

# Preparing For Climate Change In Cambridge

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## FOR MORE INFORMATION

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Or sign up to be told about  
meetings and project activities  
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## OVERVIEW

The City of Cambridge is facing the challenges of climate change. For over a decade, the City has been developing strategies and policies to reduce Cambridge's contribution of greenhouse gases that cause climate change. As climate change science continues to reveal multiple lines of evidence that the global and US climate is indeed changing and we see more extreme weather events across the country, the City of Cambridge is conducting a project to prepare for climate change in our community. This project has two phases, first a science-based vulnerability assessment phase, then a preparedness resilience plan phase to start in 2015.

The City believes we need to prepare for a "new normal", in which the weather patterns we are used to are gradually changing. For example, there may be longer, more frequent heat waves in the summer. We should also be preparing for more flooding from more intense rainstorms and coastal storm surges. These situations will affect those who live and work in our community, so we need to plan to ensure the community is protected and to enhance its resiliency.

## GETTING INVOLVED

The City wants the public to be aware of the project and have the opportunity to be involved. The vulnerability assessment is nearing completion. There will be a public meeting to present findings and discuss the development of the preparedness plan. To be informed, residents and interested parties can review general project information and updates on the project website at <http://www.cambridgema.gov/climateprep> and sign up for the project email list.

## COORDINATION AND MANAGEMENT

This project is coordinated by a City steering committee of staff from the Public Works, Public Health, and Community Development departments. A consultant team of scientists, researchers, and academicians internationally renowned in the climate change field is working with City staff. A Technical Advisory Committee (TAC) composed of community stakeholders is helping to guide the assessment and provide critical information on key community assets. An Expert Advisory Panel (EAP) is providing guidance on the team's technical approach. The City has been conducting outreach activities across the city this spring and will hold several public meetings within the next year to share information and solicit input.

## Phase 1: Research and Analysis (Climate Change Vulnerability Assessment)

In phase one, our consultant, Kleinfelder, is leading the team of experts in studying





changes to the Cambridge climate and assessing possible consequences for our citizens, our businesses and institutions, and our infrastructure and services. This assessment phase is nearing completion. The team is researching the effects of increased temperature, changes in precipitation patterns, sea level rise, and extreme events such as heat waves and more intense coastal storms. They are studying how these may impact our assets and infrastructure, our economy, public health, public safety, and our neighborhoods. They are gathering accurate, relevant information and analyzing it using expert guidance and cutting-edge scientific approaches to develop planning scenarios with future climatic parameters in the Cambridge area. The team then evaluates specific assets, systems, and communities to determine their vulnerability to the impacts of those conditions. Input from stakeholders on the TAC, experts on the EAP, and the public is incorporated

The vulnerability assessment is using scenarios for 2030 and 2070 to enable the City to conduct a “climate stress test” on the community’s infrastructure, buildings, and people. The scenarios are not hard predictions of the future. They are based on scientific information and consideration of the trends in climate change and represent reasonable projection of where our climate appears to be heading.

The assessment involves a great deal of technical modeling of heat and flooding impacts. This includes mapping of surface and air temperatures, modeling flooding from riverine and storm drainage systems, modeling of coastal storm surges in association with sea level rise, and an analysis of the effects on our urban forest resources. The modeling covers current conditions and projects changes forward to 2030 and 2070. The project will also estimate economic impacts.

The projected flooding and temperatures are put into spatial format using a geographic information system and overlaid onto spatial information about Cambridge’s physical assets and social environment to reveal impacts. With this analysis, the City is able to rate and rank the vulnerabilities of key community assets and populations using the globally recognized ICLEI ADAPT system.

This assessment will provide the technical foundation for phase two which will focus on developing a climate change preparedness and resilience plan for the city. The final report will identify those parts of the city and key assets that are most vulnerable to sea level rise, storm surges, heavier precipitation, heat waves, and the like, which will become “Priority Planning Areas.” For each asset, the team will answer: is it likely to encounter the specific effect of climate change? (Its exposure.); how much will that climate change impact affect its ability to fully function? (Its sensitivity.); to what degree can it recover? (Its adaptive capacity). The expected completion date is February 2015.

### Phase 2: Planning and Preparedness (Climate Change Preparedness & Resilience Plan)

Phase two will commence in the first part of 2015. The City will work with a broad array of citizens, community groups, businesses, institutions, and others in Cambridge to decide how to address the risks identified during phase one. What management approaches will make most sense in Cambridge? What should we do in the near term, and what should we wait to undertake? Our goal will be to identify appropriate strategies and actions to make Cambridge more resilient to and better prepared to cope with the impacts of climate change.

