



# Connecticut Department of Energy and Environmental Protection



Connecticut Department of  
**ENERGY &  
ENVIRONMENTAL  
PROTECTION**

# New State Building Code & Floodplain Zoning Regulations



October 24, 2018

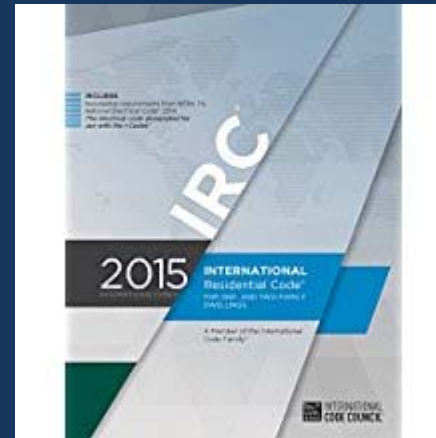
Diane Ifkovic, State NFIP Coordinator  
CAFM Annual Conference, Bridgeport



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# Community Officials Serve 2 Masters

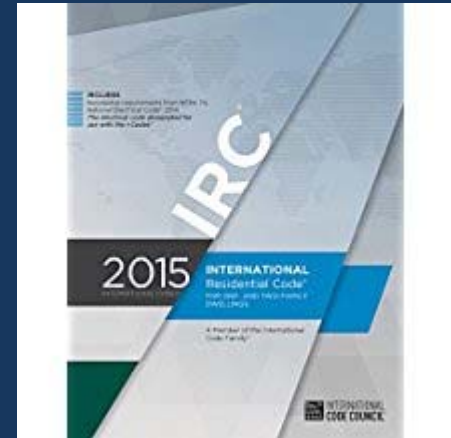
- Floodplain Zoning Regulations or stand alone Flood Ordinance  
(Zoning or Land Use Department)
- State Building Code  
(Building Dept.)



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# State Building Code – October 1, 2018

- Pursuant to section 29-252 of the CT General Statutes, the following national model codes, as amended, are adopted and shall be known as the 2018 Connecticut State Building Code:
- 2015 International Building Code (IBC)
- **2015 International Residential Code (IRC)**
- 2009 ICC/ANSI A117.1 Accessible and Usable
- 2015 International Existing Building Code
- 2015 International Plumbing Code
- 2015 International Mechanical Code
- 2015 International Energy Conservation Code
- 2017 NFPA 70, National Electric Code, of the National Fire Protection Association Inc.



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# Why did this happen?

- Tropical Storm Irene (August 2011)
- Superstorm Sandy (October 2012)
- Push by legislators to move Connecticut to the most recent national model building codes
- Office of the State Building Inspector (OSBI) is in charge of the State Building Code



# State Building Code - Floodplain

- 2015 International Building Code (IBC)
  - **Appendix G, Flood-Resistant Construction**  
*(Non-residential structures, ASCE 24)*
- 2015 International Residential Code (IRC)
  - **Chapter 3, Building Planning, Section R322, Flood-Resistant Construction**



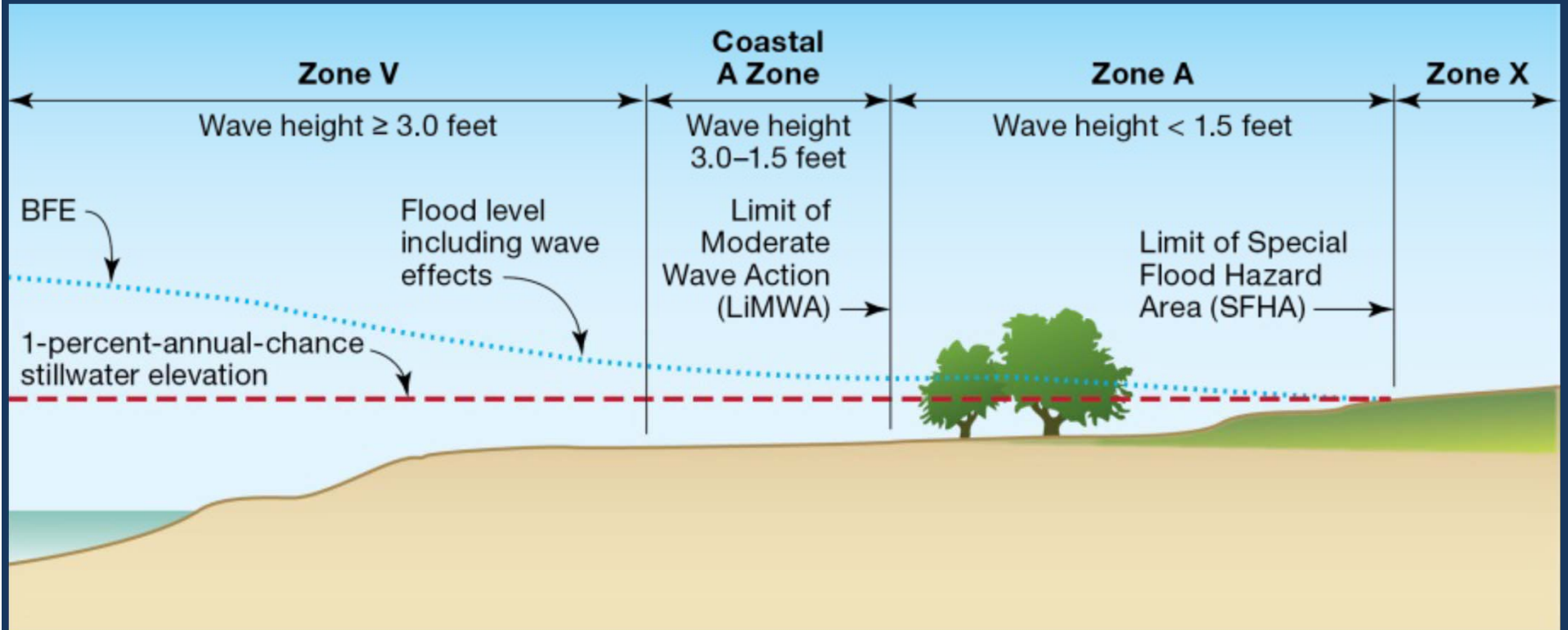
# Bldg Code Now Recognizes Coastal A Zone

- R322.2 Flood hazard areas (including A Zones)
  - *Flood hazard areas that have been delineated as subject to wave heights between 1.5 feet and 3 feet or otherwise designated by the jurisdiction shall be designated as Coastal A Zones and are subject to the requirements of Section R322.3.*





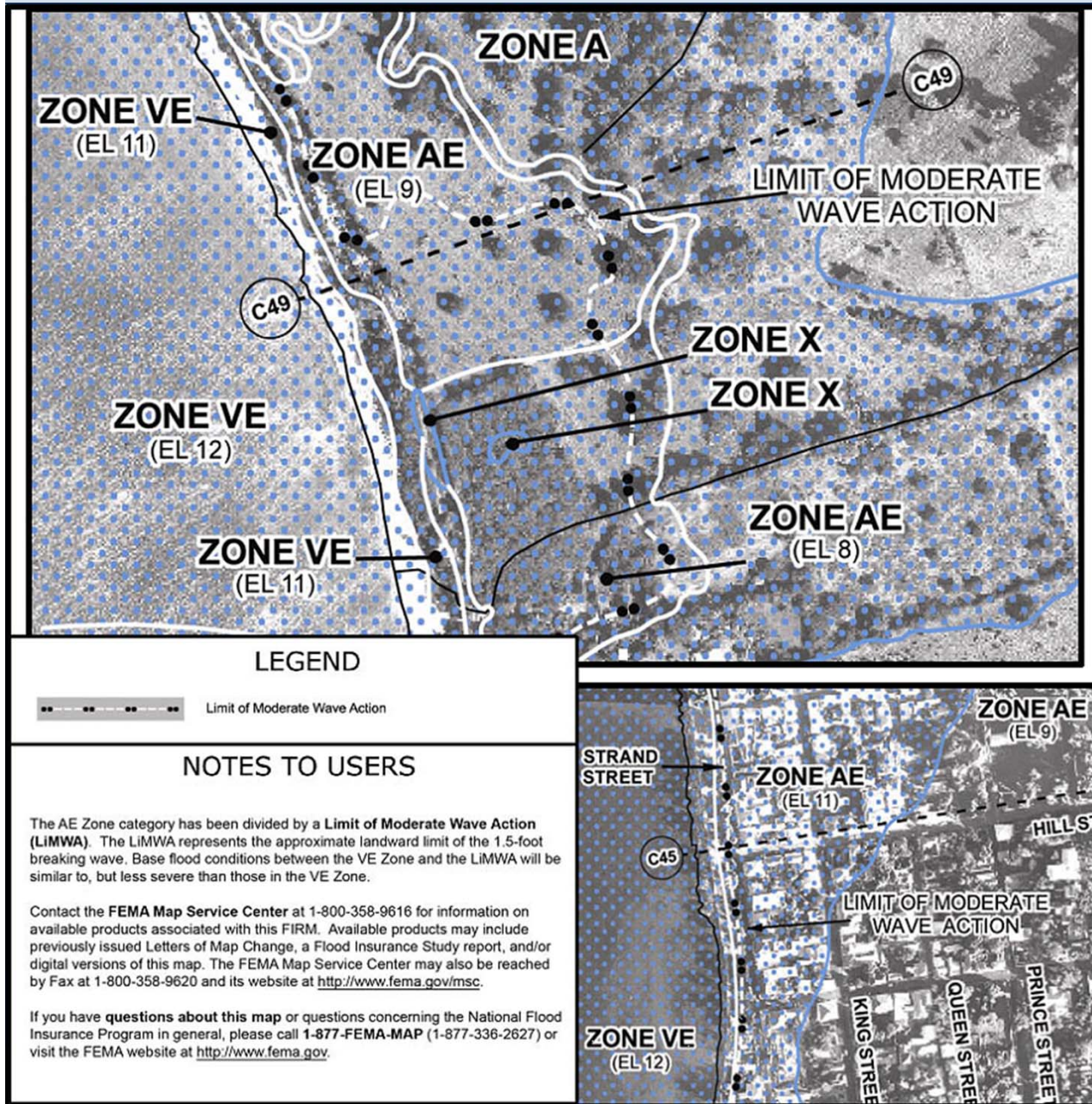
# Coastal A Zone/Limit of Moderate Wave Action (LiMWA)



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# Limit of Moderate Wave Action (LiMWA)



FEMA Fact Sheet –

“Importance of the Limit of Moderate Wave Action (LiMWA)”



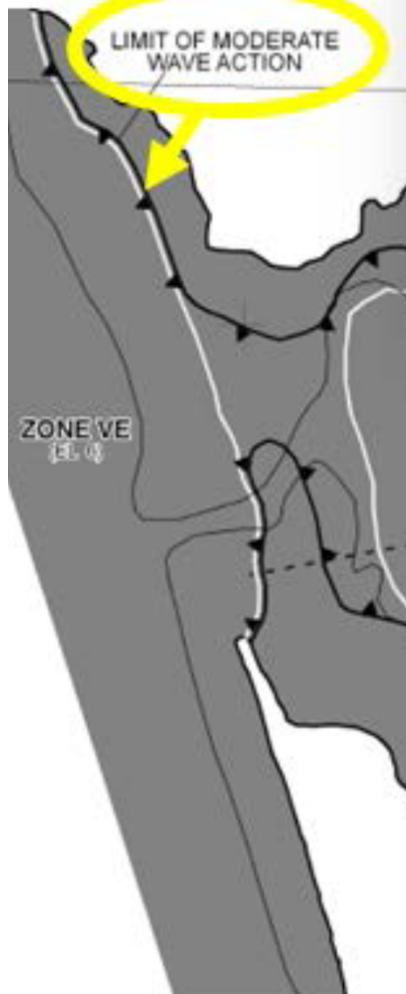
# Limit of Moderate Wave Action (LiMWA)

## NOTES TO USERS

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LiMWA)**. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. Base flood conditions between the VE Zone and the LiMWA will be similar to, but less severe than those in the VE Zone.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.fema.gov/msc>.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov>.



A



B

# New Elevation Standard – Zone A

- R322.2 Flood hazard areas (including A Zones)
  - R322.2.1 Elevation requirement
    - AE and A Zones – Lowest floor elevated to Base Flood Elevation (BFE) plus 1 foot

This elevation standard applies to both inland riverine and Coastal A zones.



# Requirements for V Zone and Coastal A

- R322.3 Coastal high-hazard areas (including V Zones and Coastal A Zones)
  - R322.3.2 Elevation Requirements
    - V Zones and Coastal A – Bottom of the lowest horizontal structural member supporting the lowest floor elevated to Base Flood Elevation (BFE) plus 1 foot

This elevation standard applies to both V Zone and Coastal A zones.



# Other Requirements for V Zone, Coastal A

- Flood vents installed in breakaway walls in both VE and Coastal A zones
- Exterior door at top of stairs to protect building envelope
- Add definitions of Coastal A and LiMWA added
- Require LiMWA boundary line on site plans



# New Requirements for all flood zones

- R322.1.6 - Bottom of Utilities to BFE+1 foot
- Tanks, under and above ground
- Building partially in flood zone, considered entirely in the flood zone
- Building in two flood zones, more restrictive applies
- FEMA Technical Bulletin 2, Flood-Damage Resistant Materials is referenced
- More detail on venting and enclosures in A zones
- ASCE 24 is referenced, can be utilized



# Model Floodplain Regulations

- Model Floodplain Regulation developed
  - Inland community
  - Coastal community
- Outlines changes needed to incorporate new building code language





# Identifying the LiMWA

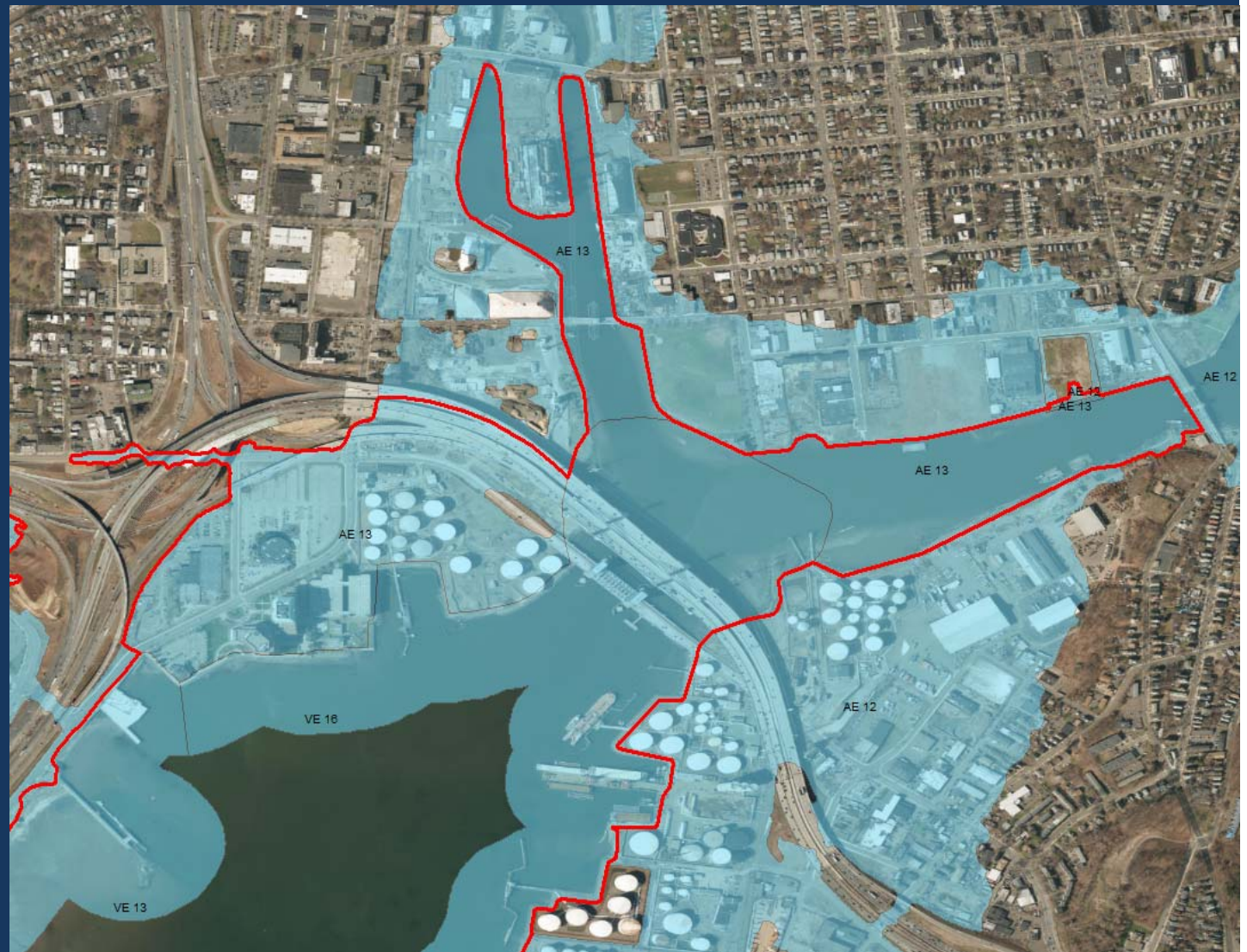
- Identifying the LiMWA can be problematic.
- **It is a continuous line running along the coast!**
- It can often be hidden, or appear broken, if the line runs in conjunction with another flood zone boundary line.
- Recommended that community officials download the National Flood Hazard Layer (NFHL) GIS dataset from FEMA's Map Service Center website.
- The dataset includes a LiMWA dataset with an unbroken LiMWA line, with no portions hidden behind other flood zone lines.
- Individual municipalities may consider publishing this layer on their own GIS viewers.
- The NFHL GIS dataset can be downloaded at the FEMA Map Service Center (MSC) through the "Search All Products" link, then choosing the appropriate state, county and community. Then click on "Effective Products" and then click on "NFHL Data-County" to download the NFHL database.



# Limit of Moderate Wave Action (LiMWA)

Map of New Haven utilizing this NFHL GIS dataset. The red line is the LiMWA line.

Line stays continuous. Any area seaward of red line is Coastal AE or VE zone and must meet new construction requirements outlined in the updated state building code.



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# Questions?

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