

Enhancing Flood Resiliency: Addressing Risks for Low-Lying Roads

Gloucester, MA



Presenter Slide



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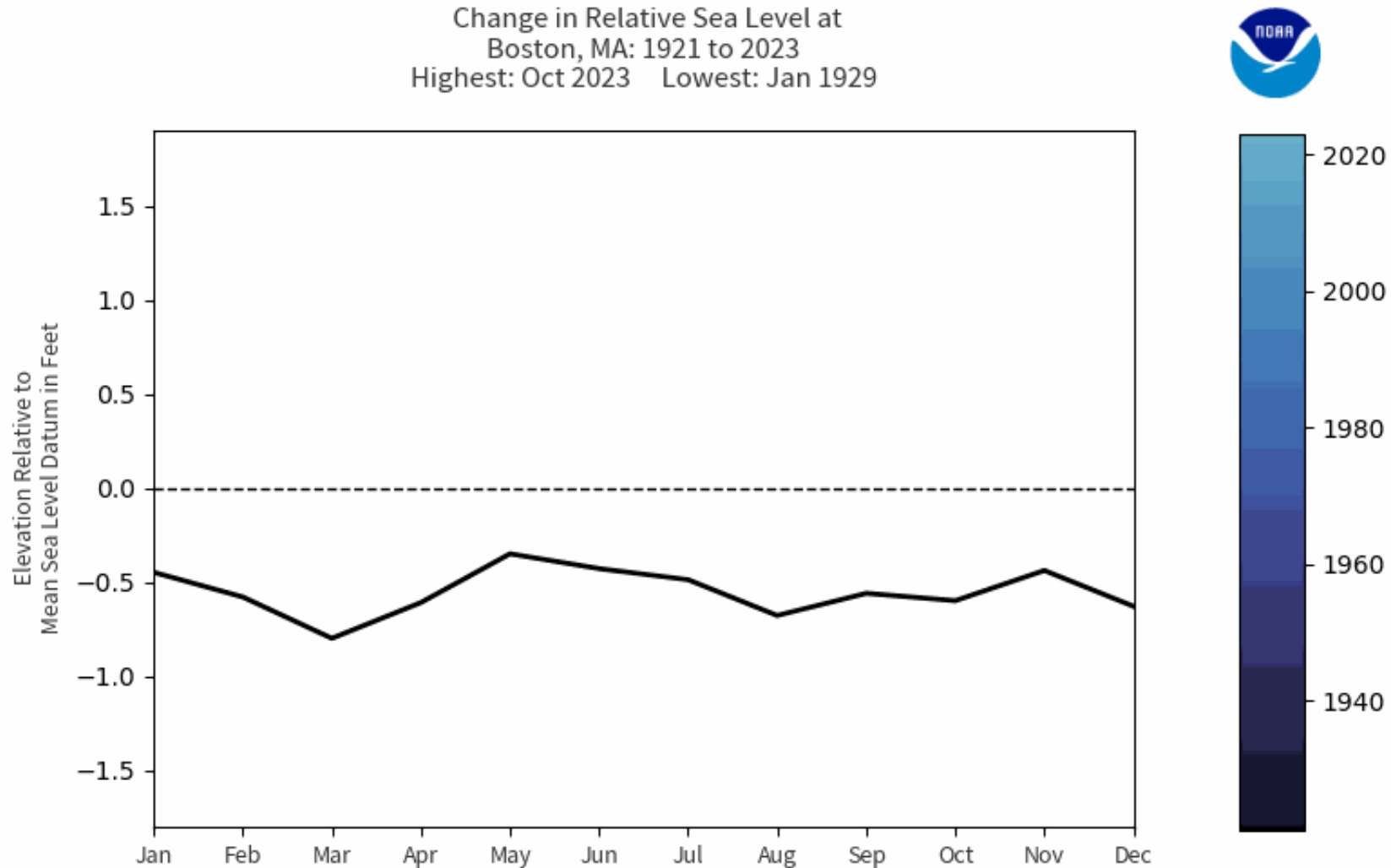
Agenda

- 1 Project Background
- 2 Study Areas
- 3 Adaptation Strategies
- 4 Next Steps

1 Project Background



Sea Level Trends in the Northeast

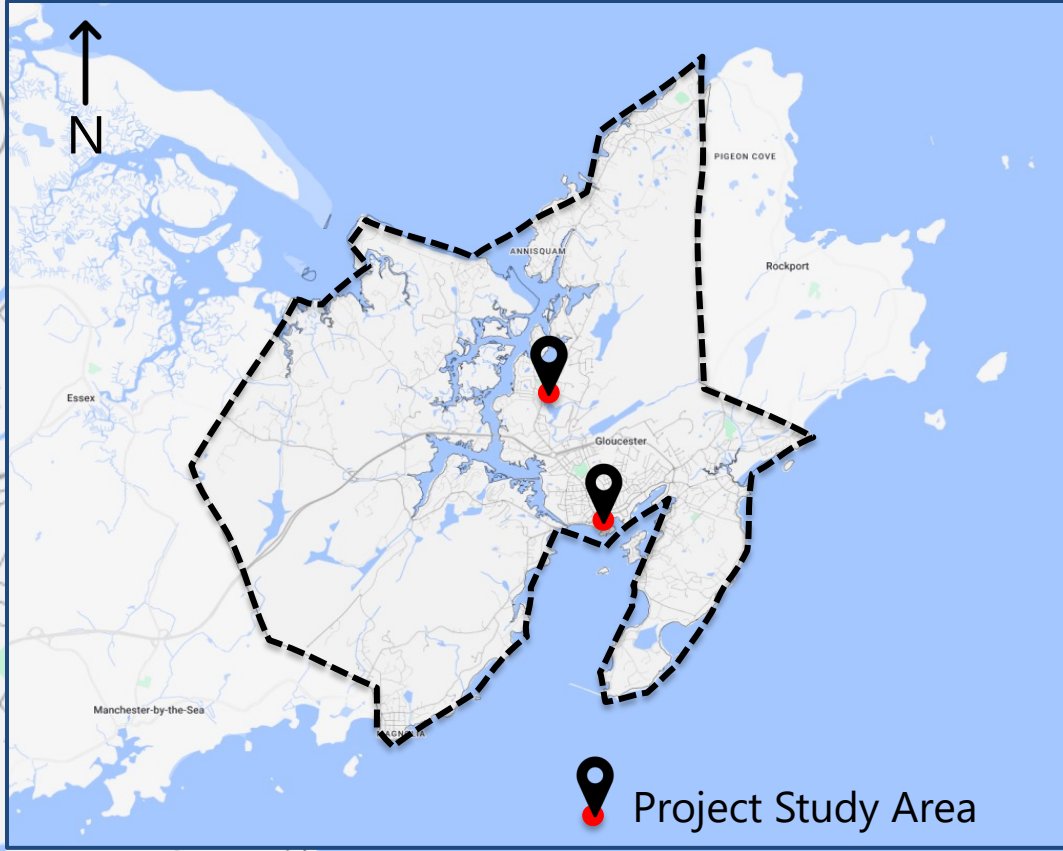
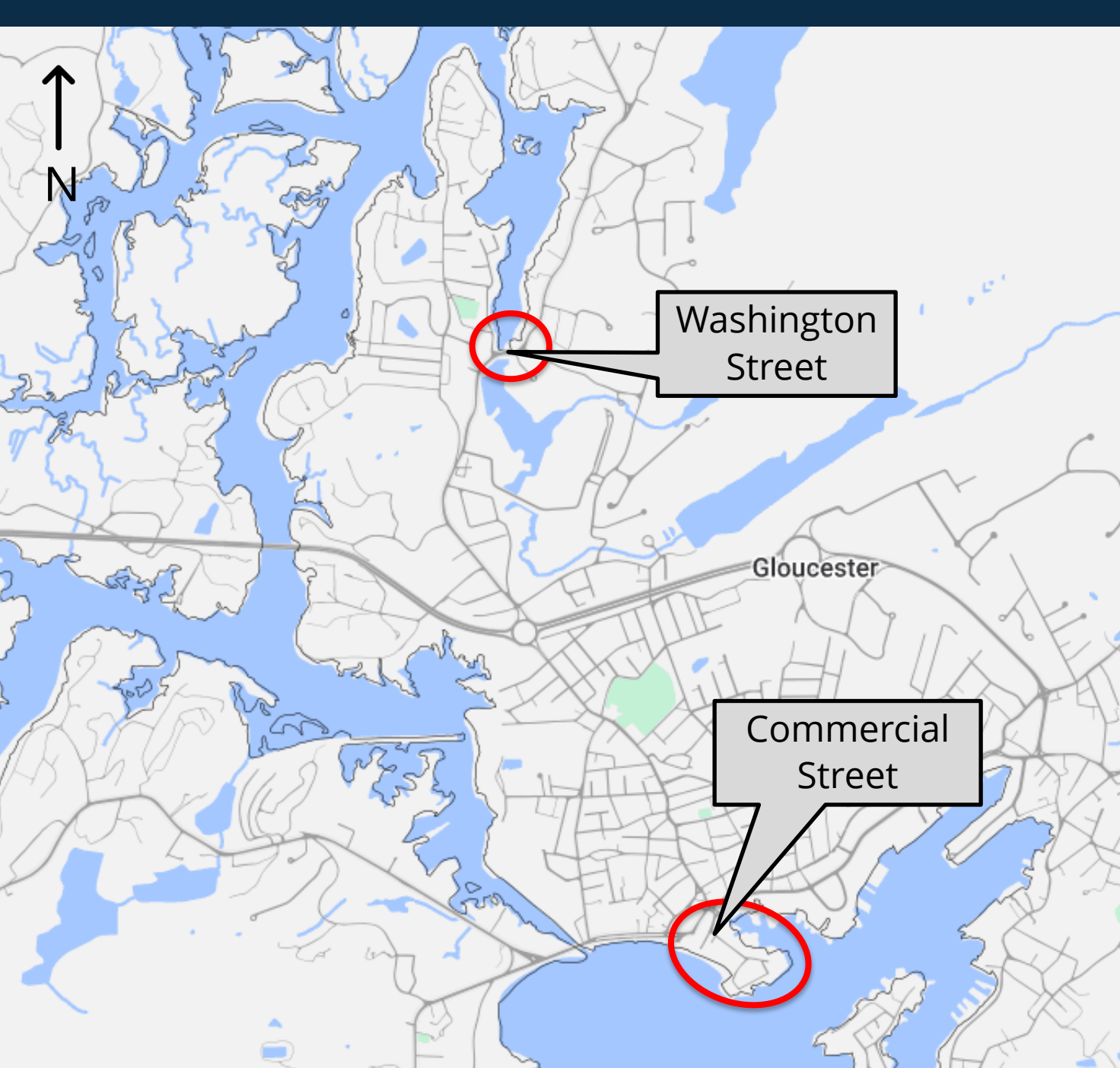


Source: MA Wildlife Climate Action Tool

Priority Roadways for Climate Resilience



Source: Woods Hole Group Vulnerability Assessment – Total Risk Scores for 2070



2 Study Areas

Commercial Street

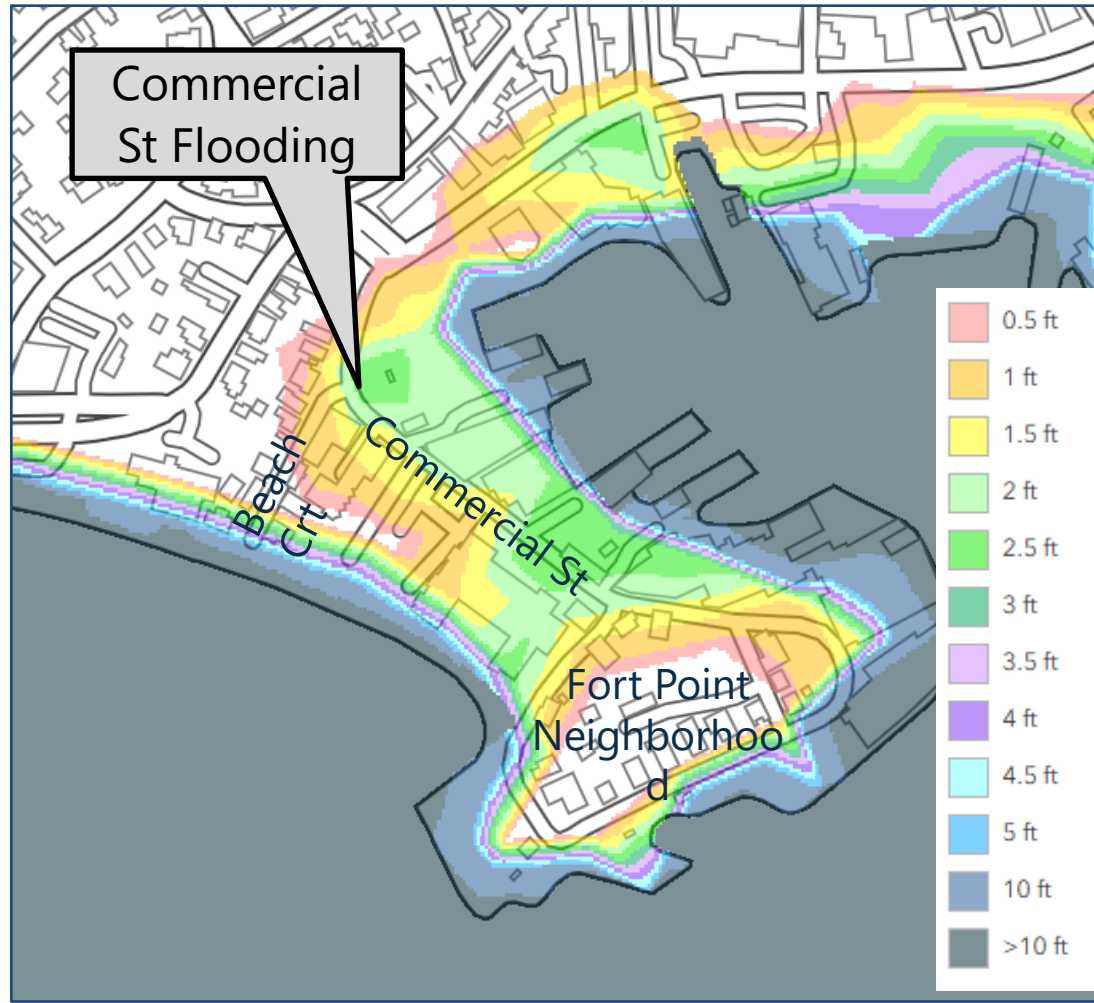


Commercial Street

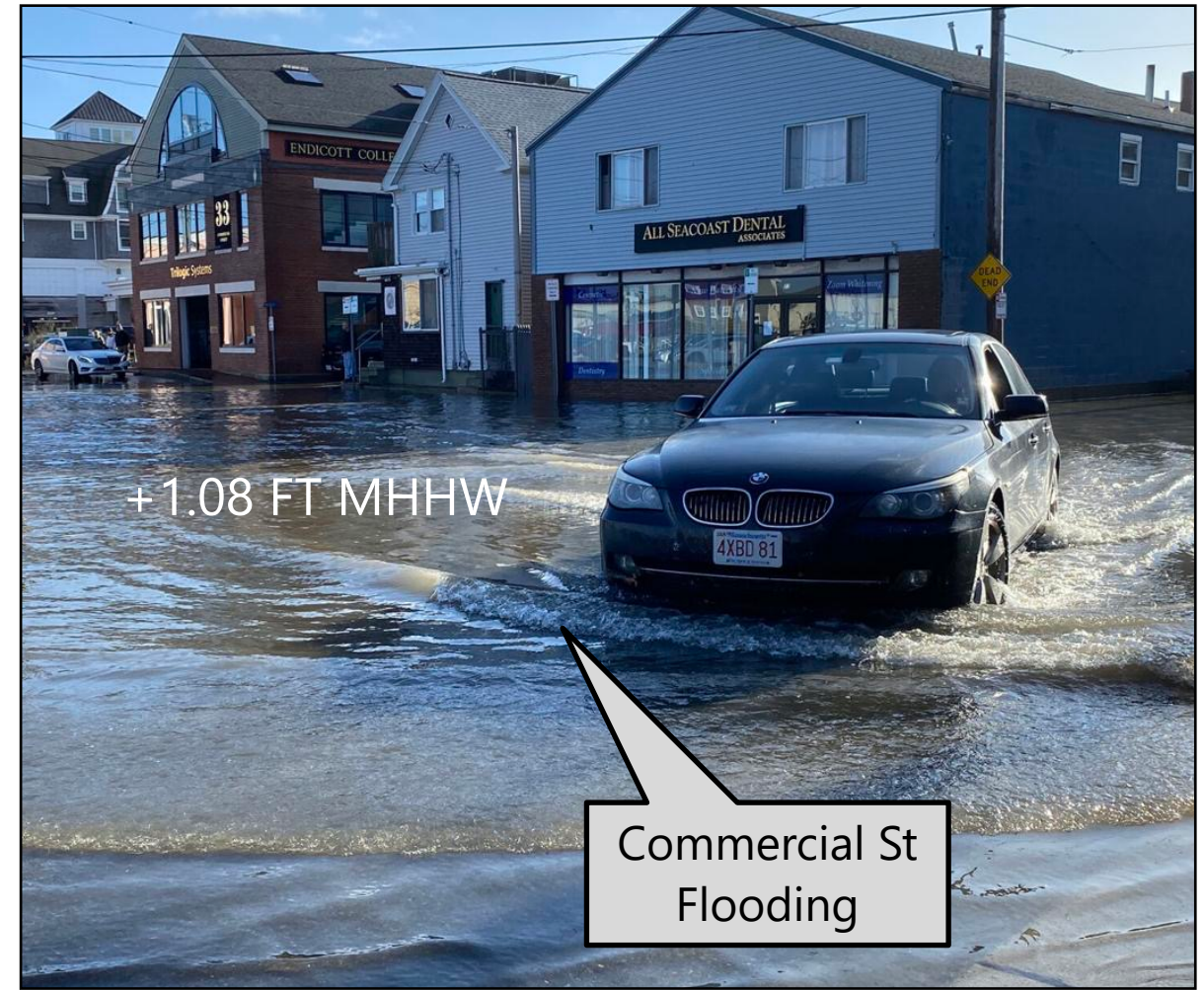


Source: Good Morning Gloucester

Commercial Street Flooding

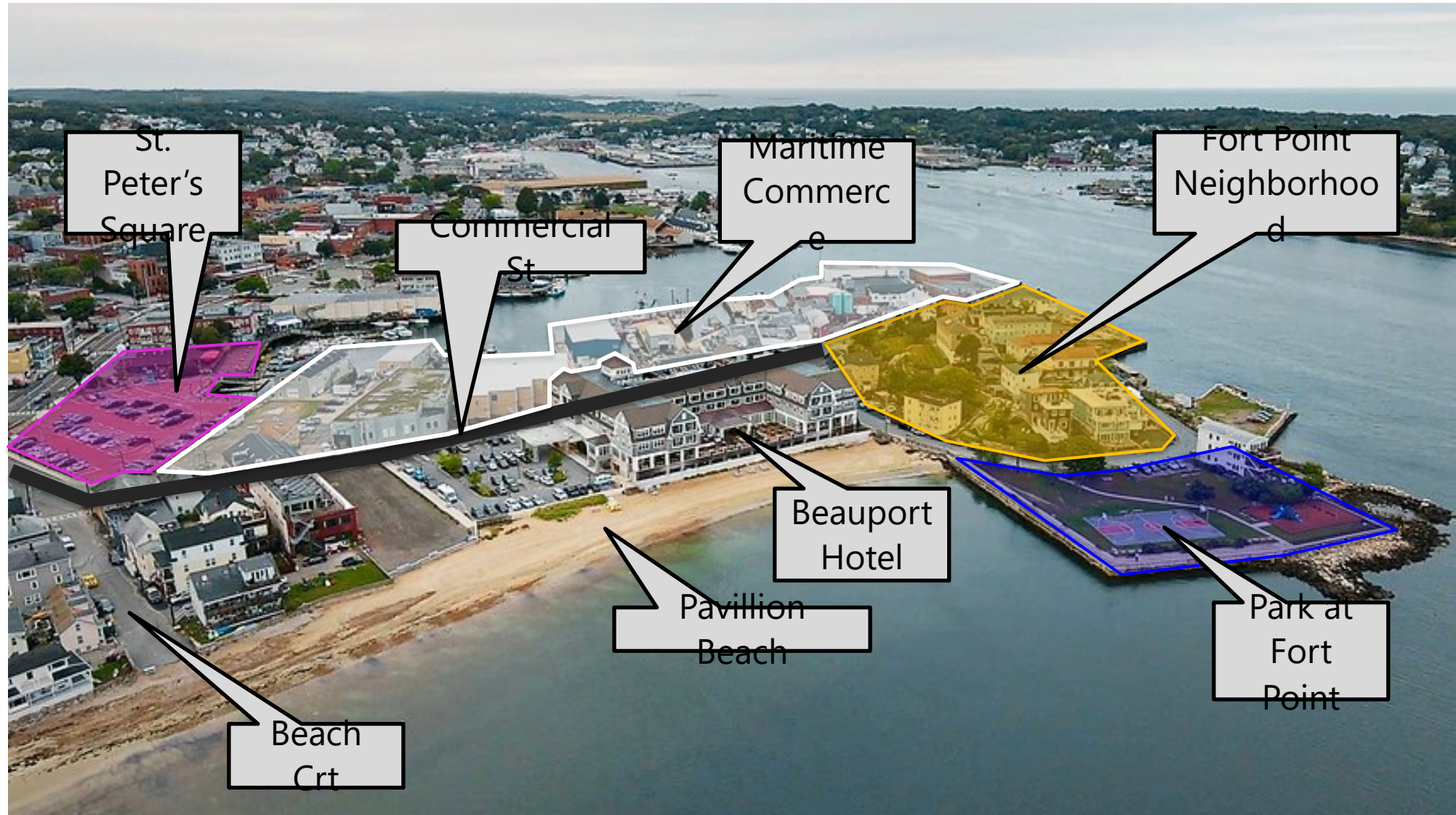


MC-FRM 2030 Flood Depths – 1% ACFEP

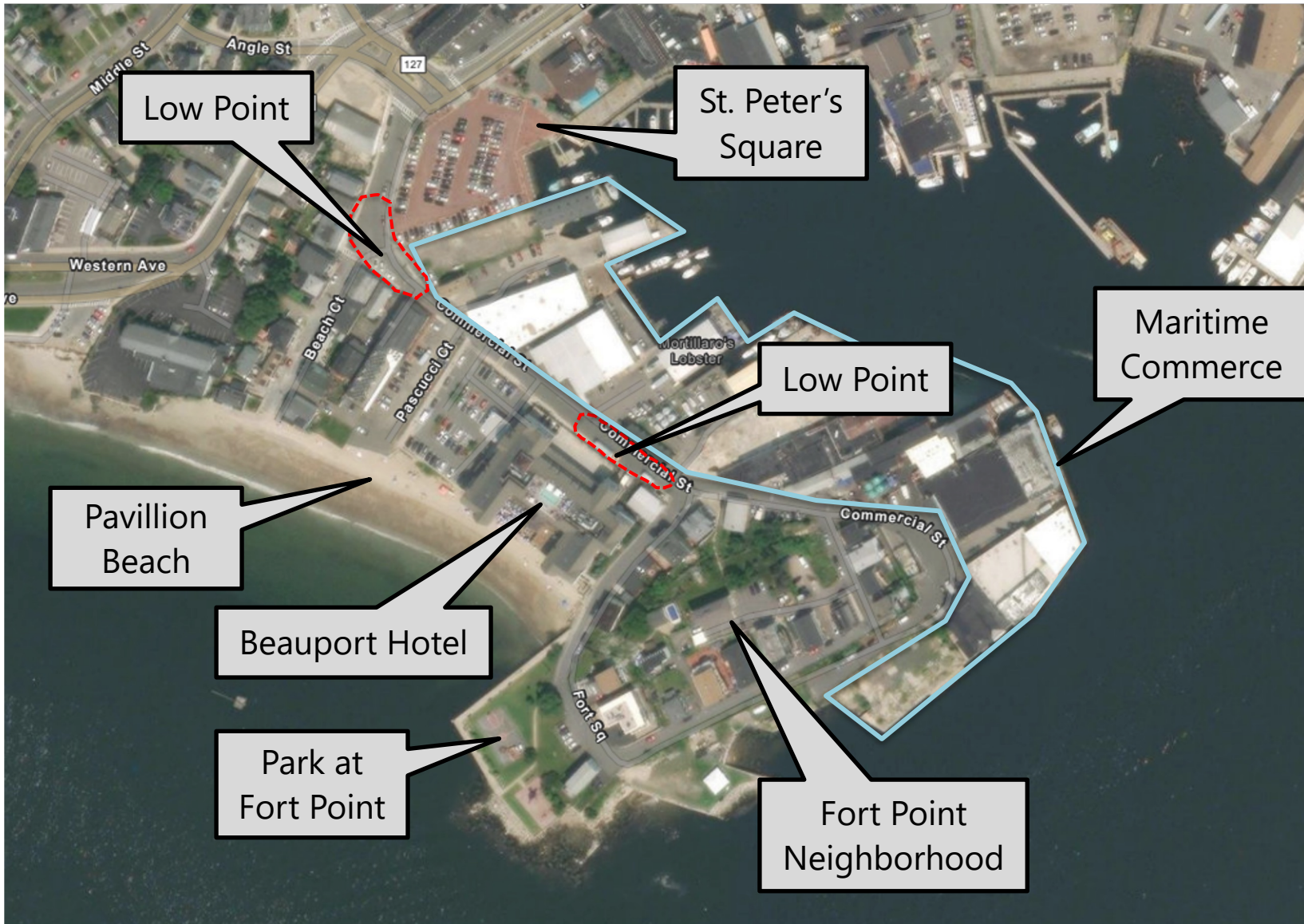


High tide at Commercial St. following January 13, 2024 storm.

Commercial Street

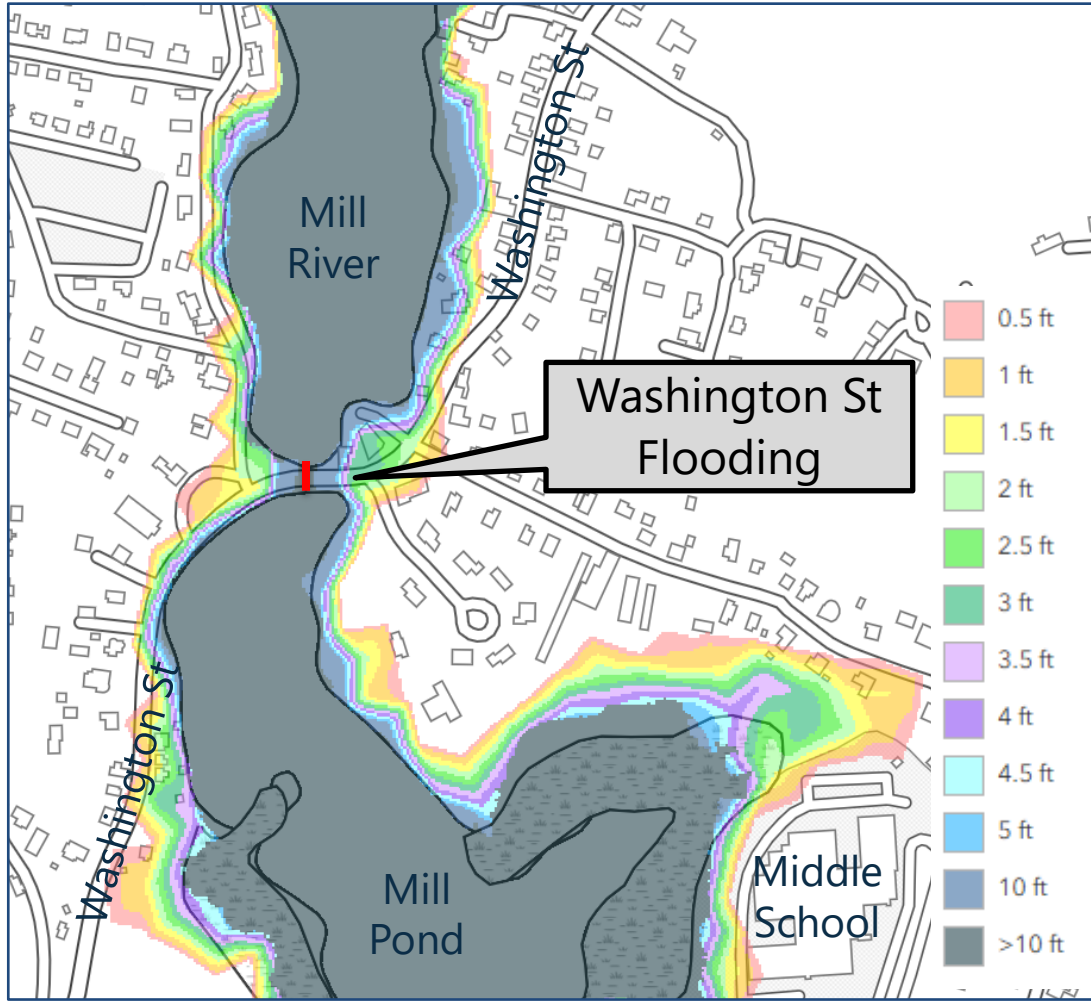


Commercial Street





Washington Street Flooding

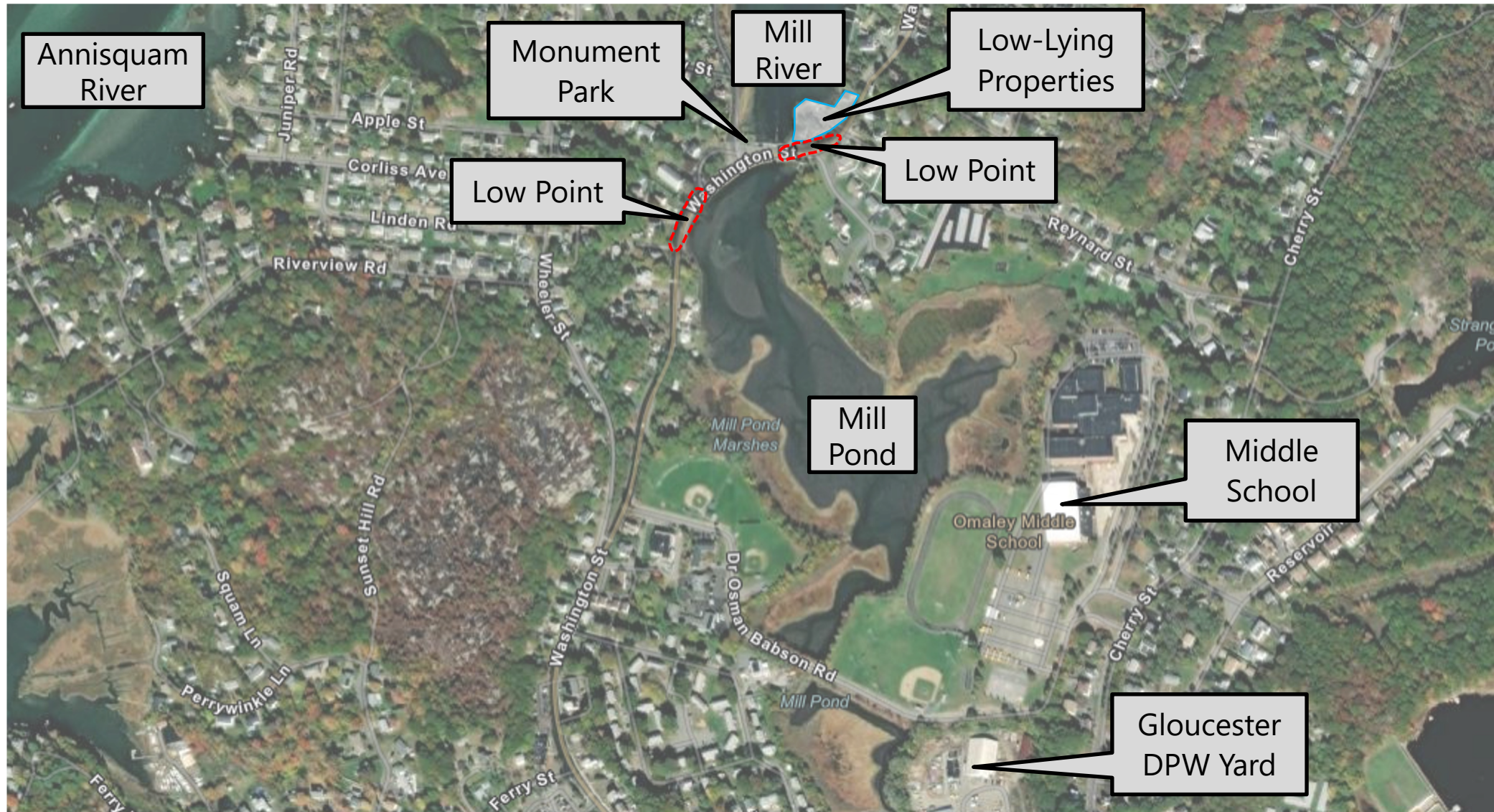


MC-FRM 2030 Flood Depths – 1% ACFEP

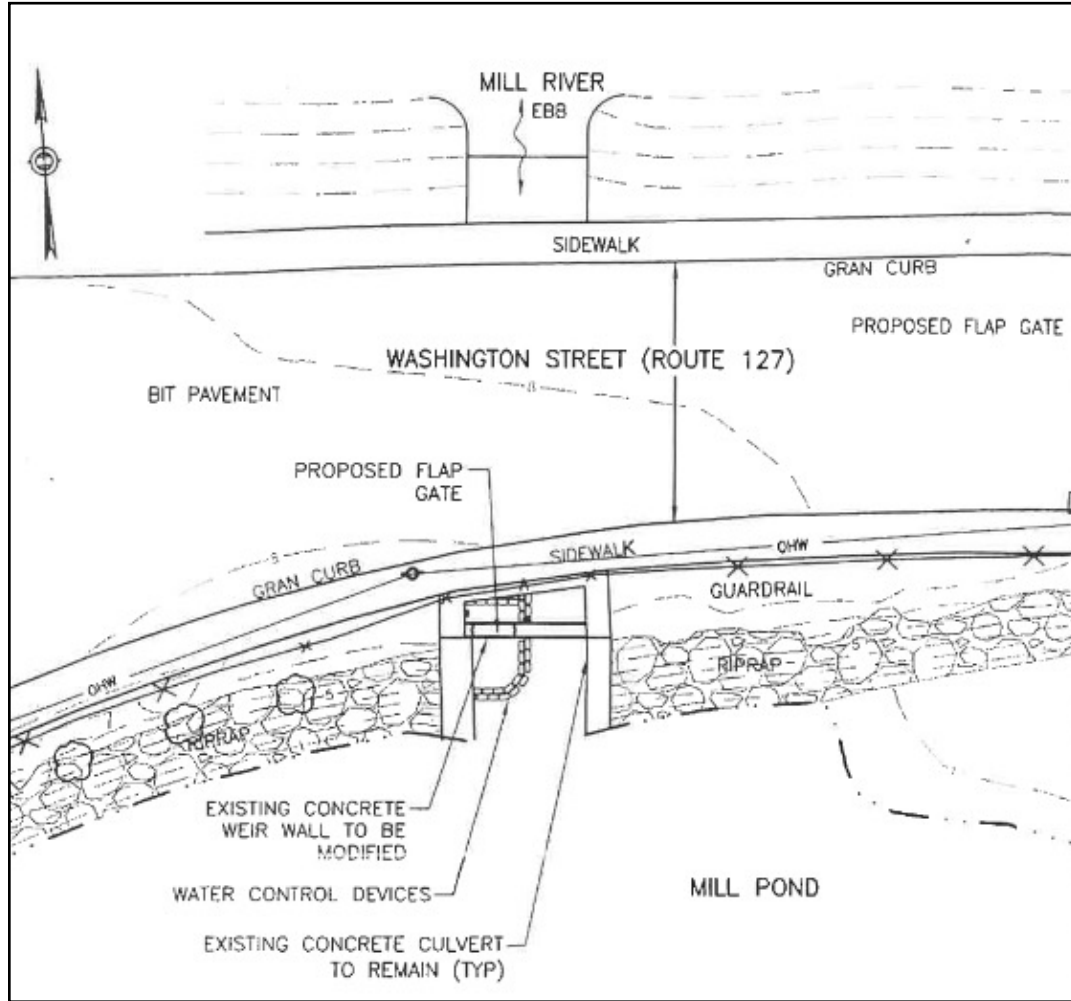


Flooding during June 22, 2024 storm event.
Source: Gloucester Resident

Washington Street



Washington Street



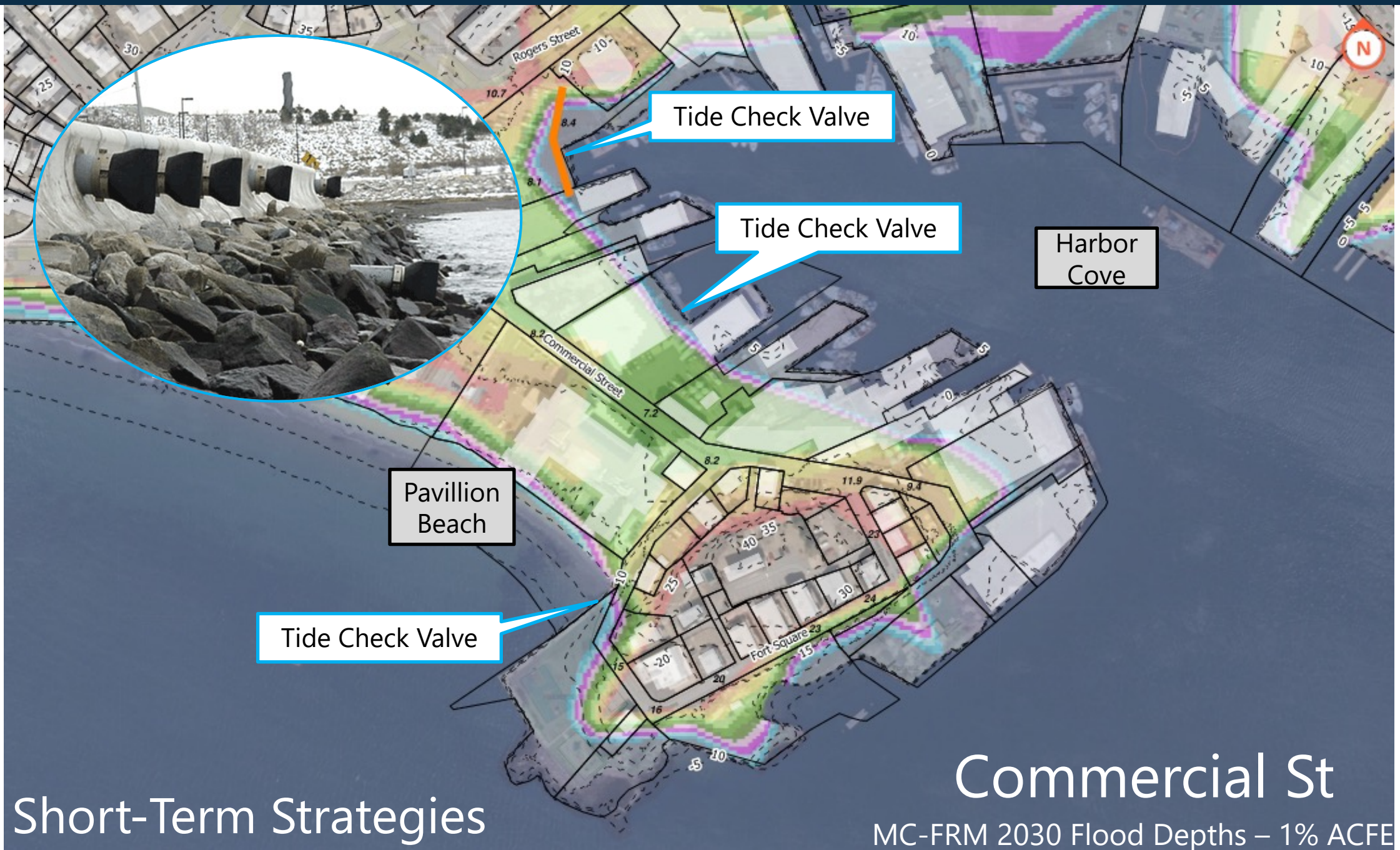
Tide Gate Replacement Plan – November 2009
Source: City of Gloucester



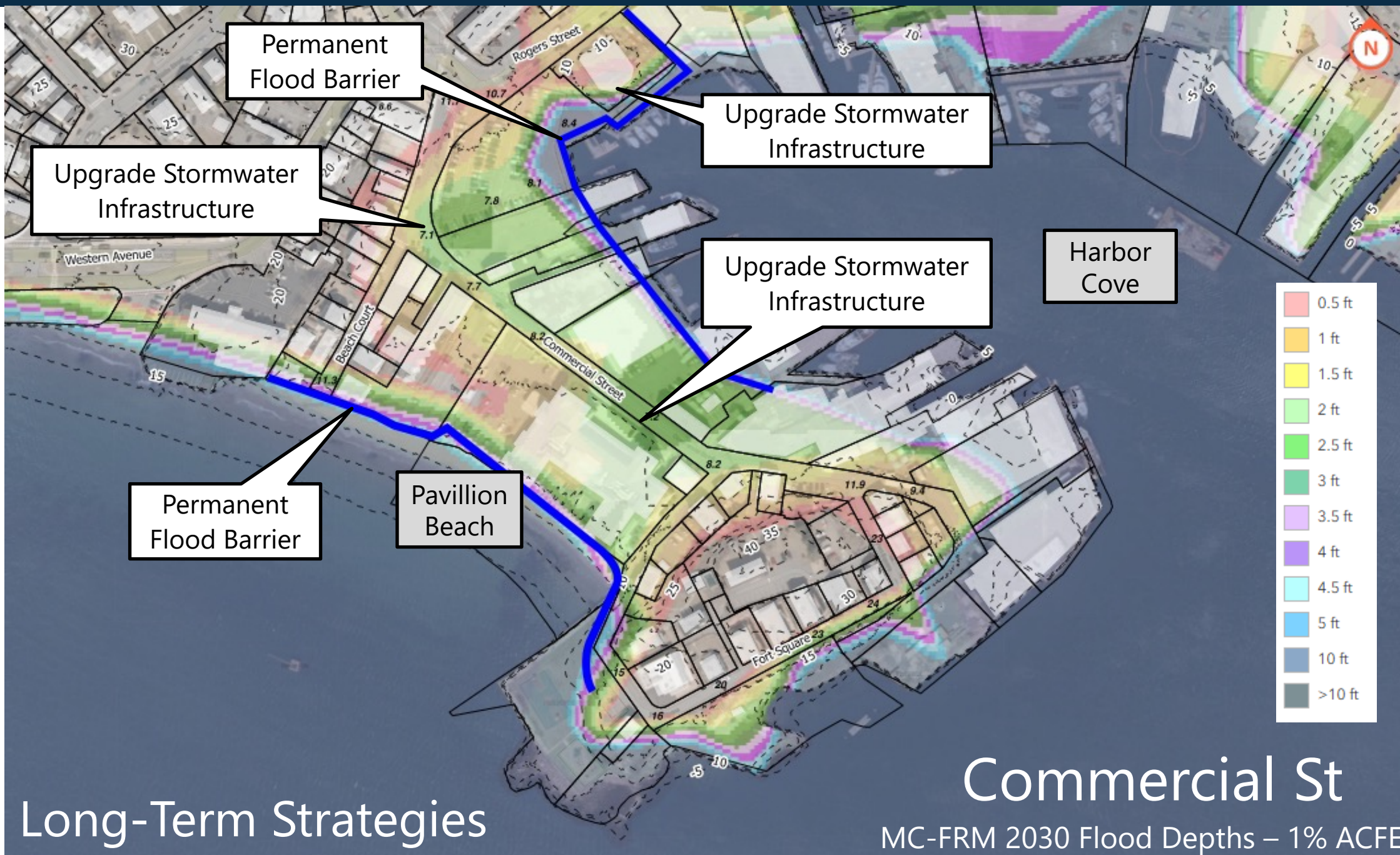
Mill Pond side of Washington St.

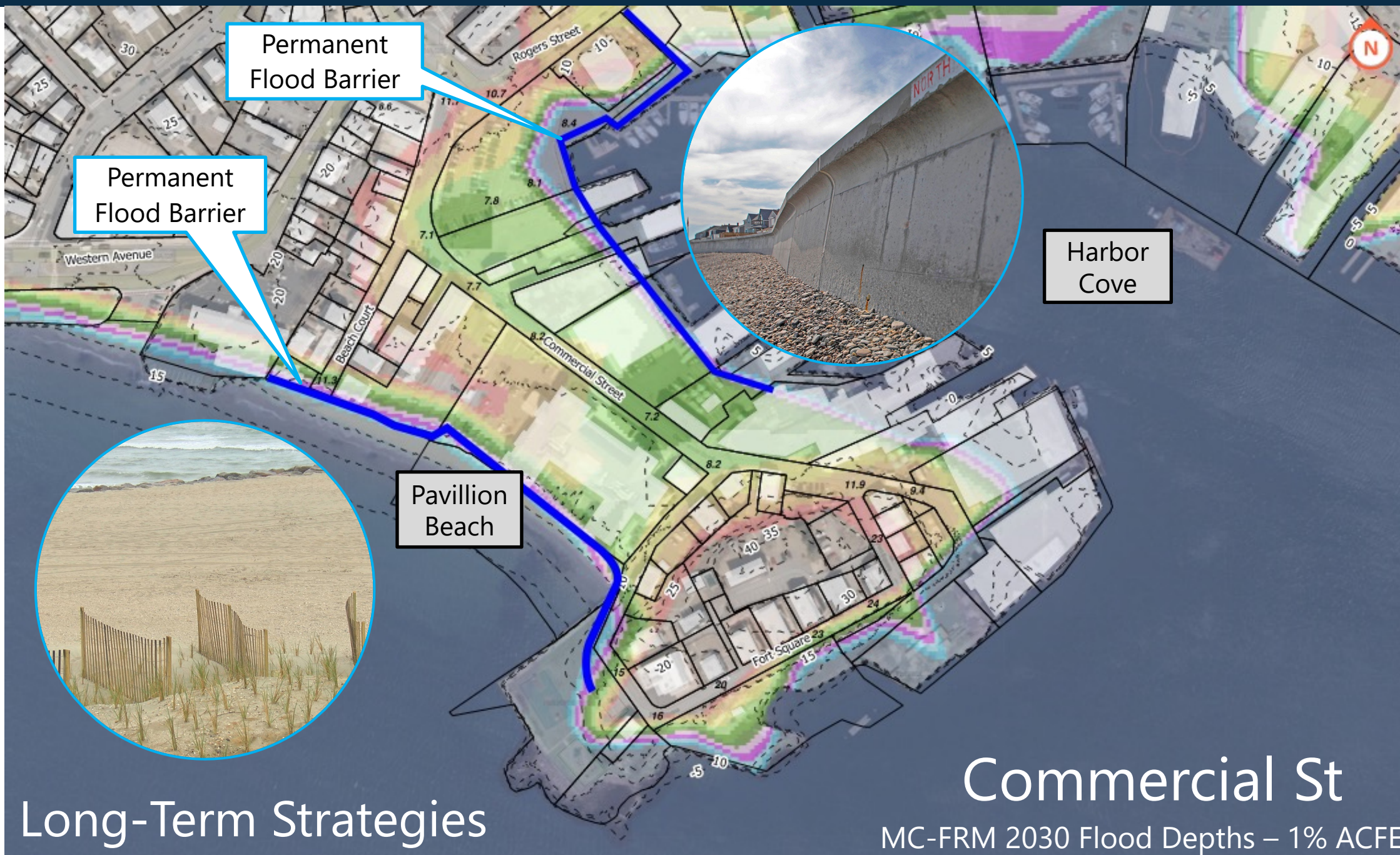


4 Adaptation Strategies









Washington St

MC-FRM 2030 Flood Depths – 1% ACFEP



Short-Term Strategies

Washington St

MC-FRM 2030 Flood Depths – 1% ACFEP



Sump Pump

Sump Pump

Mill River

Mill Pond

Short-Term Strategies

Washington St

MC-FRM 2030 Flood Depths – 1% ACFEP



Long-Term Strategies

Washington St

MC-FRM 2030 Flood Depths – 1% ACFEP

Mill River

Self-Regulating
Tide Gate

Mill
Pond

Long-Term Strategies



5 Next Steps



Next Steps

- H-H Modeling
- Constructability Assessment
- Environmental Impacts Review
- Funding Opportunities
- Community Engagement

Commercial Street Roadway Segment	
Short-Term	\$500k
Long-Term	\$24M

Washington Street Roadway Segment	
Short-Term	\$630k
Long-Term	\$26.4M

Acknowledgements



Municipal Vulnerability
Preparedness Program



City of
Gloucester



Innovative
Gloucester



Woods Hole
Group

Questions?



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