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# 8 charts that show the toll climate change will take on Boston

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By **Matt Rocheleau**

GLOBE STAFF DECEMBER 08, 2016

City officials this week released a [report](#) that included [updated projections](#) of how climate change is expected to impact Boston and [outlined ways](#) the city can prevent and brace for the potentially devastating effects.

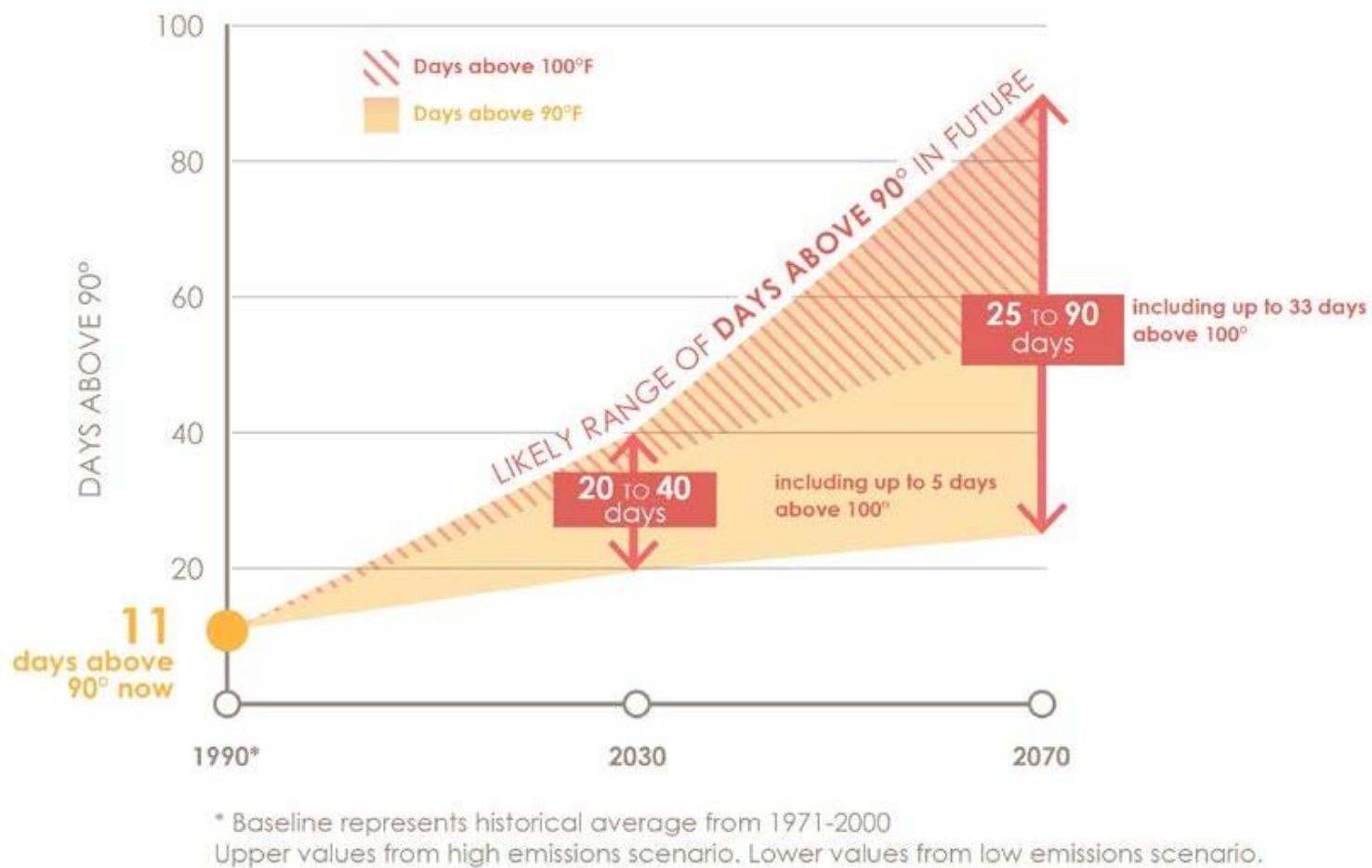
“Boston residents are already impacted by extreme heat, rain, snow and flooding,” Austin Blackmon, the city’s chief of environment, energy and open space said in a statement. The report “shows that these trends are expected to continue, and now we have a better understanding of what we need to do to prepare.”

Mayor Martin J. Walsh said in a statement, “We have the knowledge, talent and resources to prepare our neighborhoods and businesses for climate change and will continue to cut carbon emissions, tackling climate change head on.”

The following charts highlight some of the key projected impacts detailed in the report.

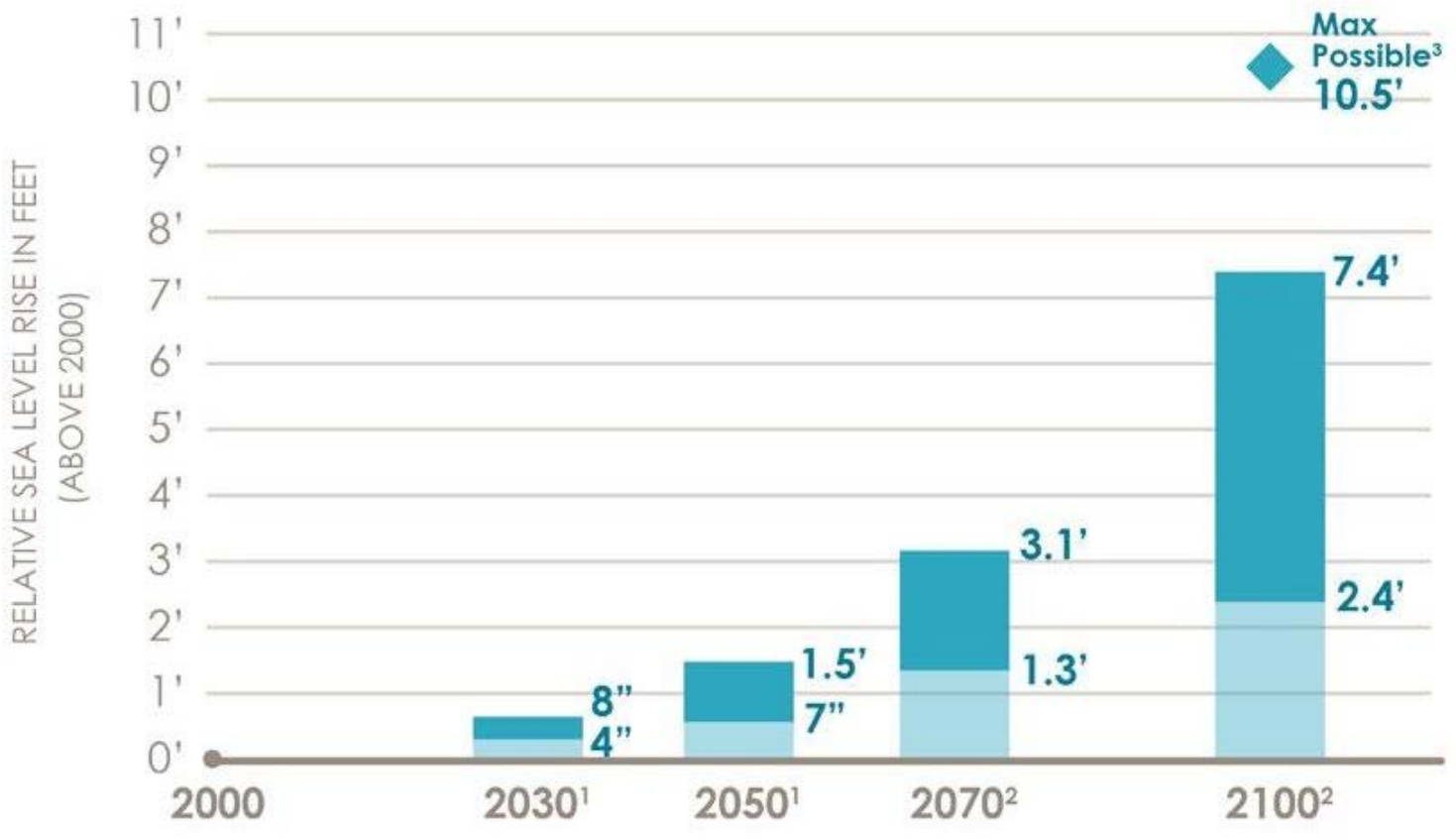
**1. The number of very hot days will increase.**





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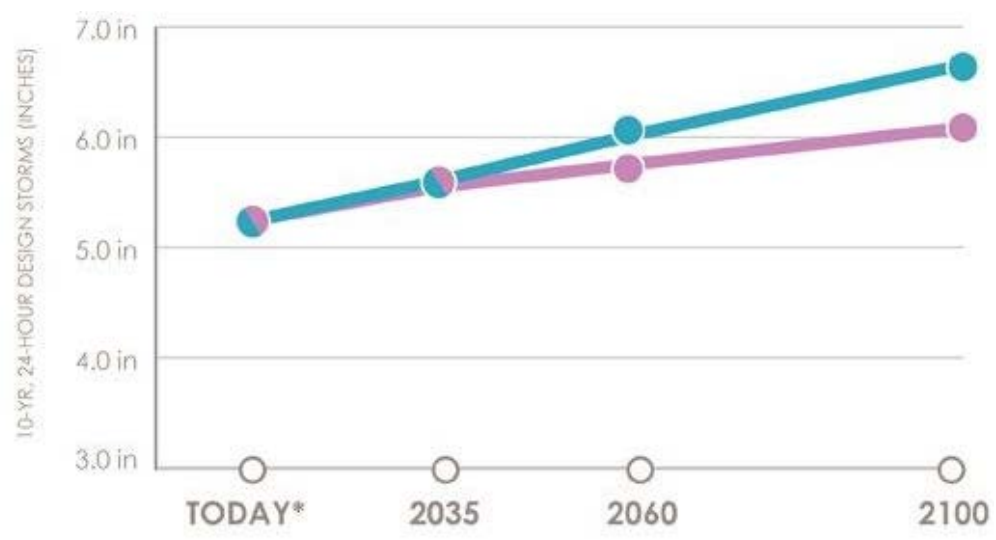
## 2. Sea levels in Boston will continue to rise.



1 - Likely under all emission scenarios  
 2 - Likely under moderate to high emission scenarios  
 3 - Low probability under high emission scenario

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### 3. Rainfall from storms will increase.

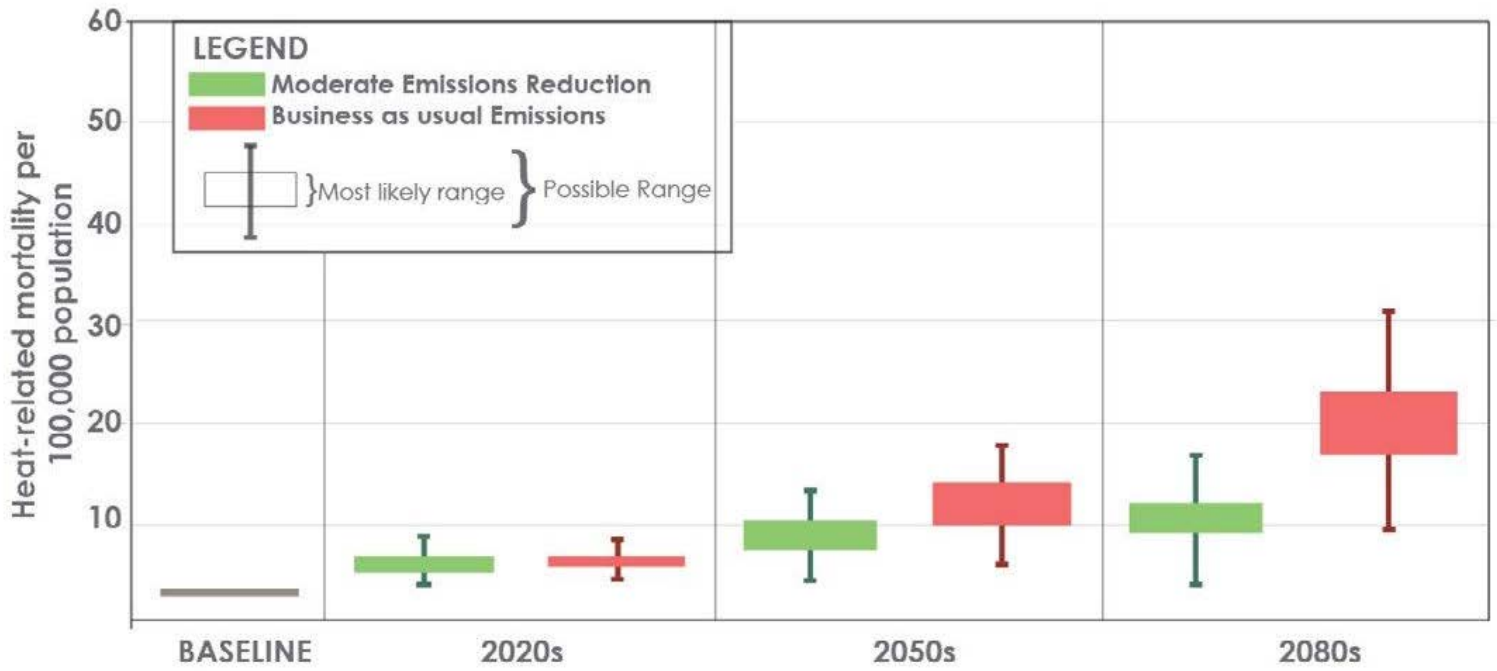


High Emissions Scenario  
(Business as usual)

Medium Emissions Scenario  
(Moderate emissions reduction)

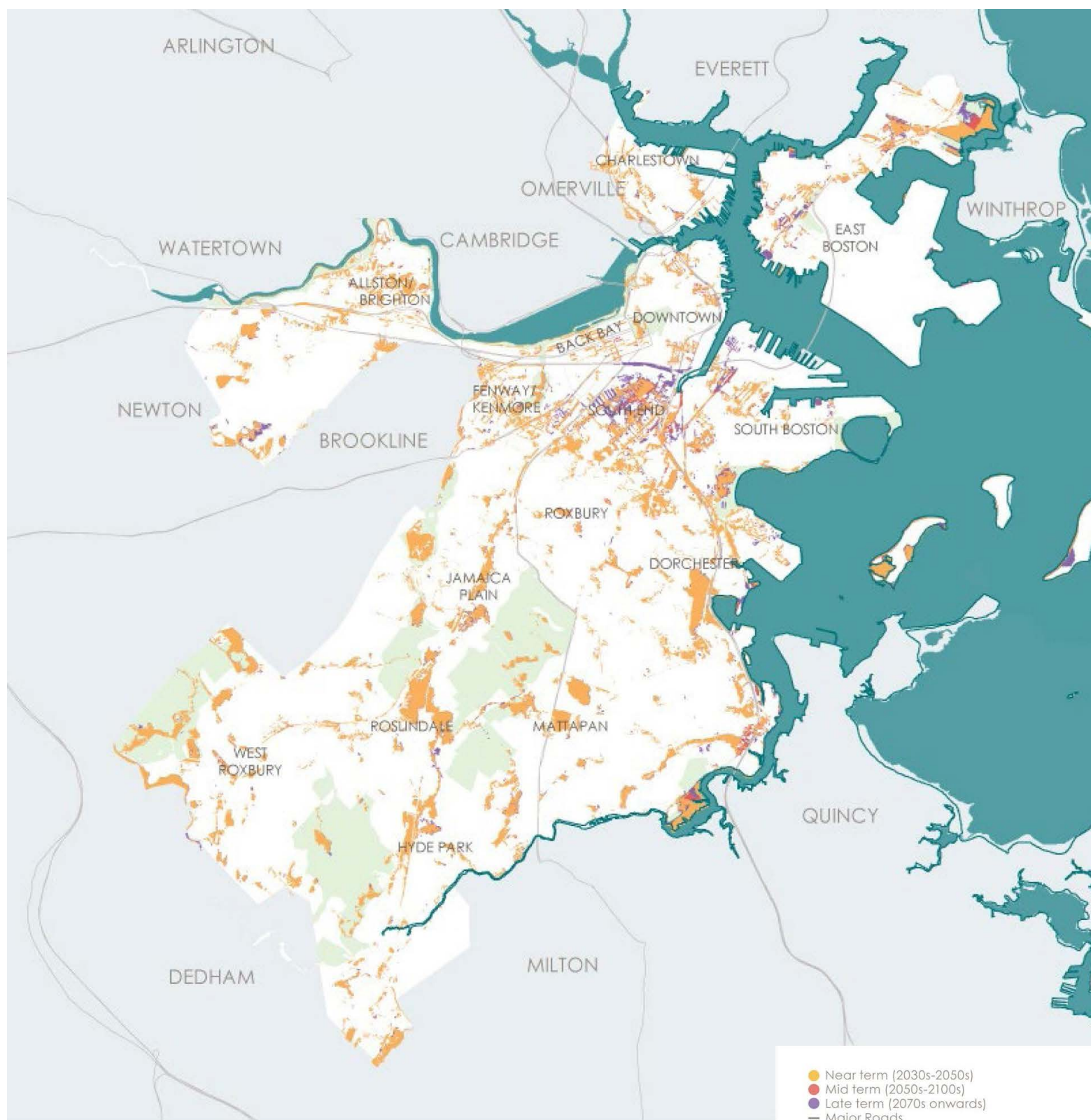
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#### 4. The number of heat-related deaths each year in Boston will triple.



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#### 5. Stormwater flooding will inundate thousands of structures.



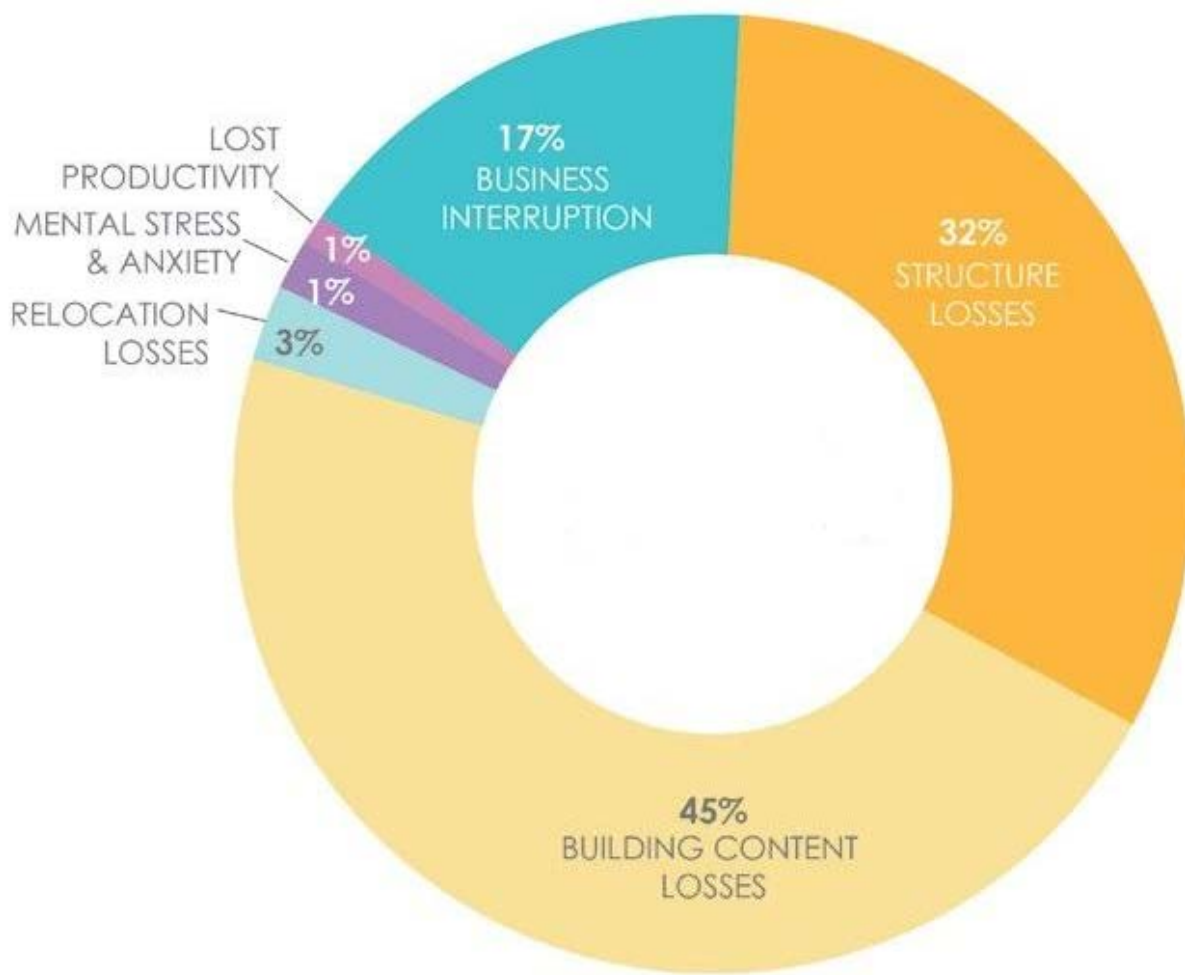
**Without improvements to the stormwater system, over 11,000 structures and 85,000 people will be directly exposed to frequent stormwater flooding as soon as the 2070s.<sup>4</sup>**

**STORMWATER FLOODING FROM 10-YEAR, 24-HOUR STORM WITH VARYING CLIMATE CONDITIONS**

<sup>4</sup>Current building stock and population in areas expected to be exposed. The building stock and population have not been projected.

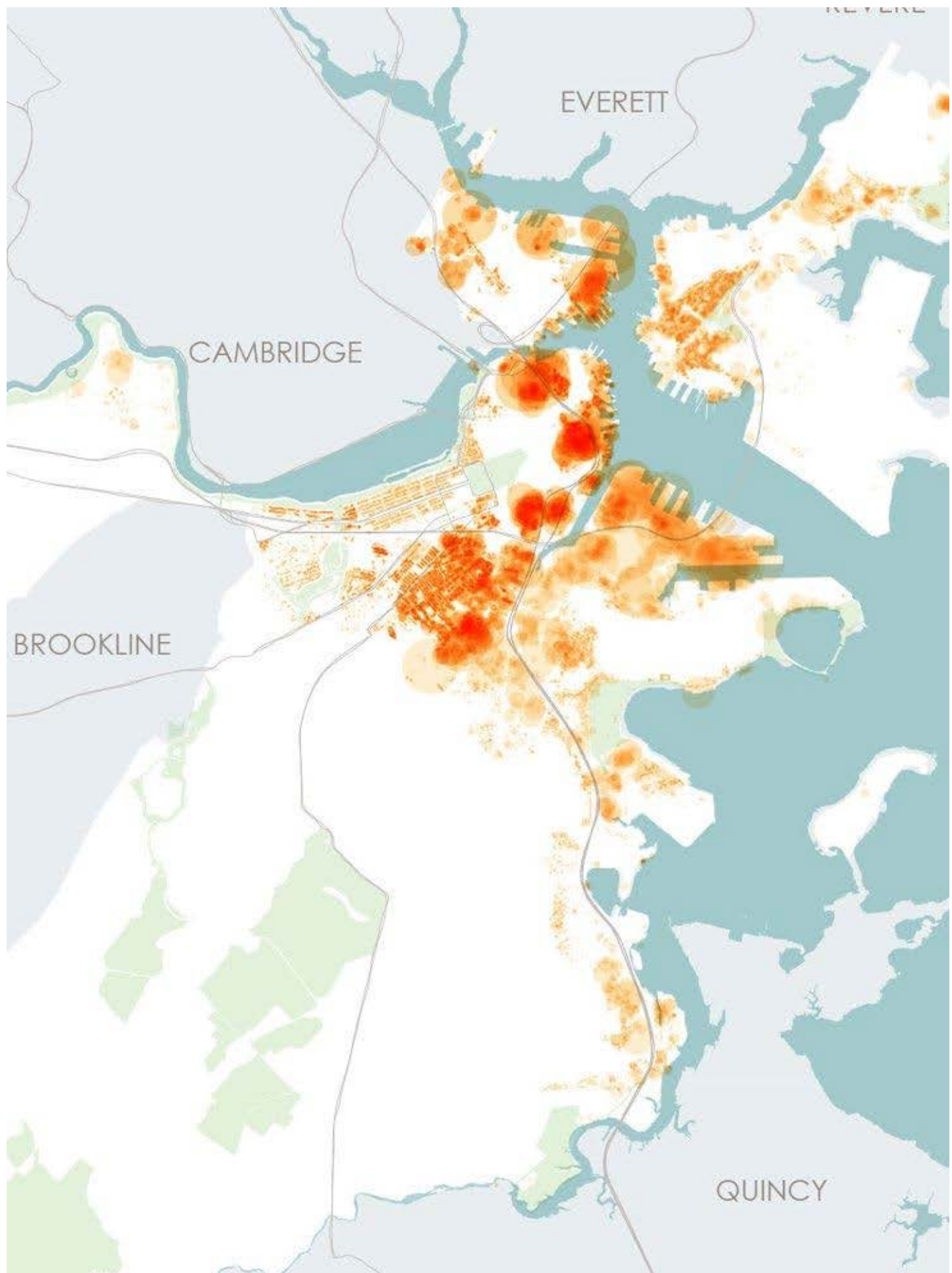
**6. Increasingly large sums of money will be lost each year due to flooding damage, interruption of business activity, and other climate change impacts.**





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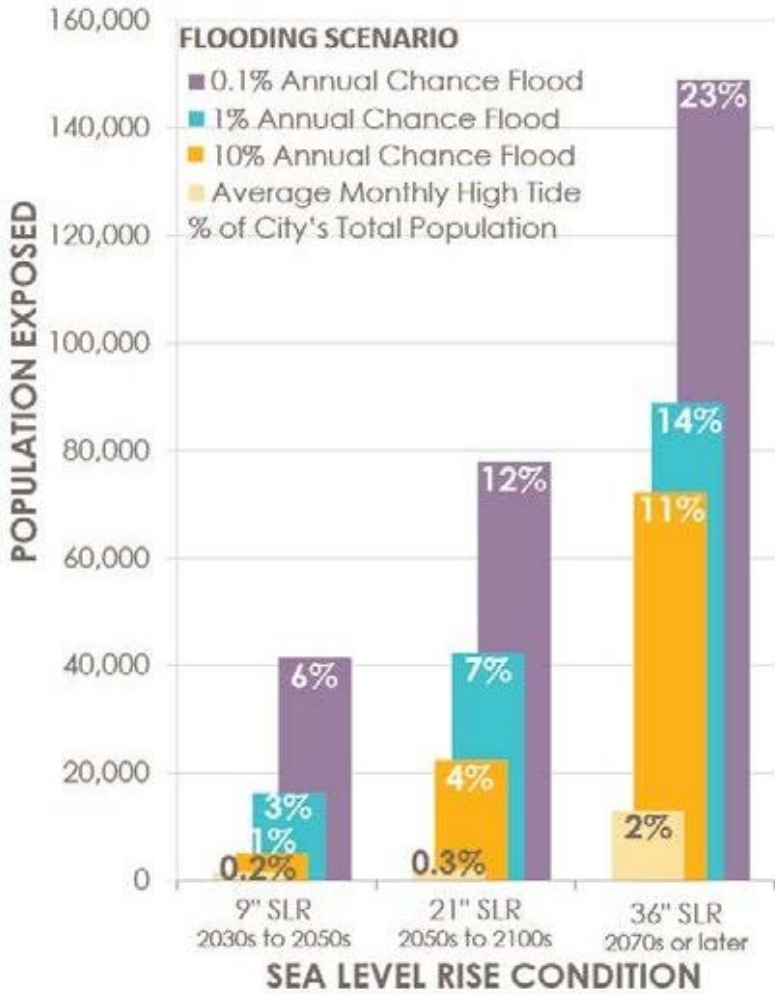
**Above is a breakdown of annualized losses based on a 36-inch rise in sea level.**



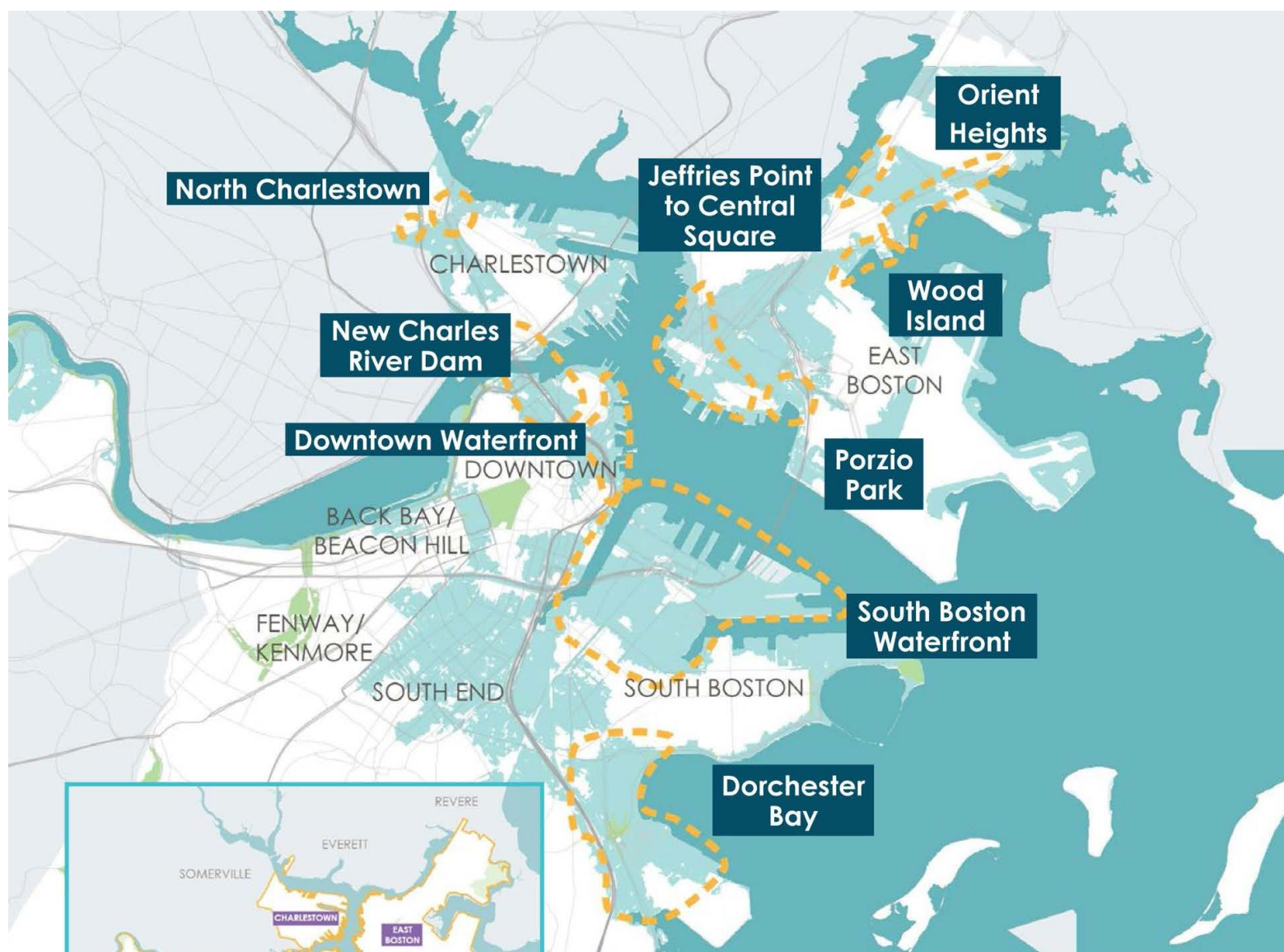


**Above is a map showing yearly financial losses per building, based on a 36-inch rise in sea level.**

**7. Thousands of city residents will be affected.**



**8. Some city neighborhoods will be hit harder than others. The city report proposed that flood-protection interventions be taken at the nine spots identified in the map below:**



**36 INCHES SLR (2070S OR LATER)**  
 DISTRICT-SCALE FLOOD PROTECTION  
 FOR 1% ANNUAL CHANCE FLOOD


**Based on the citywide vulnerability assessment and the focus-area analyses, Climate Ready Boston proposes nine locations for flood-protection interventions. As sea level rises over the century, the number of interventions needed increases, and their cumulative effectiveness becomes more important.**

**CLIMATE READY BOSTON FOCUS AREAS**

- HEAT & STORMWATER AND COASTAL FLOODING
- COASTAL HAZARD
- FOCUS AREAS

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