

FIRM Analysis for Weymouth, Massachusetts



June 16, 2015
7:00pm
Woodard & Curran
Woods Hole Group

Presentation Outline

1. FEMA/FIRM Background
2. Weymouth History
3. FIRM Analysis & Results
4. Possible Paths Forward
5. Discussion

National Flood Insurance Program (NFIP)

- Established by Congress in 1968
- Goal is to reduce the impact of future flooding & to provide a means for people to rebuild after flooding
- Provides federally backed flood insurance
- Creates minimum floodplain regulations that help mitigate the impacts of flooding on new and improved structures

WEYMOUTH JOINED THE NFIP ON JUNE 14, 1974

Flood Insurance Rate Map (FIRM)

- Created as part of the NFIP
- Depicts properties that are required to have flood insurance
- Portrays Special Flood Hazard Areas (SFHA)
 - Flood boundary for 100-year flood event
- Establishes “zones” of predicted flooding conditions
 - Areas impacted by wave action (VE Zones)
 - Areas of flooding with standing water (AE Zones)
 - Areas impacted by the 500-year flood event (X Zones)
- Predicts elevation of flooding (BFEs)
- Are routinely updated to reflect new flood data

Flood Risk vs. Insurance Cost



A



B



C

- The pictures above represent the three risk levels that are used by FEMA to calculate your actuarial risk of flooding:
 - A. First Floor Elevation (FFE) below Base Flood Elevation (BFE)
 - B. First Floor Elevation at Base Flood Elevation
 - C. First Floor Elevation above Base Flood Elevation
- By constructing or rebuilding FFE at or above the BFE, as opposed to below, you can significantly lower your flood insurance, possibly saving you up to tens of thousands of dollars over ten years

Recent FIRM Updates

- FEMA applied a major change in its “coastal methodology” starting in 2012
- Resulted in significant FIRM changes along the coastline
- Increased the number of properties that are required to have flood insurance
- Increased the predicted flood elevations (BFEs) within the Special Flood Hazard Areas (SFHAs)



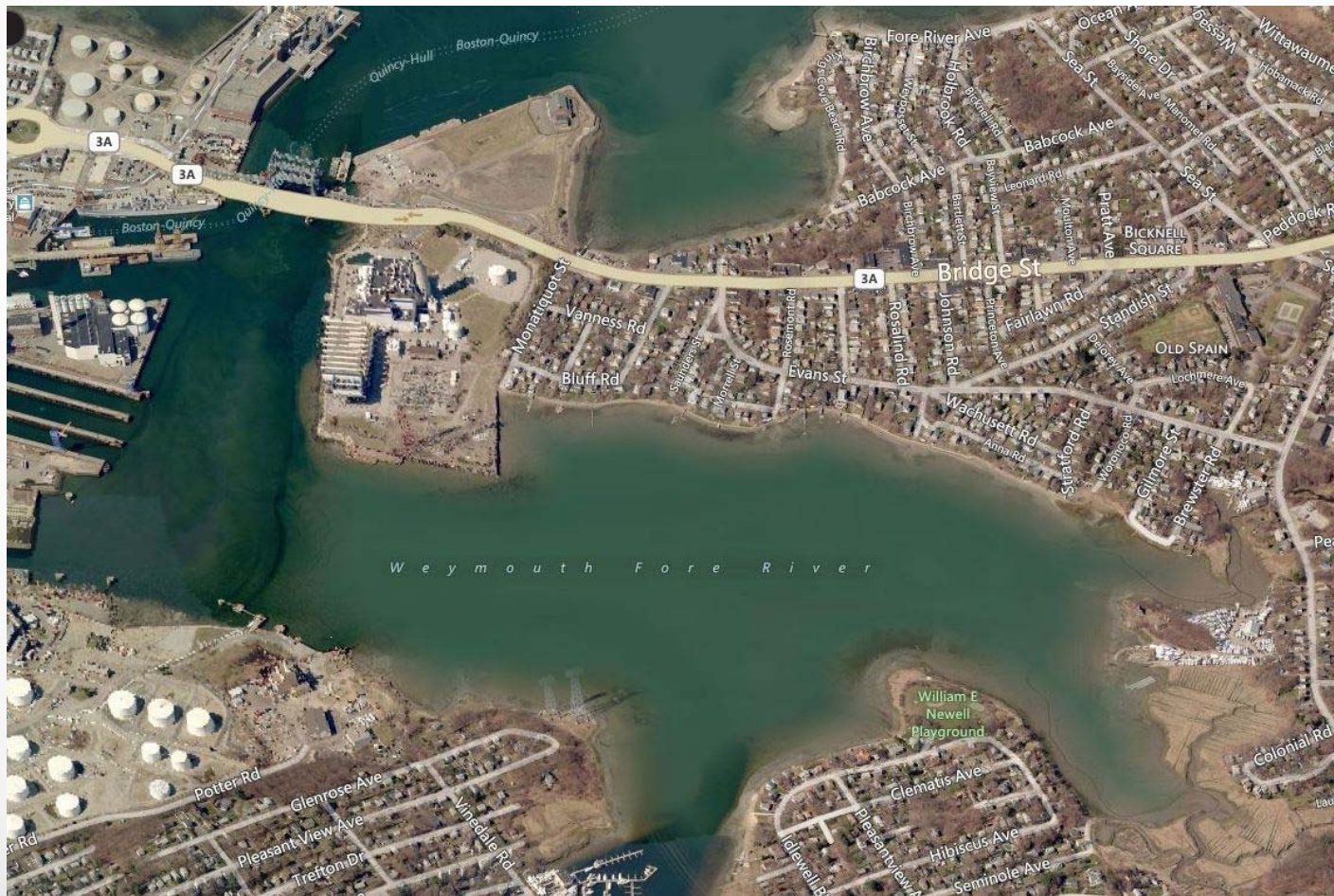
Weymouth's History

- Dates FIRMs were updated in Weymouth:
 - September 30, 1980
 - June 5, 1989
 - August 19, 1991
 - July 17, 2012
 - June 9, 2014
- Effective FIRMs predict a greater level of flood impact to Weymouth's coastline relative to past FIRMs
- FEMA's schedule for future map changes is unknown at this time

Weymouth contracted with Woodard & Curran and Woods Hole Group to assess the validity of the effective FIRMs in areas that were significantly impacted by the most recent revisions

Weymouth's FIRM Analysis

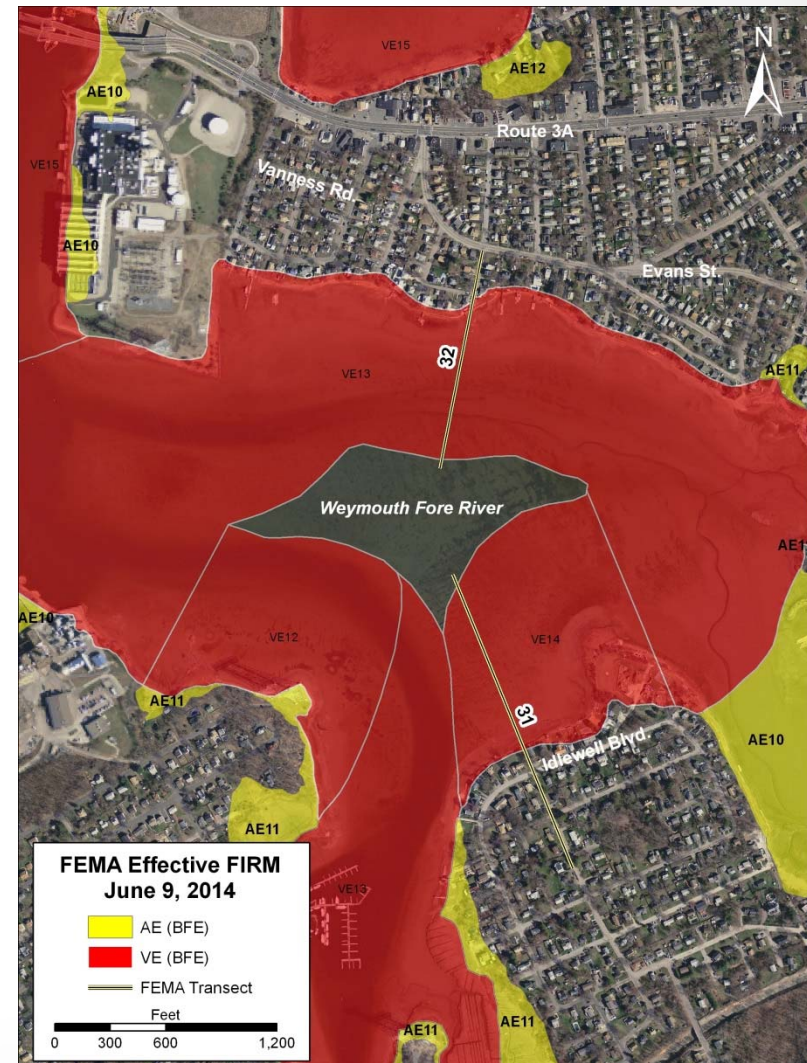
Focused on the Idlewell Boulevard neighborhood & the northern shoreline area of the Weymouth Fore River (Transects 31 & 32)



FIRM Analysis Components

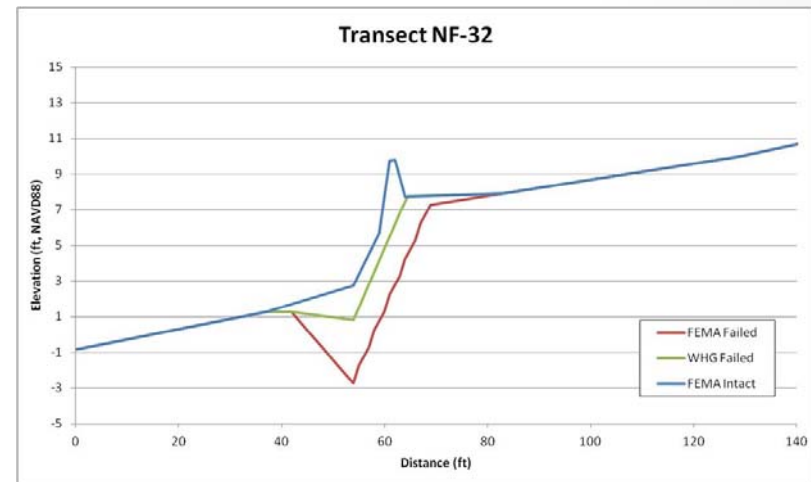
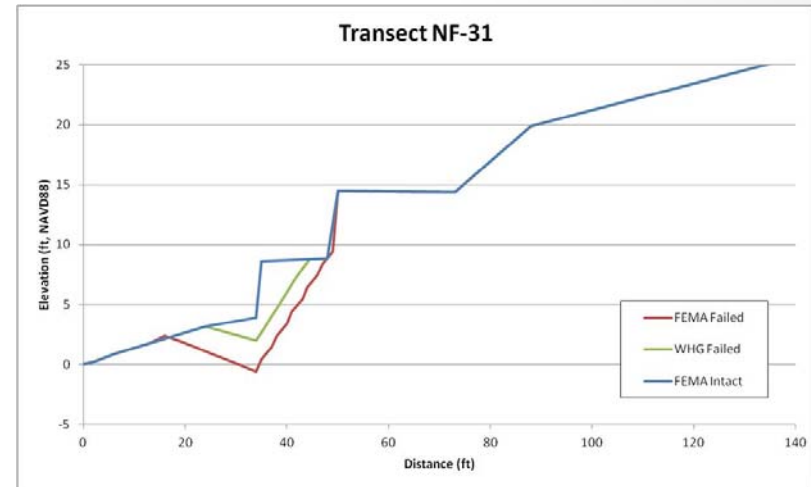
The following components were evaluated at Transects 31 & 32:

- Stillwater Elevations
- Wave Climatology
- Erosion & Structure Failure
- Wave Runup & Overtopping
- Overland Wave Transformation
- Flood Zone & Base Flood Elevation (BFE) Mapping

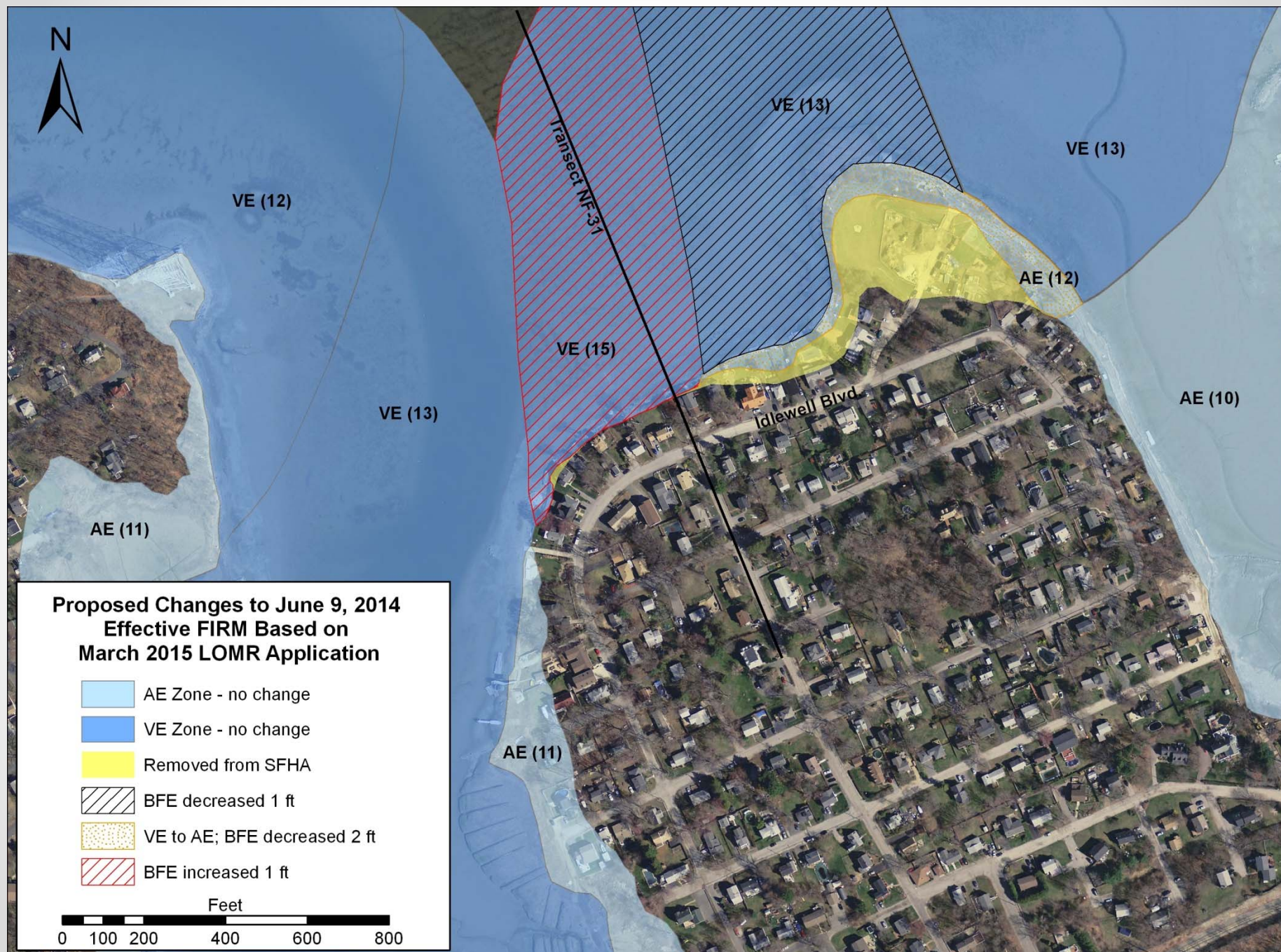


FIRM Analysis Results

- Comparable Stillwater Elevations (1% annual-chance water level)
- Lower Wave Heights & Periods
- Less Scour and less overall impact from Failed Structures
- Revised Mapping (i.e., flood zone boundaries & base flood elevations)







Summary of Results

	ESTIMATED NUMBER
Structures within SFHA	39
Structures removed from SFHA	20
Structures added to SFHA	0
Designation Changes (AE to VE)	0
Designation Changes (VE to AE)	2
BFE decrease of one (1) foot	1
BFE increase of one (1) foot	3

Note: Values listed based on visual examination of aerial photography.
Final determination based on acceptance of LOMR and insurance
broker review.

Possible Paths Forward

- Take No Action
- Prepare Letter of Map Revision (LOMR)
 - Appeal to change the boundaries, designations, and/or Base Flood Elevations (BFEs) for AE- and VE-Zones
 - Effectively “correcting” or “tweaking” the maps

Discussion

