

# Prioritizing Resilience: From Planning to Capital Investments



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City of Gloucester







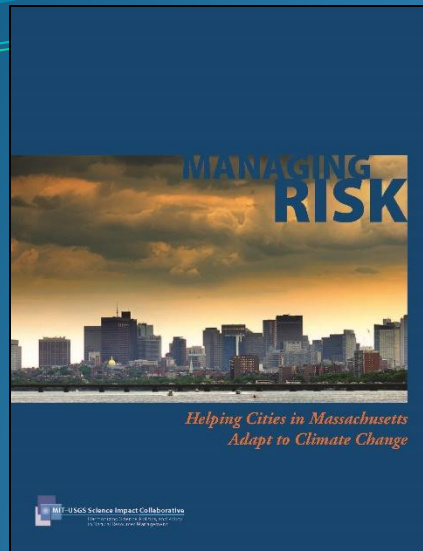




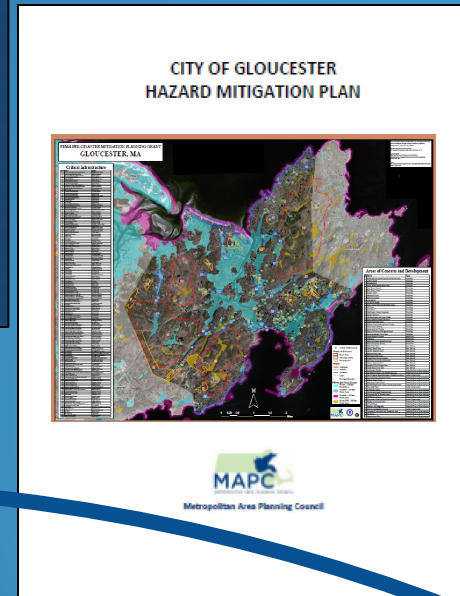
# Outline

- Brief History of Resilience Planning (What we looked at)
  - Reports, Assessment, Evaluations
- Project Identification and Funding (What we have done and why)
  - Coastal Sewer Pump Stations
  - Gloucester High School Flood Barrier
  - Water Pollution Control Facility Flood Barrier
- Lessons Learned and Strategies for the Future
  - Role of Community Engagement
  - Capital Planning
  - Prioritizing Resilience

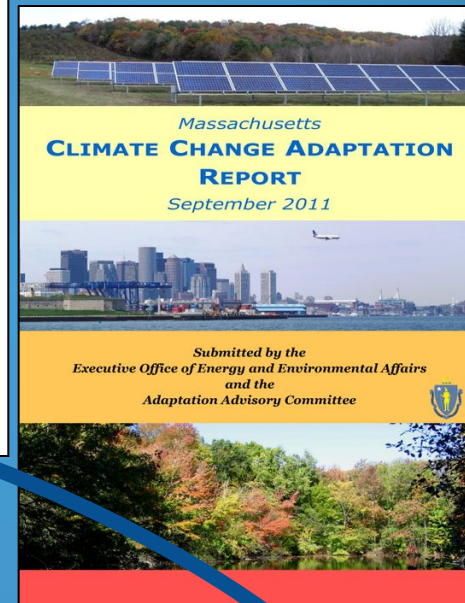
# Resiliency Planning



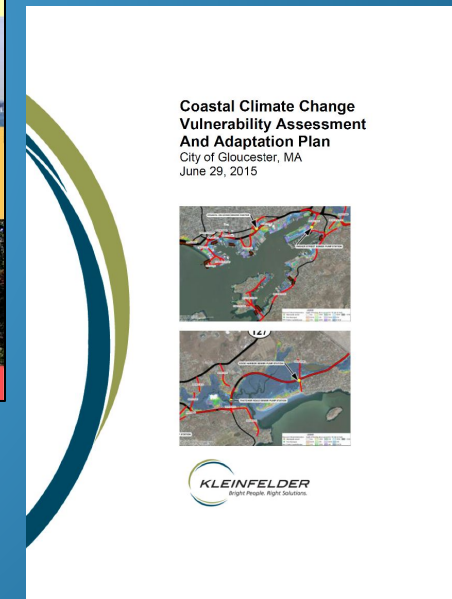
“We need better data”



“Doesn't consider the future”

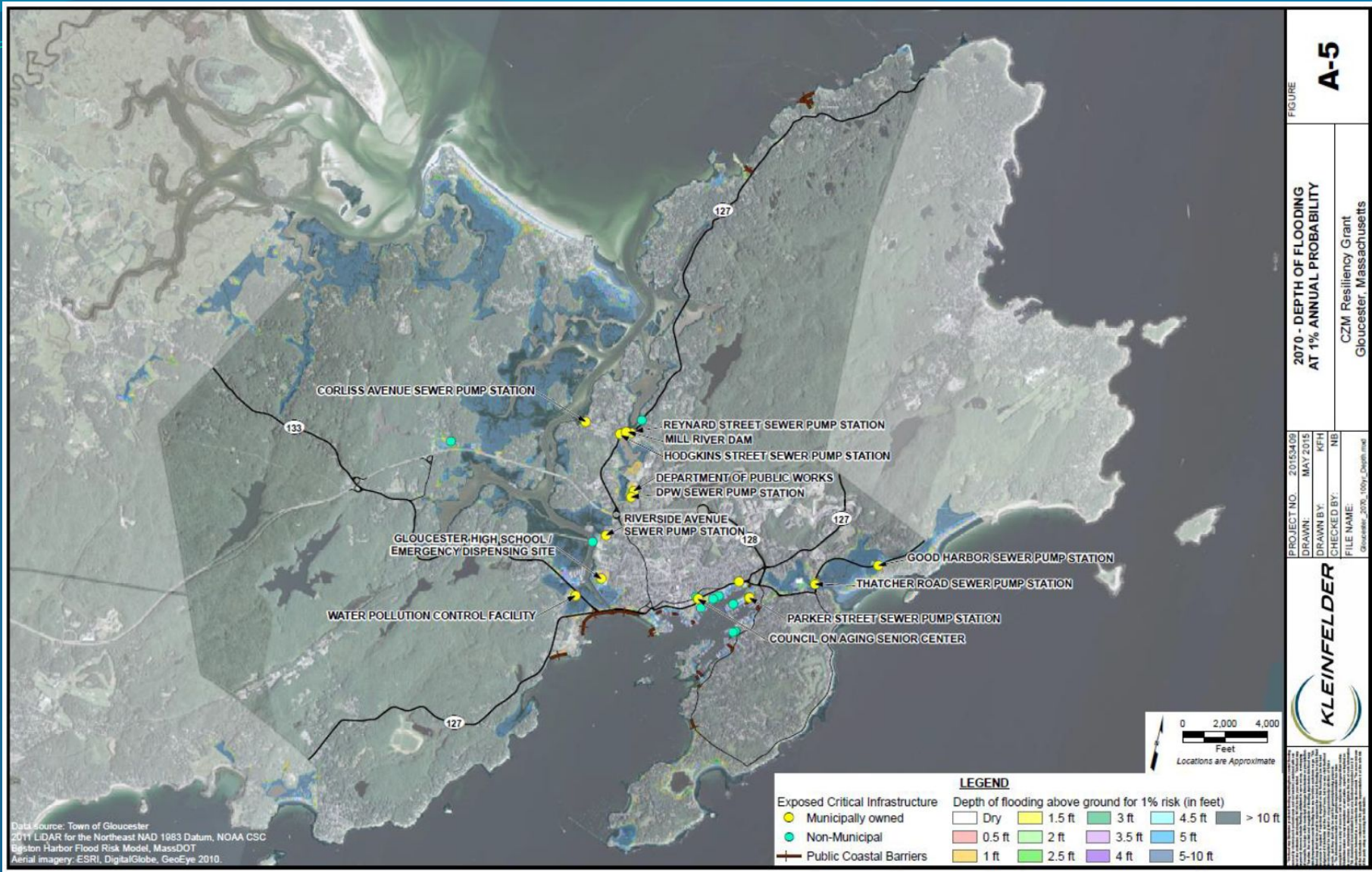


“Help and guidance From the state\*”



“Funding!”





Static Map Example of Risk Assessment

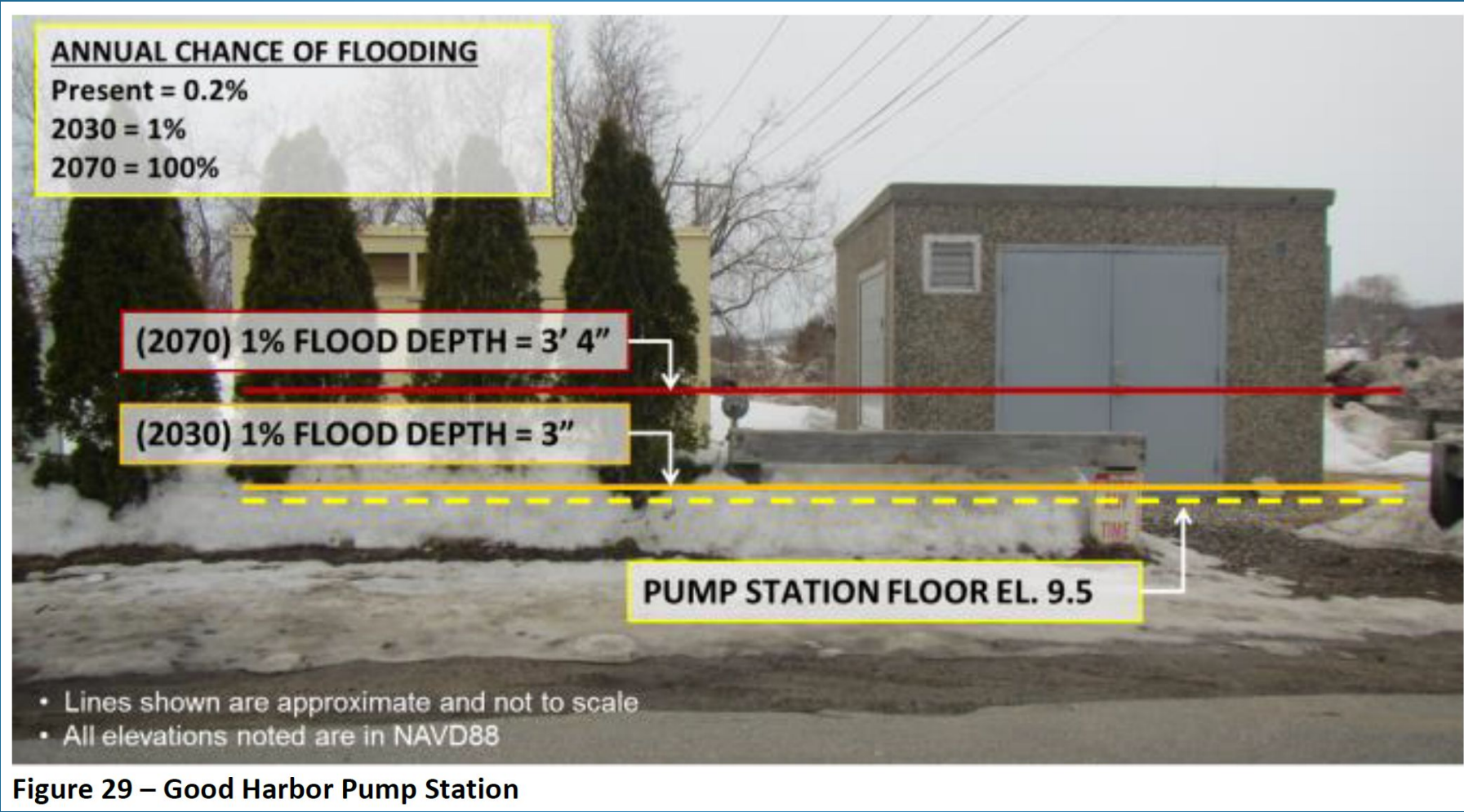


Figure 29 – Good Harbor Pump Station



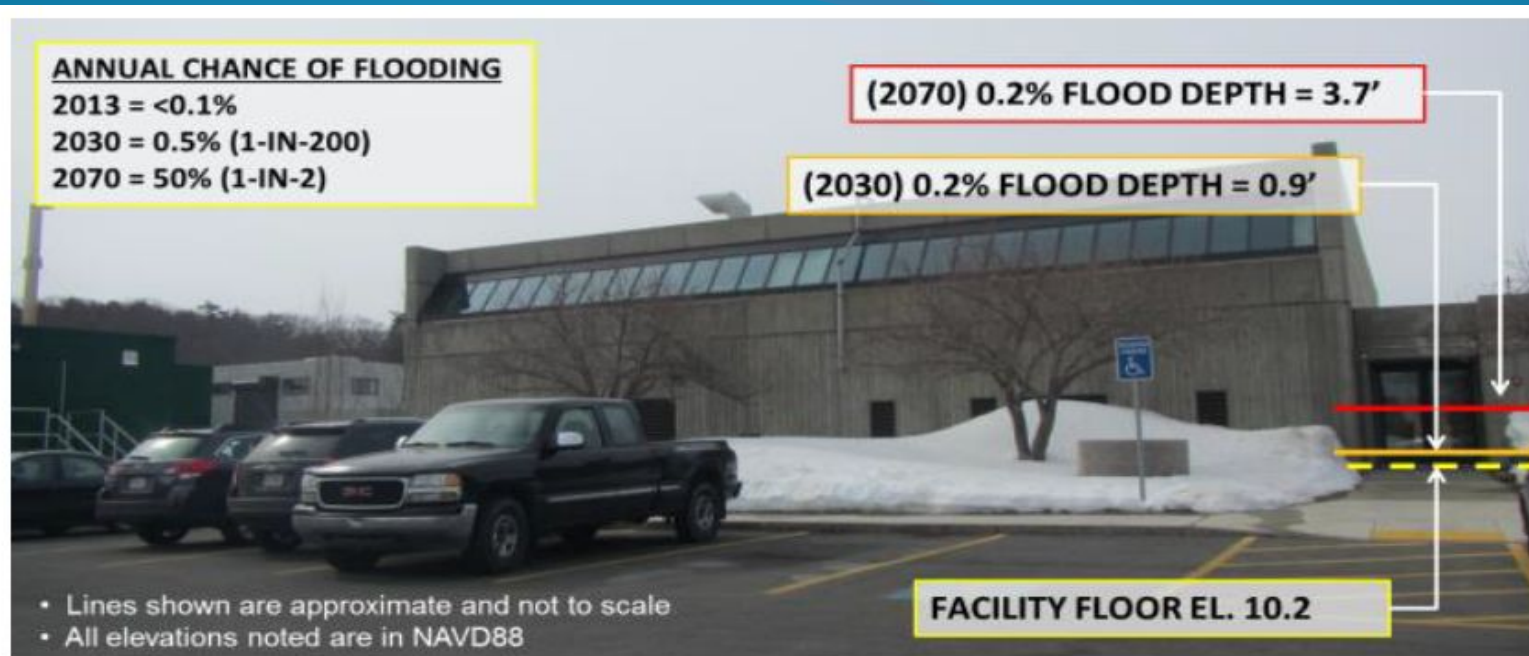


Figure 26 - Water Pollution Control Facility Elevation and Flood Risk

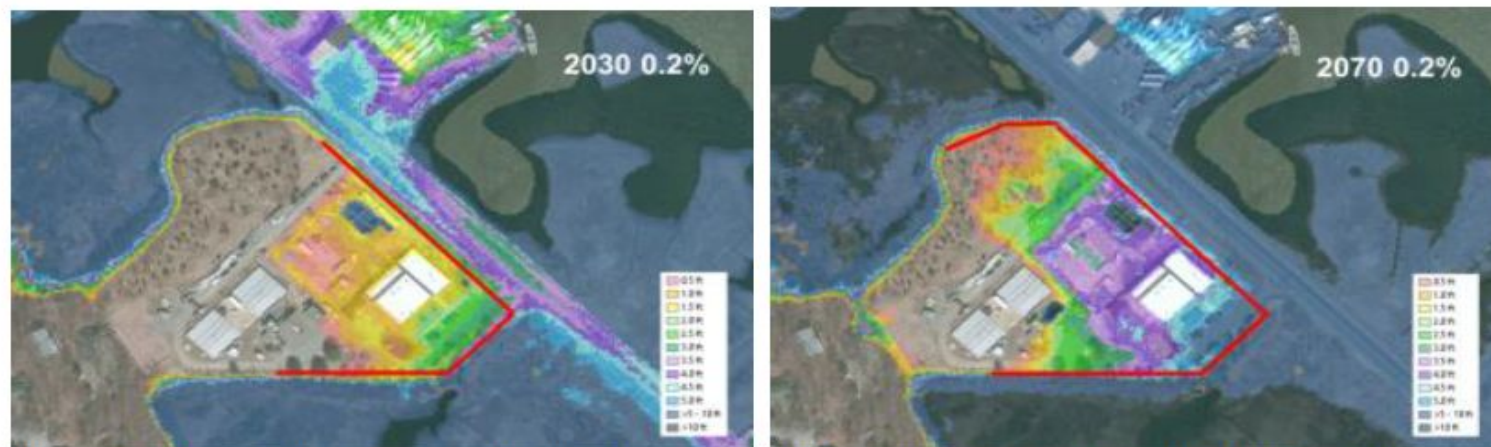
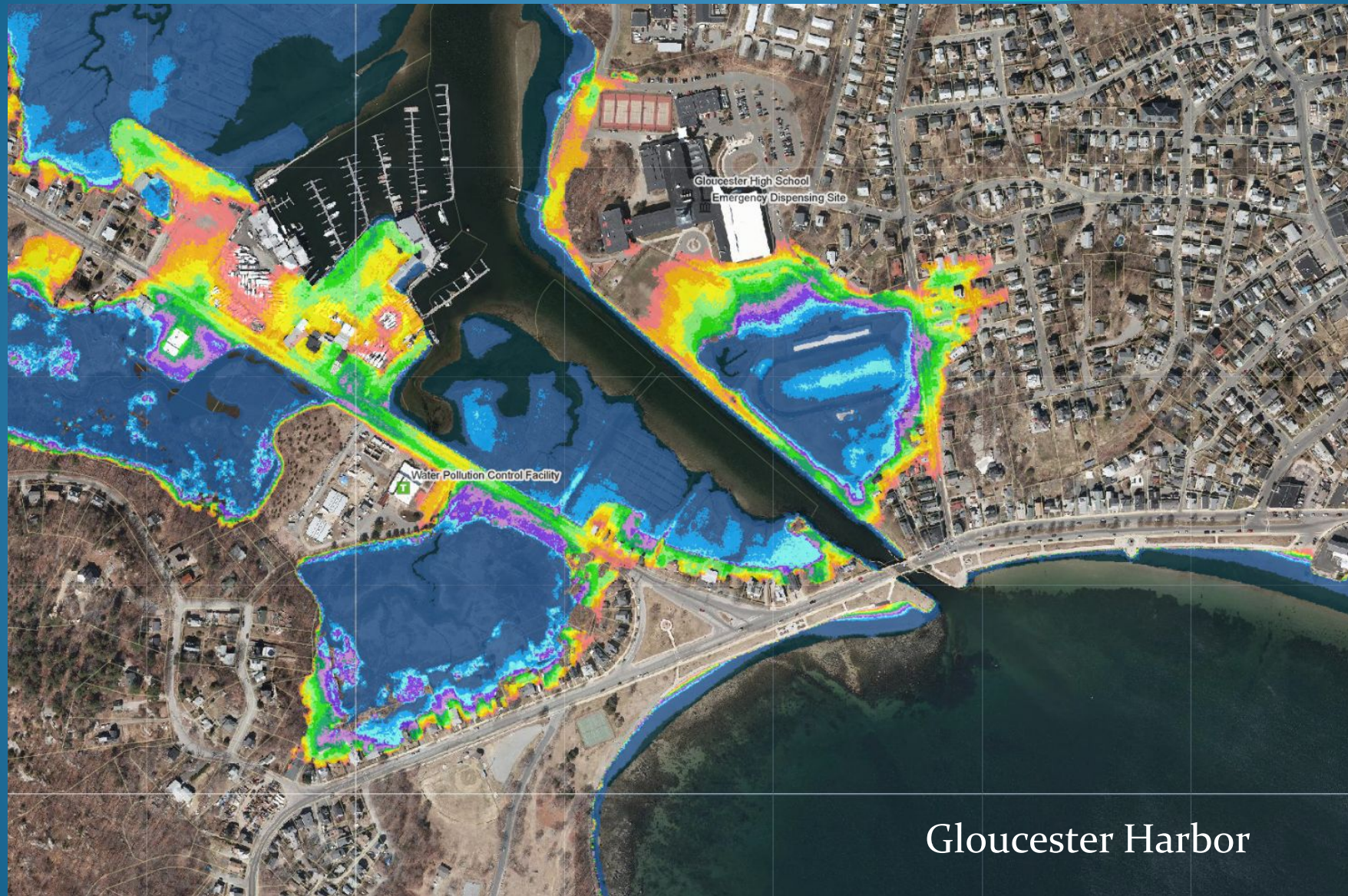


Figure 27 - Water Pollution Control Facility - Incremental Adaptation Options for 0.2% Flood Protection

# Analysis of Critical Facilities





Gloucester Harbor

Online Viewer –GHS Campus



# Winter Storm Riley 2018







Winter Storm Riley '18



Gloucester  
Community Resilience  
Workshop Summary of Findings

Prepared for:

Executive Office of Energy and Environmental Affairs  
Municipal Vulnerability Program (MVP)

Prepared by:

MAPC and the City of Gloucester  
06/30/2018



Gloucester Harbor (Credit: USHarbors.com)

# Municipal Vulnerability Preparedness (MVP) Program (2018)

- Stakeholder Engagement
- Social, Environmental and Infrastructure assets and vulnerabilities
- Beyond coastal flooding
- New initiatives and projects



**Bld Seawall**

**WWTP**

**GHS**

**MBTA**





# Gloucester High School Flood Barrier

TOTAL PROJECT COST ~ \$3.6 million

Design - \$85,000

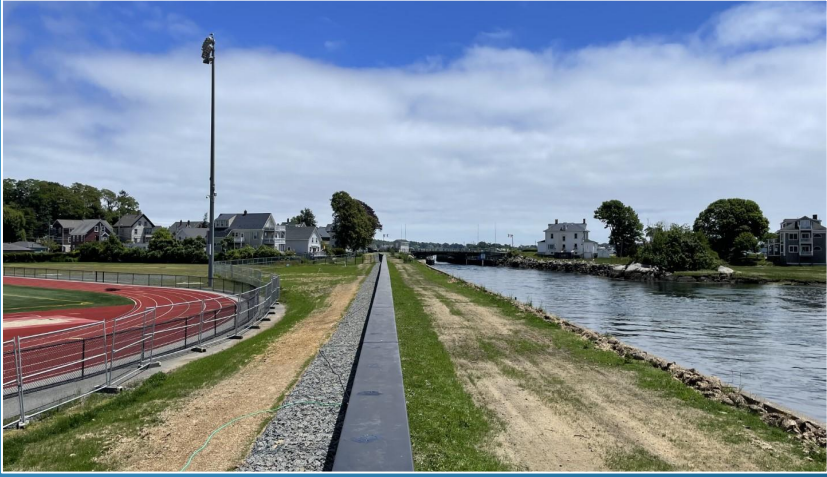
- CZM Grant - \$63,000
- City Match - \$22,000 (25% match)

Construction - \$3.5 million

- Dam and Seawall Grant Program - \$2 million
- City Match - \$1.5 million (~35% match)



# GHS Flood Barrier



# Water Pollution Control Facility Flood Barrier

TOTAL PROJECT COST ~\$4.8 million

Design Cost - \$95,000

- CZM Grant - \$70,000
- City Match - \$25,000 (25% match)

Construction - \$4.7million

- EDA Grant - \$3 million
- City Match - \$1.7 million (36% match)



# WPCF Flood Barrier



# Funding Sources

- Planning/Design
  - CZM Coastal Resilience, MVP Action, Seaport Economic Council, MAPC TAP, MassDevelopment, DER Preliminary Design Services, DEP Clean Water Trust
- Construction
  - Seaport Economic Council, Dam and Seawall Program, MVP Action, EDA, FEMA



# Lessons Learned and Strategies for the Future

- Role of Community Engagement
- Capital Planning
- Prioritizing Resilience  
Sustainability Coordinator



Questions?

