



NFIP Training for Chester County Engineers

Permitting

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Introduction

- **Welcome**
- **Logistics**
 - Attendance Sheet
 - Interactive/Questions
- **Course Expectations**



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High-level explanation of permitting in the Special Flood Hazard Area (SFHA)



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National Flood Insurance Program (NFIP) Background

- Created by National Flood Insurance Act of 1968
- Participation is **voluntary**
 - Adopt and enforce regulations
 - Eligible for flood insurance
- **Benefits** of participation
 - Flood insurance
 - Grants and loans
 - Disaster assistance
 - Federally-backed mortgages
- **Goals** of the NFIP include
 - Save lives and protect property
 - Encourage a comprehensive approach to floodplain management

The Base Flood:

The flood having a 1% chance of being equaled or exceeded in a given year. Used by the NFIP as the basis for mapping, insurance rating, and regulating development.



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NFIP Roles: Federal and State

▪ Federal

- National program oversight
- Risk identification (mapping)
- Establish development/building standards
- Provide technical assistance to state/communities/agencies
- Provide insurance coverage

▪ State

- State program oversight
- Establish development/building standards
- Provide technical assistance to local communities/agencies
- Evaluate and document floodplain management activities



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NFIP Roles: Local

- **Local Officials and Floodplain Administrators**

- Adopt and enforce floodplain management ordinance compliant with Federal/State laws
- Issue or deny development
- Inspect development and maintain records
- Make substantial damage determinations

- Development oversight is a **local responsibility**



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The Permitting Process – Overview

Permits are Required for ALL Development

ALL development in the SFHA requires a permit

- Definition of development (as per 44 CFR 59)

Any manmade change to improved or unimproved real estate, **including, but not limited to** buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials



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Which activities in the SFHA require a development permit?

- Construction of new buildings
- Additions to existing buildings
- Substantial improvements of existing buildings
- Repair of substantially damaged buildings
- Renovation of existing building interiors
- Installation of manufactured homes
- Subdivision of land
- Placement of temporary buildings and accessory structures
- Construction of roads, bridges, and culverts
- Placement of fill, grading, excavation, and dredging
- Alteration of stream channels
- Construction of a fence
- Paving



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I-Codes and the NFIP



▪ **REMEMBER!**

- You must adhere the most restrictive code, provision, or requirement
- The absence of certain floodplain management requirements from existing building codes does not absolve the municipality from applying the requirements of its floodplain management ordinance and vice versa

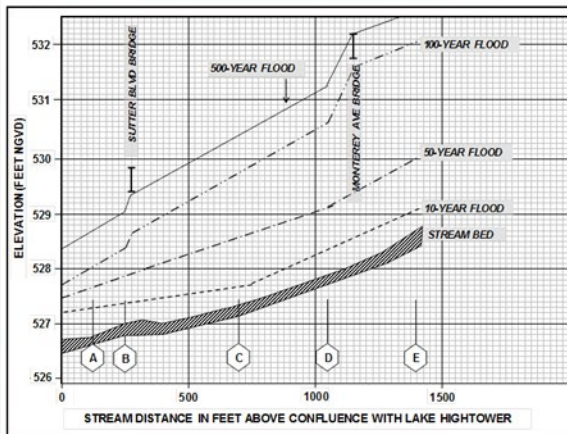


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Considerations for Zone AE, AH, and AO

Zone AE

Provide the necessary elevation data for effective permitting
Use the flood profile to determine site-specific water-surface elevations



Zone AH and AO

Represent areas subject to shallow flooding and sheet flow where average depths range from 1 to 3 feet

Average whole-foot elevation/depth derived from the FIRM

Lowest floor \geq flood depth

or

Lowest floor \geq 2' when no depth is specified

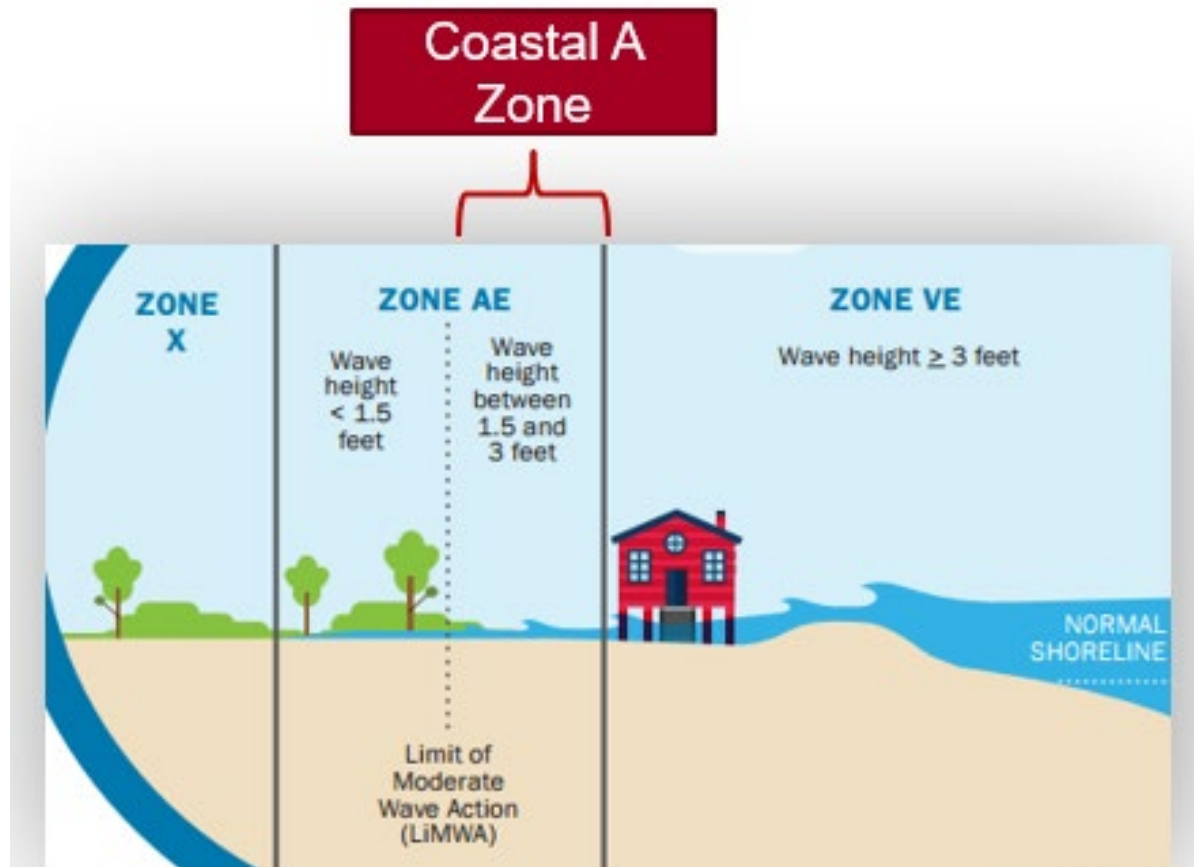


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Considerations for Zone AE

Zone AE in Coastal Areas

- Use LiMWA to identify Coastal A Zone (CAZ)
- NFIP regulations do not have provisions for CAZ but I-Codes do; requires CAZ buildings to be treated like Zone V buildings



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Considerations for Zone AE

AE Zones without Floodways

- Where FEMA has provided BFEs but no floodway, the community must review all development to **track cumulative rise**
- Ensure development does not increase the BFE more than 1.0 foot
- Once allowable rise is reached, **no further rise** is permitted
- Administrative procedure to track and collect cumulative impact

Development must prove “no rise”

- No rise = zero foot (0.00')
- Rise is tracked both upstream and downstream of the development location

Documentation requirement

- H&H study
- If an existing structure, the site plan showing the footprint will not expand

Ensure a “no rise” certificate is prepared and certified by a qualified and licensed engineer.
Read the certification; ensure it shows no rise.



Collecting Compliance Documentation

- Permit file **must contain as-built** or finished construction data for all new structures or substantial improvements in SFHA
- Required to prove compliance with the floodplain regulations
- Must be **signed and sealed** by the design or certifying professional
- Examples of compliance documentation
 - Site plans and surveys
 - Building/architectural plans
 - FEMA Elevation Certificate (EC)
 - Floodproofing certificate
 - Engineered openings
 - Declaration of Land Restriction (Non-conversion Agreement)

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)			
C1. Building elevations are based on:	<input type="checkbox"/> Construction Drawings*	<input type="checkbox"/> Building Under Construction*	<input checked="" type="checkbox"/> Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.			
C2. Elevations - Zones A1-A30, AE, AH, A (with BFE), VE, V1-V20, V (with BFE), AR, ARIA, ARIAE, ARIA1-A30, ARIAH, ARIAO. Complete items C2-a-g below according to the building diagram specified in Item A7.			
Benchmark Utilized: <u>1000</u> Vertical Datum: <u>NAD83</u> <u>4999</u>			
Conversion/Comments: _____			
a) Top of bottom floor (including basement, crawl space, or enclosure floor),	<u>627.0</u>	feet	<input type="checkbox"/>
b) Top of the next higher floor	<u>N/A</u>	feet	<input type="checkbox"/>
c) Bottom of the lowest horizontal structural member (V Zones only)	<u>N/A</u>	feet	<input type="checkbox"/>
d) Attached garage (top of slab)	<u>622.0</u>	feet	<input type="checkbox"/>
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment in Comments)	<u>627.0</u>	feet	<input type="checkbox"/>
f) Lowest adjacent (finished) grade (LAG)	<u>622.0</u>	feet	<input type="checkbox"/>
g) Highest adjacent (finished) grade (HAG)	<u>626.0</u>	feet	<input type="checkbox"/>

In this example, the BFE is 625.0 feet.

The slab-on-grade house was elevated on fill 2 feet above the BFE; the vented garage is 2.5 feet below the BFE.

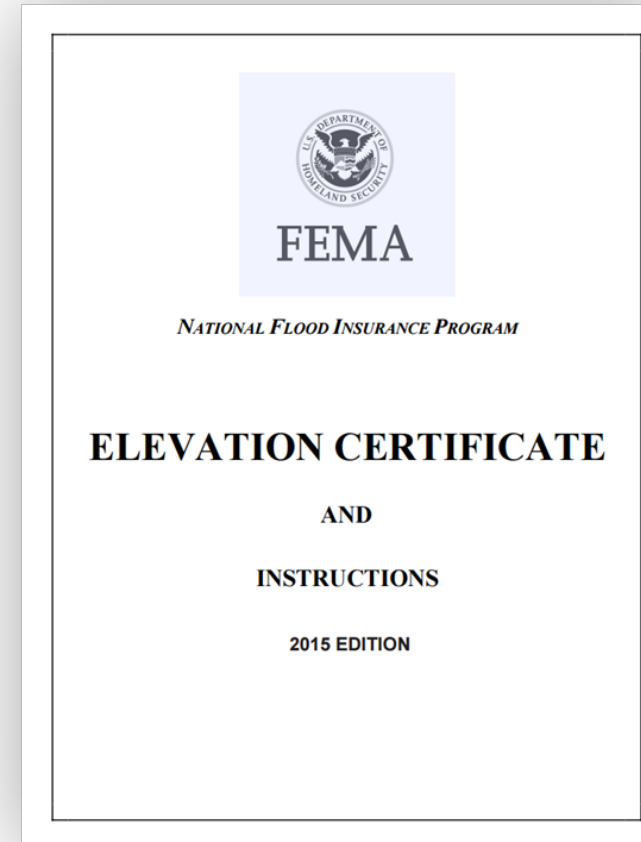
ELEVATION CERTIFICATE (partial)



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The Elevation Certificate (EC)

- Administrative tool used to provide elevation information necessary to
 - **Ensure compliance with community floodplain management regulations**
 - Support requests for certain Letters of Map Change



Questions?



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Contact

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