

CLIMATE READY: DORCHESTER

Land area: 6.1 sq miles
Population: 87,000
Jobs: 35,000
Economic contribution: \$7 billion



Equitable development and job creation. Improved transit and community services. Increased access to open space. Enhanced health and security. All of these community benefits can be achieved through preparing Boston for the impacts of climate change.

Led by the City of Boston and the Green Ribbon, Climate Ready Boston is aimed at identifying how Boston's climate is going to change, what's most at risk, and steps that can be taken to improve our community and thrive in the future. It builds on Boston's commitment to address global warming by cutting carbon and other emissions. The Climate Ready Boston report is available at (<https://www.boston.gov/environment-and-energy/climate-ready-boston>) and was developed with input from leading scientists; city, regional and state staff; utilities; and nonprofit and community organizations.

What Climate Change Means for Dorchester

GREATER
AMOUNTS
OF SEA
LEVEL RISE



More Flooding:

- Due to sea level rise, significant flooding will result from storm surges less powerful than those causing flooding today.
- South Dorchester has one of the largest areas of land vulnerable to mid-century stormwater flooding.
- In the future, water could enter low-lying areas of Dorchester and flood inland areas. Protecting Dorchester could also benefit South Boston, the South End, and Roxbury.

MORE HOT
DAYS



More Heat:

- Climate change means hotter temperatures in Dorchester, especially in its urban "heat islands," or areas with more asphalt and less tree cover to provide shade.
- Heat waves pose a particular risk to low-income populations, who may have less access to air conditioning and health services, and those suffering from medical illnesses.
- Children are also vulnerable to extreme heat; Dorchester's share of households with children (24%) is higher than the city average (17%).

What's At Stake



Community Assets & Flooding

A number of Dorchester's community assets are vulnerable to major flooding events.

- In the near term, areas near JFK/UMass Station will be exposed to major coastal flooding events.
- Damage to exposed roads and the MBTA Red Line from this type of storm could isolate Columbia Point from the rest of Dorchester and impact transportation connections to North Quincy.
- Commercial Point, along with one of the two ambulance stations in Dorchester, is at risk from major storms in the near term.
- Flooding will extend by mid-century along the Neponset River and Columbia Point.
- As soon as 2050, all of Morrissey Blvd and sections of the I-93 will be at risk in major flooding events.
- Later this century, Joe Moakley Park becomes a flood entrance to the South End, South Boston, and parts of Roxbury.
- By 2070, Dorchester's Engine 20 Fire Station would be exposed to flooding along with the Fairmont Line and Newmarket Station.



People and Buildings Impacted by Major Flood Events

As sea level rise accelerates, a greater area of Dorchester will be affected.

- In 2030, more than 300 people and 400 buildings with a value of over \$4.5 billion would be exposed in a major flood.
- In 2070, this figure rises to more than 6,800 people and 1,200 buildings with a value of over \$15 billion.



Economic Output and Jobs

Flooding can be extremely disruptive to the local economy as operations are interrupted while structures are repaired or businesses relocate.

- Dorchester is expected to face annual losses of \$15 million in economic output and 110 jobs as soon as 2070.
- Restaurants are expected to comprise roughly 40% of job loss and 20% of output loss.

Dorchester in Action

The following initiatives have been proposed to ensure that Dorchester is prepared for the effects of climate change.



Prepared & Connected Communities:

- Conduct an outreach campaign to private facilities that serve vulnerable populations to ensure that they engage in emergency preparedness and adaptation planning.
- Update the city’s heat emergency action plan.
- Expand Boston’s small business preparedness program.



Protected Shores:

- Develop a local climate resilience plan for Charlestown to support district-scale climate adaptation. The plan should include the following:
 - Community engagement through a local climate resilience committee;
 - Land-use planning for future flood protection systems;
 - Infrastructure adaptation planning;
 - Coordination with other plans, including Imagine Boston 2030, GoBoston 2030, Special Planning Areas, the Morrissey Boulevard redesign, the Joseph Moakley Park master plan, and any potential Municipal Harbor Plan process;
 - Development of financing strategies and governance structures to support district-scale adaptation.
- Near term flood protection is needed at Dorchester Bay, the South Boston Waterfront, Boston Harbor, the Reserve Channel, and at the New Charles River Dam.



Resilient Infrastructure:

- Develop coordinated risk response plans for extreme weather events.
- Support MBTA’s Red Line flooding assessment.
- Explore options for a neighborhood energy grid at Gallivan Blvd and Neponset Ave, and/or at Fields Corner, Codman Square, Four Corners/Geneva, and along Blue Hill Ave.



Adapted Buildings:

- Update zoning and building codes and notify developers with projects in the pipeline to update plans.
- Help building owners assess potential impacts and increase resilience.
- Promote access to insurance.
- Prepare municipal buildings to withstand change.