

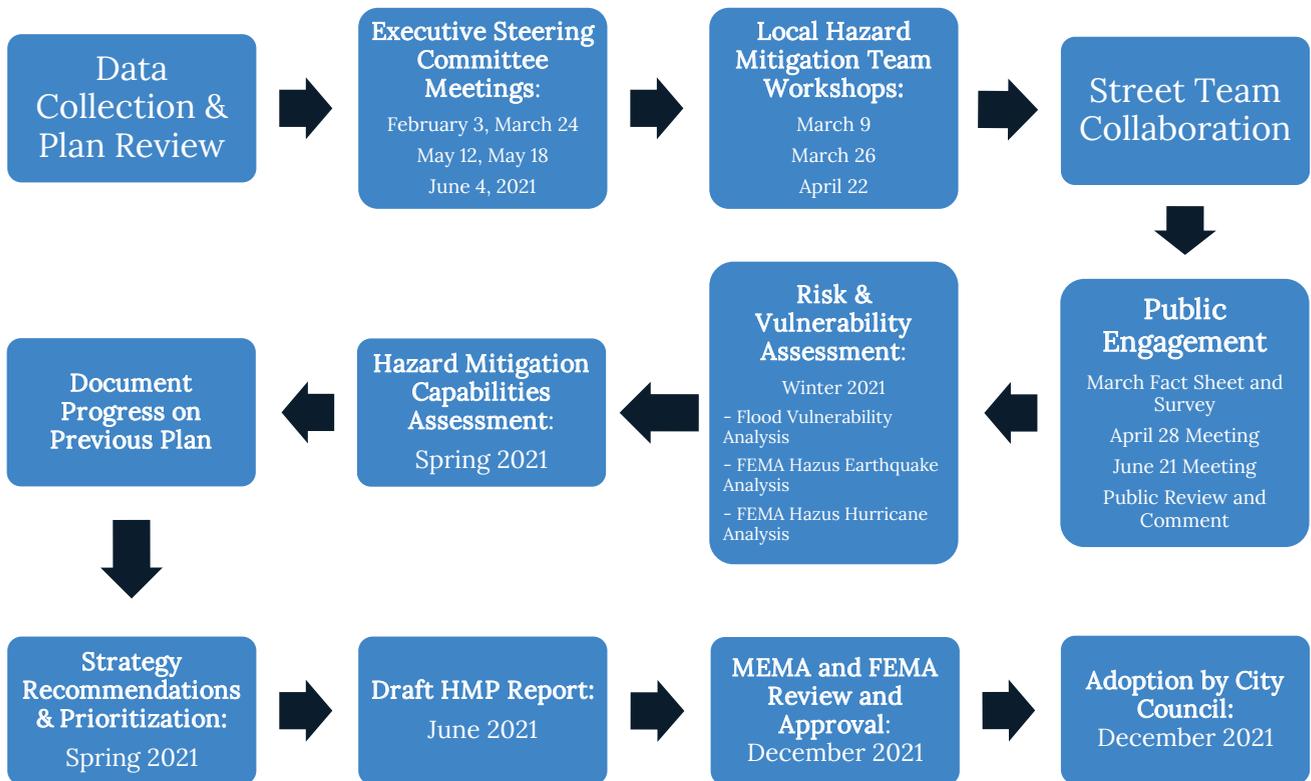


EXECUTIVE SUMMARY

Hazard mitigation planning is a proactive process used to systematically identify policies, actions, and programs that can be used to reduce the impacts of natural hazards on society, the environment, property, and human life. Climate adaptation planning recognizes that climate change will exacerbate the vulnerabilities and risks associated with natural hazards. The City of Boston completed a planning process focused on both hazard mitigation planning and climate adaptation, which provides a robust assessment and implementation plan to build the City's resilience. By completing the Natural Hazard Mitigation Plan (NHMP), the City remains eligible for hazard mitigation funding through the Federal Emergency Management Agency (FEMA). This funding will be used to support the implementation of this plan and other ongoing natural hazard mitigation and climate adaptation efforts in Boston.

Planning Process

The NHMP planning process proceeded according to the timeline below. Critical input was received from the Executive Steering Committee, Local Hazard Mitigation Team, Street Team, and Public Engagement Meetings. A description of these teams, their purpose, and participants can be found in Chapter 1.



Hazard Mitigation and Climate Adaptation Goals

Fundamentally, the NHMP intends to equitably support Boston's neighborhoods by protecting public health and safety, increasing awareness of steps to mitigate damages from natural hazards, and promoting preparedness for climate change. The Executive Steering Committee, representing the City of Boston, endorsed, the following set of hazard mitigation and climate adaptation goals. Each goal was assigned a set of objectives, which can be found in Chapter 2. These goals informed the selection and prioritization of future adaptation and mitigation actions.



1 Equitably protect the health and safety of the public through awareness, preparedness, and connections.



2 Increase resilience by protecting and enhancing natural resources.



3 Implement hazard mitigation and climate adaptation projects that meet strategic priorities.



4 Invest in protecting properties and structures.



5 Ensure that essential services and infrastructure will function during and after a hazard event and prepare essential services for projected climate change impacts.

Vulnerability and Risk Assessment

The NHMP Plan documents the vulnerabilities, strengths, and hazards across several community lifelines and sectors, including infrastructure, community assets, economic centers, and natural resources. Each of these asset categories is critical to the resilience of Boston residents and is discussed in greater detail in Chapter 3. Using the 2018 State Hazard Mitigation and Climate Adaptation Plan (EEA and EOPSS), the 2014 NHMP (City of Boston, 2016c), and Climate Ready Boston (City of Boston, 2016a) as a guide for the types of hazards that occur, we have developed hazard profiles containing information on the severity, location, historic occurrences, future climate projections, and vulnerability and risk for the following hazards:



Flooding Hazards

- Riverine
- Inland/Stormwater
- Coastal
- Tidal



Geological Hazards

- Earthquakes
- Landslides



Drought Hazards

- Drought



Dam Hazards

- Dam Failure



Fire Hazards

- Brushfires
- Urban Conflagrations



Winter Storm Hazards

- Snow and Blizzards
- Ice Storms



Wind-Related Hazards

- Severe Storms and Thunderstorms
- Hurricanes and Tropical Storms
- Tornadoes
- Nor'easters



Extreme Temperature Hazards

- Extreme Heat
- Extreme Cold

Hazard Mitigation and Climate Adaptation Strategy

Climate change will continue to worsen the hazards listed above. The City of Boston is already implementing measures to mitigate local hazards through the day-to-day operations, planning, and enforcement of regulations. The NHMP documents the City's current operational capacity and discusses potential improvements (Chapter 5). The City developed a list of priority hazard mitigation and climate adaptation strategies through a multi-faceted approach. The priority list includes new actions, as well as actions from the previous plan that were not completed or were partially completed as documented in Chapter 6.

The table on the following page details the top 34 priority actions, out of 57, which were selected based on their ability to protect lives and property, their contributions to community benefits and a healthy environment, and their technical and political feasibility. More information about the priority actions, including the implementation responsibility, cost, time frame for completion, and how prioritization was determined is available in Chapter 7.

Next Steps

The City of Boston is dedicated to implementing the findings of this plan and documenting the process as described in Chapter 8. The City will look to secure resources and work with regional and local stakeholders to complete the projects identified within the plan. The City will also continue to document hazard impacts and areas in which capacity building is needed to support mitigation and adaptation efforts. Finally, the City will proactively incorporate the hazard mitigation and climate adaptation goals into municipal planning, budgeting, and operations. By doing so, the City will be ready to update this plan in five years to maintain its eligibility for grant funding through FEMA.

Table ES-1: High Priority Hazard Mitigation and Climate Adaptation Actions

ID	Action	Est. Year of Completion	Responsibility
A1	Emergency Shelter Assessment and Improvements	2025	OEM, BCYF, BPS
A2	Establish Flood Protection Overlay Districts	2025	BPDA, Environment Department
A3	Implement Recommended Actions in Boston's Citywide Heat Resiliency Study	2022	BPDA, BPHC, Environment Department, OEM, Parks and Recreation
A4	Improve the Resiliency of the Boston Marine Industrial Park and Long Wharf Improvements	2024	BPDA
A5	Adapt Morrissey Boulevard for Flood Resilience	2030	BPDA, DCR, MassDOT
A6	Address Vulnerabilities to Tidal Flooding at McCormack and Dever Schools	2035	BPS
A7	Finalize the Design and Construct the Coastal Resilience Barriers at the Carlton and Lewis Mall Flood Pathways in East Boston	2027	BPDA
A8	Implement Climate Ready Boston and Continue to Develop Strategies that Integrate Various Natural Hazards	2030	BPDA, BTD, Environment Department, Parks and Recreation, Public Works
A9	Muddy River Flood Control	2023	Army Corp of Engineers, DCR, Parks and Recreation, Town of Brookline
A10	Prepare Parks and Outdoor Facilities for Climate Change	2026	Environment Department, Parks and Recreation
A11	Expand Citywide Climate Readiness Education, Engagement, and Leadership Development Campaigns	2025	BPDA, Environment Department, OEM
A12	Implement an Action Plan to Enhance Boston's Urban Tree Canopy and Protect Residents From the Impacts of Extreme Heat	2022	Environment Department, Parks and Recreation
A13	Promote Resilience in Buildings and Encourage Green Infrastructure in Site Design	2025	BPDA, Environment Department, ISD, Parks and Recreation
A14	Rutherford Ave/Charlestown Underpass – Manage Tunnel to Minimize Flood Impacts	2029	Public Works
A15	Franklin Park Action Plan and Resilience	2025	Parks and Recreation
A16	Continue to Develop a Resilience Assessment and Education Program for Property Owners and Tenants	2024	ISD, Environment Department



High Priority Hazard Mitigation and Climate Adaptation Actions

ID	Action	Est. Year of Completion	Responsibility
A17	Develop Design Guidelines for Green Infrastructure on Public and Private Property	2026	Parks and Recreation, BWSC, Environment Department
A18	Emergency Evacuation Route Improvements and Outreach	2024	OEM
A19	Emergency Notification System Upgrades for Increased Access	2023	OEM
A20	Maintain and Update the NHMP	2026	BPDA, BWSC, Environment Department, Office of Budget Management, Office of Public Health and Preparedness, OEM , Parks and Recreation, Public Works
A21	Physical Adaptations and Operational Changes to the MBTA Stations and Service Lines to Address Climate Impacts and Earthquake Risk	2023 and 2030	Environment Department, MBTA
A22	Building Resiliency around the Fort Point Channel Area	2025 and 2050	BPDA, BWSC -Stormwater Storage, Parks and Recreation- Flood Barrier
A23	Continue to Pursue Boston's Admission to the NFIP Community Rating System	2026 Enroll in CRS	BPDA, Environment Department, ISD
A24	Determine a Consistent Evaluation Framework for Flood Defense Prioritization	2023	BPDA, Environment Department
A25	Moon Island Seawall Rehabilitation to Mitigate Coastal Hazards	2024	BFD, BPD, DND, PFD
A26*	Stabilize Coastal Bank Along the Eastern Side of Long Island	2025	BPHC, DCR
A27	Update Storm Ready Certification with National Weather Service	2023	OEM
A28	Citywide Energy Demands Assessment Update and Reduce Stress on Grid Demand During Peak Usage	2024	BPDA, Environment Department
A29	Develop a Green Infrastructure Location Plan for Public Lands and Public Right of Way and Implement Green Infrastructure Pilot Projects	2024	BPDA, BTD, BWSC , Environment Department, Parks and Recreation, Property Management, Public Works, BPS

Table ES-1: High Priority Hazard Mitigation and Climate Adaptation Actions

ID	Action	Year of Completion	Responsibility
A30	Feasibility Assessment of District Energy Solutions for Large Scale Developments	2025	BPDA, Environment Department, BPHC
A31	Implement the Findings of the Tunnel Vulnerability Assessment and Flood Mitigation Feasibility Study	2030	MassDOT
A32	Introduce Hazard Mitigation and Resiliency Into Regulations and Ordinances at the Local Level and Advocate for Changes at the State Level	2023	BPDA, Environment Department, Parks and Recreation
A33	Public Housing Vulnerability Assessments and Adaptations	2025	DND (applicant for funding) in collaboration with BHA (implementation)
A34	Storrow Drive Reconstruction and Drainage Improvements	2030	DCR

The following roadmap illustrates the sequence of the Plan by chapter, and can be used to navigate the contents of the document.

