

# Adaptation Recommendations Summary

## Town of Walpole, MA

The **Town of Walpole** is vulnerable to flood-related damages, as evidenced by historical and recent flooding events. The Town of Walpole, in collaboration with Fuss & O’Neill, developed a **water infrastructure climate resiliency plan** to help mitigate the effects of future flooding events that will become more frequent and intense as a result of climate change. The following is a **summary of key findings and recommendations** of the town’s plan.

### Quick Facts – Walpole

- 137 road-stream crossings assessed
- 34 sites assessed for green infrastructure concept development
- 7 road-stream crossings identified for upgrades

### Road-Stream Crossings

- 137 road-stream crossings were assessed in Walpole:
- 36% of crossings are hydraulically undersized
- 12% of crossings have significant geomorphic vulnerability
- 69% of crossings limit or restrict aquatic passage
- 29% were rated “critical” for structural condition

### Recommendations:

- Replace and upgrade priority crossings (see table below) to meet the flood resilience and aquatic organism passage (AOP)
- Consider other upstream and downstream crossings and dams on the same river system
- In general, replace downstream crossings first
- Perform site-specific data collection, geotechnical evaluation, hydrologic and hydraulic evaluation, and structure type evaluation to support design

High-Priority Stream Crossings (Listed by Priority Ranking)		
Road	Stream	Crossing Type
Gould Street and Smith Avenue	Unnamed	Two (2) 3’ diameter concrete pipes
Lewis Avenue	Neponset River	Two (2) concrete box culverts 6.5’ wide
Main Street at Cobbs Pond	Unnamed	2.5’ wide concrete box/bridge
Summer St. at Neponset River	Neponset River	6’ wide concrete box/bridge
Oak Street	Unnamed	1.5’ smooth metal culvert
Plimpton Street	Neponset River	Two (2) concrete 10.7’ wide box culverts and 4’ open-bottom arch
Stone Street	Spring Brook	Two (2) 3’ diameter concrete culverts
Robbins Road	Neponset River	Two (2) 4’ diameter concrete culverts
Main Street	Neponset River	15’ wide concrete box/bridge
Summer Street	Unnamed	3’ diameter concrete pipe
Willow Street	Unnamed	2’ diameter concrete pipe

### Green Infrastructure

A screening-level assessment of potential green infrastructure (GI) retrofit sites was performed for 34 sites. Of these, 9 were selected for development of GI concepts. When applied throughout the watershed, GI can help mitigate flood risk resulting from outdated and undersized storm drainage systems and increase flood resiliency, as well as improve water quality.

### Sites Identified for GI Concept Development:

- Public Works yard
  - Recommendations: bioretention basin
- Jarvis Farm
  - Recommendations: infiltration basin and subsurface infiltration
- Walpole High School
  - Recommendations: subsurface infiltration, infiltration basin and pervious pavers
- Town Common
  - Recommendations: subsurface infiltration and pavement removal
- Town Hall and Municipal Parking Lot
  - Recommendations: bioretention basin and parking lot redesign with bioretention planters
- Old Post Road School
  - Recommendations: infiltration basin and subsurface infiltration
- Johnson Middle School
  - Recommendations: infiltration basins and pervious pavers
- Elm Street School
  - Recommendations: infiltration basins, subsurface infiltration, tree filters, and bioswale/infiltration basin
- Ellis Field
  - Recommendations: infiltration basin



