

## **One Size Fits All\*: A Tool for Climate Resilient Design Standards**

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**Background/Objectives.** The Resilient MA Action Team (RMAT) developed the Climate Resilience Design Standards Tool (the Tool) to provide a consistent basis-of-discussion for climate resilient planning and design for projects in Massachusetts. This Tool advances several of the priority action items in the 2018 State Hazard Mitigation and Climate Adaptation Plan (SHMCAP): make preliminary climate resilience analysis at the project level more broadly accessible; provide recommendations based on consistent use of state's climate and hazards data; inform climate resilient capital planning and procurement; and provide a unified and automated planning and design support tool that state agencies and municipalities can use for grant applications and evaluation of projects.

**Approach/Activities.** Over a course of 2.5 years with extensive stakeholder engagement and feedback from over 250 organizations and individuals, the project team developed a risk-based process that uses the best available climate projections to provide a preliminary climate risk screening and recommended design standards. The standards vary based on asset type (infrastructure, buildings, natural resources), location, useful life, construction type, criticality, and climate hazard (sea level rise/storm surge, extreme precipitation, extreme heat). The design standards include the following: recommended target planning horizon, recommended return period or percentile, and a list of applicable design criteria that are likely to be affected by climate change. Guidance was developed to support using recommended design standards in planning, early design, and project evaluation processes, along with limitations. Best practices surrounding site suitability, regional coordination, and flexible adaptation pathways were developed in tandem.

**Results/Lessons Learned.** This Tool has gone through four versions (Beta, Version 1.0, 1.1, and 1.2) since its conception with a rigorous stakeholder engagement process to refine methodology and guidance. Maps associated with projected water surface elevations are now available as of July 2022. With this information now readily available, reference to the Tool is becoming more and more ubiquitous in RFPs, grant applications, and permitting review processes. The outputs from this Tool are being applied in conjunction with traditional engineering assessments, feasibility analyses, and cost-benefit analyses. The Tool relies on limited user provided information to supplement statewide datasets, so the outputs are intended to serve as a consistent basis-of-discussion and framework for continued investment and integration of climate resilience in the built environment.