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Title

Climate Change Adaptation Chapter: Marshfield, Massachusetts

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Abstract

Climate change, understood as a statistically significant variation in the mean state of the climate or its variability, is the greatest environmental challenge of this generation (Intergovernmental Panel on Climate Change, 2001). Marshfield is already being affected by changes in the climate that will have a profound effect on the town's economy, public health, coastal resources, natural features, water systems, and public and private infrastructure. Adaptation strategies have been widely recognized as playing an important role in improving a community's ability to respond to climate stressors by resisting damage and recovering quickly.

Based on review of climate projections for the region, we developed a projection of likely climate changes for Marshfield. By the year 2100, Marshfield can expect sea level rise of approximately two feet, 16 - 30 more days with heat over 90 degrees in summers, and increased precipitation in the winters. Along with this will come more severe and frequent flood events.

Three key strategies were identified as top priority changes that Marshfield can enact when considering adaptation planning methods: a living shorelines treatment, pervious pavement installation, and a building elevation grant program. A matrix of additional strategies was also generated that addresses a range of sectors.

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