The City *of* Worcester

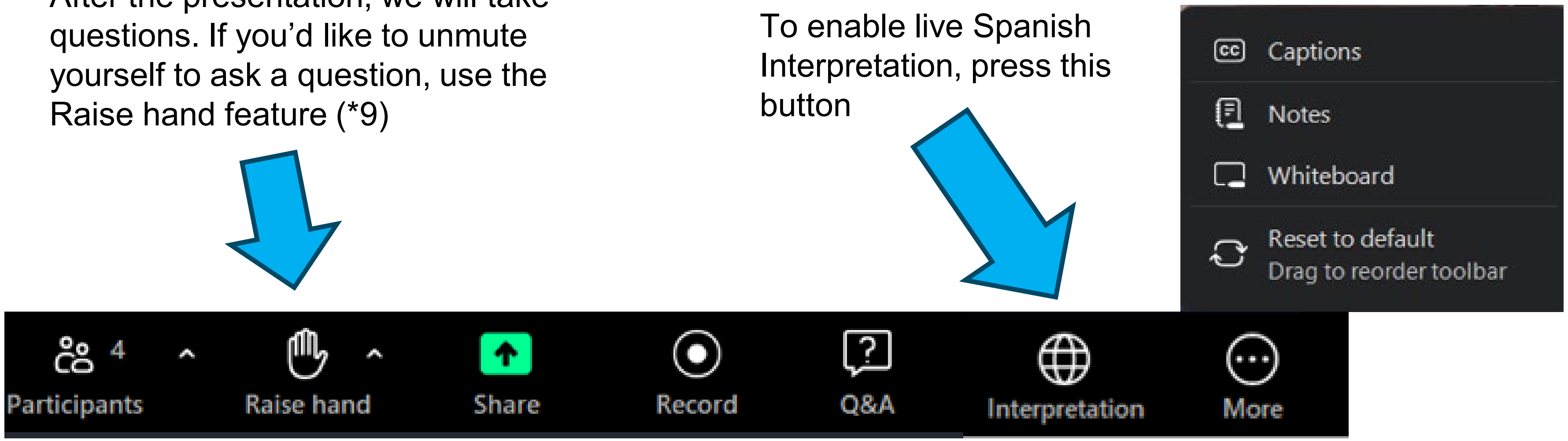
FEMA Flood Map Updates

Blackstone River Watershed

How to Participate

After the presentation, we will take questions. If you'd like to unmute yourself to ask a question, use the Raise hand feature (*9)

To enable live Spanish Interpretation, press this button



Use the Q&A feature to ask any questions during the presentation

To enable closed captioning, press "More" and then "Captions"

Presenters

Michelle M. Smith

Assistant Chief Development Officer

Planning & Regulatory Services

City of Worcester

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Conservation Planner

Planning & Regulatory Services

City of Worcester

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Assistant Conservation Agent

Planning & Regulatory Services

City of Worcester

Interpreters:

Ms. Lucy

Spanish

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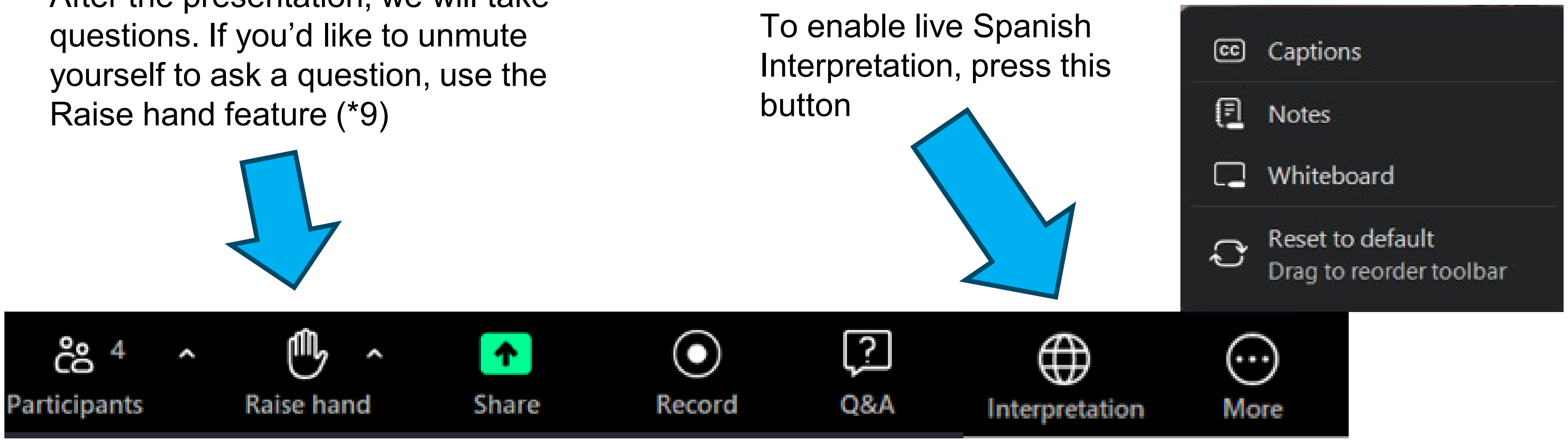

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Presentation Overview

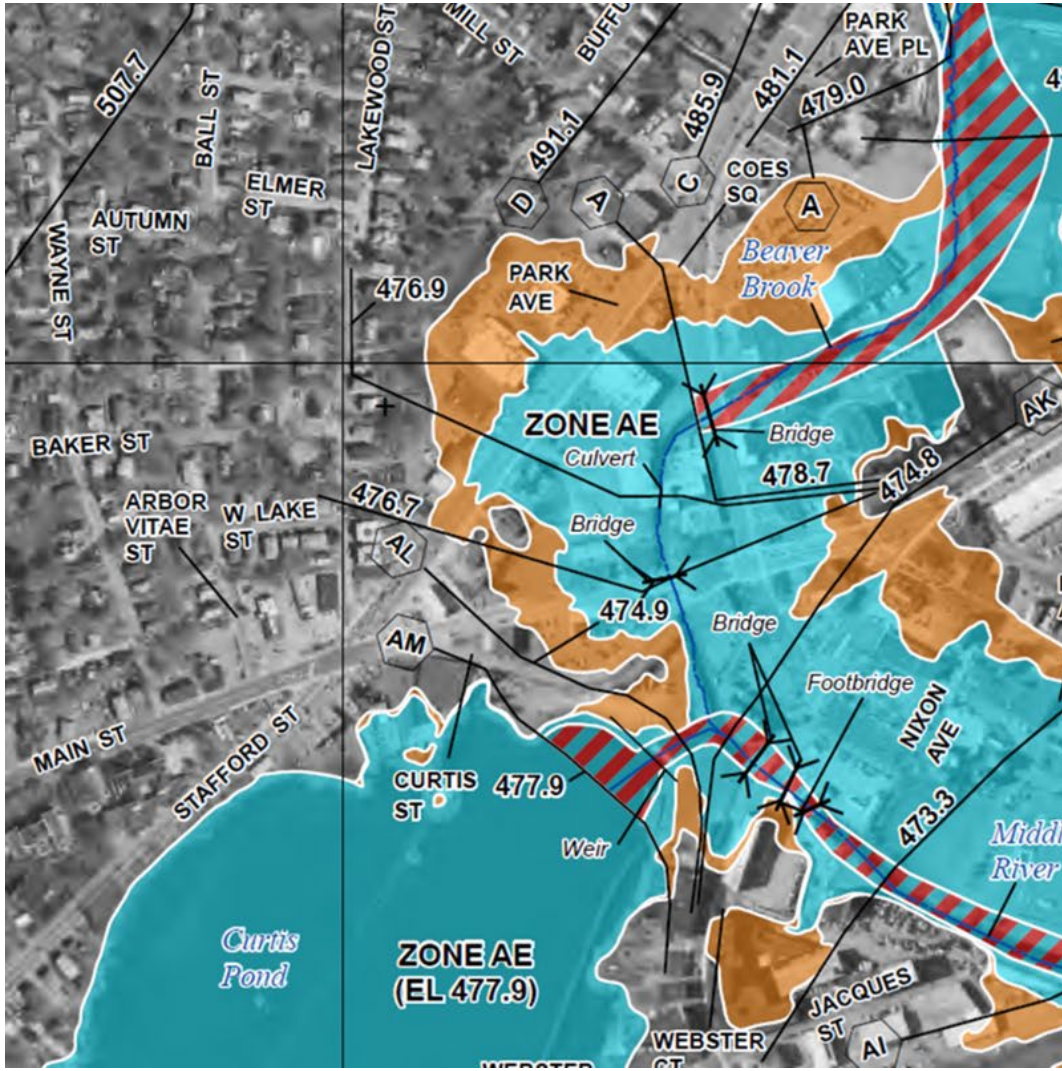
Defining "Floodplain"

The **Special Flood Hazard Area (SFHA)**, also known as:

- Floodplain
- 1% annual chance floodplain
- Zone A, AE, AH, AO, floodways
- Bordering land subject to flooding

Defined by FEMA as *"the area that will be* ***inundated*** *by the flood event having a 1% chance of being equaled or exceeded in any given year"*. This 1% change flood is also commonly referred to as the "base flood", the height of flooding is called "base flood elevation" (BFE).

Example: The 1 % annual-chance storm in Worcester means 7.64" of rain in 24 hours (NOAA)



Flooding - Leominster, MA 2023

(Sean Whigham, MassLive)

(Josh Reynolds, AP)

(Dave Thompson, MassLive)

(Michael Casey, AP)

(Dave Thompson, MassLive)

Flooding - Vermont 2023 & 2024

(Glenn Russell, VTDigger)


(Glenn Russell,

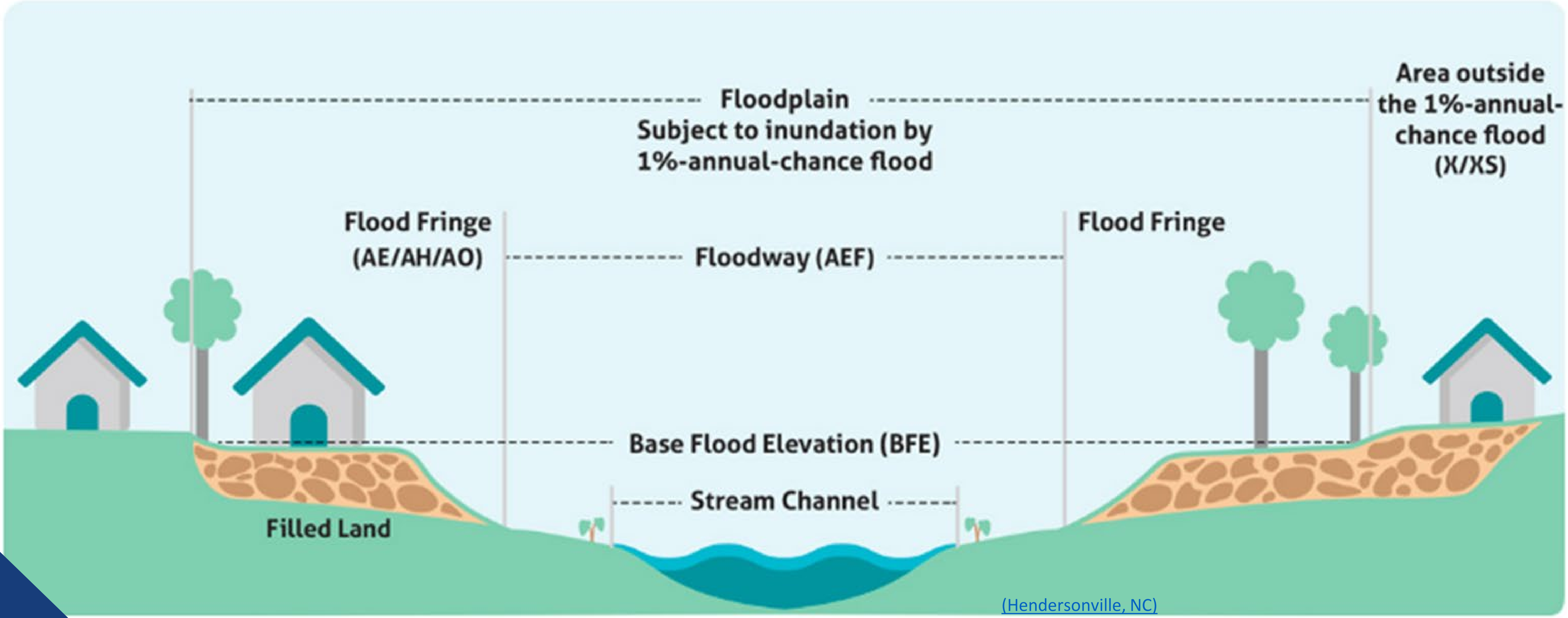

(Dmitry Belyakov, AP))


(Dmitry Belyakov, AP))

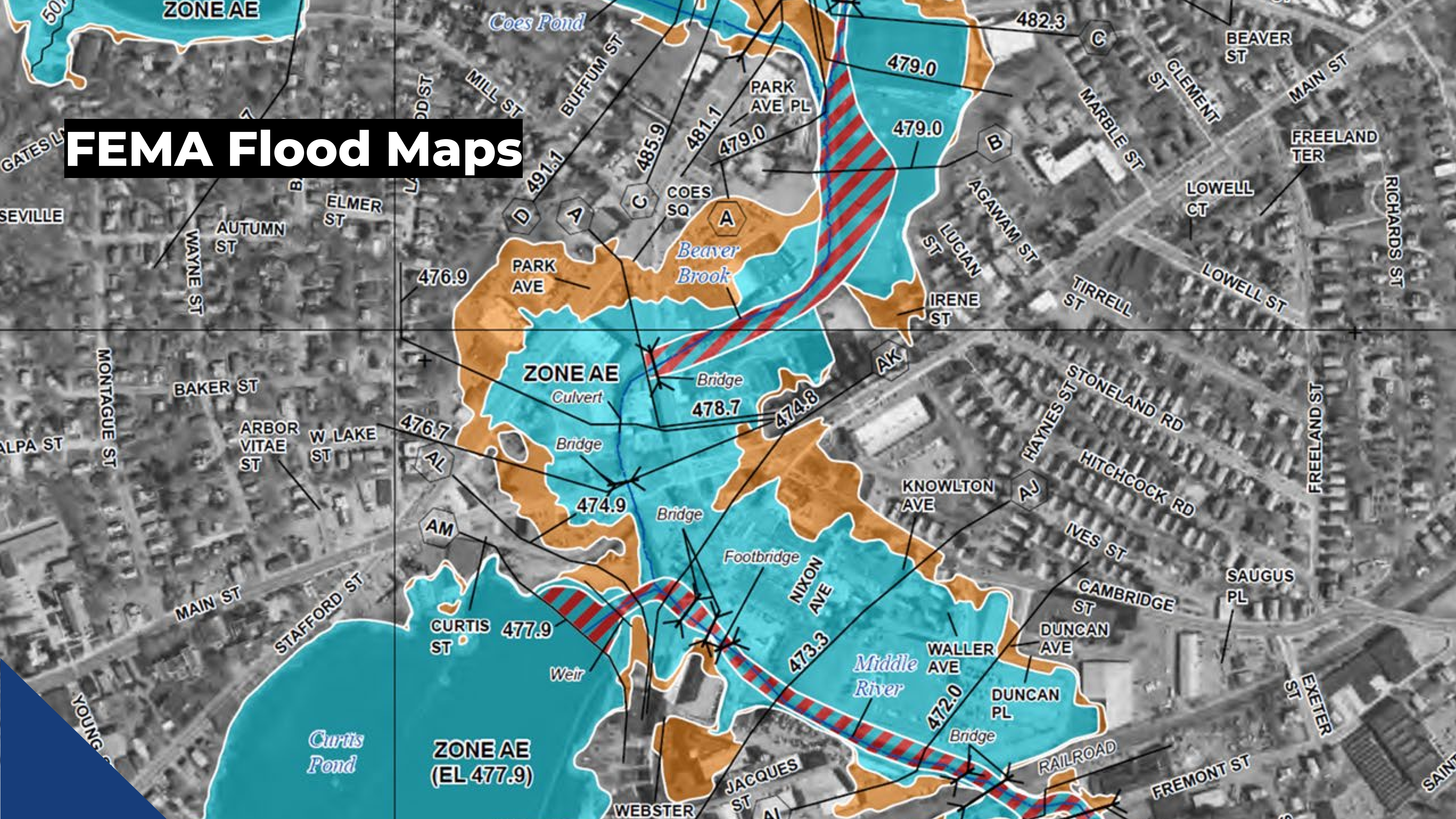

(Dmitry Belyakov, AP))


(Dmitry Belyakov, AP))

Riverine Floodplain



FEMA Flood Maps



Why are flood maps important?

FEMA's flood maps are used to communicate areas of known and theoretical (modeled) flood risk for a variety of purposes:

- Floodplain management laws & regulations
  - MA Building Code
  - MA Wetlands Protection Act & Regulations
  - Local Zoning
- Flood insurance
- Planning and mitigation projects


(ASFPM

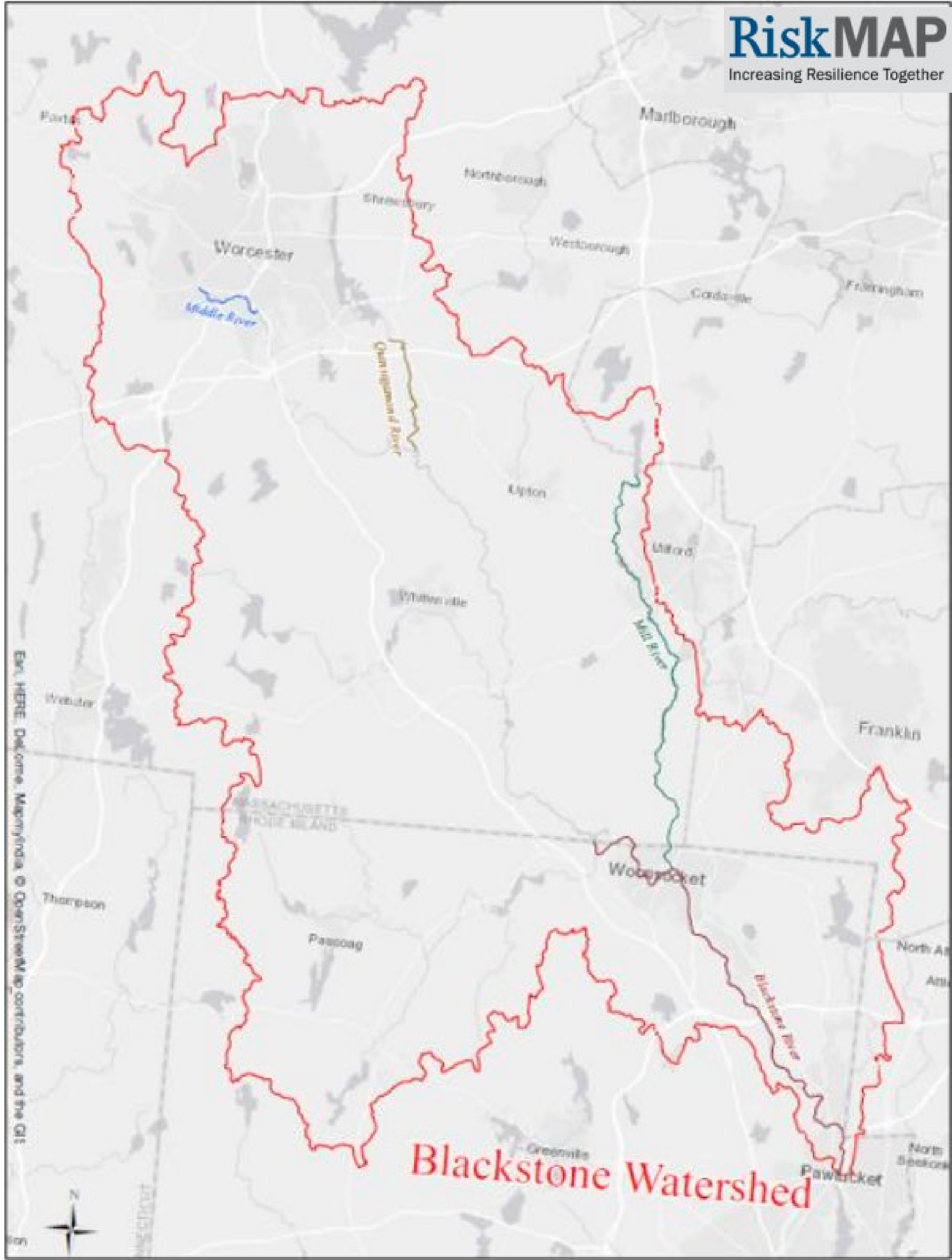
All these tools aim to help **protect people and instructure from losses** - whether damage to property or the loss of life.

Why is FEMA updating our flood maps?

- FEMA creates and publishes the maps and decides when and where to update them
- Older maps are out of date and may not reflect recent developments
  - New houses, bridges, roads, etc.
- FEMA has new technology and data to better show flood risk

FEMA’s Map Update Process Overview

- Multi-year process initiated by FEMA called a “Risk Map Update”
- Started for the Blackstone River Watershed in 2016
- Preliminary or proposed “draft” maps are now available
- Next steps for the “draft” maps to become effective or “final” include:
  - 90-day appeal period & resolution of appeals
    - Appeals require technical (engineering) data
  - Letter of Final Determination - 6 month notice prior to effective date
  - FEMA Open House - approx. 3 months before maps become effective
- Effective date is anticipated to be **Summer of 2026 or 2027** for the Blackstone River Watershed
  - This is when it will be used for insurance and building code purposes



Blackstone River Watershed Map Update Timeline

November 26, 2024

Preliminary Maps

FEMA released the preliminary maps for the Blackstone River Watershed on November 26, 2024

December 2025 or 2026

Letter of Final Determination

FEMA is expected to issue Letter of Final Determination for the Preliminary Maps in December of 2025 or 2026 once all appears and comments have been addressed

Summer of 2026 or 2027

Maps Become Effective

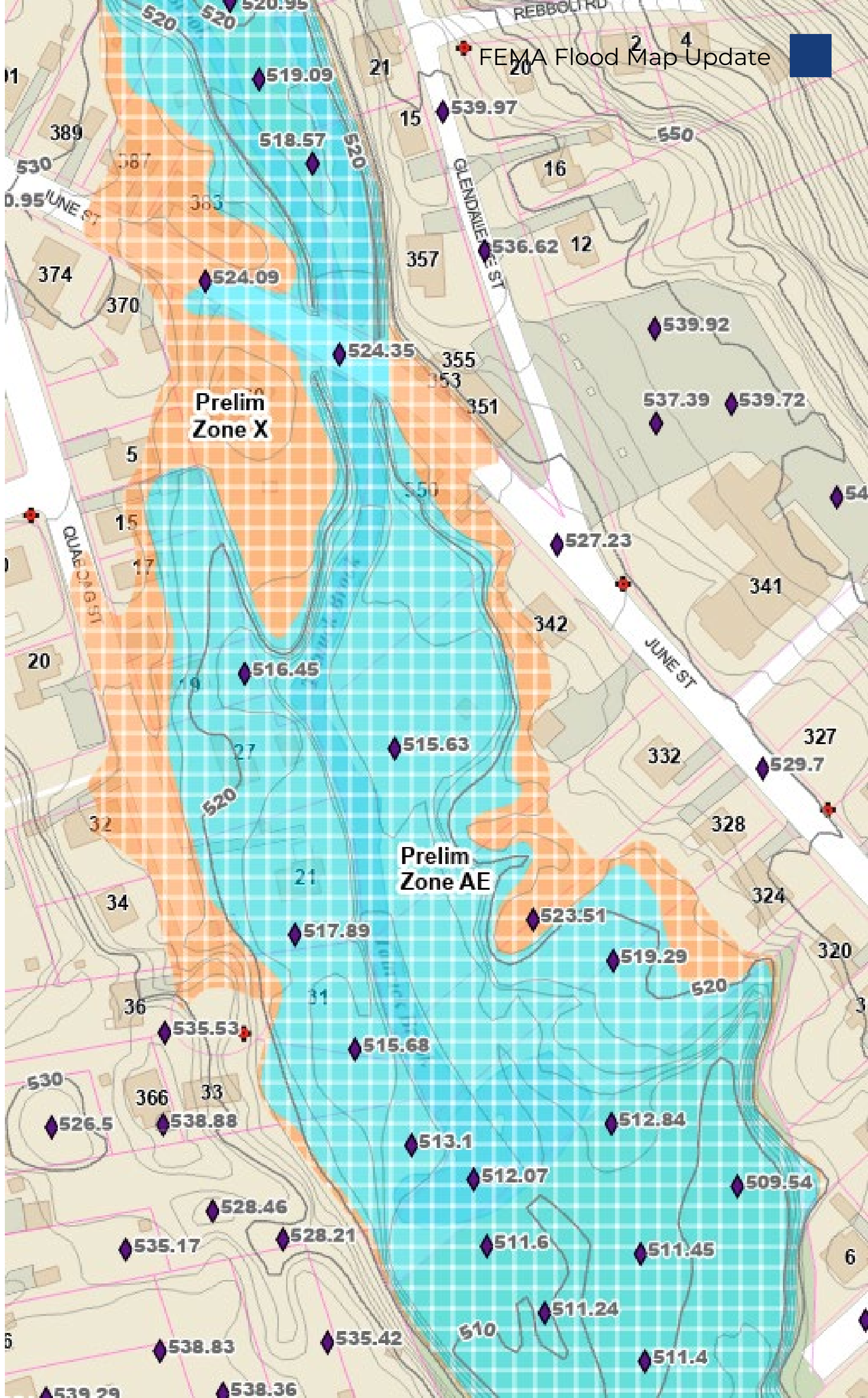
6 months after the issuance of a Letter of Final Determination, the preliminary maps will become effective. At this point, the maps will be used for purposes of the mandatory purchase requirement and building code provisions for constructions in the floodplain

How are the maps changing?

1. Redelineation:
   - Taking existing (older) study data and redrawing it onto the map using better topographic data

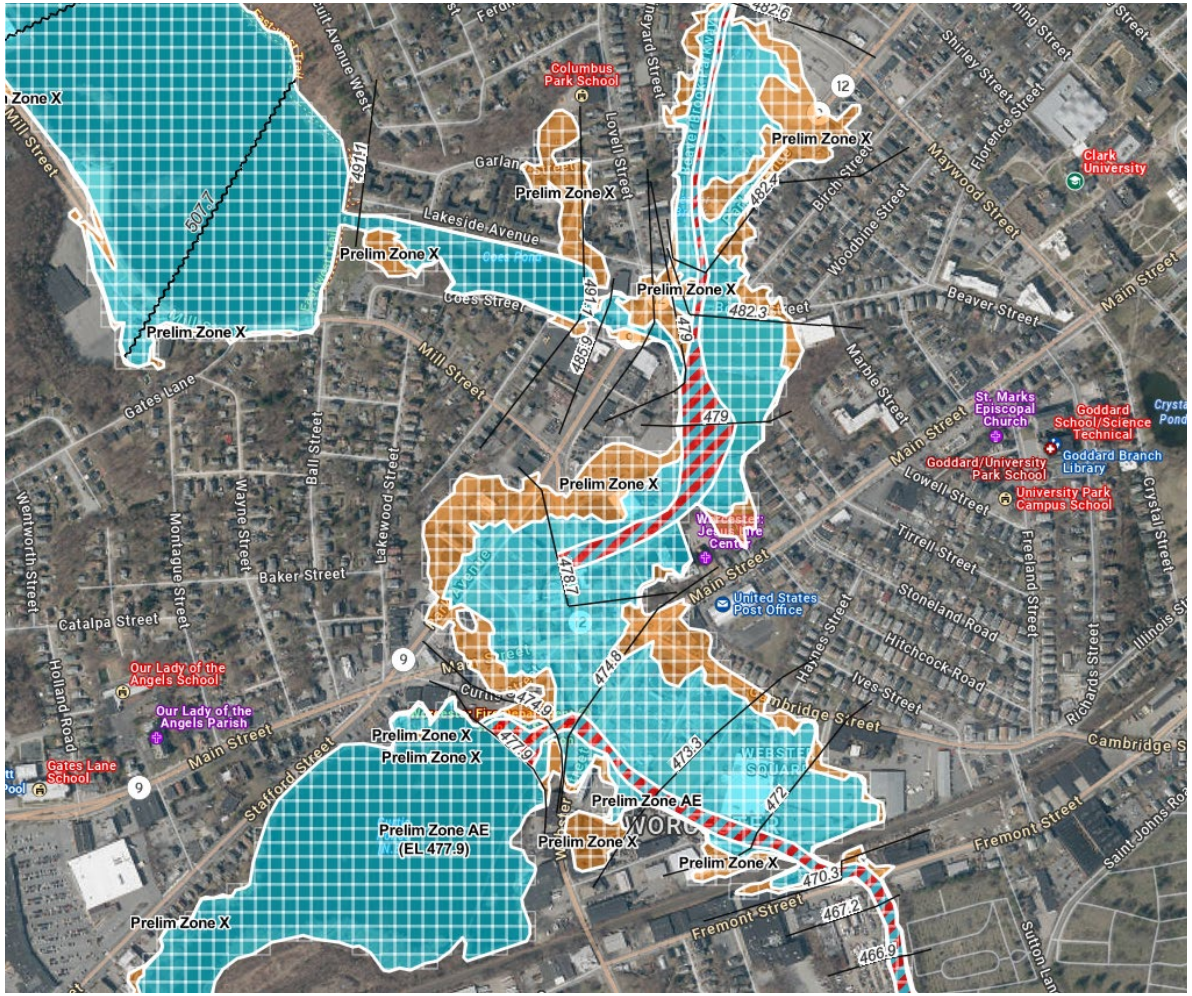
2. Approximate methods/Base Level Engineering:
   - Modeling conducted at the minimum engineering standard necessary to support regulatory mapping of the 1% chance flood

3. New detailed studies:
   - Brand new engineering analysis resulting from new data collection, field survey, and modeling



Map Changes for the City of Worcester

- Detailed re-study of the Middle River
  - Webster Sq. to McKeon Rd.
- Base Level Engineering study for Poor Farm Brook (Mountain St East to Northeast Cutoff), Cascades Brook (Olean St/Cataract St), and Lake Quinsigamond
- Redelineation of the extent of all other flood zones based on improved LIDAR topographic data
  - No change in flood elevation, just better data about what elevations are on the ground



Reminder of "Floodplain"

The **Special Flood Hazard Area (SFHA)**, also known as:

- Floodplain
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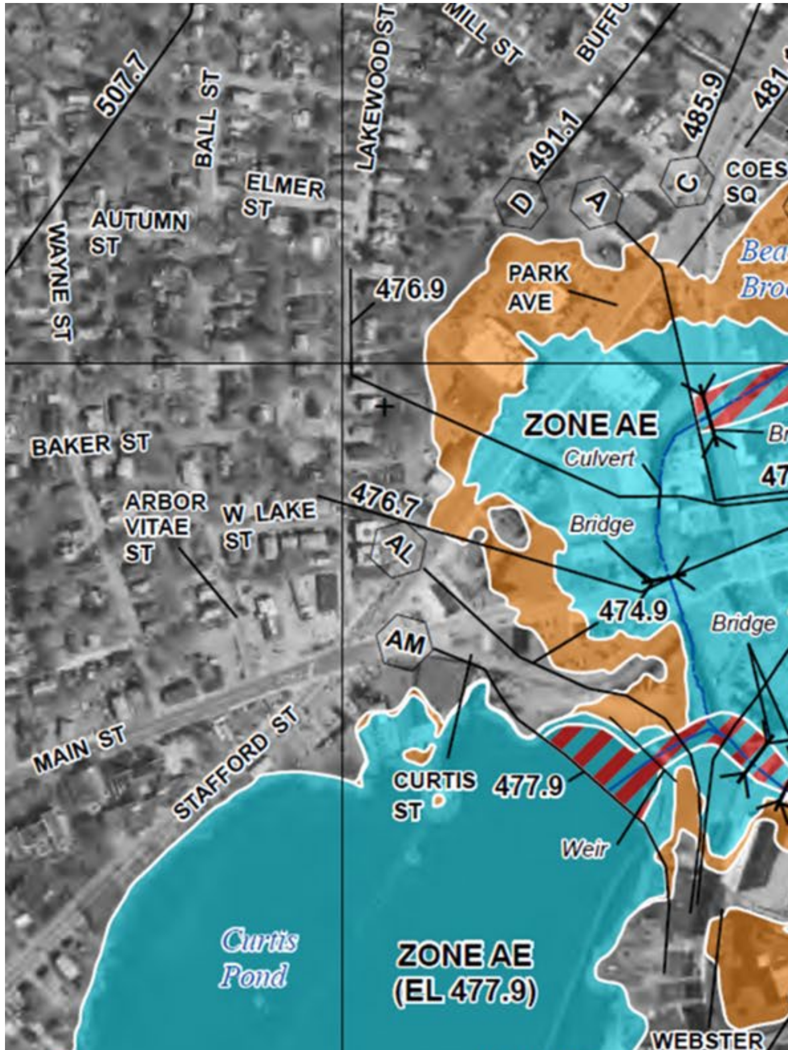
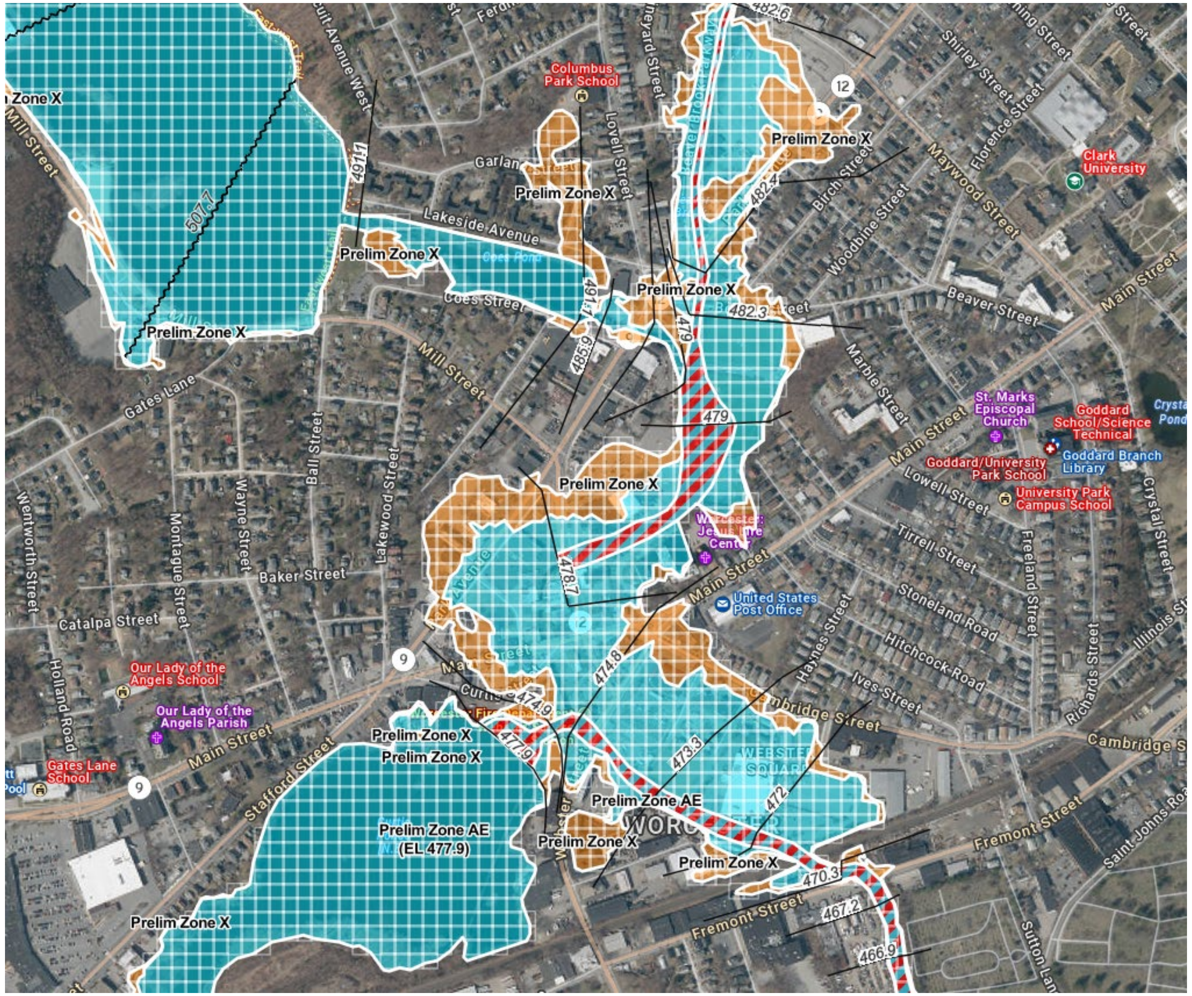


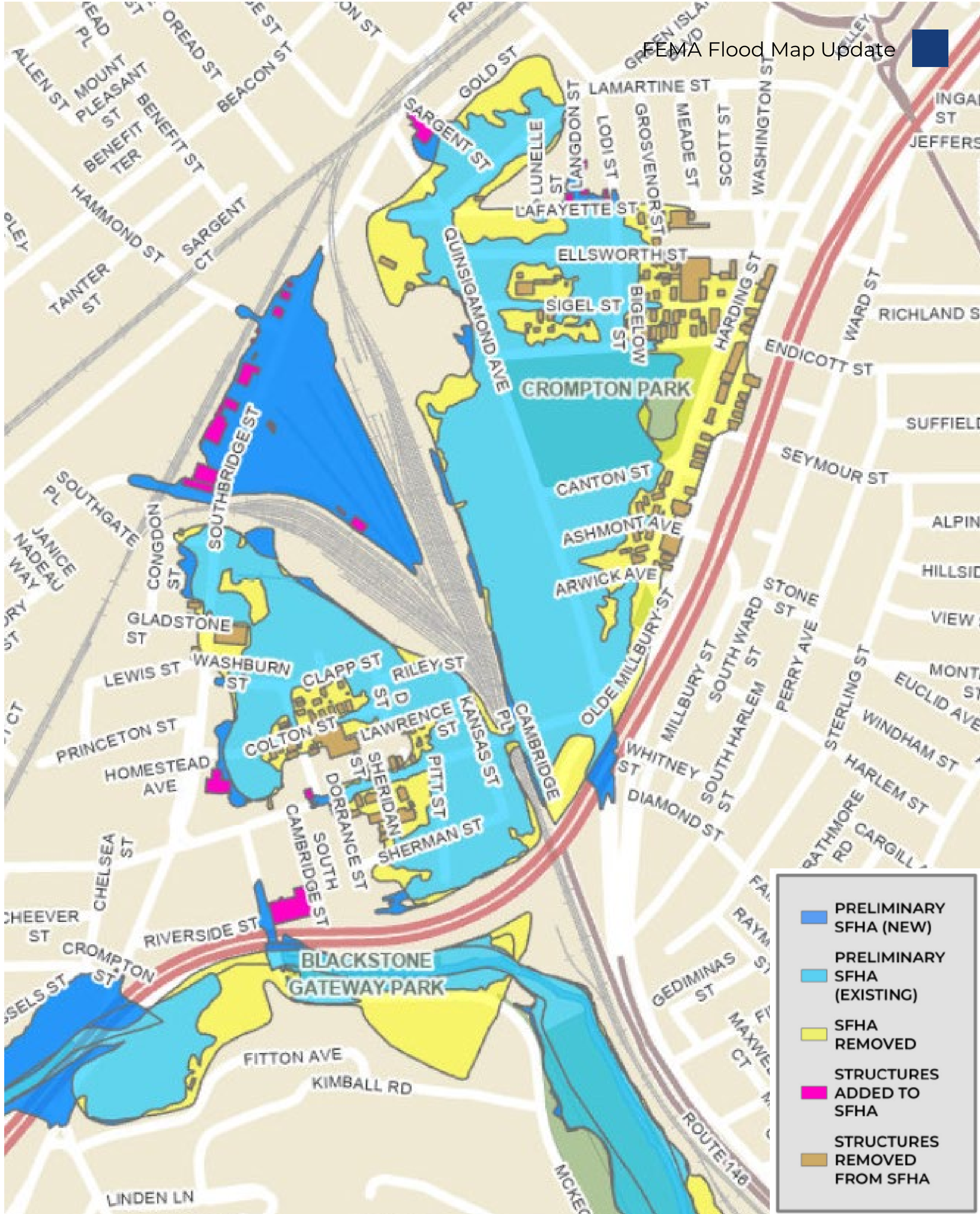
What’s Changing for the City of Worcester

- Properties:
  - 318 added to the SFHA
  - 215 removed from the SFHA
  - Net Change: +103
- Structures:
  - 327 added to SFHA
  - 412 removed from SFHA
  - Net Change: - 81
- Acreage of SFHA
  - Existing maps: 1,475 acres
  - Proposed maps: 1,412 acres
  - Net Change: -63 acres



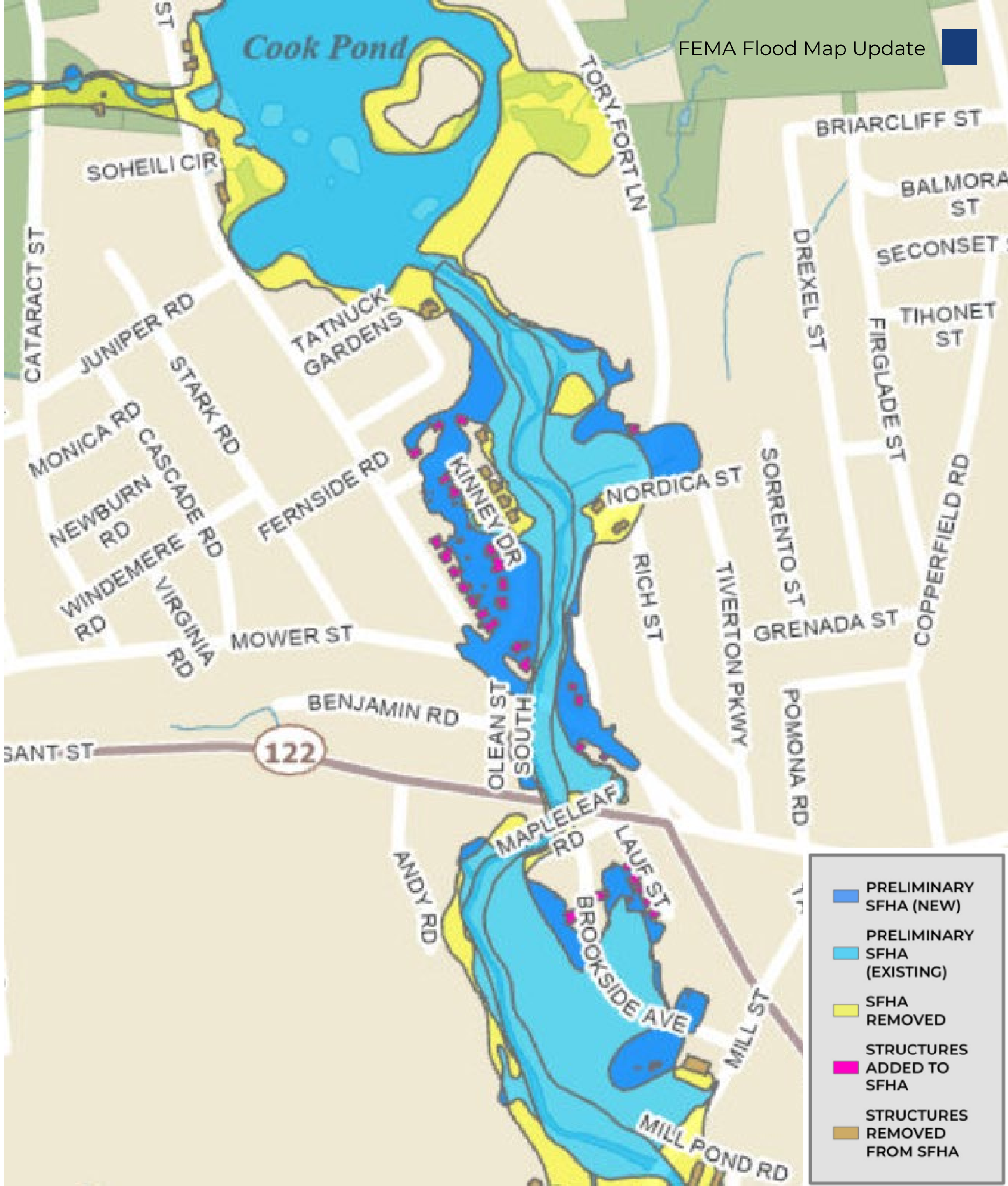
Notable Changes: Green Island

- Detailed re-study of the Middle River (from Webster Sq. to McKeon Rd.), flood elevations are expected to INCREASE by 1.1 Feet



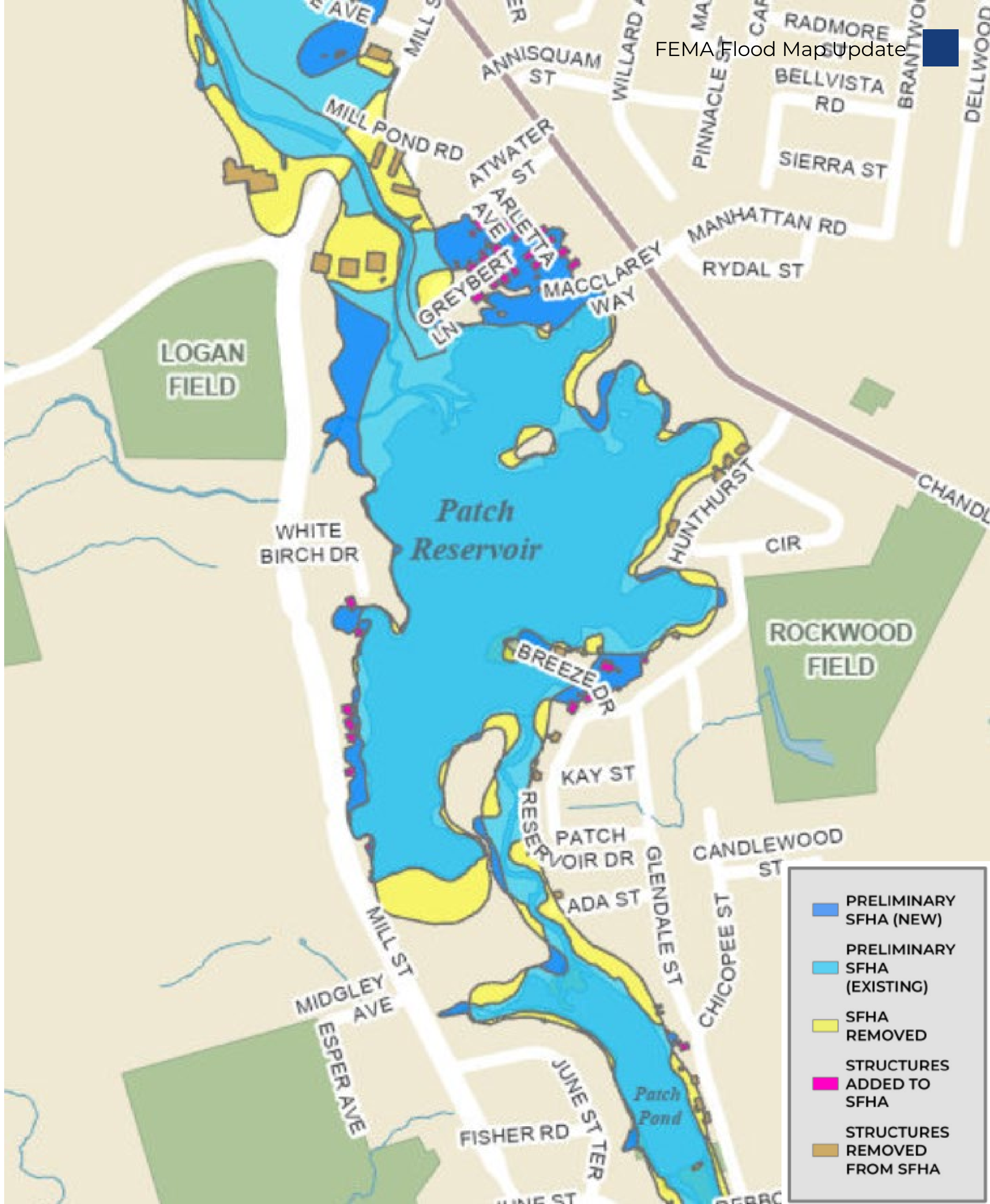
Notable Changes: Tatnuck Square

- Redelineation



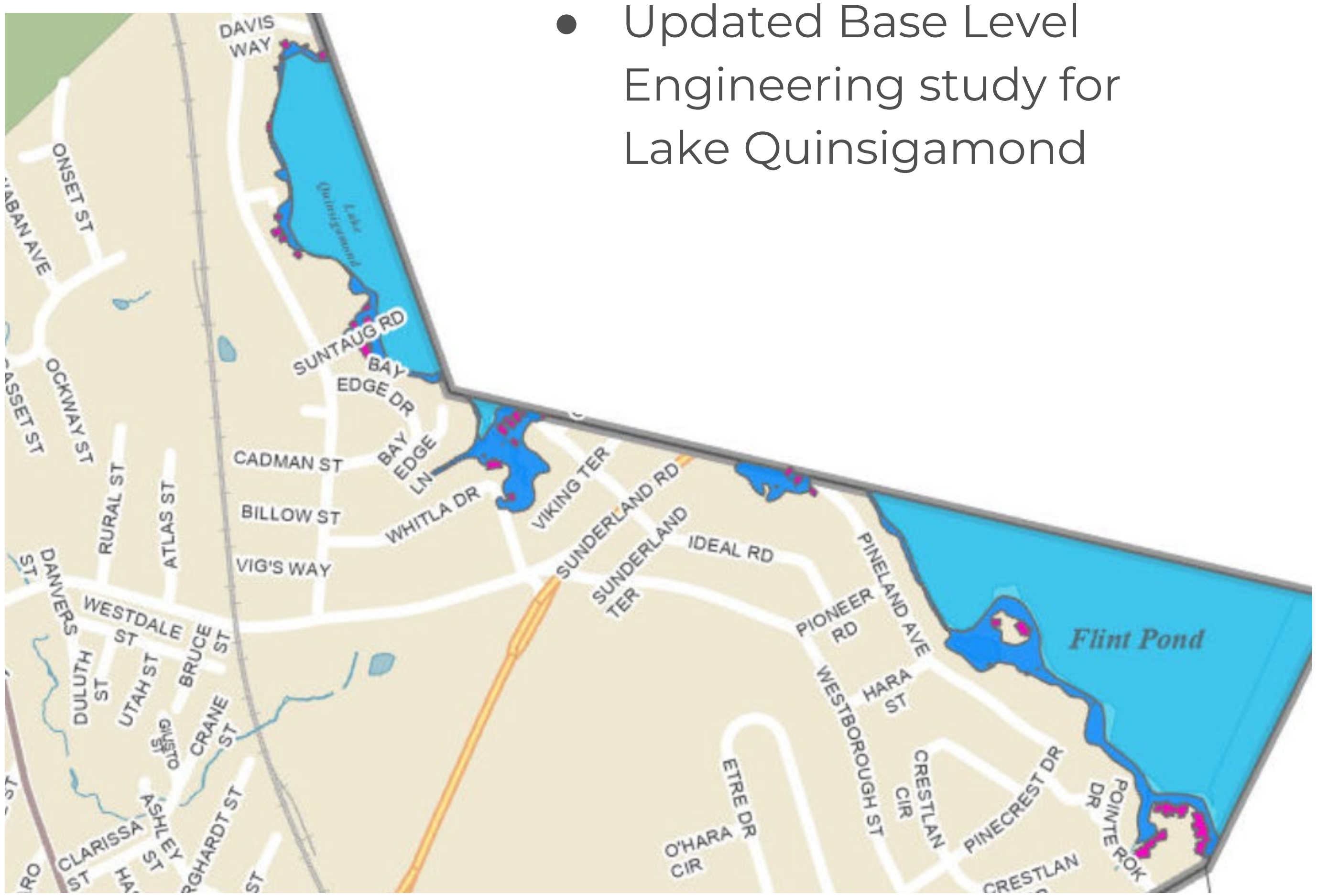
Notable Changes: Patch Reservoir

- Redelineation

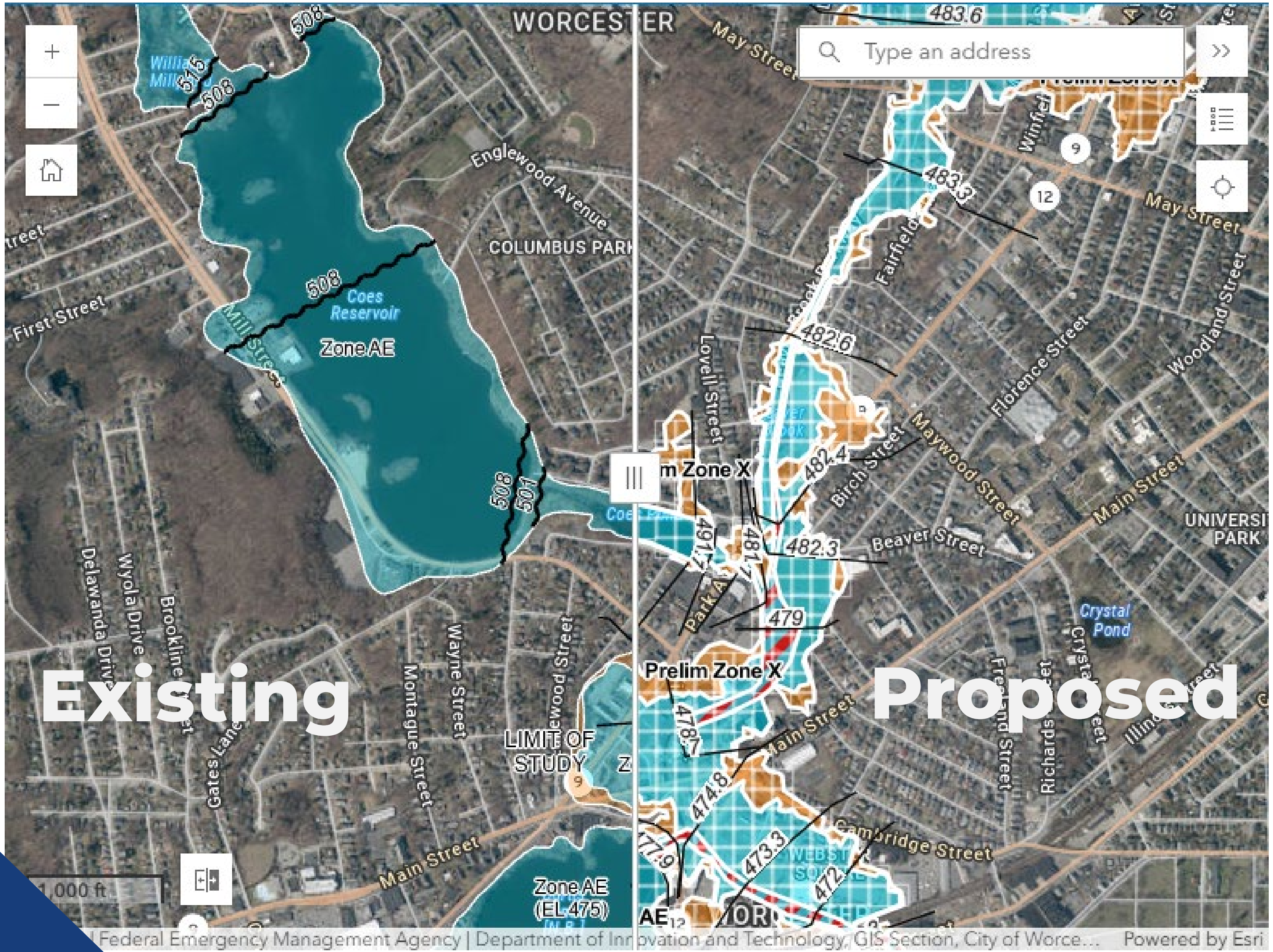


Notable Changes: Lake Quinsigamond & Flint Pond

- Updated Base Level Engineering study for Lake Quinsigamond



What changes to expect for your property - Interactive Flood Map Viewer



City of Worcester Flood Map Update Website

https://tinyurl.com/FLDMAPUPD

What does this change mean for you?

1) Flood insurance is mandatory for any structure mapped in the SFHA when a property has a federally backed mortgage. (Note: most conventional mortgages are federally backed)

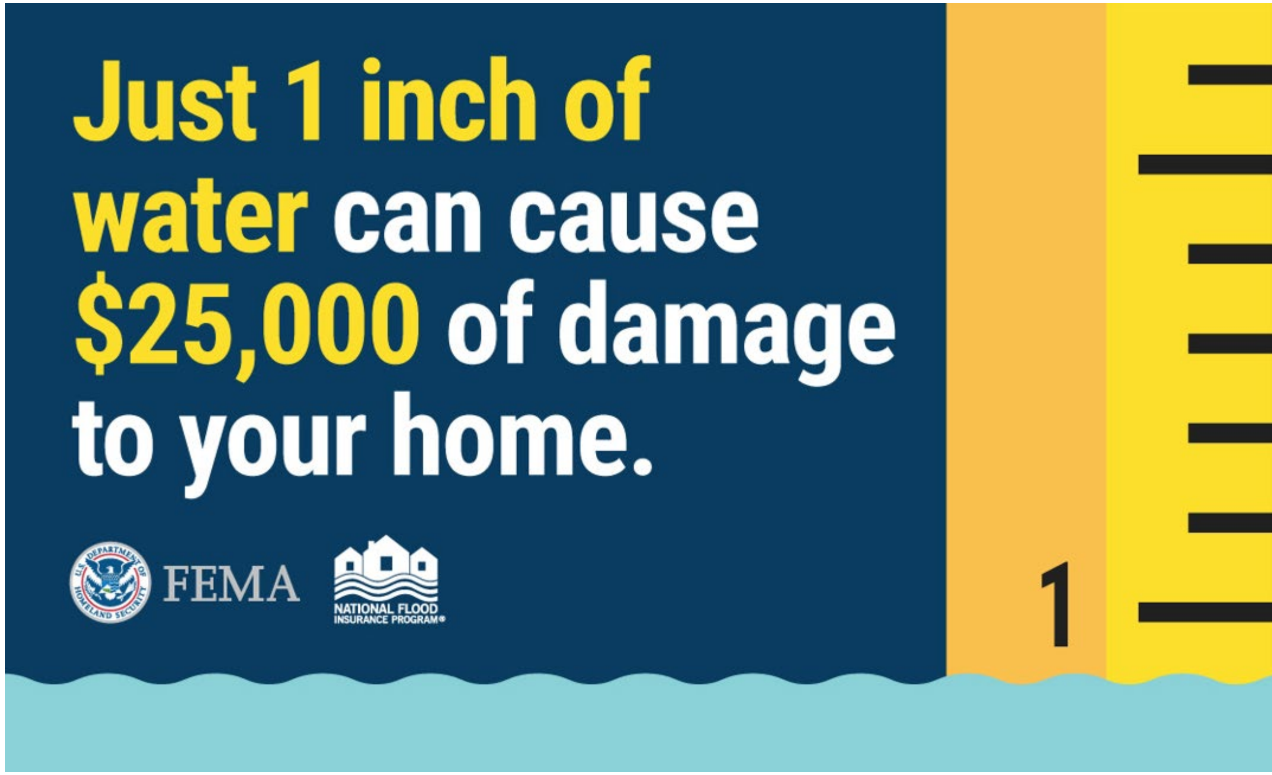
   - Flood insurance is generally *not* included in standard homeowners' insurance policy.

2) New construction or substantial improvement/damage of/to existing structures within the SFHA must meet the state building code requirements for flood resistant construction (e.g., removing basements and elevating your first floor and utilities for residential structures and/or floodproofing for non-residential structures).

3) Construction activities (e.g., tree removal, earth disturbance, decks or patios, etc.) in the SHFA require a permit from the Conservation Commission under state and local wetlands protection laws.

1 - Why is Flood Insurance Important?

- Helps protect your property from potential losses.
- Most homeowners insurance does <u>not</u> cover flood damage
- A property in the regulatory floodplain (1% Chance Annual Flood) has a 26% chance of being flooded during the life of a 30-year mortgage. **That's 1 in 4.**
- Flooding can still happen anywhere. ~32% of NFIP flood insurance claims occur *outside* of the SFHA.



Nearly 1 in 3 claims is outside of the floodplain.

Pelham Street, Worcester.
Not mapped in a regulatory floodplain.

(Pelham Street - 2018 Photos by Scott J. Croteau | masslive.com)

National Flood Insurance Program (NFIP)

- Administered by **FEMA** to participating communities in order to ensure property owners, renters, and businesses ***can* obtain flood insurance** in exchange for communities committing to uphold federal minimum floodplain management standards
- 97% of Massachusetts communities participate
- Participating communities - like Worcester - must maintain compliance with NFIP requirements (federal regulations) or risk suspension or removal from the program
    - **Worcester** also elects to participate in the Community Rating System (CRS) program, which gives policyholders up to a **15% discount** on their flood insurance premiums for properties in the City.

Flood insurance can also be obtained from private companies, but private insurers might elect not to ensure high-risk properties

Insurance - Mandatory Purchase Requirement

- If you have a **federally backed mortgage**, look out for a letter from your lender notifying you of the **mandatory requirement to purchase flood insurance for the duration of your loan**.
- FEMA plans to hold "open house" meetings prior to the new maps taking effect where FEMA insurance specialists are available to answer questions.
- The NFIP offers a **Newly Mapped discount** for buildings located in an SFHA following a flood map update. Premiums then increase gradually— within the existing statutory limit set by Congress— until reaching the "full risk" premium. Be sure to review your policy and **ASK for this** discount if it's not applied by your agent.

Flood Insurance: NFIP Policy Premiums

- **How much is it?** Average NFIP policy premium for Worcester: **$1,034/year**
    - Ask your insurance agent for an quote, or use the free **NFIP quoting tool** (QR code below)
- **How is it calculated?** Based on many factors including:
    - Likelihood of different types of flood perils (inland flooding, storm surge, coastal erosion, etc.)
    - Building characteristics (foundation type, first floor elevation, etc.)
    - Elevation and distance from flooding sources (coasts, rivers, lakes, floodways, etc.)
    - Replacement cost of the structure
- **How you can get a discount?**
    - Community Rating System - in Worcester you may get up to 15% CRS discount (applied automatically to full-risk premium upon issuance of policy or policy renewal each year)
    - **Newly Mapped discount** - may need to be **requested**
    - **Complete risk mitigation measures**, such as:
        - Elevating utilities
        - Filling in basements
        - Installing flood openings/vents
        - Elevating the structure

National Flood Insurance Program (NFIP)
https://tinyurl.com/FEMANFIP

NFIP Quoting Tool
https://tinyurl.com/NFIPQUOTE

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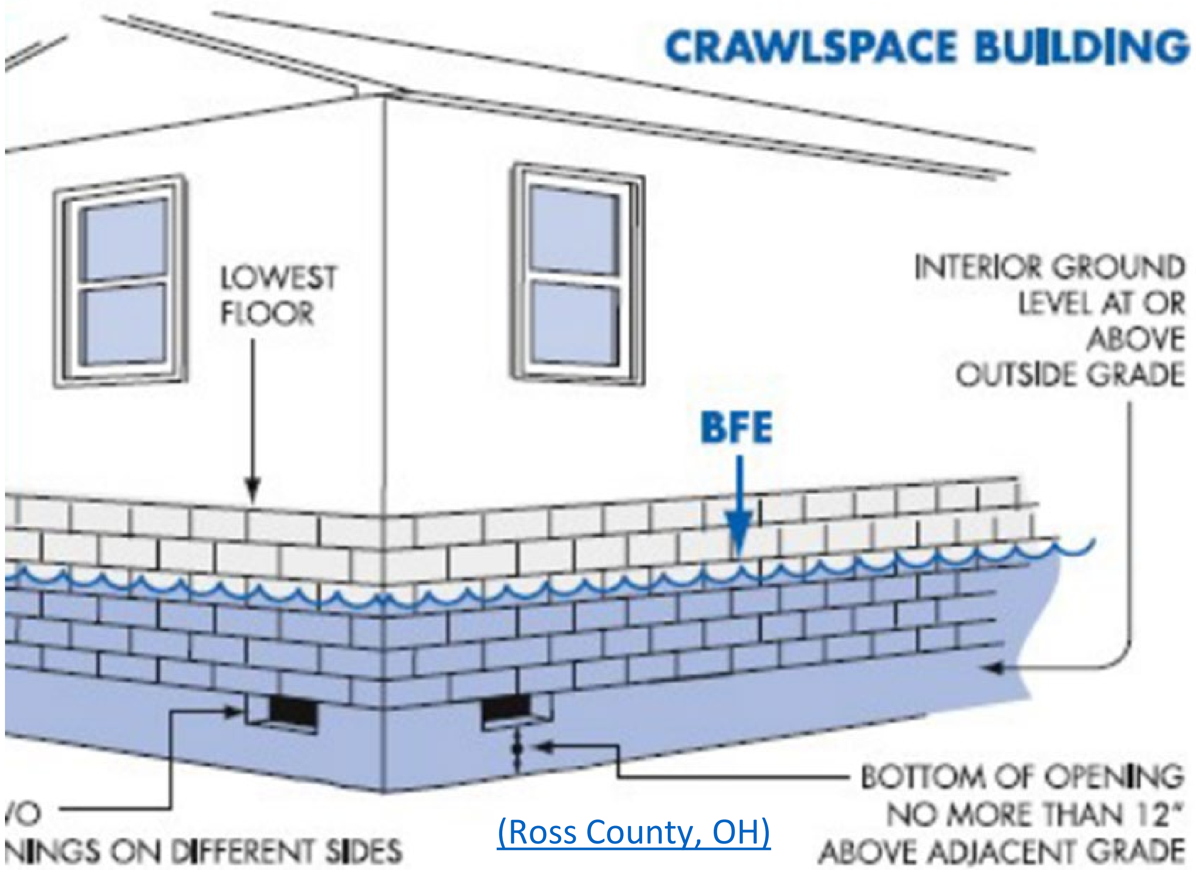
2 - Building Code Standards

For New Construction or Substantial Improvement/Damage:

- Freeboard: elevation of lowest floor and utilities 1’ (2’ as of July 1, 2025) above the Base Flood Elevation (BFE)
- Floodproofing (non-residential structures only) to 1’ (2’ as of July 1, 2025) above the BFE



(Ross County, OH)

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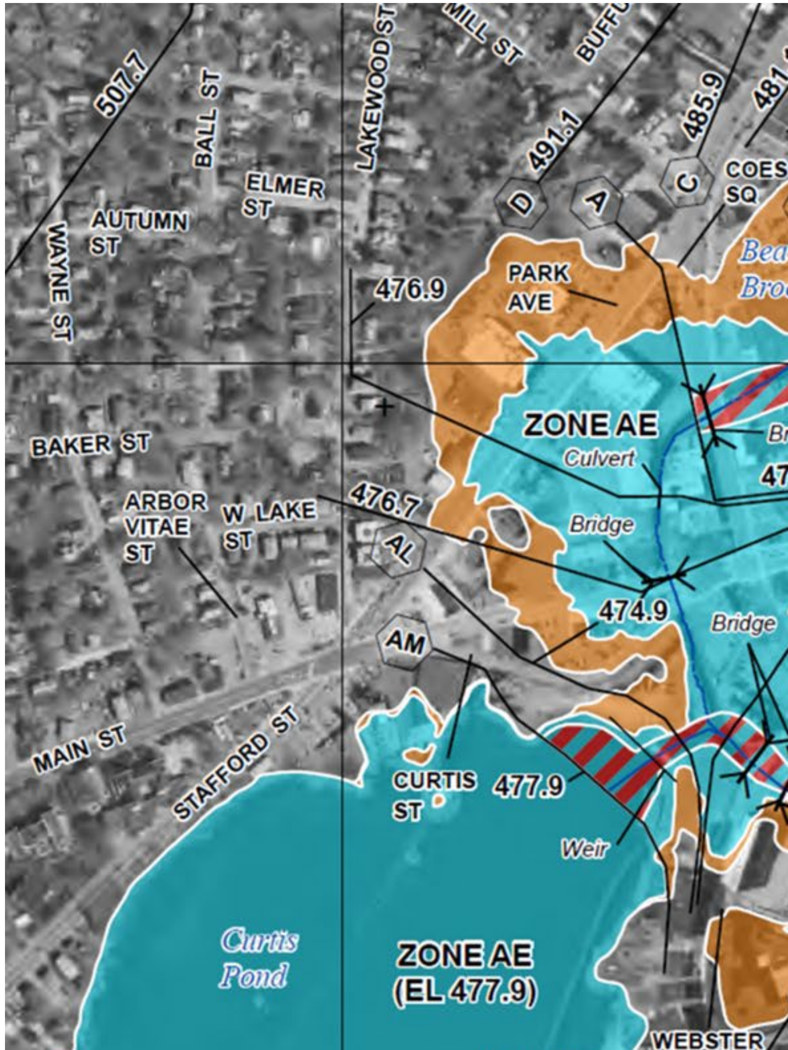
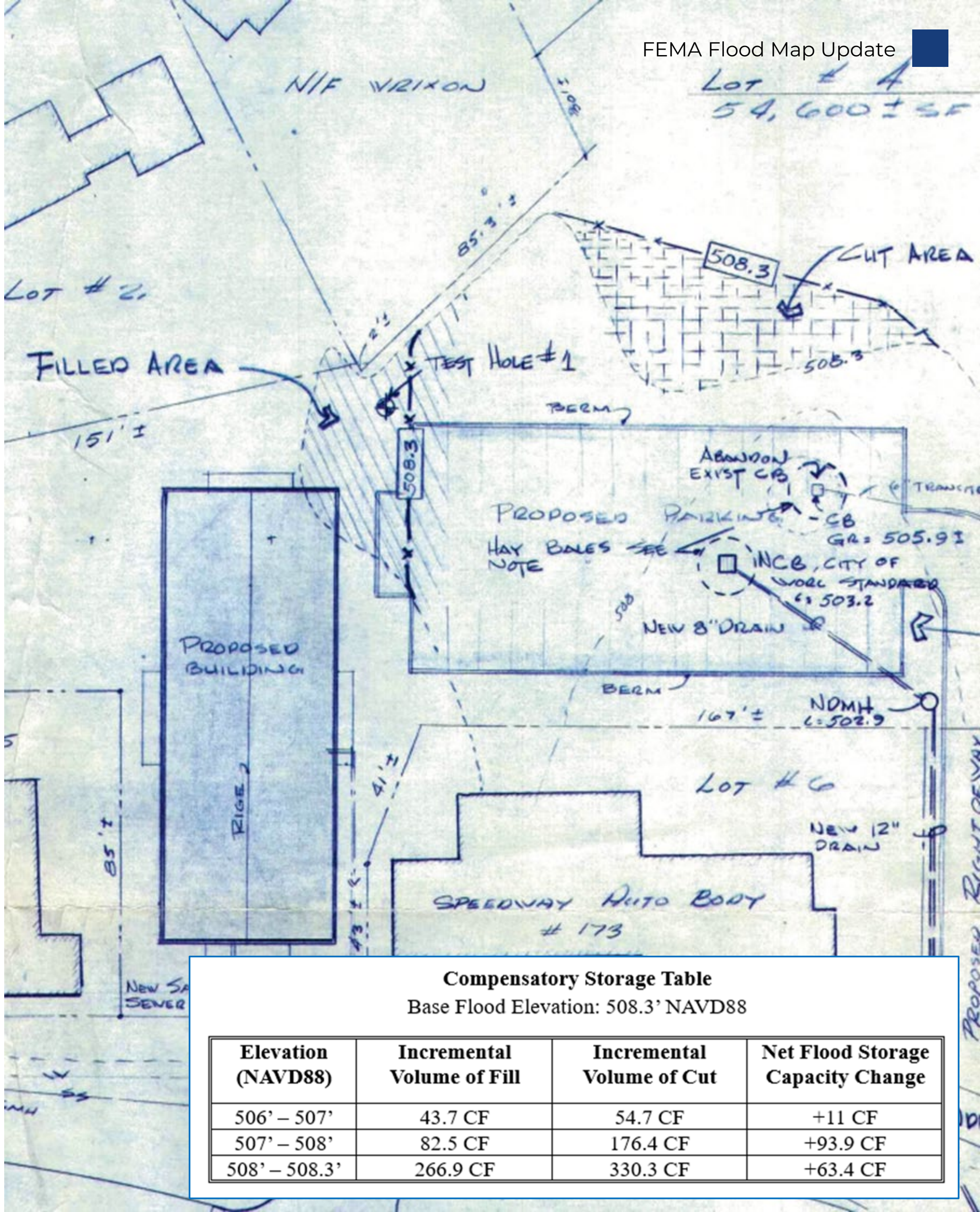


MA Wetlands Protection Act

- The SFHA is regulated under the WPA as **Bordering Land Subject to Flooding (BLSF).** Treated similar to wetlands.
  - **BLSF = Floodplain.**
- Work that involves earth disturbance, excavation, re-grading, construction, vegetation removal, etc. located within BLSF requires prior review and approval of the **Conservation Commission**
- Compensatory storage must be provided for any fill within BLSF that would displace flood waters:

> *"Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation."*



Compensatory Storage Table
Base Flood Elevation: 508.3' NAVD88

Elevation (NAVD88)	Incremental Volume of Fill	Incremental Volume of Cut	Net Flood Storage Capacity Change
506' – 507'	43.7 CF	54.7 CF	+11 CF
507' – 508'	82.5 CF	176.4 CF	+93.9 CF
508' – 508.3'	266.9 CF	330.3 CF	+63.4 CF

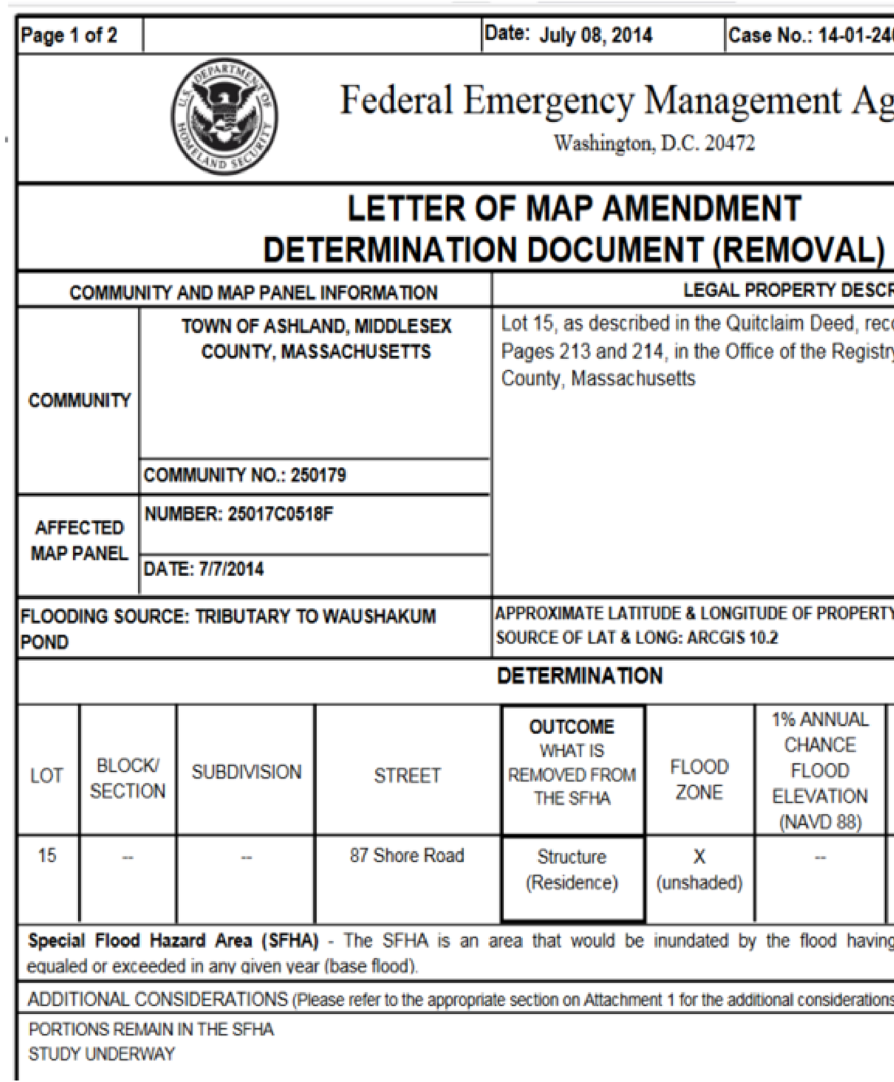
How do I get removed from the Floodplain?

It's not always possible to change FEMAs Maps, but there are options:

- Done by filing a "**Letter of Map Change**" (LOMC) to FEMA:
  - **LOMA - Amendment** - prove the maps are wrong and that your structure is actually above the 1% flood elevation ($); portions of the property are likely to remain in the SHFA
  - **LOMR - Revision** - prove the modeling (data behind the map) is wrong with new modeling ($$$)
- Consider if you want to hire a MA licensed design professional (land surveyor and/or engineer) to submit a LOMC to FEMA:
  - Check their licensure:

https://www.mass.gov/how-to/check-an-occupational-board-license

  - Ask for references
  - Ask to see examples of successful LOMC's they've filed (if it's a LOMA - look for "Removal").



Page 1 of 2 | Date: July 08, 2014 | Case No.: 14-01-24

Federal Emergency Management Ag
Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCR
COMMUNITY	TOWN OF ASHLAND, MIDDLESEX COUNTY, MASSACHUSETTS	Lot 15, as described in the Quitclaim Deed, rec Pages 213 and 214, in the Office of the Registr County, Massachusetts
	COMMUNITY NO.: 250179	
AFFECTED MAP PANEL	NUMBER: 25017C0518F	
	DATE: 7/7/2014	
FLOODING SOURCE: TRIBUTARY TO WAUSHAKUM POND		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY SOURCE OF LAT & LONG: ARCGIS 10.2

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (NAVD 88)
15	--	--	87 Shore Road	Structure (Residence)	X (unshaded)	--

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having equaled or exceeded in any given year (base flood).

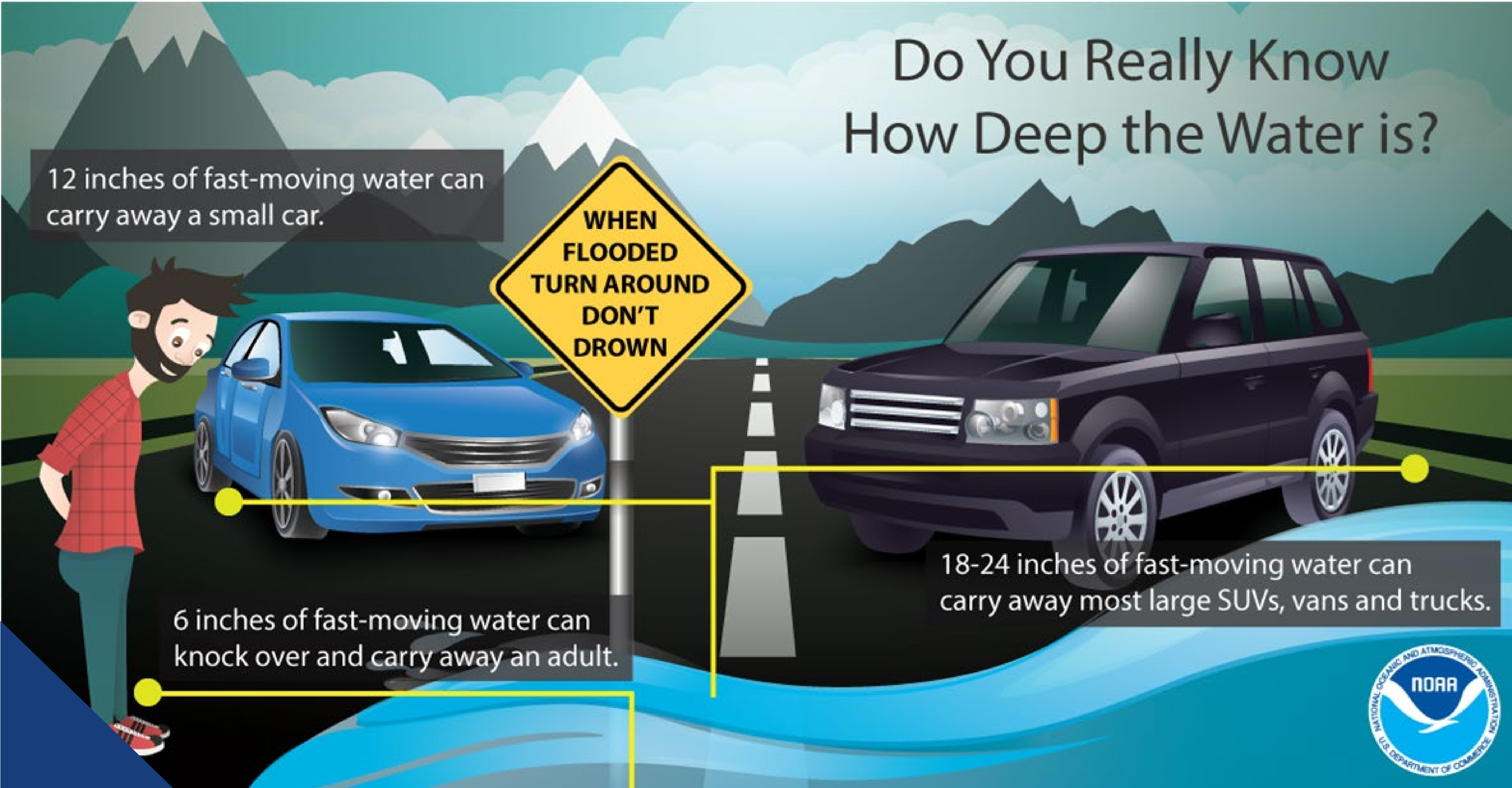
ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional consideration

PORTIONS REMAIN IN THE SFHA
STUDY UNDERWAY

Be Ready - Flood Preparedness

- Talk to your **insurance** agent about your coverage
- Prepare a list of emergency telephone numbers
- Assemble cleanup and recovery supplies
- Make a record of all of your personal property
- Identify two places where family members can meet if you are split up
- **Store** photocopies of important documents at a location away from your house
- **Elevate** utilities & valuables
- **Toss** debris from gutters
- Shut off the gas and electricity
- Prepare a flood response plan

Kansas Street & Cambridge Street (Ashley Green, Telegram & Gazette, 2021)


Do You Really Know
How Deep the Water is?
12 inches of fast-moving water can carry away a small car.
WHEN FLOODED TURN AROUND DON'T DROWN
18-24 inches of fast-moving water can carry away most large SUVs, vans and trucks.
6 inches of fast-moving water can knock over and carry away an adult.

Flood Safety - Staying Safe

- Do not walk through flowing water
- Do not drive through a flooded area
- Look before you step
- Stay away from power lines and electrical wires
- Have your electricity turned off by the Power Company
- Look out for small wild animals
- Be alert for gas leaks
- Carbon monoxide exhaust kills
- Clean & disinfect everything that got wet

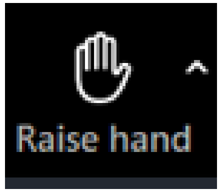
(Ashley Green, Telegram & Gazette, 2021)

Southgate Street underpass
<u>Not</u> in the regulatory floodplain

Summary

- Know your flood risk, talk to us about **LOMA**s
- Get flood **insurance** to protect you from losses
  - Ask your insurance agent about discounts, especially the "Newly Mapped" discount
  - Know what your insurance covers (and doesn't)
  - Consider contents coverage
- Take measures to protect your property (**elevate or floodproof**) and reduce premiums
- Get **permits** for any work in the floodplain
  - Look for licensed design professionals familiar with floodplain regulations
- **Be prepared and** learn how to **stay safe** during a flood by visiting www.floodsmart.gov for resources to learn more.
- **Stay informed** - sign up for ALERTWorcester

Questions?



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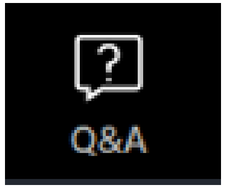
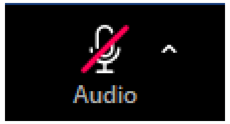


Use the Q&A feature to ask a question in writing.



Click the microphone icon to unmute, when prompted by the host (*6 if dialed in via phone).

For questions about specific properties or to set up an appointment to discuss floodplain implications further, please send an email to:

FlintE@WorcesterMA.gov

City of Worcester Flood Map Update Website

https://tinyurl.com/FLDMAPUPD

Useful Links

- City of Worcester Floodplain Management Webpage
- City of Worcester Flood Map Update Webpage
- Worcester Atlas Viewer
- FloodSmart.gov
- FEMA National Flood Insurance Program
- NFIP Quoting Tool