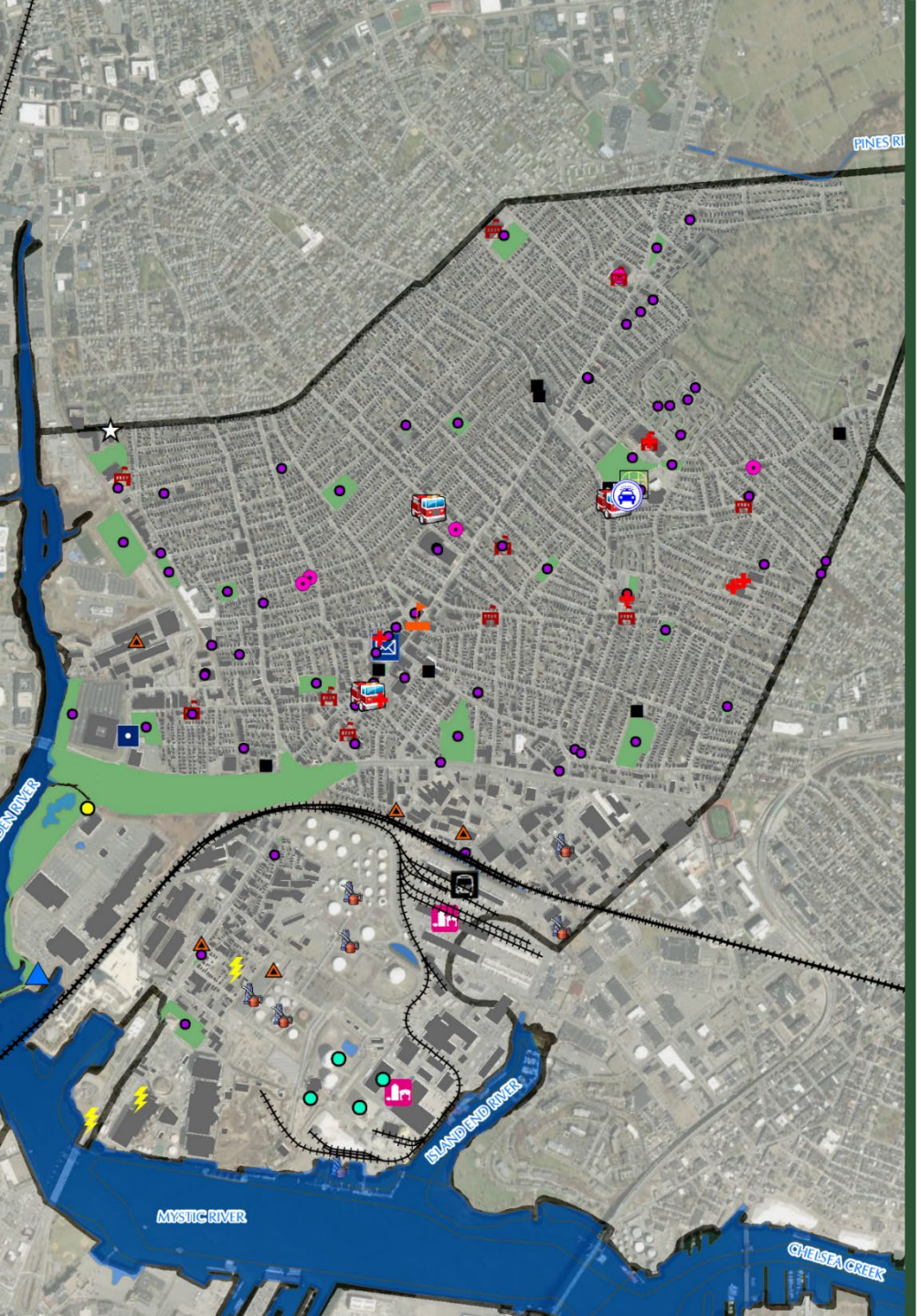


Everett 2021 Hazard Mitigation Plan Update

PUBLIC MEETING – CONSERVATION COMMISSION
JULY 15, 2021

Agenda

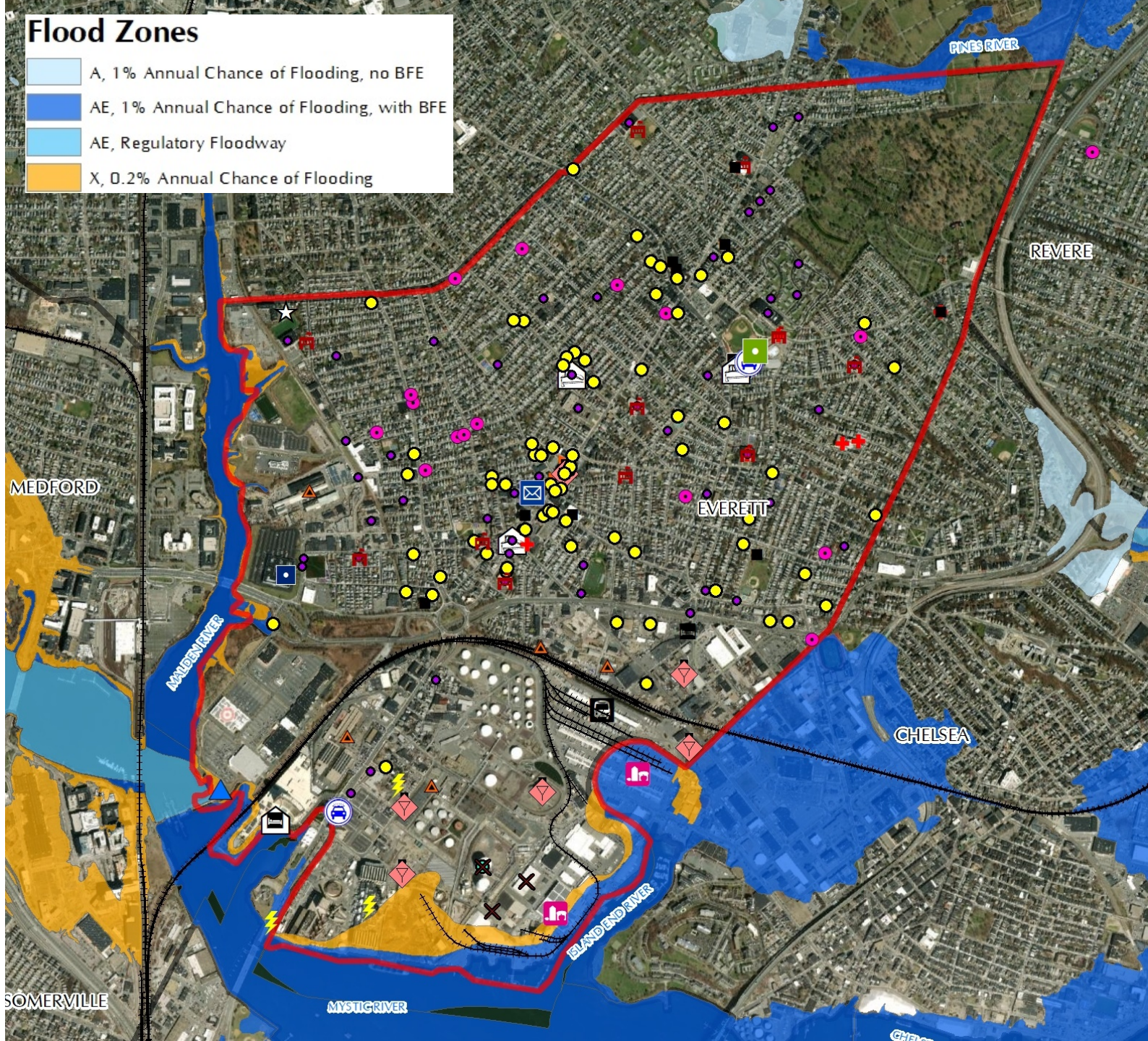
Overview of 2021 HMP Update

Risks and Hazards

Next Steps

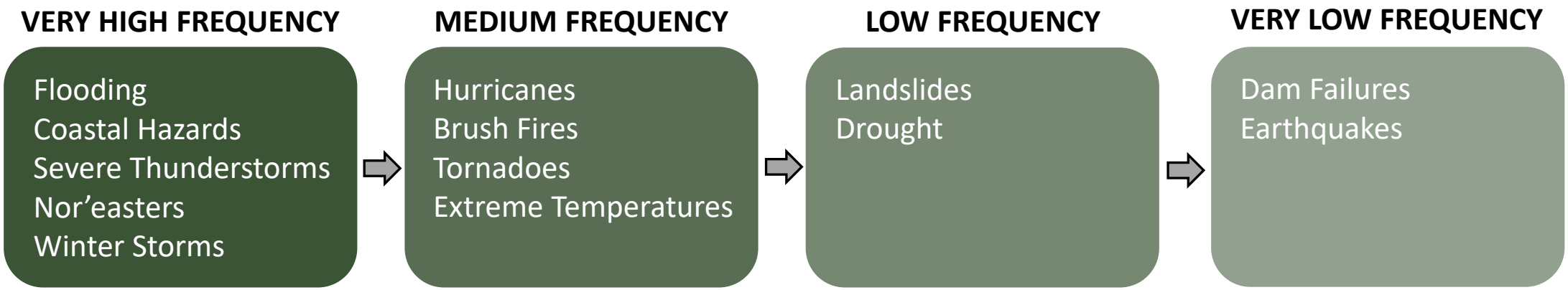
Why We're Here: FEMA HMP Requirements

- The 2000 Federal Disaster Mitigation Act requires communities that wish to qualify for FEMA funding adopt a local multi-hazard mitigation plan.
  - Plans must be updated in five-year intervals and involve a robust community engagement process.
- Hazard mitigation includes "any sustainable action that reduces or eliminates long-term risk to people and property from future disasters."

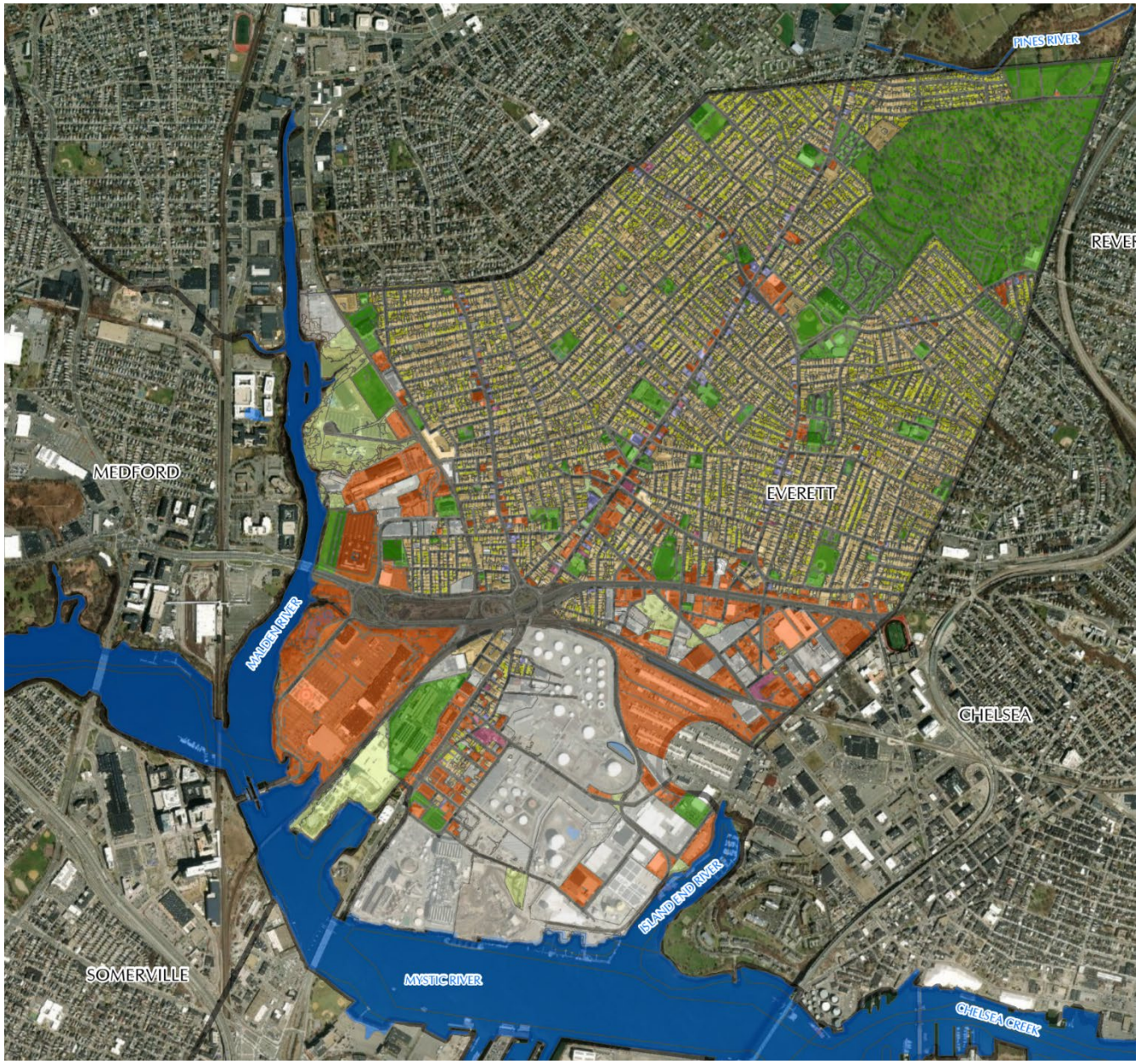


Everett HMP History

- Everett first participated in hazard mitigation planning in 2004, when it and eight other Metro Boston communities filed the Metro Boston Multi Jurisdictional Hazard Mitigation Plan under the guidance of MAPC.
- The City's first individual HMP was prepared by MAPC and filed in 2015. It was approved by FEMA in October 2016.
- Building on public participation and stakeholder engagement, the 2015 HMP Update identified nine mitigation goals to reduce the dangers to life and property from the following community-identified natural hazard events:



Risks and Hazards



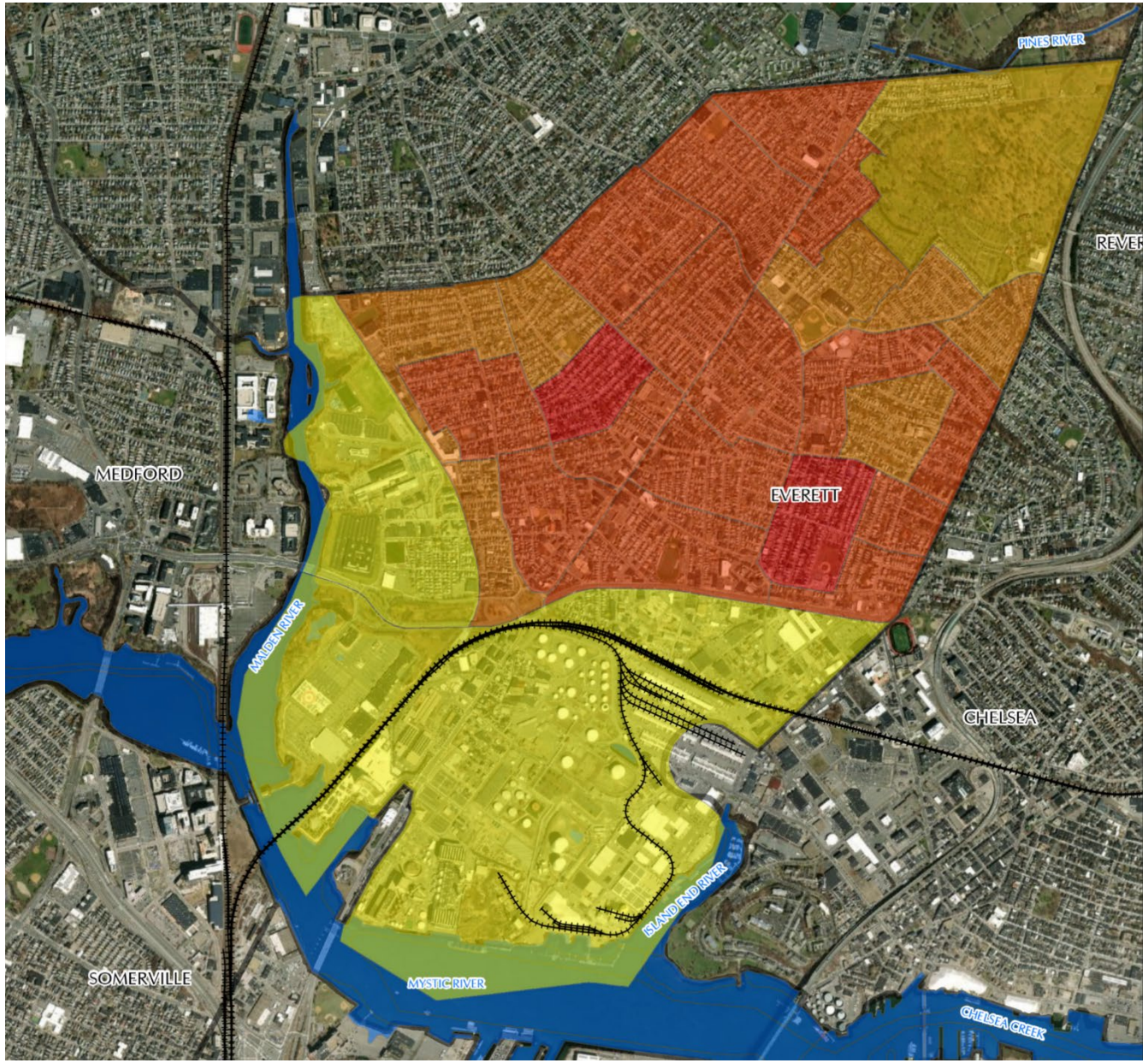
Community Context

Land Use

- Infill of commercial and residential uses in industrial areas along Mystic, Malden, and Island End Rivers
- Robust economic development
- New residents and visitors to the city
- Increased impact on municipal services and infrastructure

Land Use 2016

- Commercial
- Industrial
- Mixed use, other
- Mixed use, primarily commercial
- Mixed use, primarily residential
- Open land
- Residential - multi-family
- Residential - other
- Residential - single family
- Right-of-way
- Recreation
- Water



Community Context

Population Density

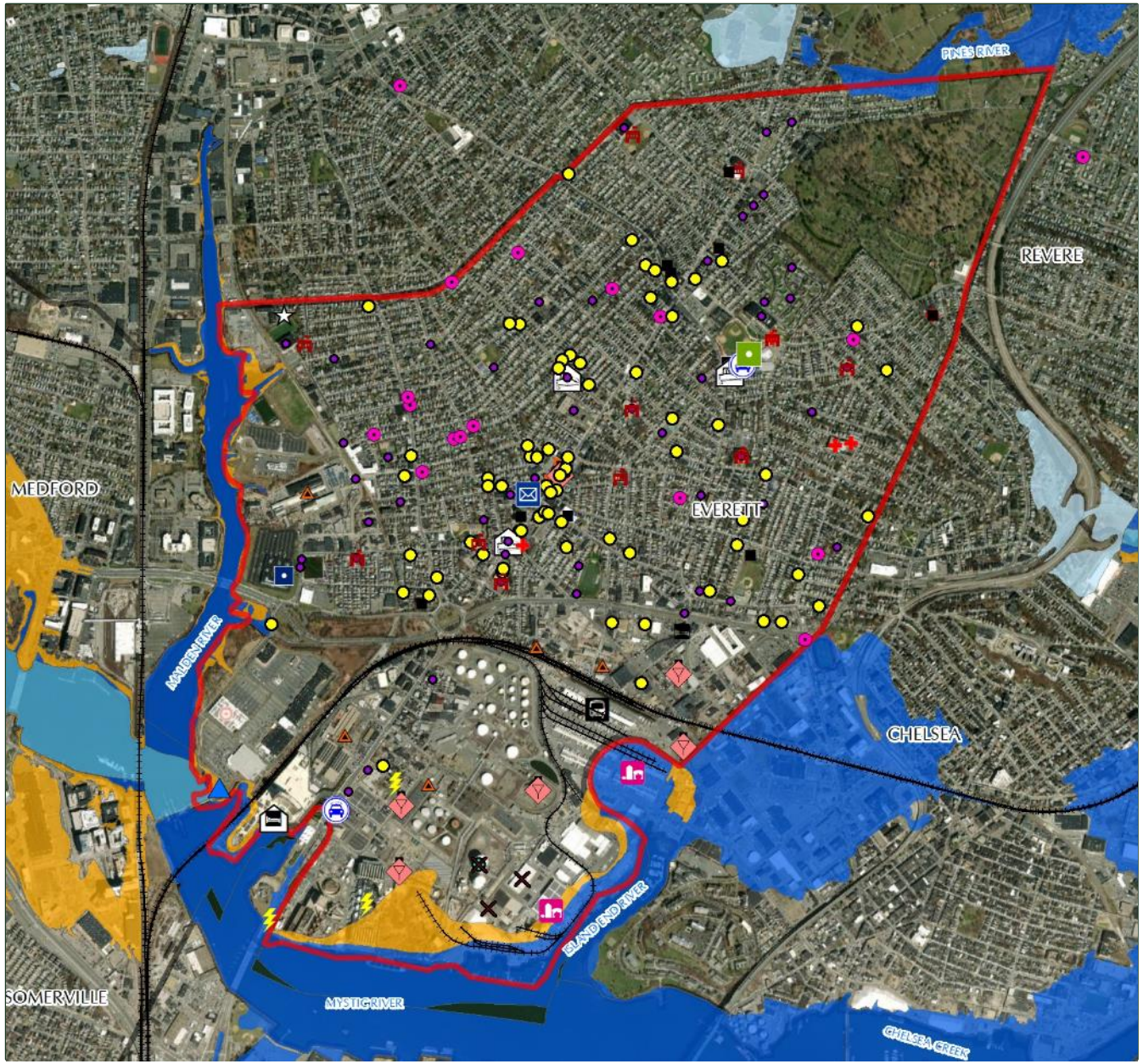
- Population corresponds with land use; primarily residential north of Revere Beach Parkway and Northern Strand Community Trail
- Least dense in heavily industrial/commercial areas along Mystic, Malden, and Island End Rivers
- Most dense toward center of city and Broadway "spine"

Population Density 2018
People Per Acre

- Less than 5.0
- 5.0 - 15.0
- 15.1 - 30.0
- 30.1 - 50.0
- More than 50.0

Flooding

- Everett is subject to inland (riverine) flooding, urban (precipitation) flooding, and coastal (storm surge) flooding.
- Floods are caused by severe rainstorms, thunderstorms, nor'easters, and hurricanes.
- Undersized or lack of storm drainage and large expanses of impervious surfaces (building roofs, asphalt pavement for roadways or parking areas, etc.) exacerbate flooding impacts.



Current FEMA Flood Zones (2010)

- Middlesex county Flood Insurance Rate Maps (FIRMs) last updated in June 2010
- Suffolk County FIRM maps updated in 2016
- Areas of potentially high flood risk (such as the Island End River near the New England Produce Center) are currently mapped as hazards in Chelsea but are not mapped over the county line in Everett

Flood Zones

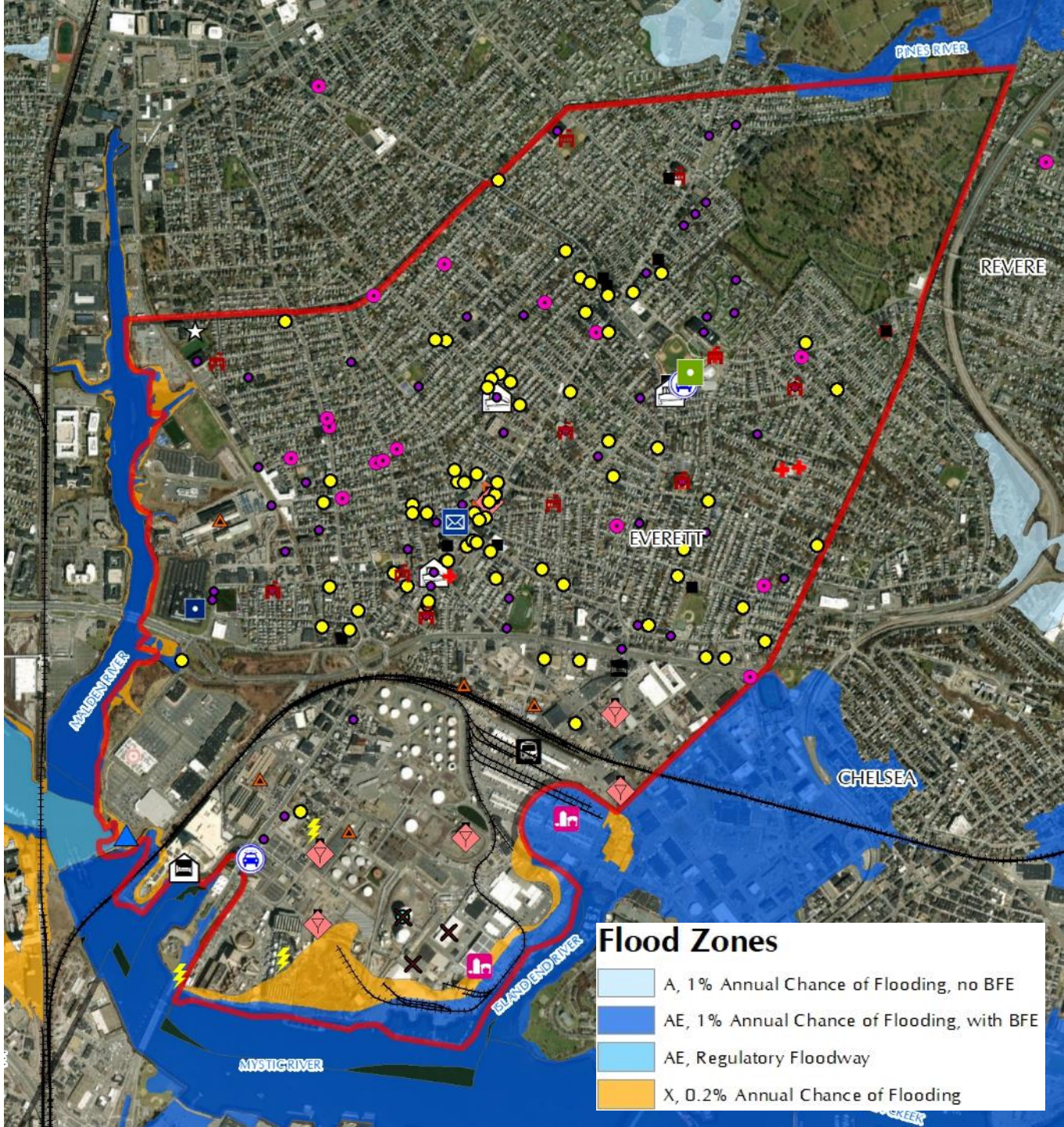
- A, 1% Annual Chance of Flooding, no BFE
- AE, 1% Annual Chance of Flooding, with BFE
- AE, Regulatory Floodway
- X, 0.2% Annual Chance of Flooding

Community Risk Profile

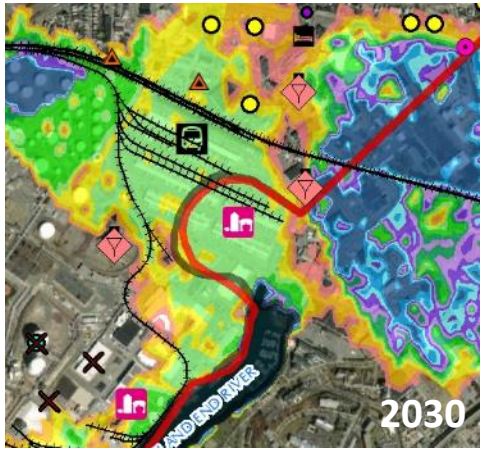
- "Repetitive Loss" (RL) is defined by FEMA as:

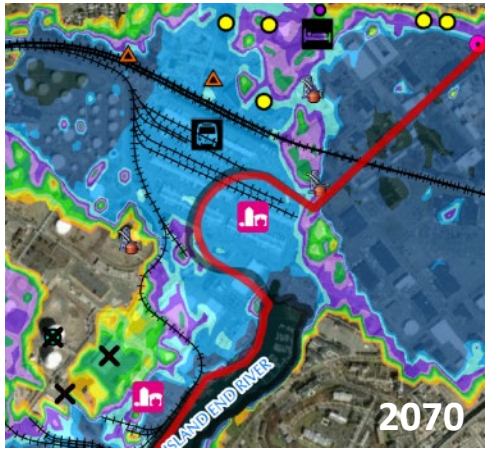
  a National Flood Insurance Program-insured structure that has had at least 2 paid flood losses of more than $1,000 each in any 10-year period since 1978.

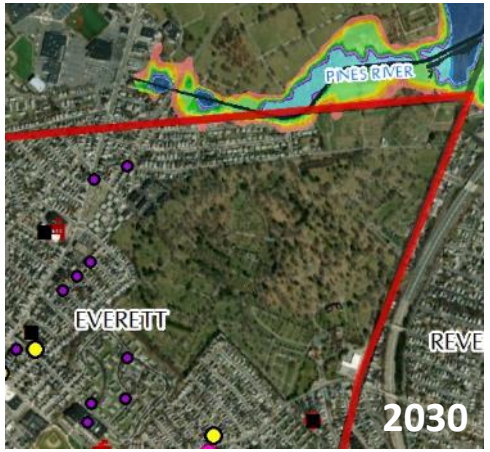
- In Everett, there have been 2 RL Buildings in the A and AE Zones, and 1 building in the X Zone.
- Losses total $23,876.25.
- The quantity and value of these claims reflect the flood zones on the FIRMs to date, which cover only small portions of the Island End River area, the Malden River area, and the Mystic River DPA.

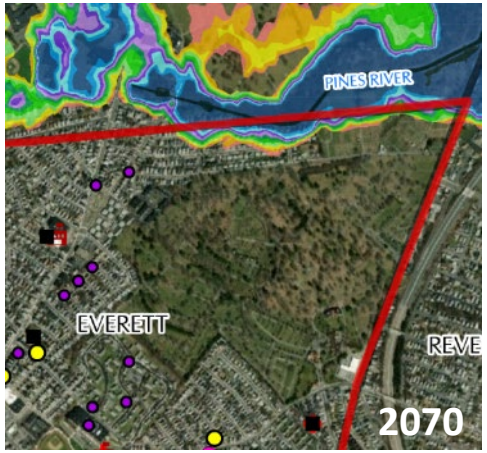


Areas of Flood Risk 2020 - 2070



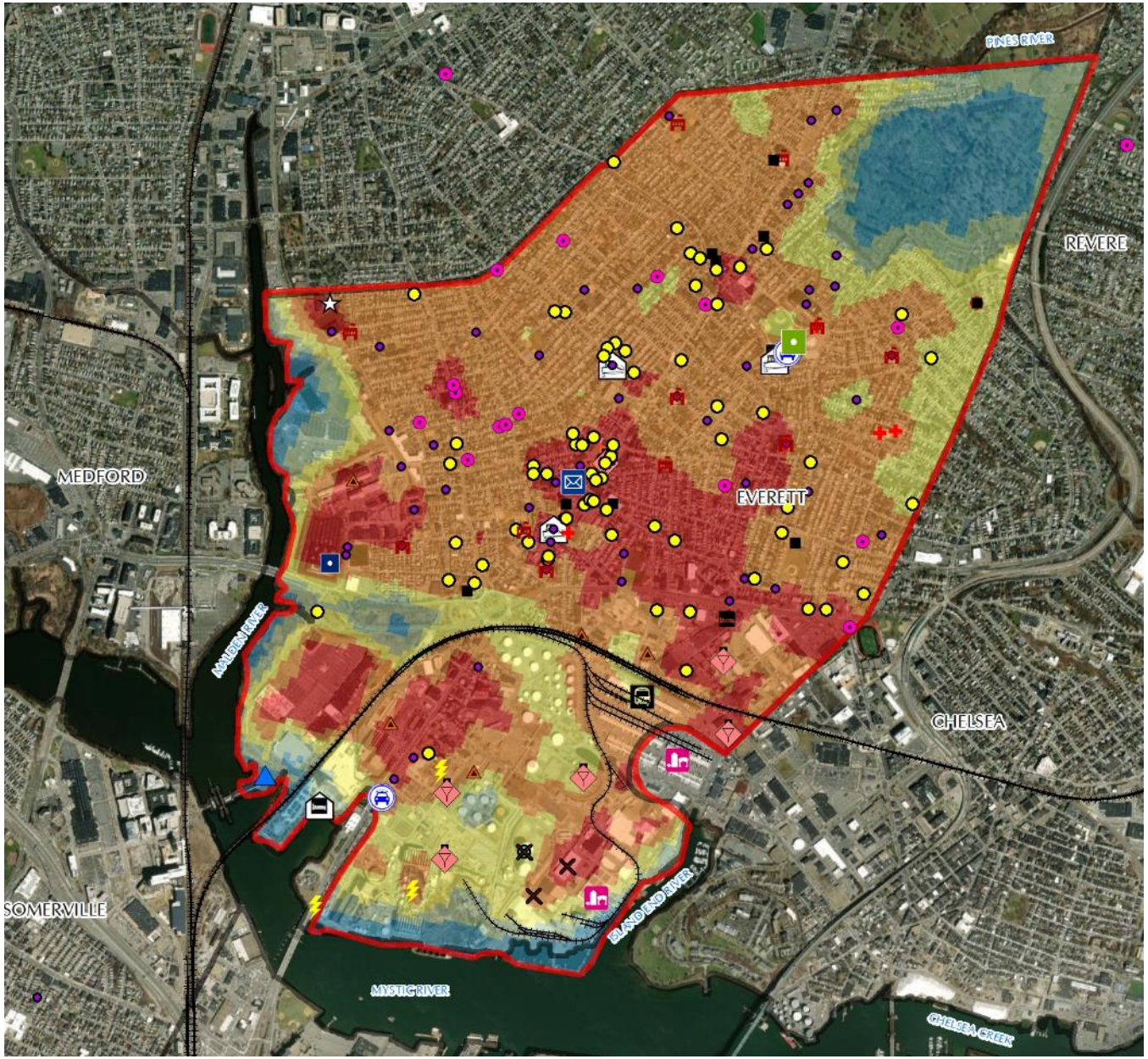






Heat

- In Massachusetts, the annual number of days over 90◦F is expected to increase to 12 – 45 by 2050.
- Heat impacts in Everett come from:
  - Over 85% impervious cover.
  - Limited tree canopy and landscape vegetation.
  - Heavy trucking activity and idling vehicles from industrial uses.
  - Heat waste from HVAC and refrigeration.



Average Summer Temperature 2017 - 2018

- Illustrates intensifying heat in the most densely built areas
- Land cover and different sources of waste heat increase temperatures in different neighborhoods:
  - Industrial uses along Island End and Mystic Rivers
  - Construction equipment, machinery, and building exhaust in areas of high redevelopment
  - Traffic exhaust along major transportation corridors

Average Summer Temperature (F) (2017 – 2018)

Less than 70	80.1-85.0
70.1-75.0	More than 85.0
75.1-80.0	

CITY OF EVERETT

The City of Everett is updating its **Hazard Mitigation Plan** (HMP).
The primary purpose of the HMP is to help the City and the community better prepare for natural disasters.

Please consider taking 5-10 minutes to complete this survey.
All responses are anonymous.

Scan QR code to visit the survey website!

English:

https://www.surveymonkey.com/r/EverettHMP

Spanish:

https://www.surveymonkey.com/r/EverettHMP-esp

Portuguese:

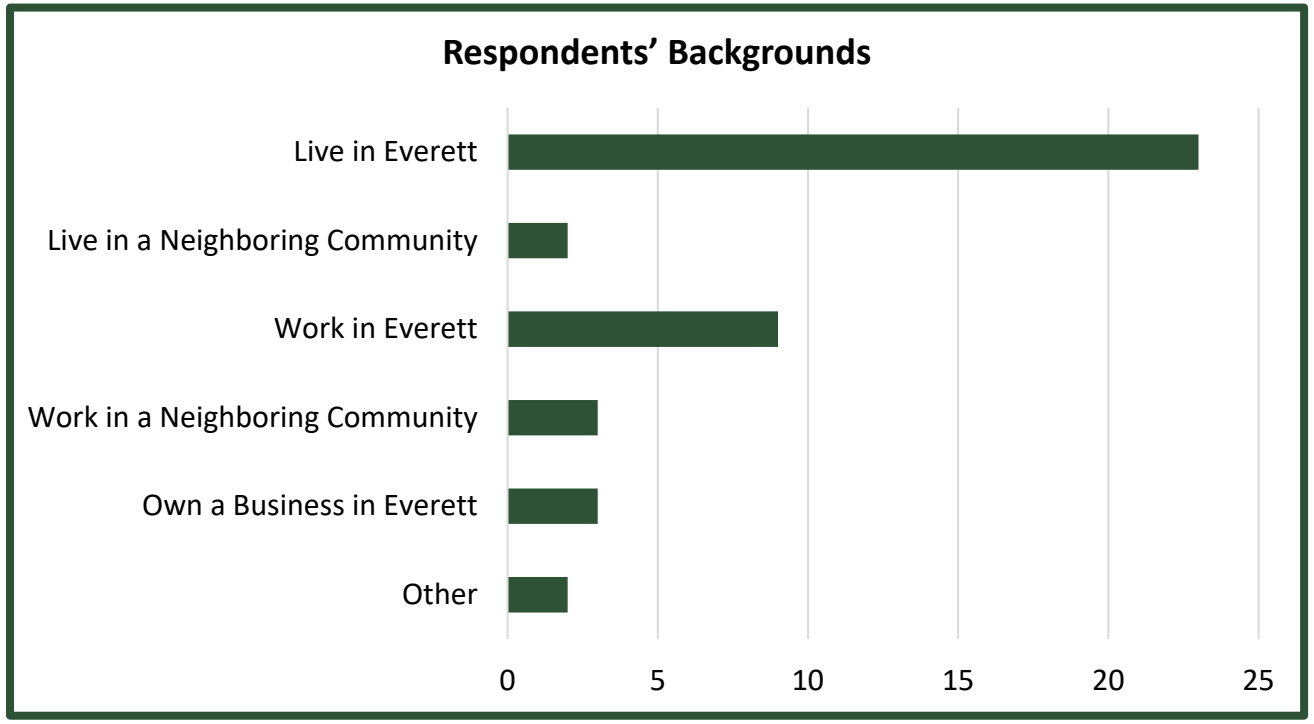
https://www.surveymonkey.com/r/EverettHMP-ptbr

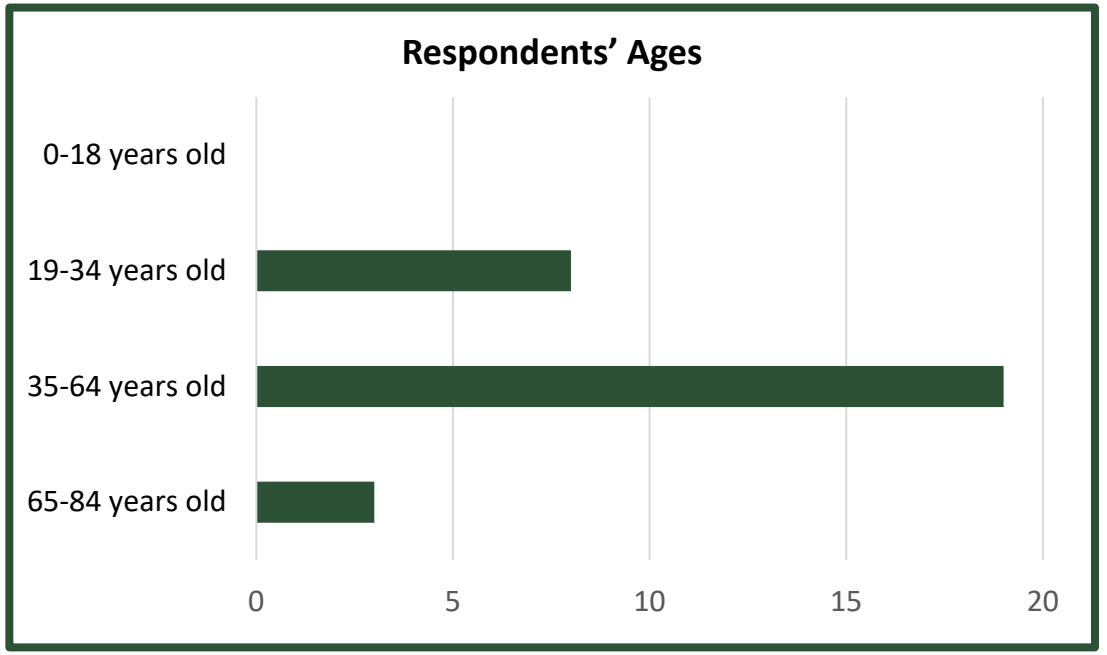
Community Preparedness Survey

- Objectives
  - Understand how natural hazards have impacted community members
  - Reach a diverse group of people from different backgrounds
- Shared via:
  - City of Everett social media
  - Email to LPC and Stakeholder Working Group
  - Distribution from Stakeholders to networks

Everett Community Preparedness Survey

- 16-question survey conducted in Fall 2020 concerning hazard preparedness in Everett
- 33 respondents from in and around Everett





What has the City of Everett done well to prepare for natural hazards?

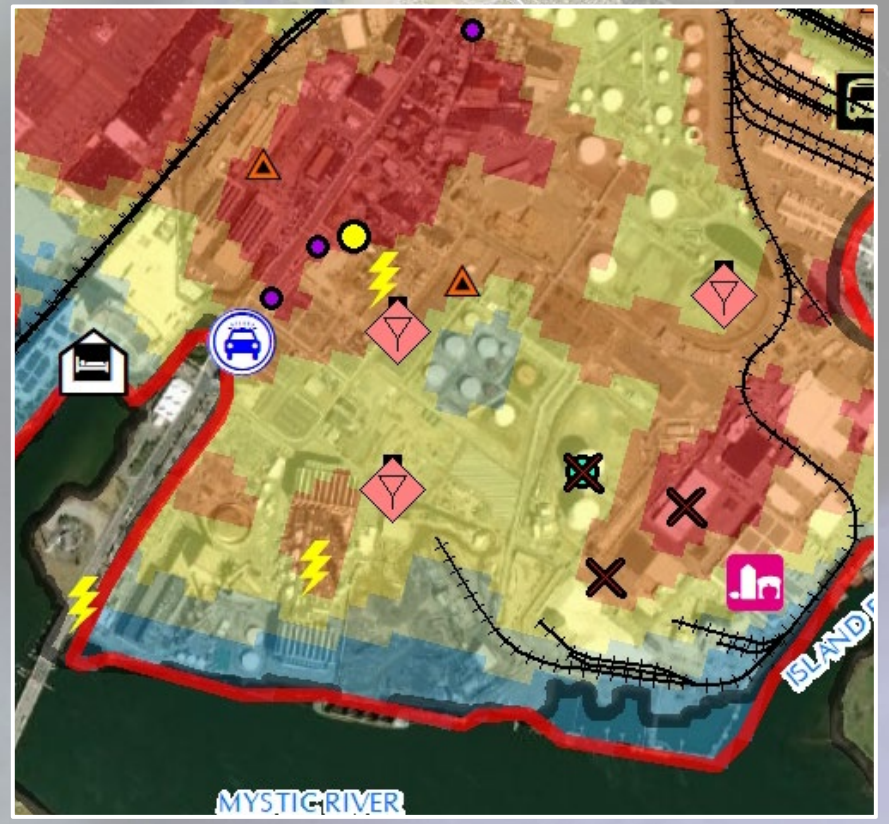
- Excellent first responder teams in place
- Streets get maintained so flooding isn't an issue.
- Proactive communication
- Phone calls with warnings
- It is working on upgrading its drainage infrastructure
- The snow removal is phenomenal.

How (or where) could the City of Everett improve its preparedness for natural hazards?

- Better communication to the public
- Upgrade utility services, address flooding
- Air Force Road floods during heavy rain
- Have a clear plan in place
- Upgrade sewage lines to handle flood surges.
- Increase awareness of protocols, increase and improve social programs and update infrastructure/public transportation

Mystic River DPA

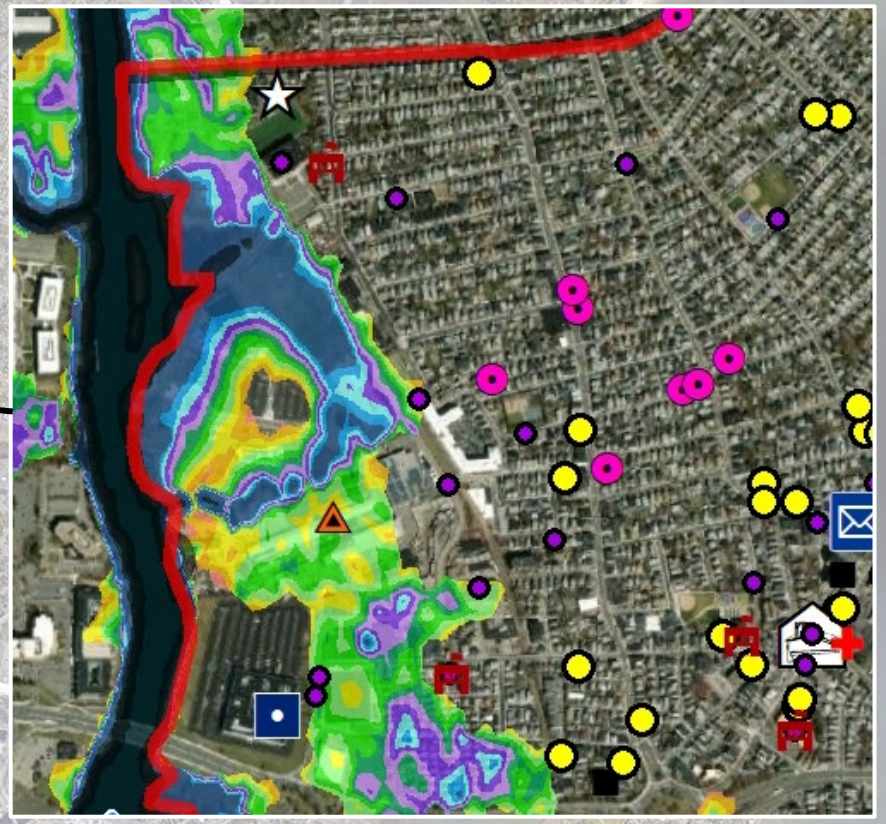
Coastal Flooding



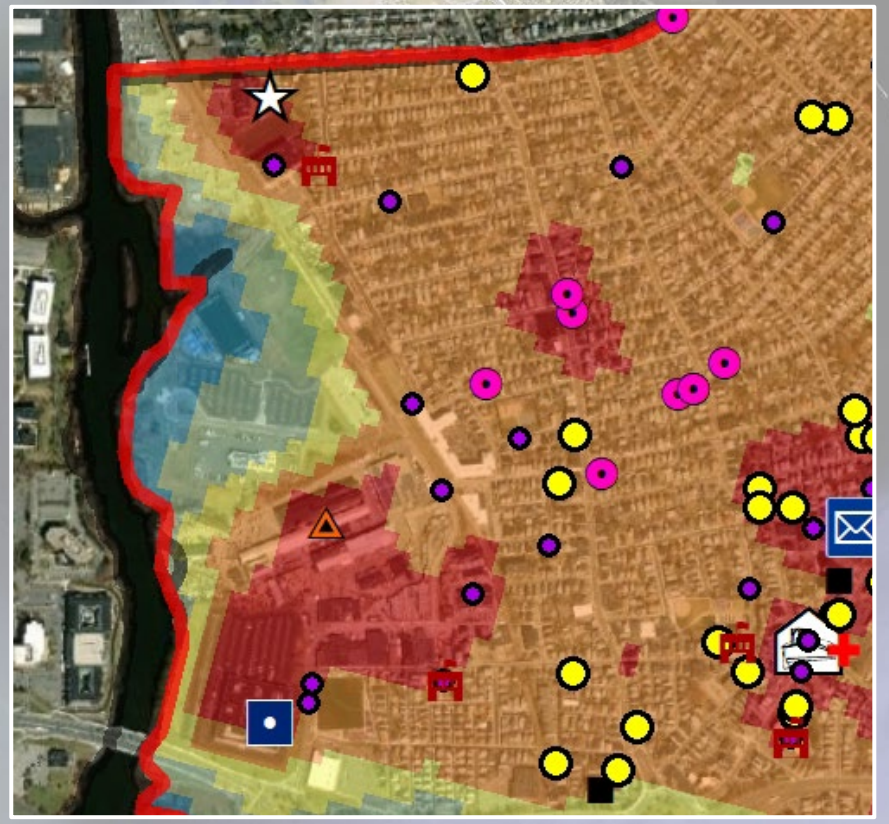
Heat

Key infrastructure: Schnitzer Steel, Exelon LNG facility and other former Distrigas properties where petroleum products and fuels are stored, Ciment Quebec, Exxon Mobil, private rail tracks to industrial properties, Beacham Street

Malden River



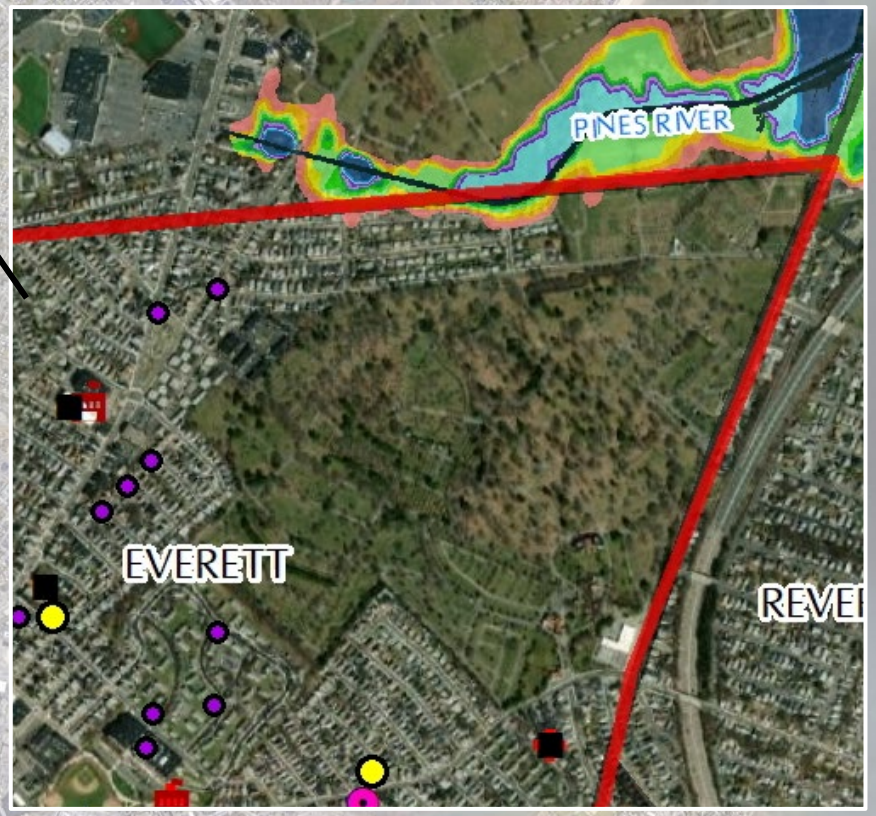
Coastal Flooding



Heat

Key infrastructure: Madeline English School, Rivergreen Park, RiverGreen Technology Park, Revere Beach Parkway, former BNY Mellon building at 135 Santilli Highway

Pines River

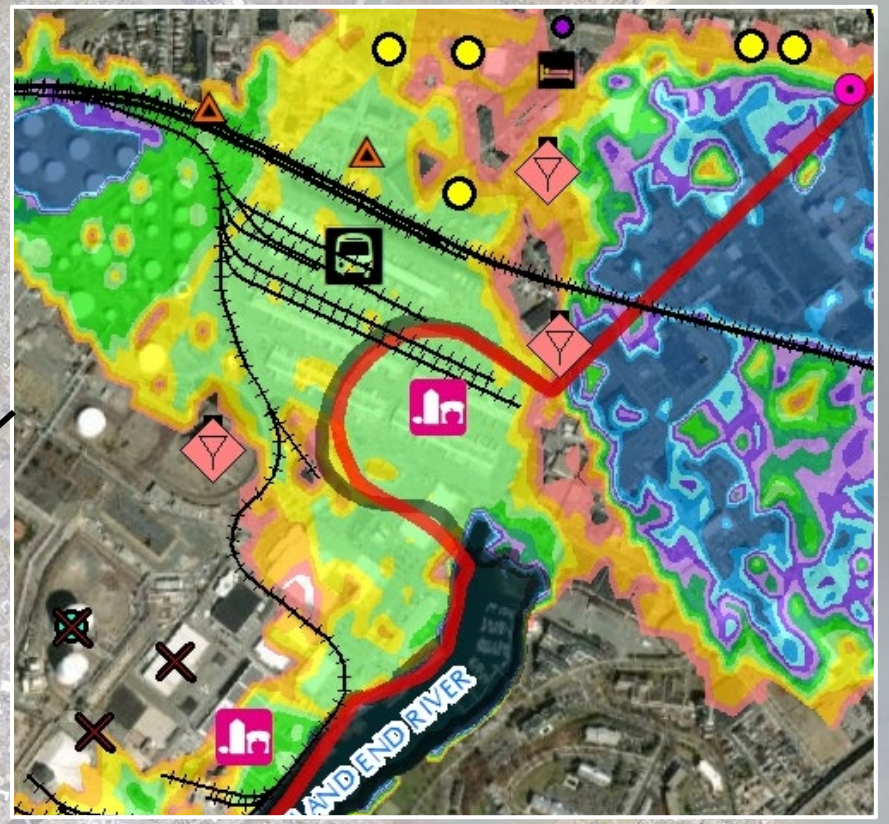


Coastal Flooding

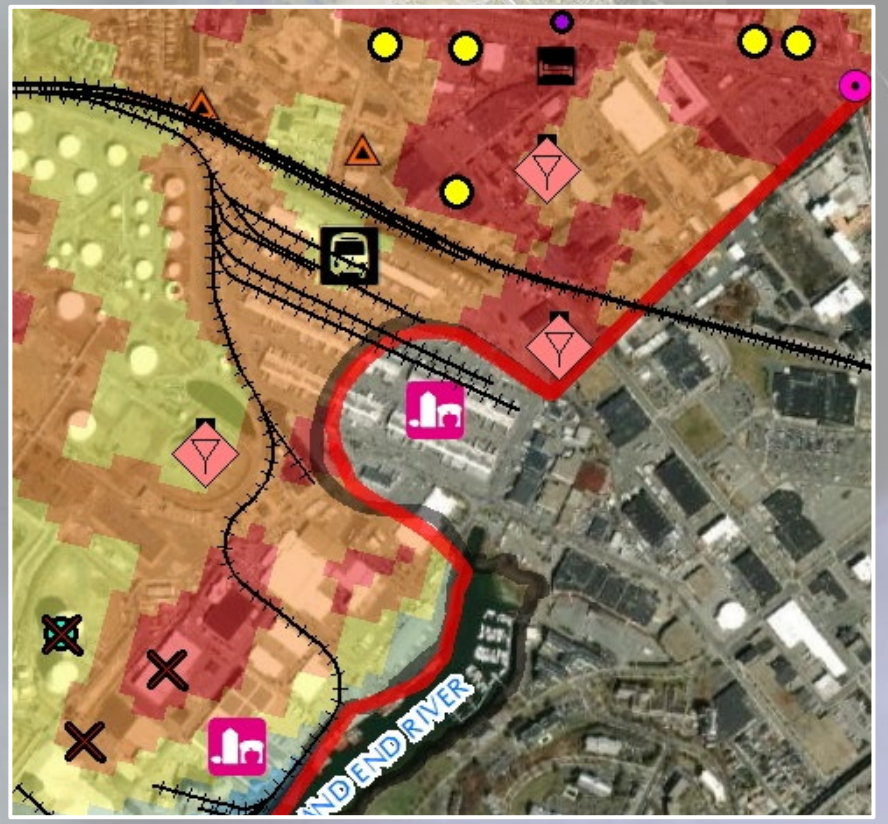
Heat

Key infrastructure: single-family and multi-family residential properties, Glenwood Cemetery, Woodlawn Cemetery, Broadway

Island End River



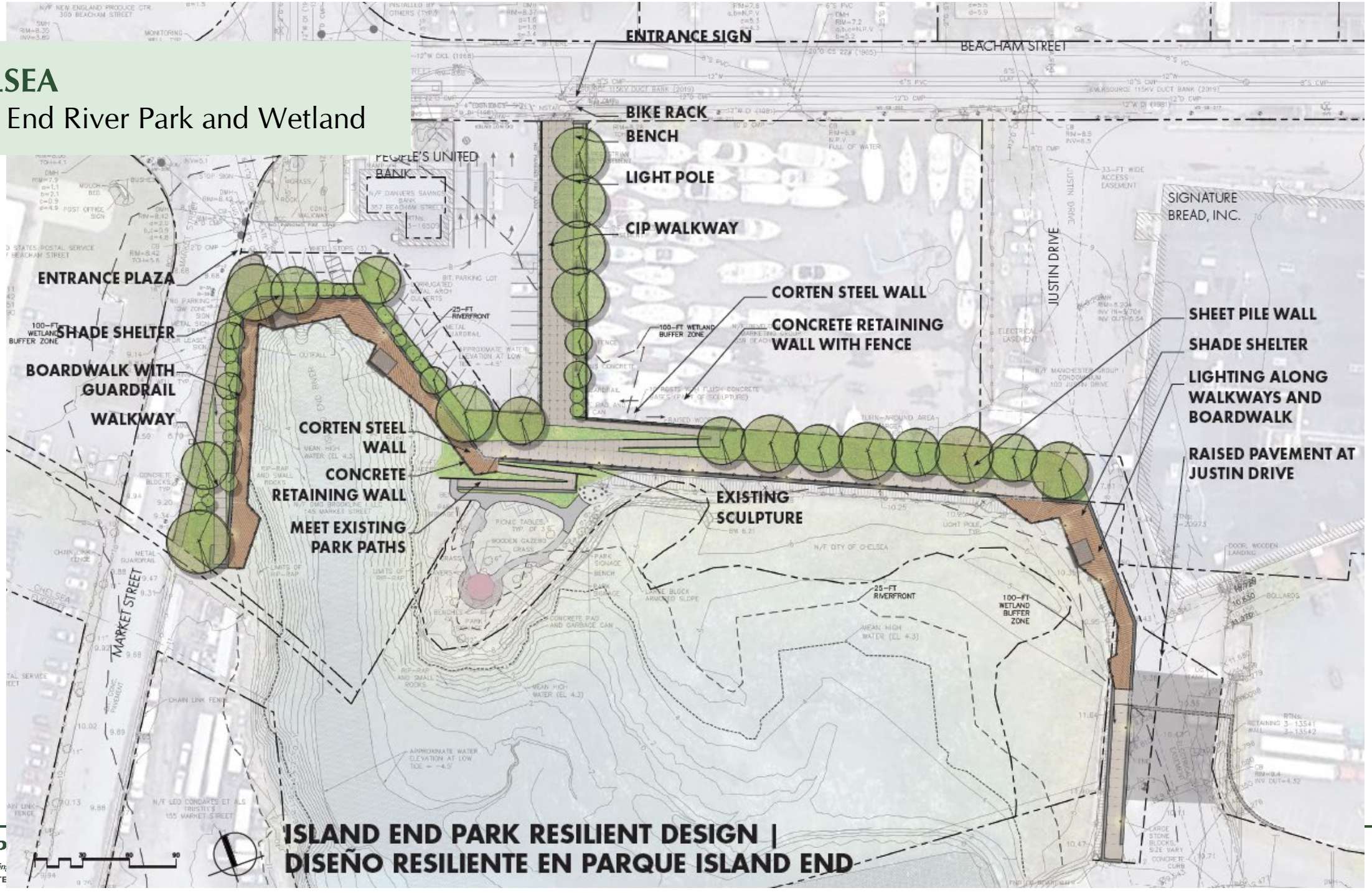
Coastal Flooding



Heat

Key infrastructure: New England Produce Center, USPS facility, PW Marks, Amazon Fresh, and other food distribution facilities, SPS New England

CHELSEA
Island End River Park and Wetland



CHELSEA
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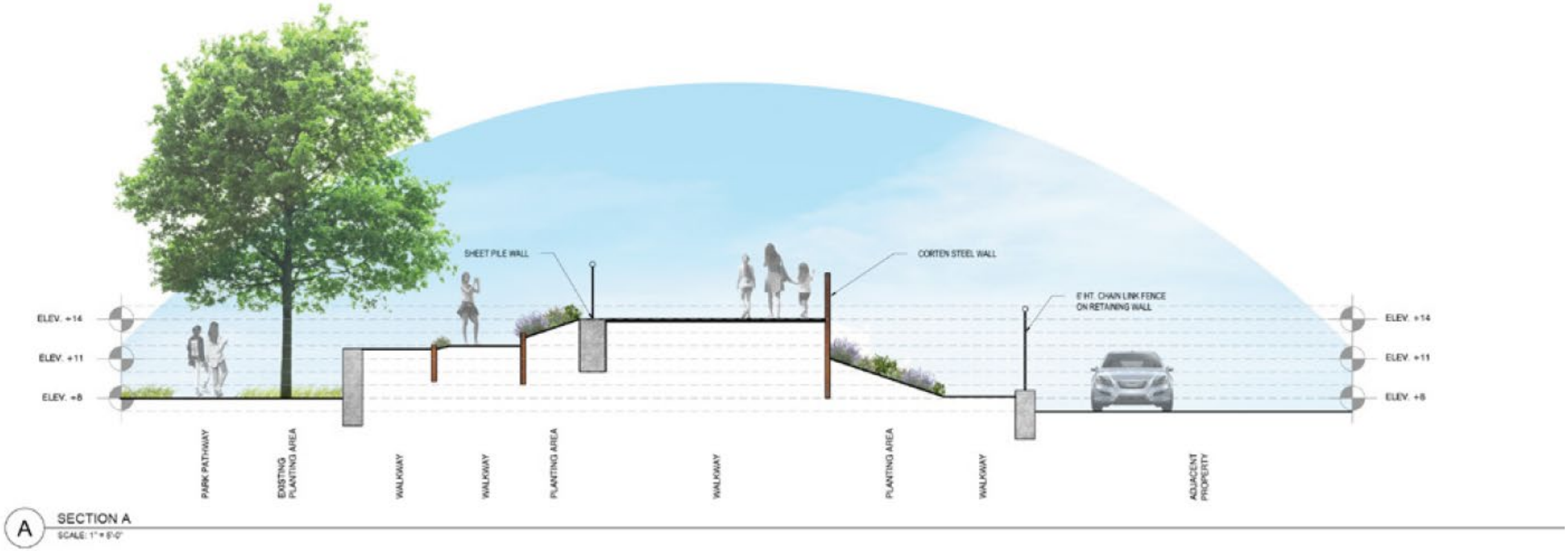


Additional Initiatives and Projects in the IER Corridor

- **DPA Industrial District Master Planning**
  City of Everett & Utile (with Fort Point Associates as sub-consultant)

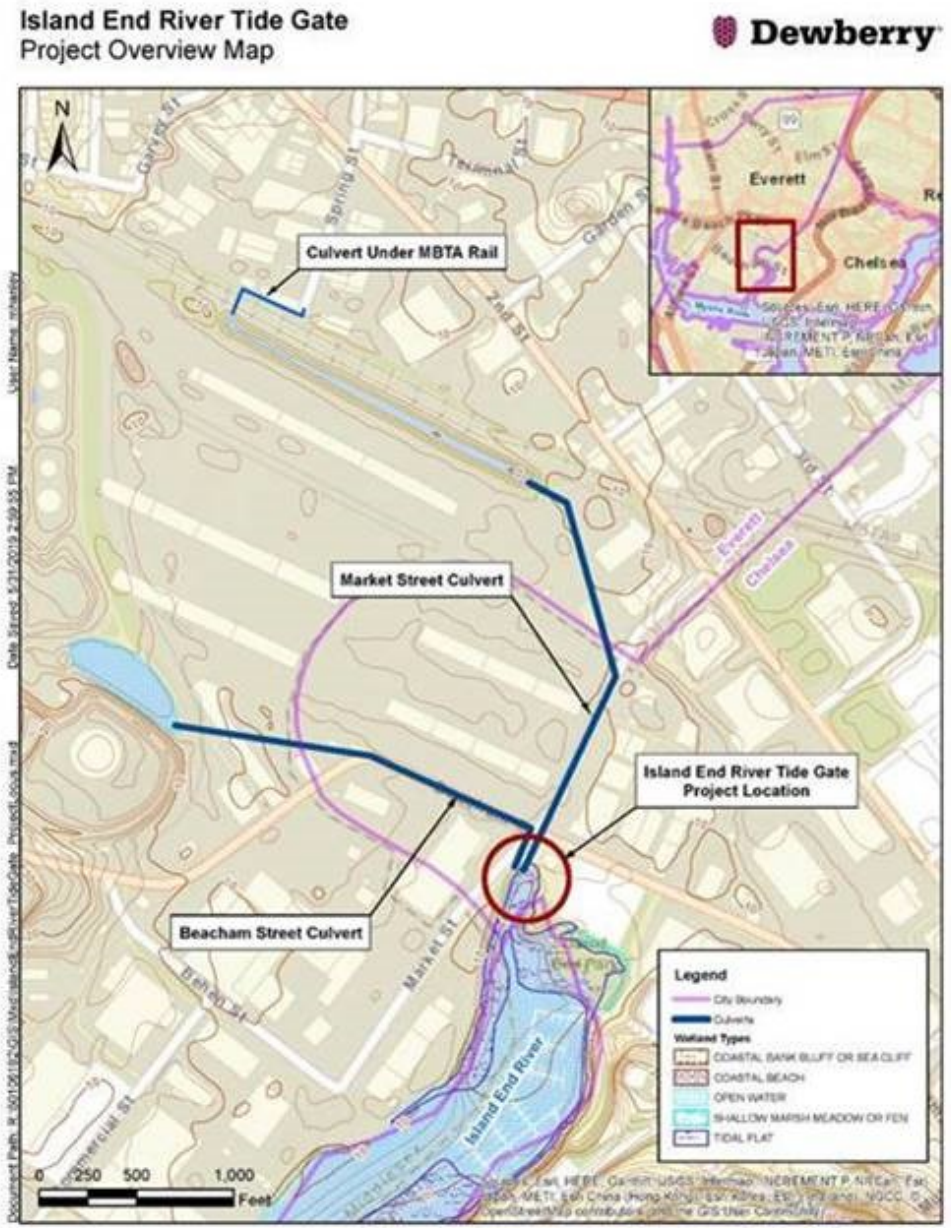
- **Hazard Mitigation Plan (HMP) Updates**
  City of Everett & City of Chelsea

- **Market Street Culvert Replacement and Daylighting**
  The Davis Companies & City of Everett

- **Market Street Culvert and Outfall Improvements**
  Including culvert pipe repair and replacement, evaluation of pump station(s), tide gates, and other flood resilience solutions
  City of Chelsea

- **Mystic Infiltration Trench Siting and Design for Phosphorous Nutrient Management**
  Mystic River Watershed Association & City of Everett

- **MBTA Culvert Replacement**
  City of Everett & MBTA



Island End River Flood Resilience Project
Flood Barrier Alignment Options

Next Steps

Early July

- HMP workshop with Everett Community Growers on July 8
- Final 2021 HMP Update meeting with LPC and stakeholders on July 13

Mid July

- Attend Conservation Commission hearing to present HMP update on July 15
- Release a draft copy of HMP Report during week of July 19-23
  - Draft report posted to City of Everett website
  - Two-week public comment period

August

- Submit HMP to MEMA

Fall 2021

- Present to Everett Chamber of Commerce on ongoing and upcoming hazard mitigation projects at the Island End River
- MEMA anticipated to recommend final review of HMP by FEMA