Cambridge Large Organization
Ready for Extreme Weather?
CLIMATE RESILIENCE TOOLKIT

To achieve resiliency, large organization like yours need to work with many internal and external stakeholders to implement actions. Many actions are also implemented within different applications as they relate to planning and design, operational changes, and/ or education and training. In the table below, different applications and partners are identified by resiliency goals.

	Resiliency Goal	Application			Partners/Stakeholders		
		Planning & Design	Operational Change	Education & Training	Employees	Vendors	City
1	Understand specific climate vulnerabilities with the best available information organization-wide, and spread knowledge within the operation.	✓	✓	✓	✓	✓	
2	Evaluate internal systems, and plans with a climate change lens to understand gaps and evolving needs.	✓	✓	✓	✓		
3	Understand organization's dependance on external services and vendors that are vulnerable to disruption; including energy, communication and transportation infrastructure.			✓	✓	✓	
4	Educate organization's host communities on impacts from extreme weather events.			✓	✓	✓	✓
5	Strengthen public-private collaborations to build community resilience that enhances the organization's resilience.		✓	✓	✓	✓	✓
6	Implement climate resilient design into all new construction to avoid later retrofits.	✓	✓		✓		✓
7	Build understanding of mutual vulnerabilities and opportunities with organizational peers to identify where collaboration and sharing make sense.		✓	✓		✓	✓
8	Make your community more prepared and resilient.	✓		✓	✓		✓

MORE RESOURCES

Guide to Public-Private Collaboration on City Climate Resilience Planning:
https://www.c2es.org/site/assets/uploads/2017/05/guide-public-private-collaboration-city-climate-resilience-planning.pdf

Climate Action Business Association:
https://cabaus.org/

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WHAT IS YOUR RISK?

The City has mapped future flood and heat risks from climate change, which demonstrate that in the future, temperature will be warmer and extreme flood events are likely to be more intense. The results from the City's Climate Change Vulnerability Assessment (CCVA) show that everyone is at risk of higher temperatures, and that some properties are more prone to flooding. In all cases, we need to prepare for a new normal best suited for each of the city stakeholders. Your corporation or institution may already have a plan in place for emergency and extreme weather events. This toolkit is to help you integrate these plans with the City's climate change initiatives.

1. UNDERSTAND YOUR PHYSICAL FLOOD RISK

Look up your location in the Cambridge FloodViewer here:

FloodViewer
City of Cambridge, MA

https://www.cambridgema.gov/Services/FloodMap

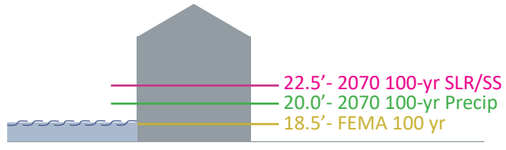
The FloodViewer does not include all types of storms (e.g., microbursts), so your property may still experience flooding, even though it is not identified in a flood zone in the FloodViewer.

2. UNDERSTAND YOUR OPERATIONAL RISK

Factors that can increase operational vulnerability include:

- Vendors who may not be prepared.
- A workforce or clients/customers that need a stable indoor environment; e.g. due to age or chronic health condition.
- Equipment or supplies that require stable indoor environment or constant cooling; e.g., labs or food storage.
- Employees who are vulnerable at home.
- Energy, communication, and transportation systems that are vulnerable.

3. IDENTIFY YOUR SPECIFIC FLOOD RISK



You are in an identified flood zone: The City has made its flood modeling projections available in the FloodViewer for planning and design purposes.

You are not in an identified flood zone: Focus on prevention to minimize impact on your assets or your operation.

GET INFORMED ABOUT YOUR HEAT RISKS

- Your **air conditioner cannot meet the demand**, or is inefficient.
- Your real estate portfolio includes buildings with limited **insulation.**
- Your properties are in a dense urban environment consisting of hard surface with **little vegetation.**
- Your staff who works outside gets sick.

4. POSSIBLE FLOOD IMPACTS:

- Basement(s) with building utilities are flooded
- Valuable program function (e.g. labs)are flooded
- Transportation disruption impacts commuting
- Your vendors do not have emergency plans
- Your vendors are not insured for flood damage

POSSIBLE HEAT IMPACTS:

- Indoor temp. reaches 80 degrees & is unbearable
- Loss of research/product due to power shortage
- Mold grows in your building due to heat & humidity
- Employees suffer from heat sickness
- Transportation disruption impacts commuting

A new normal

What can you do to prepare?

Costly extreme weather events caused by climate change have mobilized and invigorated internal discussions within large organizations to get prepared and take action. Improving preparedness presents opportunities to manage short- and long-term risks to your organization to reduce possible recovery costs, and provide greater community resilience.

	Resiliency Goals	Internal Actions	External Actions	Resources
1	**Understand specific climate vulnerabilities with the best available information organization-wide, and spread knowledge within the operation.**	Create a business continuity plan to share with other members of your organization to prepare for climate change and extreme weather events.	Share this business continuity plan with outside vendors and service providers.	Refer to the **City of Cambridge Business Continuity Plan** and **Small Business Prepareness Toolkit**
2	**Evaluate internal systems and plans with a climate change lens to understand gaps and evolving needs.**	Assess real estate portfolio and operations, and consider how extreme weather events may impact these assets.	Work with staff to develop a punchlist for areas of risk and improvement.	**Ready for Flooding?** City of Cambridge brochure, June 2019. **Ready for Heat?** City of Cambridge brochure, June 2019
3	**Understand organization's dependence on external services and vendors that are vulnerable to disruption, including energy, communication and transportation infrastructure.**	(i) Survey internal stakeholders to create a list of critical vendors. (ii) Host a workshop to discuss vendor dependencies.	(i) Share concerns with vendors and provide reference to resources on how to prepare for extreme events. (ii) Follow up with discussion on contingency plans.	The infrastructure **provider's resiliency plans**
4	**Educate organization's host communities on impacts from extreme weather events**	Develop a communication plan to correspond with host communities in the event of power and cellphone service outages.	Support the City in engaging with utility providers and the Massachusetts Public Utilities Commission to increase the resiliency of the electricity distribution system.	**How to get started**: http://www.cambridgepublichealth.org/services/emergency-preparedness/
5	**Strengthen public-private collaborations to build community resilience that enhances the organization's resilience.**	Identify key members within your organization and community to serve as ambassadors.	Participate in Cambridge-wide groups and meetings to further planning and programming on emergency management and climate resiliency.	**City of Cambridge**
6	**Implement climate resilient design into all new construction to avoid later retrofits.**	Create climate resilience design guidelines. Review capital planning for new construction opportunities and examine where climate resiliency design criteria can be implemented.	Coordinate with the City of Cambridge and refer to the Climate Change Preparedness and Resiliency (CCPR) Handbook on changes that can be made to your real estate portfolio. Advocate to the State for changes to the building code.	**City of Cambridge:** **CCPR** Handbook and Technical Appendixes
7	**Build understanding of mutual vulnerabilities and opportunities with organizational peers to identify where collaboration and sharing make sense.**	Identify existing relationships with external stakeholders.	Attend municipal, state, and federal level meetings and hearings to advance the business communities' commitment to climate resilience.	Cambridge **COMPACT** for a Sustainable Future
8	**Make the community more prepared and resilient.**	Identify those within the organization who are most at risk and establish benefits to increase resiliency.	Participate in the City's stakeholder process for Climate Change Preparedness to provide input on strategies to build climate resiliency.	**City of Cambridge**