

CLIMATE READY: ROXBURY

Land area: 3.9 sq miles
Population: 71,600
Jobs: 24,800
Economic contribution: \$4.2 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 Roxbury

GREATER
AMOUNTS
OF SEA
LEVEL RISE



More Flooding:

- Already prone to flooding from heavy rainfall, 180 acres of Roxbury will be exposed in major flooding events later this century.
- West Roxbury contains one of the largest land areas in Boston that is vulnerable to future stormwater flooding.

MORE HOT
DAYS



More Heat:

- Climate change means hotter temperatures in Roxbury, especially in its urban "heat islands," or areas with more asphalt and less tree cover to provide shade.
- Roxbury has some of the hottest summer temperatures and a high percentage of community members who may be more at risk of heat stroke, including low-income individuals, older Bostonians and children, and those dealing with medical illnesses.

What's At Stake



Community Assets & Flooding

A number of Roxbury community assets are vulnerable to major flooding events.

- Stormwater flooding already occurs in Roxbury with Melnea Cass Blvd often impacted. Even a few inches of road flooding can block access to essential services.
- More frequent intense storms will extend the exposure into Lower Roxbury and Hampton George including the northern edge of Malcolm X Park and the area north of King Towers.
- Flood progression into Roxbury occurs through the South End. In addition to impacting roads, the Amtrak/MBTA lines between Tremont and Columbus are exposed to stormwater flooding.



People and Buildings Impacted by Major Flood Events

While Roxbury's population remains largely unexposed to coastal flooding until later in the century, as sea level rise accelerates, a greater area of Roxbury will be affected.

- In 2070, more than 1,800 people and 230 buildings valued at over \$700 million, including the Boston Water and Sewer Commission headquarters, will be exposed.



Economic Output and Jobs

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

- Roxbury is expected to face annual losses of \$1.4M in economic output by 2070.
- The main industries affected are expected to be hospitals and restaurants.

Roxbury in Action

The following initiatives have been proposed to ensure that Roxbury is prepared for climate change impacts.



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 Roxbury 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, and any future Municipal Harbor Plan processes.
 - Development of financing strategies and governance structures to support district-scale adaptation.
- As soon as the 2050s, the northern edge of Roxbury will be exposed to flooding requiring protection at the South Boston Waterfront, Dorchester Bay, and the New Charles River Dam.



Resilient Infrastructure:

- Develop coordinated risk response plans for extreme weather events.
- Support MBTA’s Orange Line flooding assessment.
- Explore options in Roxbury for energy justice microgrids that could improve energy security in areas with dense affordable housing and in places of refuge during power outages. Roxbury has the greatest solar energy potential in Boston.



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.