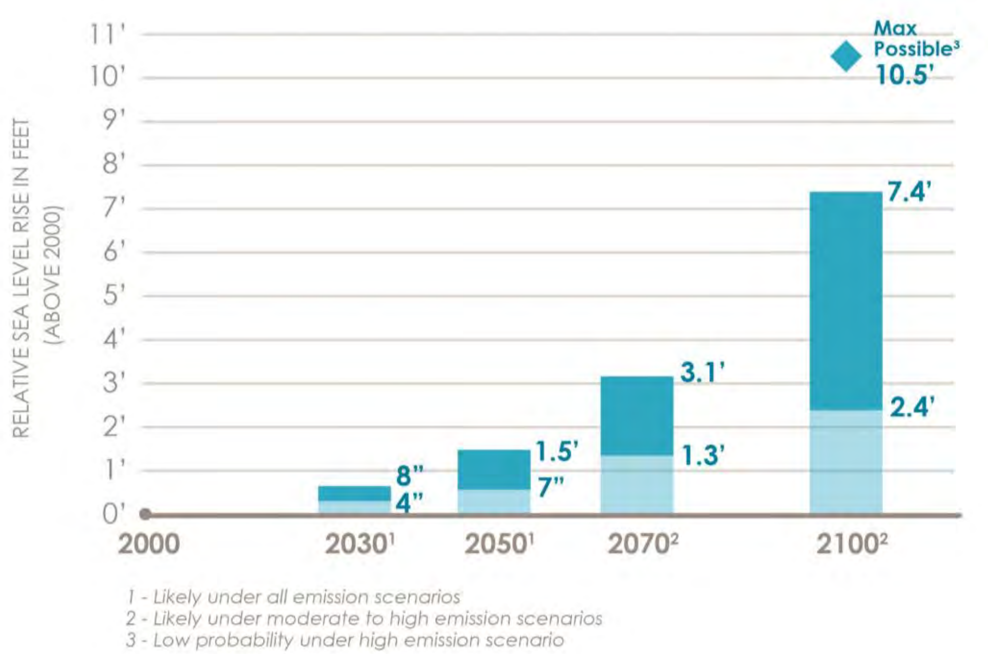
New buildings should be planned and designed to manage more intense precipitation events and to reduce infrastructure burdens including rainwater harvesting, on-site stormwater retention and infiltration strategies.

Additionally, project planning should identify future adaptation measures for managing an increase in precipitation levels.

Sea Level Rise

Climate Ready Boston's Research Advisory Group used three greenhouse gas emissions scenarios — high ("business as usual"), medium, and low (consistent with the 2015 Paris accords) — to project future sea-level rise in Boston. As indicated in the Boston Research Advisory Group (BRAG) Report, under the medium emissions scenario, there is a 5% probability that sea level rise will be higher than three feet by 2070 and a 65% probability that sea level rise will be higher than three feet by 2100.

Based on these greenhouse gas emission scenarios, or other plausible greenhouse gas emissions scenarios, the sea level in Boston will continue to rise throughout the century and will exceed three feet sooner in the high emission scenario, later in the low emission scenario. For the BPDA Climate Resiliency Checklist these scenarios represent reasonable future climate conditions and sea level rise risk thresholds for evaluating new development impacts.



The implications of these scenarios are represented on BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map as a modeled 1% annual chance flood event with 40 inches of sea level rise (SLR) as derived from the MassDOT-FHWA Boston Harbor Flood Risk Model (BH-FRM). The 40" of SLR is a combination of the mean sea level rise (3.2 feet above 2013 tide levels) plus 2.5 inches of local land subsidence. The SLR-FHA data and map are by the Woods Hole Group and the BPDA.

These measures may be updated based upon future climate science, coastal flooding assessments, and flood risk models.

Projects should first evaluate **if the location and site conditions** are vulnerable to flooding:

- To determine if the Project site is within a FEMA SFHA, visit: https://msc.fema.gov/portal.
- To determine if the Project site is within a BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) use the online BPDA SLR-FHA Mapping Tool, visit: http://maps.bostonredevelopmentauthority.org/zoningviewer/?climate=true

Project sites and buildings located in either the FEMA SFHA or the BPDA SLR-FHA may be vulnerable to flooding due to either present or future conditions, including rising sea levels.

If the Project site is located in either the FEM SFHA or the BPDA SLR-FHA, use the online BPDA SLR-FHA Mapping Tool to determine the highest Sea Level Rise - Base Flood Elevation (SLR-BFE) for the project site and calculate the Sea Level Rise - Design Flood Elevation (SLR-DFE) by adding at minimum 24" of freeboard for critical facilities and infrastructure and buildings with ground floor residential units OR at minimum 12" of freeboard for all other buildings and uses. Include the SLR-BFE and SLR-DFE determinations for the project site in the Resiliency Report.

The SLR-DFE should be used as the minimum performance target for assessing sea level rise impacts and for reducing or eliminating flood risk, potential damage, and related adverse impacts.

New building projects should be planned and designed to reduce or eliminate flood risk and potential damage. Strategies include raising the elevation of the site and access routes, elevating building ground floors, dry and wet flood proofing, locating critical building equipment and systems above potential flood elevations, and deploying temporary barricades.

Additionally, project planning and design should identify future adaptation strategies that might be necessary for meeting and exceeding the SLR-DFE and adapting to higher SLR conditions.

Disclaimer

The Sea Level Rise - Flood Hazard Areas (SLR-FHA) and Sea Level Rise - Base Flood Elevations (SLR-BFE) depicted in these maps are for planning purposes. The 40-inch SLR forecast and resulting SLR-BFE's do not represent a worst case SLR scenario. Project proponents are encouraged to reference the 2016 Boston Research Advisory Group Report and evaluate their own tolerance for risk given the specifics of the project site, location, and use(s) to determine what, including additional, flood hazard mitigation and prevention measures should be incorporated into their project. Compliance with these guidelines does not guarantee against present or future flooding and resulting damages.

This mapping information is not intended for flood insurance determinations, nor should it be directly related to FEMA Flood Insurance Rate Maps or Flood Insurance Studies.

Climate Change Checklist Appendix

Flood Insurance Discount

Elevating a building above minimum freeboard requirements can help protect a project from future flooding and may lead to reductions in federal flood insurance premiums. Both residential and commercial projects that incorporate up to four feet of freeboard may be eligible for discounts. Please visit the Massachusetts Office of Coastal Zone Management freeboard webpage for more information.

Glossary

1% Annual Chance Flood: also known as the **100-Year Flood** and the **Base Flood**. Defined by FEMA as a flood with a 1% annual chance of occurring or being exceeded. FEMA Flood Insurance Rate Maps delineate the horizontal extent of the **Base Flood**, along with its corresponding Base Flood Elevations.

100-Year Floodplain: the boundary of a flood that has a 1% annual chance of occurring or being exceeded. Also referred to as **Special Flood Hazard Areas (SFHA)** on FEMA Flood Insurance Rate Maps.

Adaptation: changes that respond to anticipated environmental risks.

Base Flood Elevation (BFE): defined by FEMA as the top of water elevation projected for a specified flooding scenario. BFEs listed on FEMA Flood Insurance Rate Maps are based on the 1% Annual Chance Flood.

Boston City Base (BCB): a city-wide elevation datum typically used for site and building planning, design, and engineering. BCB elevations can be converted the NAVD88 datum by subtracting 6.46 feet. (BCB - 6.46' = NAVD88)

Boston Harbor - Flood Risk Model (BH-FRM): is a dynamic flood model which uses climate change projections to simulate flooding from extreme weather and sea level rise. The model incorporates a number of variables including topography, the influence of wind, wave action and storm surge. As a result, the mapped SLR BFE's vary and can increase across the SLR-FHA's. The model was developed by UMass-Boston, Woods Hole Group, Inc. and the University of New Hampshire as part of the Massachusetts Department of Transportation (MassDOT) and Federal Highway Administration (FHWA) Resilience Pilot Project.

BPDA Sea Level Rise – Flood Hazard Area Map (SLR-FHA Map): is derived from the MassDOT-FHWA Boston Harbor Flood Risk Model (BH-FRM) and was prepared by the Woods Hole Group. The map depicts Sea Level Rise - Flood Hazard Areas (SLR-FHA) and Sea Level Rise - Base Flood Elevations (SLR-BFE) based upon a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). The SLR-FHA's and SLR-BFE's depicted on the maps are for use with the Climate Resiliency Checklist.

Building Floodproof Elevation: a BPDA term for the height below which water will not enter the building, including above and below grade building conditions.

Coastal Flood Exceedance Probability (CFEP): the likelihood that a location will experience a flood during a given year. The MassDOT BH-FRM uses the 1% CFEP and the 0.1% CFEP to estimate flood depths in 2013, 2030 and 2070.

Critical Facilities and Infrastructure: defined by FEMA as a facility where even a low risk of disruption would constitute a severe threat. FEMA includes hospitals, fire stations, police stations, critical record storage facilities, and similar structures within this scope. The American Society of Civil Engineers also includes facilities related to energy, water, transportation, communication systems, and natural and virtual resources within their definition of critical facilities.

Design Flood Elevation (DFE): defined by FEMA as the height of the lowest occupiable floor (when wet floodproofing), or the height of the lowest structural member of an inhabitable floor (when elevating a building). The DFE is separated from the BFE by freeboard.

Federal Emergency Management Agency (FEMA): manages the federal government's response to natural and manmade disasters. FEMA also manages the NFIP and produces Flood Insurance Rate Maps (FIRM).

Flood Insurance Rate Map (FIRM): maps produced by FEMA that delineate the borders of the 100-year floodplain and corresponding Base Flood Elevations. The flood projections shown on FIRMs are based on historic data, and do not include factors related to future sea level rise.

Floodproofing: defined by FEMA as structural or non-structural interventions that reduce flood damage to a space or a building.

Freeboard: defined by FEMA as a factor of safety, or a buffer between predicted flood levels and a building's lowest occupiable floor. In other words, the distance between the SLR-BFE and the SLR-DFE.

North American Vertical Datum of 1988 (NAVD88): an elevation datum created by the National Geodetic Survey typically used to coastal water heights. NAVD88 elevations can be converted to the BCB datum by adding 6.46 feet. (NAVD88 + 6.46' = BCB)

Resilience: the ability of a system to prepare for, withstand, and recover quickly from a disaster. Ideally, resilient systems should recover from an event by becoming stronger than they were prior to the stress.

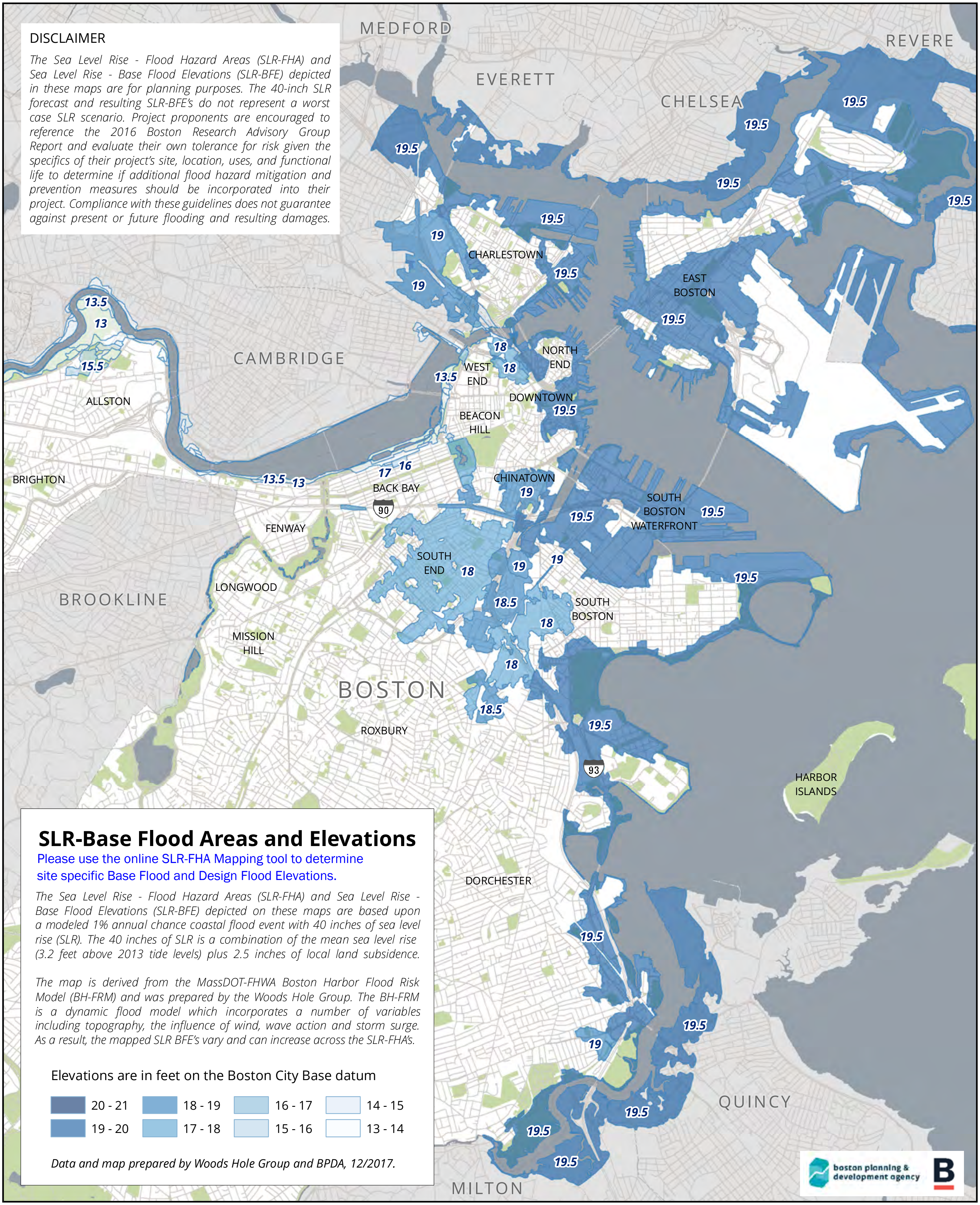
Sea Level Rise - Base Flood Elevation (SLR-BFE): a BPDA term for the top of water elevation predicted by the BH-FRM's 1% CFEP in 2070 scenario. This includes 3.2' of sea level rise above 2013 tide levels, an additional 2.5" to account for subsidence, and the 1% Annual Chance Flood. The SLR-BFE is separated from the SLR-DFE by freeboard.

Sea Level Rise - Design Flood Elevation (SLR-DFE): a BPDA term for the height of the lowest occupiable floor. This elevation is separated from the SLR-BFE by freeboard.

Sea Level Rise - Flood Hazard Area (SLR-FHA): a BPDA term that delineates the extent of flooding projected in the BH-FRM for a 1% annual chance coastal flood event with 40 inches of sea level rise (SLR).

Sustainability: Meeting the needs of the present without compromising the ability of future generations to meet their own needs. UN Brundtland Commission

BPDA Sea Level Rise-Flood Hazard Area Map



DISCLAIMER

The Sea Level Rise - Flood Hazard Areas (SLR-FHA) and Sea Level Rise - Base Flood Elevations (SLR-BFE) depicted in these maps are for planning purposes. The 40-inch SLR forecast and resulting SLR-BFE's do not represent a worst case SLR scenario. Project proponents are encouraged to reference the 2016 Boston Research Advisory Group Report and evaluate their own tolerance for risk given the specifics of their project's site, location, uses, and functional life to determine if additional flood hazard mitigation and prevention measures should be incorporated into their project. Compliance with these guidelines does not guarantee against present or future flooding and resulting damages.

SLR-Base Flood Areas and Elevations

Please use the online SLR-FHA Mapping tool to determine site specific Base Flood and Design Flood Elevations.

The Sea Level Rise - Flood Hazard Areas (SLR-FHA) and Sea Level Rise - Base Flood Elevations (SLR-BFE) depicted on these maps are based upon a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). The 40 inches of SLR is a combination of the mean sea level rise (3.2 feet above 2013 tide levels) plus 2.5 inches of local land subsidence.

The map is derived from the MassDOT-FHWA Boston Harbor Flood Risk Model (BH-FRM) and was prepared by the Woods Hole Group. The BH-FRM is a dynamic flood model which incorporates a number of variables including topography, the influence of wind, wave action and storm surge. As a result, the mapped SLR BFE's vary and can increase across the SLR-FHA's.

Elevations are in feet on the Boston City Base datum

20 - 21
19 - 20
18 - 19
17 - 18
16 - 17
15 - 16
14 - 15
13 - 14

Data and map prepared by Woods Hole Group and BPDA, 12/2017.

boston planning & development agency

Climate Resiliency Checklist

NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

A.1 - Project Information

Project Name:	
Project Address:	
Project Address Additional:	
Filing Type (*select*)	*Initial (PNF, EPNF, NPC or other substantial filing)* *Design / Building Permit (prior to final design approval), or* *Construction / Certificate of Occupancy (post construction completion)*

Filing Contact	*Name*	*Company*	*Email*	*Phone*
Is MEPA approval required	*Yes/no*		*Date*	

A.3 - Project Team

Owner / Developer:	
Architect:	
Engineer:	
Sustainability / LEED:	
Permitting:	
Construction Management:	

A.3 - Project Description and Design Conditions

List the principal Building Uses:	
List the First Floor Uses:	
List any Critical Site Infrastructure and or Building Uses:	

Site and Building:

Site Area:	*SF*	Building Area:	*SF*
Building Height:	*Ft*	Building Height:	*Stories*
Existing Site Elevation – Low:	*Ft BCB*	Existing Site Elevation – High:	*Ft BCB*
Proposed Site Elevation – Low:	*Ft BCB*	Proposed Site Elevation – High:	*Ft BCB*
Proposed First Floor Elevation:	*Ft BCB*	Below grade levels:	*Stories*

Article 37 Green Building:

LEED Version - Rating System :		LEED Certification:	*Yes / No*
Proposed LEED rating:	*Certified/Silver/ Gold/Platinum*	Proposed LEED point score:	*Pts.*

Building Envelope

When reporting R values, differentiate between R discontinuous and R continuous. For example, use "R13" to show R13 discontinuous and use R10c.i. to show R10 continuous. When reporting U value, report total assembly U value including supports and structural elements.

Roof:	*(R)*	Exposed Floor:	*(R)*
Foundation Wall:	*(R)*	Slab Edge (at or below grade):	*(R)*

Vertical Above-grade Assemblies (%'s are of total vertical area and together should total 100%):

Area of Opaque Curtain Wall & Spandrel Assembly:	*(%)*	Wall & Spandrel Assembly Value:	*(U)*
Area of Framed & Insulated / Standard Wall:	*(%)*	Wall Value	*(R)*
Area of Vision Window:	%	Window Glazing Assembly Value:	*(U)*
		Window Glazing SHGC:	*(SHGC)*
Area of Doors:	%	Door Assembly Value:	*(U)*

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined			
Annual Electric:	*(kWh)*	Peak Electric:	*(kW)*
Annual Heating:	*(MMbtu/hr)*	Peak Heating:	*(MMbtu)*
Annual Cooling:	*(Tons/hr)*	Peak Cooling:	*(Tons)*
Energy Use - Below ASHRAE 90.1 - 2013:	%	Have the local utilities reviewed the building energy performance?:	*Yes / no*
Energy Use - Below Mass. Code:	%	Energy Use Intensity:	*(kBtu/SF)*

Back-up / Emergency Power System

Electrical Generation Output:	*(kW)*	Number of Power Units:	
System Type:	*(kW)*	Fuel Source:	

Emergency and Critical System Loads (in the event of a service interruption)

Electric:	*(kW)*	Heating:	*(MMbtu/hr)*
		Cooling:	*(Tons/hr)*

B – Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

Reducing GHG emissions is critical to avoiding more extreme climate change conditions. To achieve the City's goal of carbon neutrality by 2050 new buildings performance will need to progressively improve to net carbon zero and positive.

B.1 – GHG Emissions - Design Conditions

For this Filing - Annual Building GHG Emissions: *(Tons)*

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

Describe building specific passive energy efficiency measures including orientation, massing, envelop, and systems:

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

Describe any energy efficiency assistance or support provided or to be provided to the project:

B.2 - GHG Reduction - Adaptation Strategies

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):

C - Extreme Heat Events

Annual average temperature in Boston increased by about 2˚F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

C.1 – Extreme Heat - Design Conditions

Temperature Range - Low:	*Deg.*	Temperature Range - High:	*Deg.*
Annual Heating Degree Days:		Annual Cooling Degree Days	

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90°:	#	Days – Above 100°:	#
Number of Heatwaves / Year:	#	Average Duration of Heatwave (Days):	#

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

C.2 - Extreme Heat – Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

D - Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25”. There is a significant probability that this will increase to at least 6” by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

D.1 – Extreme Precipitation - Design Conditions

10 Year, 24 Hour Design Storm: *In.*

Describe all building and site measures for reducing storm water run-off:

D.2 - Extreme Precipitation - Adaptation Strategies

Describe how site and building systems will be adapted to efficiently accommodate future more significant rain events (e.g. rainwater harvesting, on-site storm water retention, bio swales, green roofs):

E – Sea Level Rise and Storms

Under any plausible greenhouse gas emissions scenario, sea levels in Boston will continue to rise throughout the century. This will increase the number of buildings in Boston susceptible to coastal flooding and the likely frequency of flooding for those already in the floodplain.

Is any portion of the site in a FEMA SFHA?	*Yes / No*	What Zone:	A, AE, AH, AO, AR, A99, V, VE
		Current FEMA SFHA Zone Base Flood Elevation:	*Ft BCB*

Is any portion of the site in a BPDA Sea Level Rise - Flood Hazard Area? Use the online BPDA SLR-FHA Mapping Tool to assess the susceptibility of the project site.	*Yes / No*

If you answered YES to either of the above questions, please complete the following questions.
Otherwise you have completed the questionnaire; thank you!

E.1 – Sea Level Rise and Storms – Design Conditions

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented on the BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map, which depicts a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). Use the online BPDA SLR-FHA Mapping Tool to identify the highest Sea Level Rise - Base Flood Elevation for the site. The Sea Level Rise - Design Flood Elevation is determined by adding either 24” of freeboard for critical facilities and infrastructure and any ground floor residential units OR 12” of freeboard for other buildings and uses.

Sea Level Rise - Base Flood Elevation:	*Ft BCB*		
Sea Level Rise - Design Flood Elevation:	*Ft BCB*	First Floor Elevation:	*Ft BCB*
Site Elevations at Building:	*Ft BCB*	Accessible Route Elevation:	*Ft BCB*

Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave / velocity breaks, storm water systems, utility services, etc.:

Describe how the proposed Building Design Flood Elevation will be achieved including dry / wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:

Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:

Describe any strategies that would support rapid recovery after a weather event:

E.2 – Sea Level Rise and Storms – Adaptation Strategies

Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave / velocity breaks, storm water systems, utility services, etc.:

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

A pdf and word version of the Climate Resiliency Checklist is provided for informational use and off-line preparation of a project submission. NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

For questions or comments about this checklist or Climate Change best practices, please contact: John.Dalzell@boston.gov