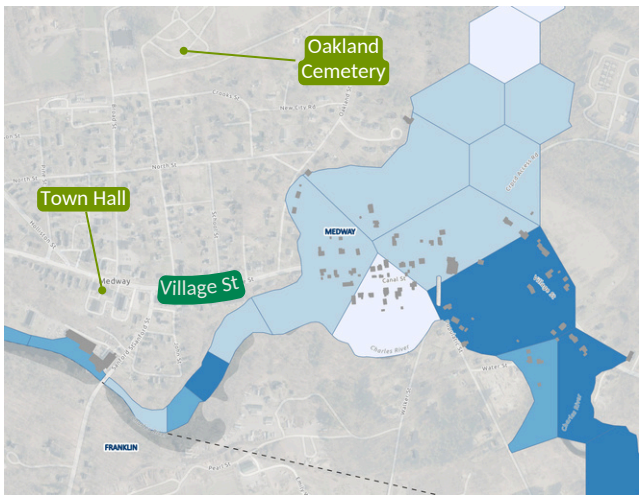
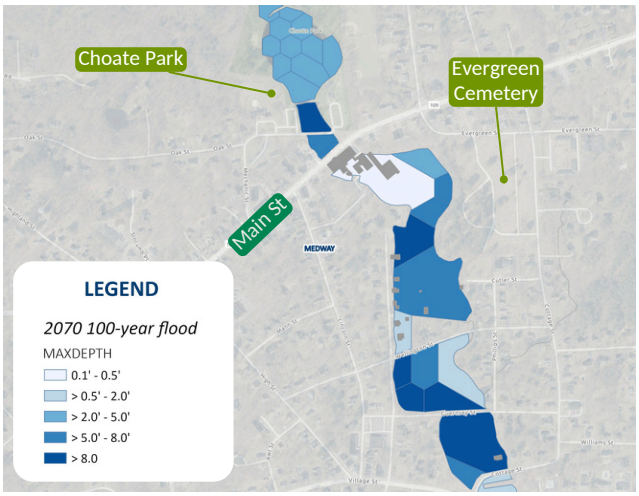
Future Flooding Report for Medway





Map of flooding impacts in Medway from the Charles River Flood Model

Climate Change means we will experience more flooding.

In the Northeast, the number of days with major rainstorms has increased by 60% since the 1950s *(U.S Fifth National Climate Assessment)*. Because of climate change, warmer air can hold more water. This means we need to prepare for heavier, more damaging floods now and into the future.

How can we minimize impacts?

The Charles River Watershed Association, Town of Medway, and more than 20 local communities are working together to identify solutions to prepare Medway for bigger storms and future floods using the Charles River Flood Model (CRFM).

Key solutions include:

- Requiring stronger standards for new and redevelopment projects to store and infiltrate more stormwater onsite whenever possible
- Build more storage into the landscape to capture and hold stormwater runoff in constructed wetlands, ponds, rain gardens, and/or underground infiltration systems (see back for more details)

*A 100-year storm has a **1% chance** of occurring every year*

BY 2070, A 100-YEAR STORM BRINGING 11-INCHES OF RAIN TO MEDWAY WOULD CAUSE:

386 ACRES
of Medway to flood

27 ACRES
not flooded today, to flood in the future

70 ACRES
of residential land to flood

1 CRITICAL FACILITIES
(public water supply) to flood

149 BUILDINGS
to flood

Flood Solutions for Medway!

Preparing and Adapting to Climate Change

Working Together for Regional Solutions

Charles River Climate Compact

Formed in 2019, the Charles River Climate Compact (CRCC) is a collaboration of watershed cities and towns, led by CRWA, working together to adapt to climate change. In 2021, the team developed the Charles River Flood Model (CRFM), which shows when and where flooding will occur as our climate changes & tests out the impact of potential flood reduction solutions.

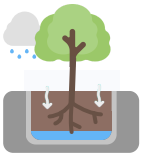
CRFM analysis revealed that different techniques are more effective than others in different locations across Medway. **Capturing runoff from developed or impervious areas, or converting paved areas to natural areas, is the recommended strategy across the central and eastern sections** (along Main St. and at the schools). **Storing runoff from pervious or undeveloped areas is the recommended strategy in the western and southern sections of Medway** (around the Animal Hospital and Fire Station).

The CRFM also shows that strong stormwater regulations, specifically requiring new and redeveloped properties to store a 100-year storm on-site, can significantly reduce flood risk across the entire watershed.

PERVIOUS STORMWATER STORAGE

Identify areas to temporarily store stormwater runoff, and ideally, slowly infiltrate it back into the ground using nature-based solution tools like:

Rain Gardens



Tree Box Filters

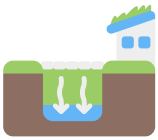
Subsurface Infiltration

Ponds

IMPERVIOUS SURFACE REDUCTION & STORAGE

Identify impervious surfaces to remove and replace with natural land cover, such as meadows, forests, and rain gardens or pervious pavement. This may mean smaller parking lots or using materials other than traditional pavement.

Forests



Permeable Pavers

Wetlands

Meadows

SCAN TO USE THE FLOOD MODEL OR GO TO >

bit.ly/Charles-Watershed-Model

PROJECT WEBSITE: *www.crwa.org/watershed-model*

QUESTIONS?

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Charles River Watershed Association