

Community Rating System Overview

Overview of the Community Rating System



OMB No. 1660-0022
Expires: September 30, 2013

National Flood Insurance Program
Community Rating System

Coordinator's Manual

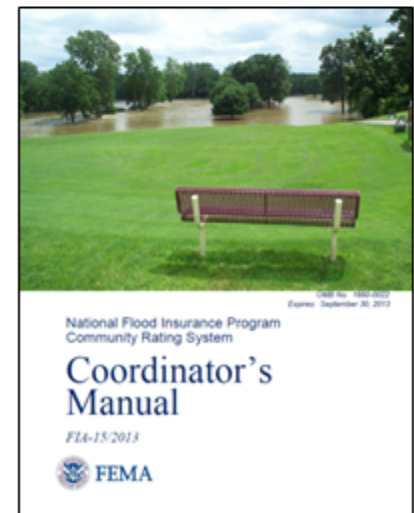
FLA-15/2013



Community Rating System Overview

CRS Basics

- ✓ Part of the National Flood Insurance Program
 - Administered by FEMA
- ✓ Provides reduced flood insurance premiums where there is better floodplain management
- ✓ Administered by Insurance Services Office
 - ISO/CRS Specialist



Community Rating System Overview

Goals

1. Reduce and avoid flood damage to insurable property
2. Strengthen and support insurance aspects of the NFIP
3. Foster comprehensive floodplain management



from
Manual

Community Rating System Overview

4 Series of Activities

300 Public Information

400 Mapping and Regulations

500 Flood Damage Reduction

600 Warning and Response

19 Activities

94 Elements



Community Rating System Overview

<u>Class</u>	<u>Points</u>	<u>SFHA</u>	<u>Non-SFHA</u>	<u>PRP</u>
1	4,500	45%	10%	0
2	4,000	40%	10%	0
3	3,500	35%	10%	0
4	3,000	30%	10%	0
5	2,500	25%	10%	0
6	2,000	20%	10%	0
7	1,500	15%	5%	0
8	1,000	10%	5%	0
9	500	5%	5%	0
10	< 500	0	0	0

Community Rating System Overview

Prerequisites to Participate

1. In Regular Phase of NFIP \geq 1 year
2. In full compliance with NFIP minimum criteria
3. Agree to maintain Elevation Certificates
4. Assess and address repetitive loss properties
5. Maintain all flood insurance policies required for community-owned buildings
6. Coastal communities agree to show LiMWA on FIRM

Community Rating System Overview

Costs

- ✓ Designate CRS Coordinator
- ✓ Implement activities
- ✓ Maintain records
- ✓ Recertify each year
- ✓ Participate in verification visits



Community Rating System Overview

Benefits

- ✓ Money stays in the community
- ✓ Insurance savings offset costs
- ✓ Better and better organized programs
- ✓ Technical assistance
- ✓ Public information builds constituency
- ✓ Incentive to keep implementing



\$100
Taxes

\$150
CRS



Community Rating System Overview

Application Process

- ✓ Letter of interest from CEO
- ✓ CRS Quick Check
- ✓ NFIP CAV
- ✓ ISO/CRS Specialist
- ✓ FEMA makes final decision

A	B	C	D	E	F	G	H	I
CRS Quick Check								
1	Community Name			State		BCEGS	10	
2	NFIP Number			FIRM Effective Date				
3	Population			Current FIRM Date				
4	Application Date			County				
5								
6			Chief Executive Officer			CRS Coordinator		
7	Name							
8	Title							
9	Address							
10	Address							
11								
12				CRS Coordinator's phone			Fax	
13				CRS Coordinator's e-mail				
14								
15	Section		Prerequisites		Met	Can Meet	Enter	
16	211	a(2)	Have you had a Community Assistance Visit that concluded you are in full compliance with the NFIP?					
17		a(4)	How many repetitive loss properties are there in your community?					
18		a(4)	What is your repetitive loss category? (A = no rep losses, B = 1 - 9, C = 10 or more)					
19		a(5)	Have you maintained flood insurance policies on all buildings that have been required to have one?					
20	213	a	How many buildings are in your community's Special Flood Hazard Area?					



Community Rating System Overview

References and Resources

- ✓ ISO/CRS Specialist
- ✓ State NFIP Coordinator
- ✓ FEMA Regional Office
- ✓ Websites
- ✓ Publications
- ✓ Other CRS communities
- ✓ CRS users groups

“HELP”

Community Rating System Overview



CRS Resources Home

This is the temporary location of the CRS Resources webpage. This website is provided for webinar participants, users groups, and CRS coordinators to obtain reference materials related to ongoing refinements of the CRS. Here you will find CRS guidance documents, worksheets, and tools relevant to the activities to be credited under the New CRS Coordinator's Manual.

Use the menu above to find resources organized by CRS Activity.

[Download the 2013 CRS Coordinator's Manual](#)

[New communities can click here to find the CRS application and Quick Check.](#)

ISO CRS Cycle Review Process

CRS Cycle Visit Scheduling

- Cycle Visits are typically scheduled at the beginning of the year

CRS Crosswalk

- The Crosswalk is sent out after the Cycle Visit is scheduled
- The Crosswalk covers Activities that the community was previously receiving credit for
- The Crosswalk should be used to help prepare for the visit

Prior to the CRS Cycle Visit

- Activity 310 Permit List and Elevation Certificates to be submitted for review 2 months prior to the CRS Cycle Visit
- 310 Permit List will be reviewed to ensure all required information is included and only permits for new construction and substantial improvements in the Special Flood Hazard Area are listed
- There is a Permit List Template that we recommend using that can be provided to you
- If the community has more than 70 permits listed, a random sample of 70 Elevation Certificates will be reviewed.
- Elevation Certificates will be reviewed in accordance with the 2017 CRS Coordinator's Manual via the Central Review.
- Elevation Certificates reviewed must meet the minimum 90% correctness threshold. If the 90% correctness threshold is not met upon the first review the community will be given the opportunity to make corrections for a second and up to a third review.
- Compliance issues are not a gig for CRS purposes but will be reported to the FEMA Region.
- It is encouraged to submit all documentation ahead of the visit
- Documentation for Activities 310 540 need to be submitted ahead of time
- Activities 310 and 501 are required, it is recommended to take care of those ahead of the visit

During the CRS Cycle Visit

- All required forms should be completed for review
- For CRS Repetitive Loss Category B and C communities required documentation for Rep Loss should be submitted for review
- For Repetitive Loss Category C communities, all required documentation for Activity 510 Floodplain Management Planning should be submitted for review
- For all other voluntary Activities the community is requesting credit for, supporting documentation should be submitted for review
- We will go over all submitted documentation during the visit therefore the meeting is more productive if all (most) of the documentation is submitted ahead of time

After the CRS Cycle Visit


- The CRS Coordinator will be emailed a 30 Day Letter
- When the response to the 30 Day Letter is received it will be reviewed
- CRS should be a snapshot in time to look at the community
- Everything needs to be ready in the 30 days after the visit (or before the visit) to avoid being retrograded or removed from the program
- Activities requiring Tech Review will be sent in as soon as all of the required documentation is submitted and all credit criteria is met.
- All creditable documentation is prepared and sent in for PC Review
- 2 or 3 other people see the file so I have to ensure everything is correct and that takes time
- Once the PC Review is complete comments are sent to the ISO/ CRS Specialist to be addressed
- When all PC Review comments have been satisfied and all Tech Reviews have been complete the review process is complete
- There are internal deadlines per FEMA that have to be met on how fast we have to turn a classification around
- There are two effective dates per year for classifications
- Files must be done 6-8 months prior to the effective dates
- The official letter from FEMA arrives usually around the effective date
- Communities should wait until the letter from FEMA arrives before telling residents about any classification changes

Remember!

- It is recommended to submit as much as possible before the CRS Cycle Visit
- Feel free to ask for direction instead of just waiting for the visit

310 – Elevation Certificates

Activity 310 (Elevation Certificates)



FEMA

NATIONAL FLOOD INSURANCE PROGRAM

ELEVATION CERTIFICATE

AND

INSTRUCTIONS

ELEVATION CERTIFICATE
IMPORTANT: Follow the instructions on pages 1 - 5.

Form No. 1640-0008
Expiration Date: July 31, 2012

SECTION A - PROPERTY INFORMATION

41. Building Owner's Name _____
 42. Building Street Address (including apt., unit, suite, and/or bldg. No.) of NE corner and full lot _____
 43. City _____ State _____
 44. Property Description (Lot and Block Number, or Parcel Number, Legal Description, etc.) _____

45. Building Use (e.g., Residential, Non-Residential, Office, Assembly, etc.) _____
 46. Latitude, Longitude, etc. _____
 47. Elevation of each 1/2" change of the building's floor structure in being used to assess flood insurance _____
 48. Building Elevation Number _____

49. Is a building with a basement or sub-basement? Yes No Not applicable No
 50. Is a building with an attached garage? Yes No Not applicable No
 51. Is an attached garage used for storage or parking? Yes No Not applicable No
 52. Is an attached garage used for storage or parking? Yes No Not applicable No
 53. Is an attached garage used for storage or parking? Yes No Not applicable No

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

54. Firm Name _____
 55. Map Sheet Number _____
 56. Flood Zone _____
 57. Flood Protection _____
 58. Flood Hazard (Structure Type) _____

59. Indicate whether the structure is in a Special Flood Hazard Area (SFHA) or Special Flood Hazard Zone (SFHZ) _____
 60. Indicate whether the structure is in a Flood Hazard Area (FHA) or Flood Hazard Zone (FHZ) _____
 61. Indicate whether the structure is in a Flood Hazard Area (FHA) or Flood Hazard Zone (FHZ) _____
 62. Indicate whether the structure is in a Flood Hazard Area (FHA) or Flood Hazard Zone (FHZ) _____

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

63. Building elevations are based on: Leveling, Survey, or other method Other (Specify) _____
 64. Indicate whether the structure is in a Flood Hazard Area (FHA) or Flood Hazard Zone (FHZ) _____
 65. Indicate whether the structure is in a Flood Hazard Area (FHA) or Flood Hazard Zone (FHZ) _____
 66. Indicate whether the structure is in a Flood Hazard Area (FHA) or Flood Hazard Zone (FHZ) _____

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certificate is to be signed and sealed by a registered engineer or architect authorized by law to certify elevation information. I certify that the information on this certificate is true and correct to the best of my knowledge and belief, and that I am a duly licensed professional engineer or architect under the laws of the State of _____.

Check base of structure. Check top of structure. Check base of structure. Check top of structure.

Signature _____ Date _____

Professional Seal _____

V ZONE DESIGN CERTIFICATE

Name _____
 Policy Number (Insurance Co. Use) _____

Building Address (Other Description) _____
 Parcel No. _____ City _____ State _____ Zip Code _____

SECTION I: Flood Insurance Rate Map (FIRM) Information

Community No. _____
 Flood No. _____
 FIRM (Date) _____
 FIRM Zone(s) _____

SECTION II: Elevation Information Used for Design

[NOTE: This section documents the elevation(s) used or specified in the design - it does not document surveyed elevations and is not equivalent to the actual elevations required to be submitted during or after construction.]

1. FIRM Base Flood Elevation (BFE) _____ feet
 2. Community's Design Flood Elevation (DFE) _____ feet
 3. Elevation of the Bottom of Lowest Horizontal Structure Member _____ feet
 4. Elevation of Lowest Adjacent Grade _____ feet
 5. Depth of Anticipated Construction Used for Foundation Design _____ feet
 6. Elevation (Depth of Finings of Foundation below Lowest Adjacent Grade) _____ feet

* Indicate elevation (Multi used in 1-4): NAVD83 NAD83 Other _____

SECTION III: V Zone Design Certification Statement

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of the above-mentioned building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice for the following provisions:

- The bottom of the lowest horizontal structure member of the lowest floor (excluding piers and columns) is elevated to or above the BFE.
- The pile and column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of the wind and water loads acting simultaneously on all loading components. Water loading items used are those associated with the base flood. Wind loading values used are those required by the applicable State or local building code. The potential for scour and erosion at the foundation has been anticipated for conditions associated with the base flood, including wave action.

SECTION IV: Breakaway Wall Design Certification Statement

[NOTE: This section must be certified by a registered engineer or architect when breakaway walls are designed to have a resistance of more than 20 psf (20 kN/m²) determined using allowable stress design.]

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of breakaway walls to be constructed under the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice for the following provisions:

- Breakaway wall collapse shall result from a water load less than that which would occur during the base flood.
- The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (see Section III).

SECTION V: Certification and Seal

This certificate is to be signed and sealed by a registered professional engineer or architect authorized by law to certify structural designs. I certify the V Zone Design Certification Statement (Section III) and _____ the Breakaway Wall Design Certification Statement (Section IV), check if applicable.

Certifier's Name _____ License Number _____
 Title _____ Company Name _____
 Address _____
 City _____ State _____ Zip Code _____
 Signature _____ Date _____ Telephone _____

Note: The V Zone design certificate is not a substitute for the NFIP Elevation Certificate (see Fact Sheet No. 1-5, Lowest Floor Elevation), which is required to certify as-built elevations needed for flood insurance rating.

310 – Elevation Certificates

301.a Definition of “Building”

- 2 or more exterior walls and a roof affixed to a site
- Manufactured (mobile) home
- Travel trailer without wheels



310 – Elevation Certificates

“Not a Building”

- ✓ Open pavilions, carports, underground pump stations, trailers, etc. are not buildings
- ✓ Accessory structures are not counted

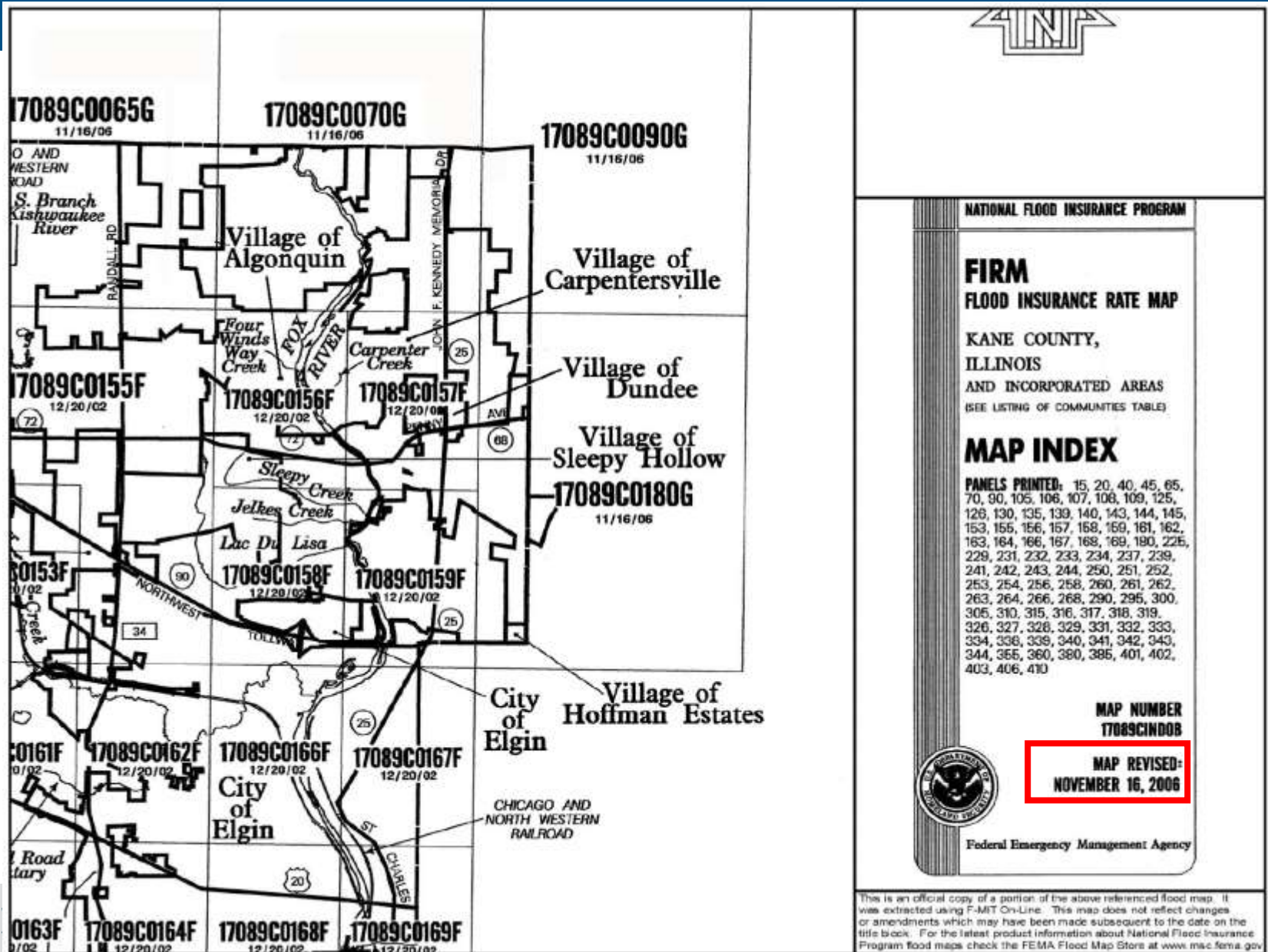


310 – Elevation Certificates

301.b Pre- and post-FIRM buildings

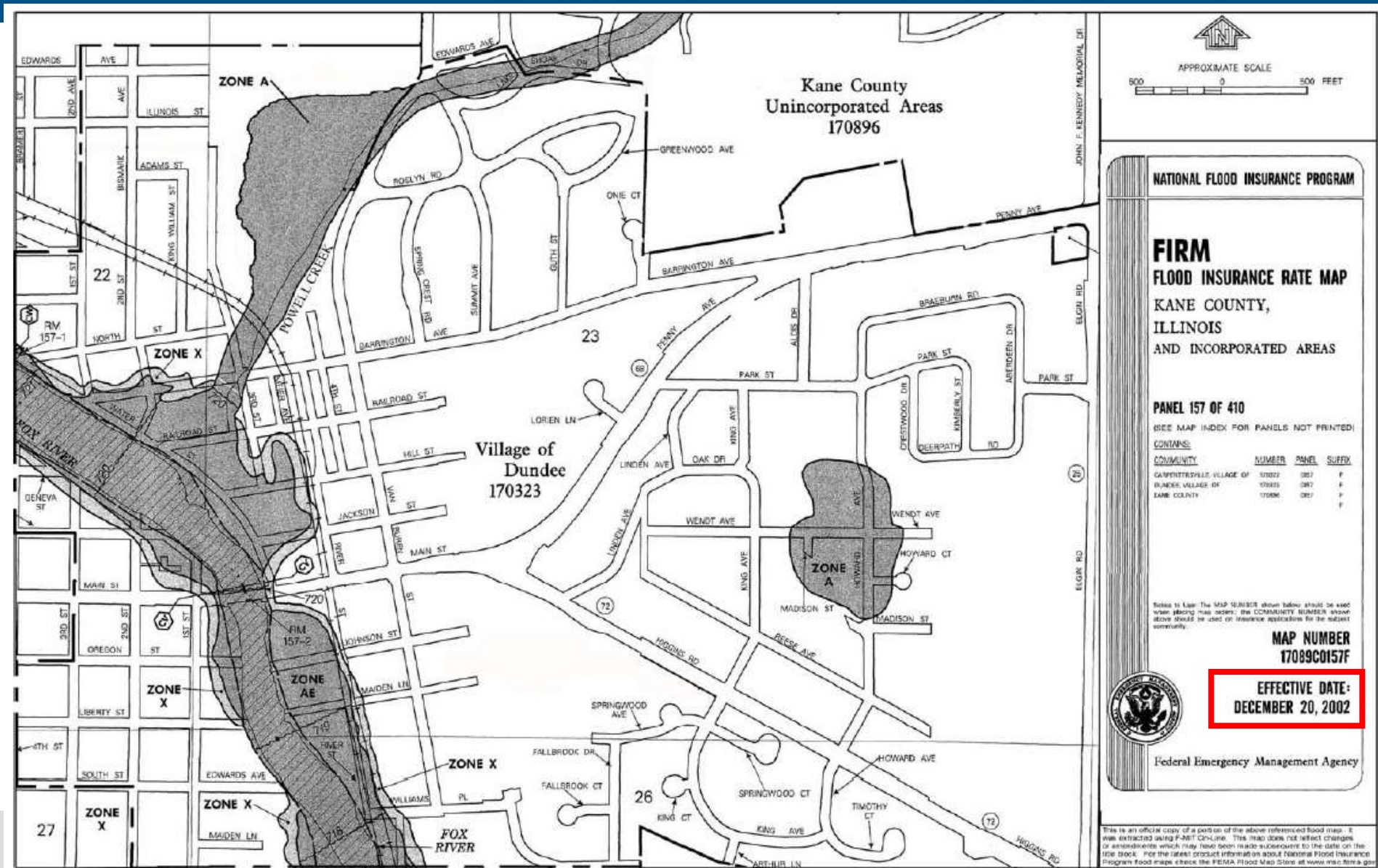
- ✓ Pre-FIRM: built before initial date of Flood Insurance Rate Map
- ✓ Post-FIRM: built after initial date of Flood Insurance Rate Map but before the date of application to CRS

310 – Elevation Certificates



This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov

310 – Elevation Certificates



APPROXIMATE SCALE
 0 500 FEET

Kane County
 Unincorporated Areas
 170896

Village of
 Dundee
 170323

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM
 FLOOD INSURANCE RATE MAP**
 KANE COUNTY,
 ILLINOIS
 AND INCORPORATED AREAS

PANEL 157 OF 110

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GARFIELDVILLE VILLAGE OF	170322	087	F
BLAINE VILLAGE OF	170323	087	F
KANE COUNTY	170896	087	F

Notes to User: The MAP NUMBER shown below should be used when placing maps orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

**MAP NUMBER
 17089C0157F**

**EFFECTIVE DATE:
 DECEMBER 20, 2002**



Federal Emergency Management Agency

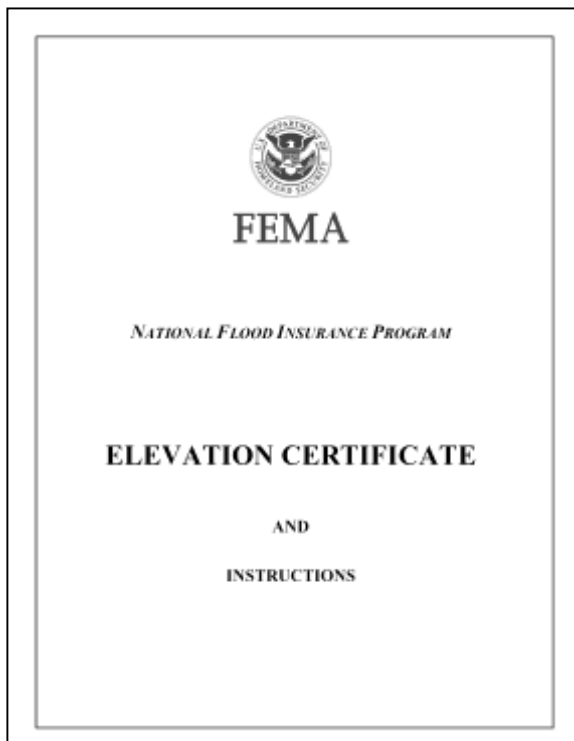
This is an official copy of a portion of the above referenced flood map. It was extracted using F-NIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the map book. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

310 – Elevation Certificates

Manual Page 310-2

Activity 310 (Elevation Certificates)

Objective: Maintain FEMA Elevation Certificates



The cover sheet features the FEMA logo at the top center, with the text "NATIONAL FLOOD INSURANCE PROGRAM" below it. The main title "ELEVATION CERTIFICATE AND INSTRUCTIONS" is centered in a large, bold font. The background is a light gray with a subtle grid pattern.



The form is titled "ELEVATION CERTIFICATE" and includes a "DATE" field (1/24/2018) and "EXPIRES" field (July 31, 2022). It is divided into several sections: SECTION A - PROPERTY INFORMATION, SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION, SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED), and SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION. Each section contains various checkboxes and input fields for property details, flood zone information, and building specifications.



The form is titled "V-ZONE DESIGN CERTIFICATE" and includes a "Name" field and "Building Address or Other Description" field. It is divided into three main sections: SECTION I: Flood Insurance Rate Map (FIRM) Information, SECTION II: Elevation Information Used for Design, and SECTION III: V-Zone Design Certification Statement. SECTION II includes a checklist for design criteria such as FIRM Date, Design Flood Elevation (DFE), and Foundation Design. SECTION III contains a certification statement and a signature line for the certifier.

310 – Elevation Certificates

Manual Page 310-3

311.a Activity description
Required Certificates
Elevation Certificates
(FEMA Form 086-0-33)

The image shows the FEMA Elevation Certificate Form 086-0-33, which is used to certify the elevation of a building above flood levels. The form is divided into several sections:

- SECTION A - PROPERTY INFORMATION:** Includes fields for Building Owner's Name, Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or PO, House and Box No., City, State, ZIP Code, and Property Description (Lot and Block Numbers, Assessor's Parcel Number, Legal Description, etc.).
- FOR INSURANCE COMPANY USE:** Includes fields for Policy Number and Company Name.
- SECTION B - INSURANCE RATE MAP (FIRM) INFORMATION:** Includes fields for County Name, State, FIRM Panel Effective/Revised Date, Flood Zone(s), Base Flood Elevation(s) (Zone AD, see base flood depth), and Base Flood Depth entered in Item B2.
- SECTION C - ELEVATION INFORMATION (SURVEY REQUIRED):** Includes fields for Building Under Construction, Finished Construction, and Elevation (Elev. in feet or meters) for various parts of the building (e.g., lowest floor, main floor, roof, etc.).
- FOR ENGINEER, OR ARCHITECT CERTIFICATION:** Includes a section for the professional to certify the elevation survey and provide their name, license number, and signature.

The form also includes a section for the National Flood Insurance Program (NFIP) and a section for the Elevation Certificate and Instructions.

310 – Elevation Certificates

Manual Page 310-3

311.a Activity description
Required Certificates
Floodproofing Certificates
For non-residential buildings
(FEMA Form 086-0-34)

✓ Do not need an EC with a
Floodproofing Certificate

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
National Flood Insurance Program

**FLOODPROOFING CERTIFICATE
FOR NON-RESIDENTIAL STRUCTURES**

OMB No. 1660-0008
Expiration Date: July 31, 2015

The floodproofing of non-residential buildings may be permitted as an alternative to elevating to or above the Base Flood Elevation; however, a floodproofing design certification is required. This form is to be used for that certification. Floodproofing of a residential building does not alter a community's floodplain management elevation requirements or affect the insurance rating unless the community has been issued an exception by FEMA to allow floodproofed residential basements. The permitting of a floodproofed residential basement requires a separate certification specifying that the design complies with the local floodplain management ordinance.

BUILDING OWNER'S NAME _____ THE INSURANCE COMPANY USE
DIRECT ADDRESS (Including lot, blk, sect, and/or plat, corner, L&R, B&E, and city name) _____ FLOOD NUMBER
ENCL (DESCRIPTION of and from numbers, etc.) _____ LIBRARY TAG NUMBER
CITY _____ STATE _____ ZIP CODE _____

SECTION I – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

Provide the following from the proper FIRM:

COMMUNITY NAMED	FIRM NUMBER	DATE	DATE OF FIRM ROLL	FIRM ZONE	DATE FIRM ELEVATION (in All Units, see Note)

Indicate elevation datum used for Base Flood Elevation shown above: NGVD 1929 NAVD 1988 Other/Source: _____

SECTION II – FLOODPROOFING INFORMATION (By a Registered Professional Engineer or Architect)

Elevations are based on: Construction Drawing Building Under Construction Fielded Construction

Floodproofing Design Elevation Information:
Building is floodproofed to an elevation of _____ feet (in Puerto Rico only: _____ meters). NGVD 1929 NAVD 1988 Other/Source: _____
(Elevation datum used must be the same as that used for the Base Flood Elevation.)
Height of floodproofing on the building above the lowest adjacent grade is _____ feet (in Puerto Rico only: _____ meters).

For Unnumbered A Zones Only:
Highest adjacent finished grade next to the building (FAG) _____ feet (in Puerto Rico only: _____ meters).
 NGVD 1929 NAVD 1988 Other/Source: _____

(NOTE: For insurance rating purposes, the building's floodproofed design elevation must be at least 1 foot above the Base Flood Elevation to receive rating credit. If the building is floodproofed only to the Base Flood Elevation, then the building's insurance rating will result in a higher premium.)

SECTION III – CERTIFICATION (By a Registered Professional Engineer or Architect)

Non-Residential Floodproofed Construction Certification:

I certify that, based upon development and/or review of structural design, specifications, and plans for construction, the design and methods of construction are in accordance with accepted standards of practice for meeting the following provisions:

The structure, together with attendant utilities and sanitary facilities, is watertight to the floodproofed design elevation indicated above, with walls that are substantially impervious to the passage of water.

All structural components are capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy, and anticipated debris impact forces.

I certify that the information on this certificate represents my best efforts to design to the data available. I understand that any false statement may be punishable by the enforcement under 18 U.S. Code, Section 1001.

CERTIFIER'S NAME _____ LICENSE NUMBER (in All States) _____
TITLE _____ COMPANY NAME _____
ADDRESS _____ CITY _____ STATE _____ ZIP CODE _____
SIGNATURE _____ DATE _____ PHONE _____

Copies should be made of this Certificate for: 1) community official(s); 2) insurance agent/company; and 3) building owner.

FEMA FORM 086-0-34 REPLACES ALL PREVIOUS EDITIONS F-086 (01/12)

310 – Elevation Certificates

Manual Page 310-4

311.a Activity description

Required Certificates

V Zone design certificates

(example on
CRSResources.org)

✓ Do need an EC with each
V Zone design certificate

V ZONE DESIGN CERTIFICATE

Name _____ Policy Number (Insurance Co. Use) _____
Building Address or Other Description _____
Permit No. _____ City _____ State _____ Zip Code _____

SECTION I: Flood Insurance Rate Map (FIRM) Information

Community No. _____ Panel No. _____ Suffix FIRM Date _____ FIRM Zone(s) _____

SECTION II: Elevation Information Used for Design

[NOTE: This section documents the elevations/depths used or specified in the design – it does not document surveyed elevations and is not equivalent to the as-built elevations required to be submitted during or after construction.]

1. FIRM Base Flood Elevation (BFE) _____ feet*
2. Community's Design Flood Elevation (DFE) _____ feet*
3. Elevation of the Bottom of Lowest Horizontal Structure Member _____ feet*
4. Elevation of Lowest Adjacent Grade _____ feet*
5. Depth of Anticipated Scour/Erosion used for Foundation Design _____ feet
6. Embedment Depth of Pilings of Foundation Below Lowest Adjacent Grade _____ feet

* Indicate elevation datum used in 1-4: NGVD29 NAVD88 Other _____

SECTION III: V Zone Design Certification Statement

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice** for meeting the following provisions:

- The bottom of the lowest horizontal structural member of the lowest floor (excluding piles and columns) is elevated to or above the BFE.
- The pile and column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of the wind and water loads acting simultaneously on all building components. Water loading values used are those associated with the base flood***. Wind loading values used are those required by the applicable State or local building code. The potential for scour and erosion at the foundation has been anticipated for conditions associated with the base flood, including wave action.

SECTION IV: Breakaway Wall Design Certification Statement

[NOTE: This section must be certified by a registered engineer or architect when breakaway walls are designed to have a resistance of more than 20 psf (0.96 kN/m²) determined using allowable stress design]

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of breakaway walls to be constructed under the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice** for meeting the following provisions:

- Breakaway wall collapse shall result from a water load less than that which would occur during the base flood***.
- The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (see Section III).

SECTION V: Certification and Seal

This certification is to be signed and sealed by a registered professional engineer or architect authorized by law to certify structural designs. I certify the V Zone Design Certification Statement (Section III) and _____ the Breakaway Wall Design Certification Statement (Section IV, check if applicable).

Certifier's Name _____ License Number _____
Title _____ Company Name _____
Address _____
City _____ State _____ Zip Code _____
Signature _____ Date _____ Telephone _____

Note: The V Zone design certificate is not a substitute for the NFIP Elevation Certificate (see Fact Sheet No. 1-4, Lowest Floor Elevation), which is required to certify as-built elevations needed for flood insurance rating.

310 – Elevation Certificates

Manual Page 310-3

311.a Activity description Required Certificates Residential Basement Floodproofing Certificate (FEMA Form 086-0-24)

DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY RESIDENTIAL BASEMENT FLOODPROOFING CERTIFICATE						See Reverse Side for Agreement Details (Division Instructions)	O.M.B. No. 1608-0013 Expires August 31, 2015		
For use ONLY in communities that have been granted an exception by FEMA to allow the construction of floodproofed residential basements in Special Flood Hazard Areas.									
BUILDING OWNER'S NAME					FOR INSURANCE COMPANY USE				
BUILDING STREET ADDRESS (including Apt., Unit Number)					POLICY NUMBER				
OTHER DESCRIPTION (Lot and Block Number, etc.)					COMPANY NASC NUMBER				
CITY					STATE	ZIP CODE			
SECTION I – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION									
Provide the following from the FIRM and flood profile (from Flood Insurance Study)									
COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM	ZONE	BASE FLOOD ELEVATION (IN AD ZONES, USE DEPTH)	NAME OF FLOODING SOURCE(S) AFFECTING BUILDING			
SECTION II – FLOODPROOFING INFORMATION (to be Registered Professional Engineer or Architect)									
Floodproofing Design Elevation Information:									
Building is floodproofed to an elevation of _____ feet. (Elevation datum used must be the same as that on the FIRM.)									
Elevation of the top of the basement floor is _____ feet. (Note: The floodproofing design elevation must be at least one foot above the Base Flood Elevation (BFE).)									
SECTION III – CERTIFICATION (to be Registered Professional Engineer or Architect)									
Residential Floodproofed Basement Construction Certification:									
I certify that, based upon development and/or review of structural design specifications, and plans for construction, including consideration of the depth, velocity, and duration of flooding and the type and permeability of soils at the site, the design and methods of construction of the floodproofed basement to be used are in accordance with accepted standards of practice for meeting the following provisions:									
<ul style="list-style-type: none"> Basement area, together with attendant utilities and sanitary facilities, is watertight to the floodproofing design elevation with walls that are impermeable to the passage of water without human intervention; and Basement walls and floor are capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy resulting from flooding to the floodproofing design elevation, and have been designed so that minimal damage will occur from floods that exceed the floodproofing design elevation; and Building design, including the floodproofing design elevation, complies with community requirements. 									
I certify that the information on this certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code Section 1001.									
CERTIFIER'S NAME					LICENSE NUMBER (or registration)				
TITLE					COMPANY NAME				
ADDRESS					CITY	STATE	ZIP		
SIGNATURE					PHONE NO.	DATE			
Copies of this certificate must be given to: 1) the community official; 2) the insurance agent; and 3) the building owner.									
FEMA Form 086-0-24, 05/11/10				Formwork: FEMA Form 086-0-24				F-086-0810	

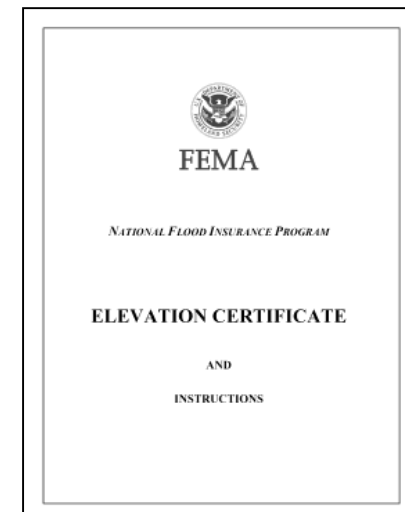
310 – Elevation Certificates

Manual Page 310-5

CRS Participation Requirement

Class 9 participation prerequisite:

- ✓ Maintain certificates
- ✓ On all new buildings
- ✓ And substantial improvements
- ✓ In the Special Flood Hazard Area
- ✓ Permitted after the community applies for CRS credit

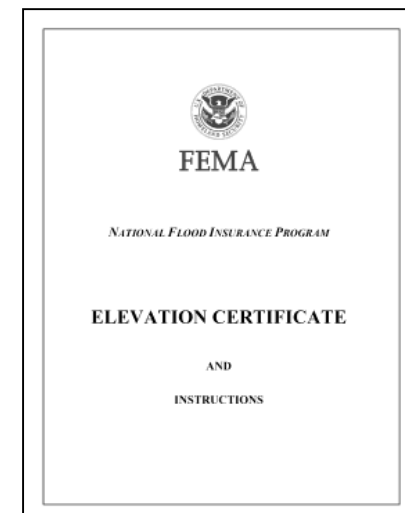


310 – Elevation Certificates

Manual Page 310-5

311.b Activity credit criteria

- (1) Maintain completed ECs showing “finished construction”
- (2) Other certificates as appropriate
- (3) Make sure they are complete and correct
- (4) Make copies available to inquirers



310 – Elevation Certificates

Manual Page 310-7

SECTION A—PROPERTY INFORMATION

- A2 and A3 Complete street address or property description. In either case, the city, state, and zip code must be listed.
- A6 Photographs: Photographs are not required for CRS credit. However, they are required for writing a flood insurance policy and they can be very helpful for compliance records.
- A7 Building diagram number.
- A8 a), b), and c) Enclosure and crawl space information for buildings that are diagram 6, 7, 8, or 9.
- A9 a), b), and c) Attached garage information. If there is no attached garage, enter "N/A" in all three spaces. If there is an attached garage and there are no openings, the correct entry is "zero," even if the garage is above the BFE.
- A8 and A9 If the square footage of the crawlspace or garage is larger than the square inches of the openings AND "(d) Engineered flood openings" is checked "yes," then there must be a certification by a registered design professional or a copy of the ICC Evaluation Service report.

SECTION B—FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

- B1 NFIP community name/community number.
- B4 Map AND panel number.
- B5 Panel number suffix. If the property is in an area revised by a LOMR, then B4, B5, and B7 must all be completed based on the LOMR.
- B7 FIRM panel effective/revised date.
- B8 Flood zone(s) in which the building is located.
- B9 Base flood elevation(s).
- B10 The source of the base flood elevation data or base flood depth entered in B9.
- B11 The elevation datum used for the base flood elevation in B9.
- B12 Whether the building is located in a Coastal Barrier Resources System area or Otherwise Protected Area.

SECTION C—BUILDING ELEVATION INFORMATION (when a survey is required)

- C1 Basis for building elevations: Note: "Finished construction" must be checked unless the building is still under construction. The ISO/CRS Specialist will not review Elevation Certificates for buildings still under construction, unless requested to by the community.
- C2 Elevations. The benchmark utilized and vertical datum entries must be completed. Items a) through g) must have an entry. Elevation items a), f), and g) must be recorded on every certificate. If an item does not apply, enter "N/A" in the fields where no data are being supplied. Items b) and c) must be completed with an elevation if they are applicable and if that letter appears on the diagram on pages 7-9 of the instructions. If there is an attached garage, an elevation must be entered for item d), otherwise the entry is "N/A." If there is machinery and/or equipment that service the building, an elevation must be entered for item e), otherwise the entry is "N/A."

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
National Flood Insurance Program

ELEVATION CERTIFICATE
IMPORTANT: Follow the instructions on pages 3-9.

OMB No. 1600-0008
Expiration Date: July 31, 2015

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name: **CRS EC Checklist**

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or R.O. Route and Box No.: _____

City: **Elizabet** or A2 or A3 must be completed. State: **TN** ZIP Code: _____

A3. Property Description (Lot and Block Numbers, See Parcel Number, Legal Description, etc.): _____

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.): _____

A5. Latitude/Longitude: Lat. _____ Long. _____ Horizontal Datum: NAD 1983 NAD 1983

A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.

A7. Building Diagram Number: _____

A8. For a building with a crawlspace or attic space: _____ sq ft

a) Square footage of crawlspace or attic space _____ sq ft

b) No. of permanent flood openings in the crawlspace or attic space(s) within 3.0 feet above adjacent grade _____

c) Total net area of flood openings in A8 b) _____ sq ft

d) Engineered flood openings? Yes No

A9. For a building with an attached garage: _____ sq ft

a) Square footage of attached garage _____ sq ft

b) Number of permanent flood openings in the attached garage within 3.0 feet above adjacent grade _____

c) Total net area of flood openings in A9 a) _____ sq ft

d) Engineered flood openings? Yes No

FLOOD INSURANCE COMPANY USE

Policy Number: _____

Company Subj. Number: _____

ZIP Code: _____

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number		B2. County Name		B3. State	
B4. Map/Panel Number	B5. State	B6. FIRM Issue Date	B7. FIRM Panel (Effective/Revised Date)	B8. Flood Zone(s)	B9. Base Flood Elevation(s) (Data AG can have flood marks)

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9:
 B1 Profile FIRM Community Determined Other/Source: _____

B11. Indicate elevation datum used for BFE in Item B9: NAVD 1929 NAVD 1983 Other/Source: _____

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Yes No
 Designation Date: _____ / _____ / _____ CBRS OPA

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: Construction Drawings* Building Under Construction* 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-V30, V with BFE, AR, AR/A, AR/A1, AR/A1-A30, AR/AH, AR/AG. Complete items C2 a-f below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.

Vertical Datum: _____ Vertical Datum: _____

Indicate elevation datum used for the elevations in items c) through f): NAVD 1929 NAVD 1983 Other/Source: _____
 Datum used for building elevations must be the same as that used for the BFE. Check the measurement used.

a) Top of bottom floor (including basement, mezzanine, or unexcavated floor)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
b) Top of the next higher floor	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
c) Bottom of the lowest horizontal structural member (is Zoned area)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
d) Attached garage (top of slab)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
f) Lowest adjacent finished grade next to building (LAD)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
g) Higher adjacent finished grade next to building (HAG)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to verify elevation information. I certify that the information on this Certificate represents the best efforts to determine the data available.

Check here if comments are provided on back of form. Were outside and longitude in Section A obtained by a licensed land surveyor? Yes No

Check here if attachments. Yes No

Certificate Number		Signature	
Title	Company Name	City	State
Address	City	State	ZIP Code
Signature	Date	Telephone	

PLACE SEAL HERE

FEMA Form 090-0-01 (7/12) See reverse side for instructions. Replace all previous editions.

Figure 310-2. CRS Checklist for the 2006, 2009, and 2012 FEMA Elevation Certificate forms.

310 – Elevation Certificates

Manual Page 310-6

Getting correct Certificates

(1) Bad elevations (Section C2)
→ new Certificate

(2) Other sections:

- Tell surveyor to fix it
- Prepare a cover memo or cover sheet
- Note corrections in Section G

Option: Fill out Sections A and B at permit application

[Community letterhead]

Memo of Review for Accuracy and Completion

The attached FEMA Elevation Certificate has been reviewed by this office. The items noted below are not correct on the attached form and should read as entered on this page.

SECTION A – PROPERTY INFORMATION		FEDERAL INSURANCE COMPANY USE
A1. Building Owner's Name		Policy Number:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and box No.		Computer MAC Number:
City	State	ZIP Code
A3. Property Description (if not and Block Numbers, Tax Parcel Number, Legal Description, etc.)		
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)		
A5. Latitude/Longitude Lat. _____ Long. _____		Horizontal Datum: <input type="checkbox"/> NAD 1927 <input type="checkbox"/> NAD 1983
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.		
A7. Building Diagram Number _____		
A8. For a building with a crawlspace or enclosure(s):		A9. For a building with an attached garage:
a) Square footage of crawlspace or enclosure(s) _____ sq ft		a) Square footage of attached garage _____ sq ft
b) No. of permanent flood openings in the crawlspace or enclosure(s) within 3.0 feet above adjacent grade _____		b) Number of permanent flood openings in the attached garage within 3.0 feet above adjacent grade _____
c) Total net area of flood openings in AB: _____ sq ft		c) Total net area of flood openings in AB: _____ sq ft
d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No		d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. FIP Community Name & Community Number		B2. County Name	B3. State
B4. Map/Panel Number	B5. Suffix	B6. FIRM Index Date	B7. FIRM Panel Effective/Revised Date
B8. Flood Zone(s)		B9. Base Flood Elevation(s) (Zone AD, use base flood depth)	

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in item B9:
 FIG Profile FIRM Community Determined Other/Source: _____

B11. Indicate elevation datum used for BFE in item B9: NGVD 1929 MVD 1988 Other/Source: _____

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Yes No
Designation Date: _____ / _____ / _____ CBRS OPA

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: Construction Drawings* Building Under Construction* Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

Local Official's Name: _____ Title: _____
Community Name: _____ Telephone: _____
Signature: _____ Date: _____
Comments: _____

310 – Elevation Certificates

Manual Pages 310-10 – 11

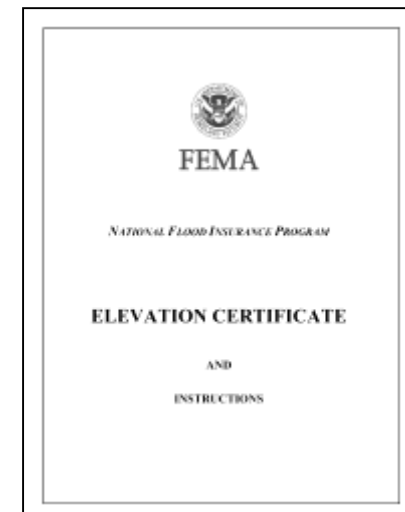
311.c Credit verification

Cycle Visit

- ✓ Submit all certificates obtained since the last verification visit
- ✓ Feedback is provided
- ✓ At least 90% must be correct to stay in CRS

Recertification

- ✓ All last year's certificates reviewed
- ✓ Feedback is provided – no change in score
(But can fix them before next visit)



310 – Elevation Certificates

Manual Page 310-12

312.a Maintaining Elevation Certificates (EC)

EC is for maintaining certificates collected since the date of the community's application to the CRS

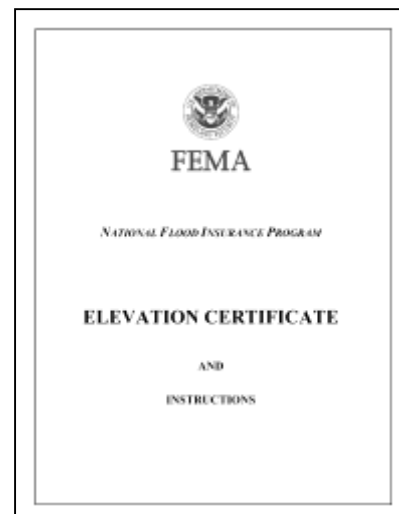
Credit criteria

✓ Same as for the activity

Credit points

EC = a maximum of 38 points for maintaining Elevation Certificates,
and

EC = 38 x $\frac{\text{reviewed and correct Elevation Certificates}}{\text{all reviewed Elevation Certificates}}$



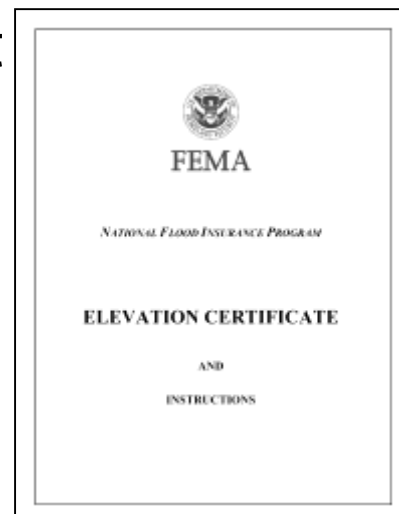
310 – Elevation Certificates

Manual Page 310-11

312.a Maintaining Elevation Certificates (EC)

Documentation

- (1) At least 2 months before the verification visit
 - (a) List of all permits for new buildings/substantial improvements in the SFHA since the last visit
 - (b) All certificates collected since the last visit
- (2) At verification visit: How the certificates are stored and provided to inquirers
- (3) Recertification: same as (1)



310 – Elevation Certificates

Manual Pages 310-13 – 14

312.b Maintaining Elevation Certificates for post-FIRM buildings (ECPO)

ECPO is for maintaining certificates built between the initial FIRM date and the date of application to the CRS

Credit points

ECPO = up to 48 points

(points adjusted based on percent correct)

Documentation

(a) Copies of the certificates

(b) Show they're still available for inquirers

310 – Elevation Certificates

Manual Pages 310-14 – 16

312.c Maintaining Elevation Certificates for pre-FIRM buildings (ECPR)

ECPR is for maintaining certificates built before the initial FIRM date

Credit points

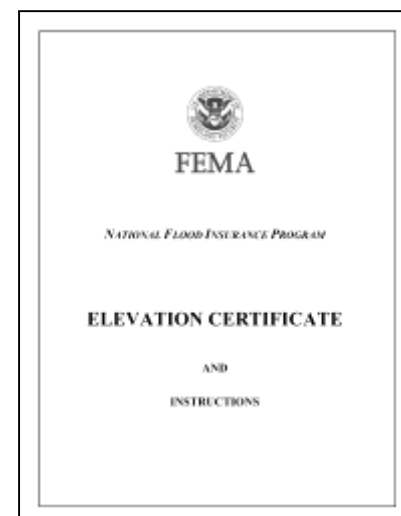
ECPR = up to 30 points

(points adjusted based on percent correct)

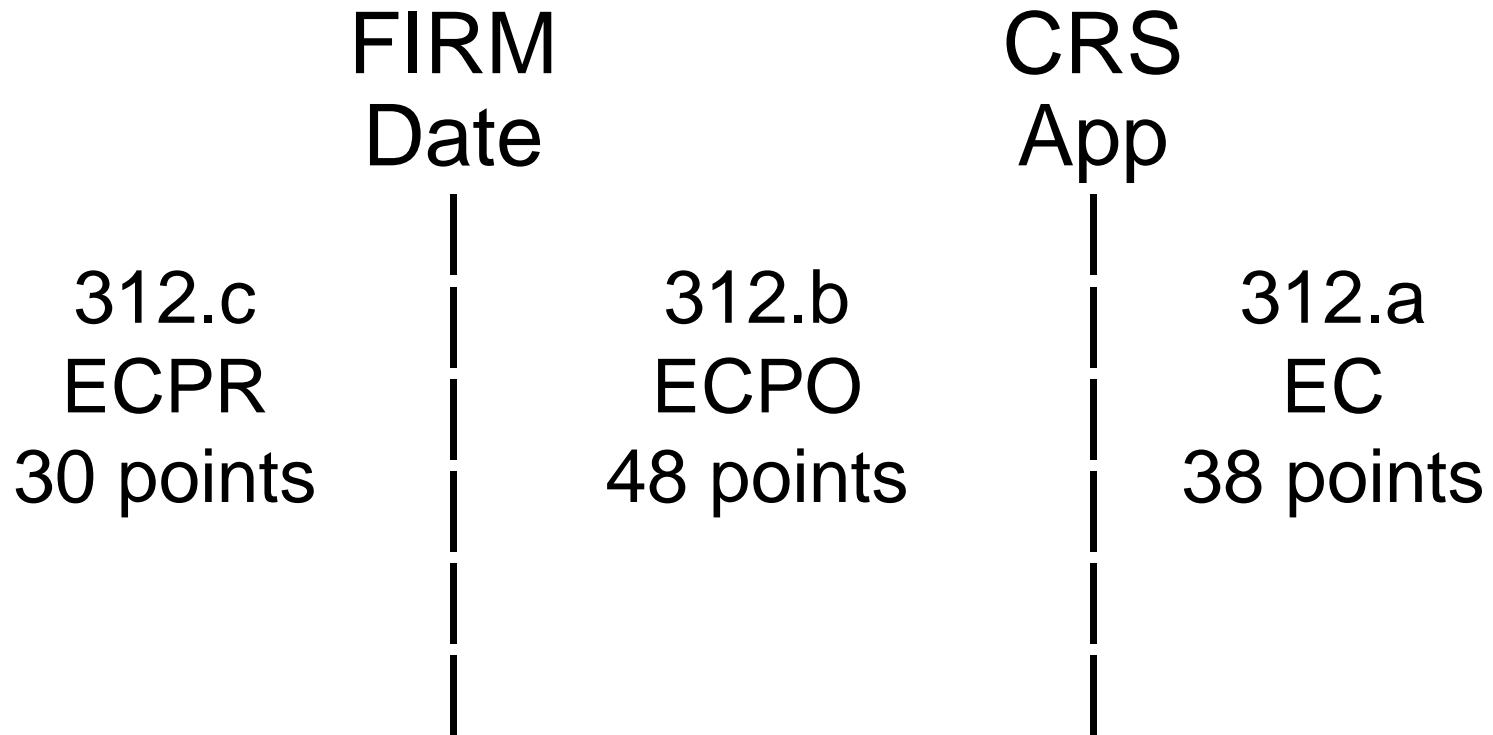
Documentation

(a) Copies of the certificates

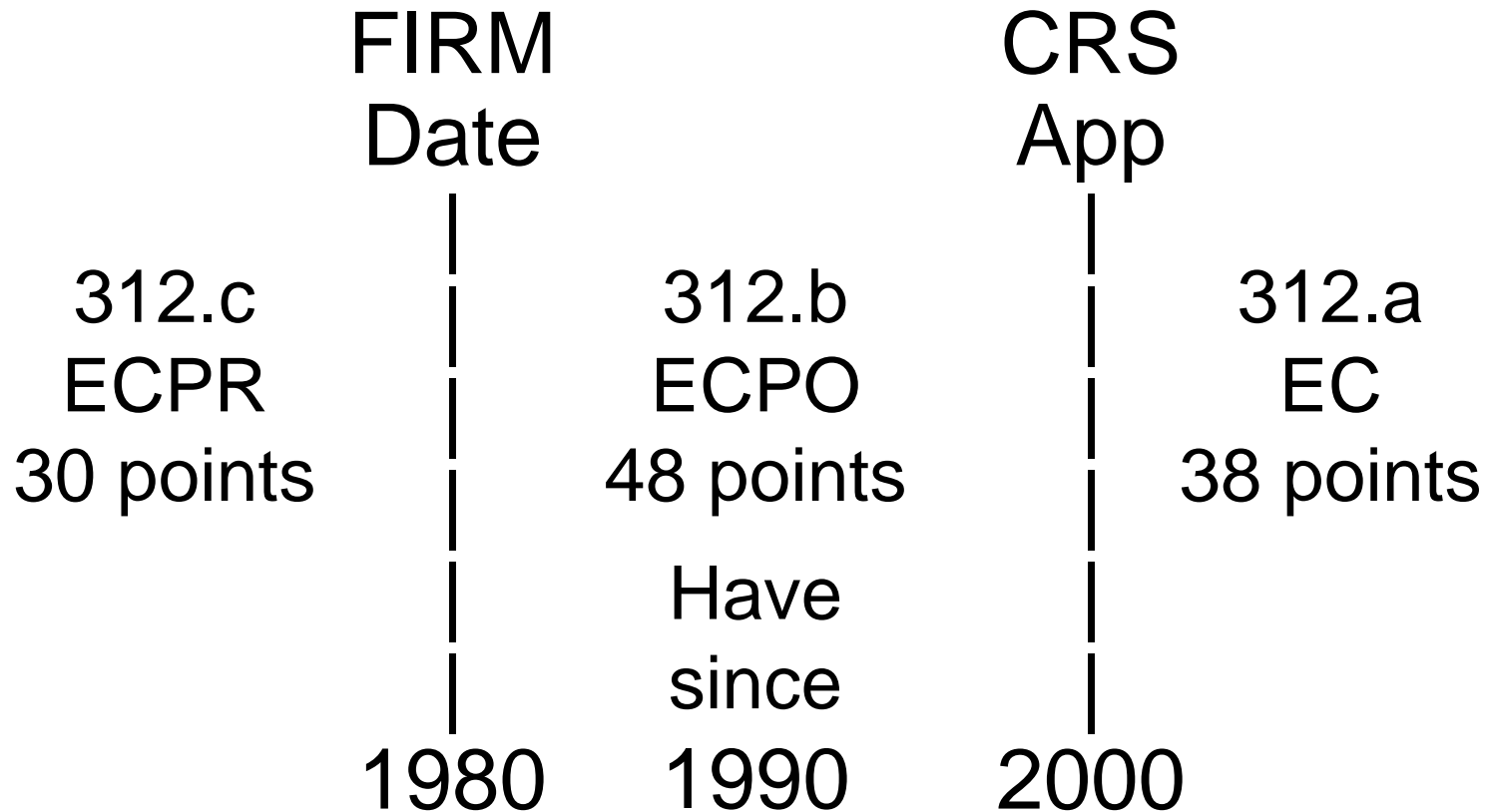
(b) Show they're still available for inquirers



310 – Elevation Certificates



310 – Elevation Certificates



310 – Elevation Certificates

Manual Page 310-1

310 ELEVATION CERTIFICATES—Summary

Maximum credit: 116 points

312 Elements

- a. **Maintaining Elevation Certificates (EC):** Up to 38 points for maintaining FEMA Elevation Certificates on all buildings built in the Special Flood Hazard Area (SFHA) after the date of application to the Community Rating System (CRS). All communities applying to the CRS must apply for this element. The community must make copies of the certificates available to all inquirers.
- b. **Maintaining Elevation Certificates for post-FIRM buildings (ECPO):** Up to 48 points for maintaining Elevation Certificates on buildings built before the date of application to the CRS but after the initial date of the Flood Insurance Rate Map (FIRM).
- c. **Maintaining Elevation Certificates for pre-FIRM buildings (ECPR):** Up to 30 points for maintaining Elevation Certificates on buildings built before the initial date of the FIRM.

Credit Criteria

All three elements of this activity have the same credit criteria, described in Section 311.b.

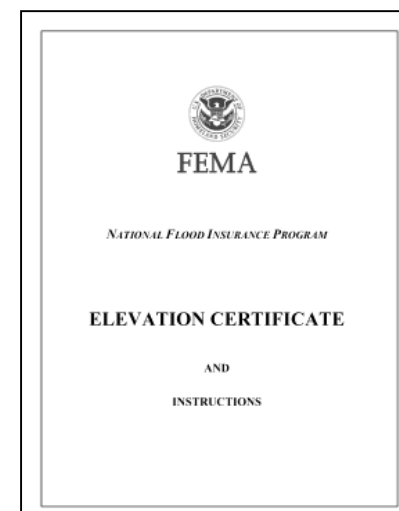
- a. The community must maintain completed Elevation Certificates showing the "Finished construction" elevations for all buildings constructed or substantially improved in the SFHA during the period credited.
- b. For floodproofed buildings, a FEMA Floodproofing Certificate is needed instead of an Elevation Certificate. Other certificates may be needed in coastal high hazard areas and for floodproofed residential basements.
- c. The community must ensure that the certificates are complete and the information correct.
- d. The community must make copies of Elevation Certificates readily available to anyone upon request.

Impact Adjustment

There is no impact adjustment for EC. The credit for ECPO and ECPR are adjusted based on the number of post-FIRM and pre-FIRM buildings in the community.

Documentation Provided by the Community

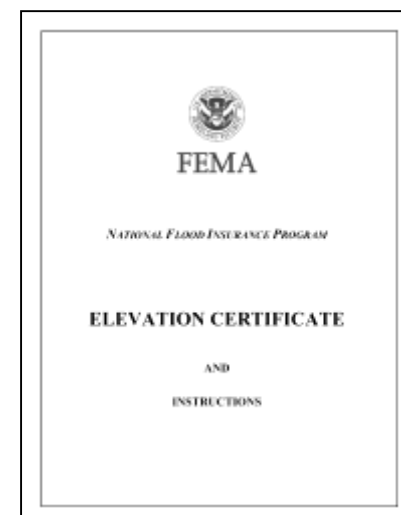
Each element has a separate section describing needed documentation.



310 – Elevation Certificates

Impact Adjustment

- ✓ Adjust the score based on how much of the job is being done
- ✓ Example: if 50% of the job
- ✓ Receive 50% of the max score
- ✓ Ratio: $r_{XXX} = 0.5$

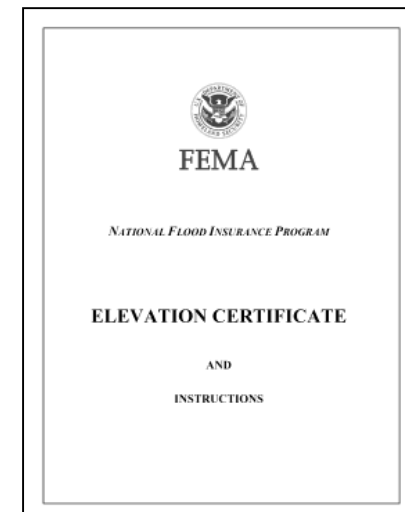


310 – Elevation Certificates

Manual Page 310-16

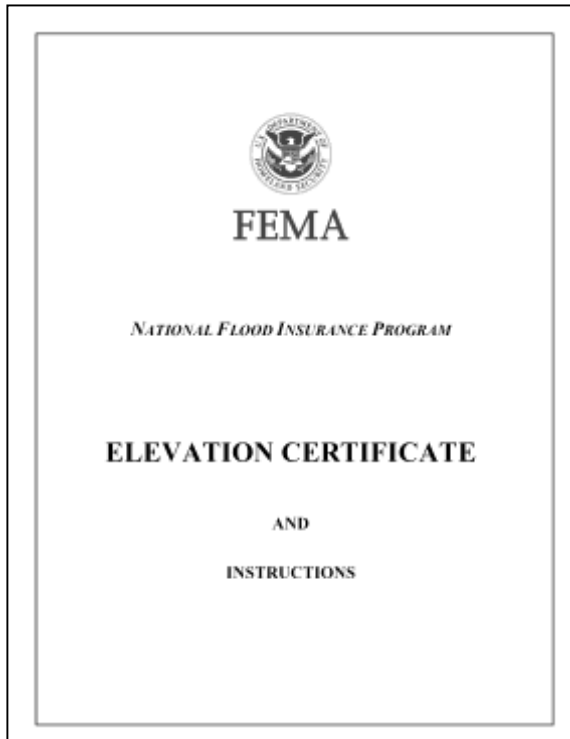
313 Credit Calculation

- a. $cEC = 38$ (x percent correct)
- b. $cECPO = ECPO \times rECPO$ (x percent correct)
- c. $cECPR = ECPR \times rECPR$ (x percent correct)
- d. $c310 = cEC + cECPO + cECPR$



310 – Elevation Certificates

Questions?



This is the main body of the Elevation Certificate form. It is divided into several sections:

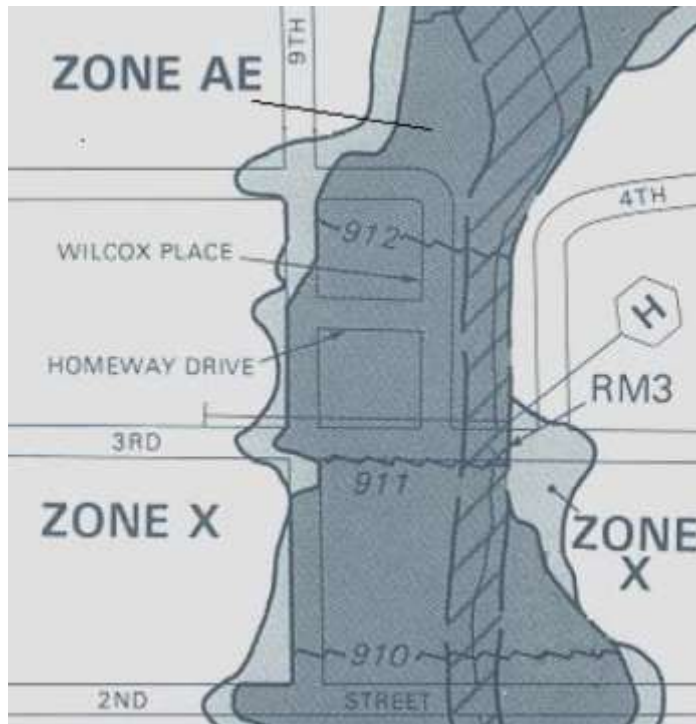
- SECTION A - PROPERTY INFORMATION:** Includes fields for Building Owner's Name, Address, City, State, Zip Code, and Property Description.
- SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION:** Includes fields for Map Sheet Number, Flood Panel, and Flood Zone.
- SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED):** A detailed survey section with multiple-choice and fill-in options for various building components like roof, walls, and foundation.
- SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION:** A section for the professional certifying the elevation, including a signature line and a box for the professional seal.

This is the V-Zone Design Certificate form, which is a separate document required for buildings in V-zones. It includes:

- SECTION III: V-Zone Design Certification Statement:** A statement where the certifier certifies that the design and construction meet or exceed the standards of practice for the V-zone.
- SECTION IV: Breakaway Wall Design Certification Statement:** A statement where the certifier certifies that any breakaway walls are designed to meet the required standards.
- SECTION V: Certification and Seal:** A section for the professional certifying the design, including a signature line and a box for the professional seal.

410 – Floodplain Mapping

410 Floodplain Mapping

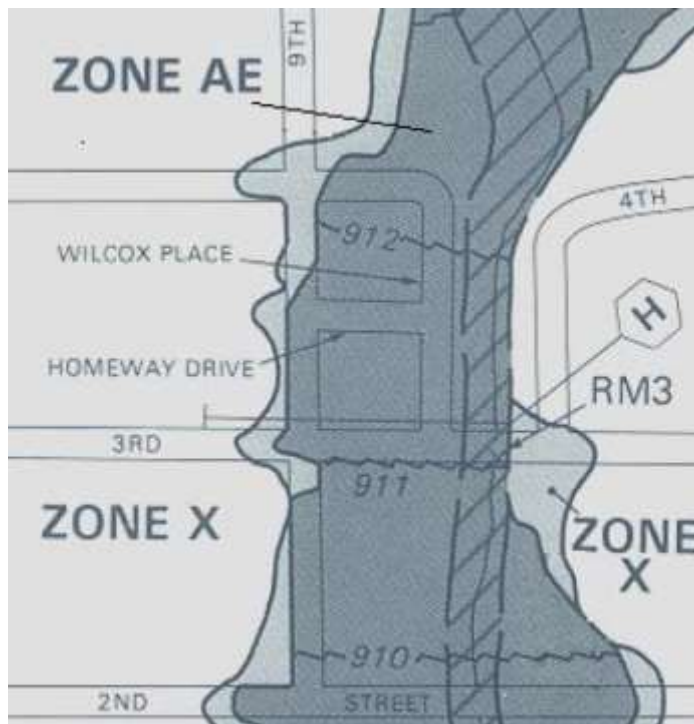


410 – Floodplain Mapping

Manual Page 410-2

410 Floodplain Mapping

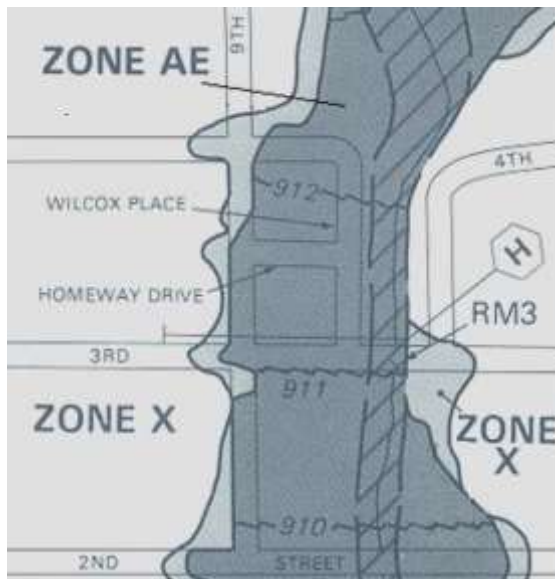
Objective: improve the quality of the mapping used to regulate floodplain development



410 – Floodplain Mapping

Credit is for:

- ✓ Using data not provided by FEMA,
- ✓ Data prepared to a higher study standard, and/or
- ✓ Sharing in the cost of a Flood Insurance Study



410 – Floodplain Mapping

Manual Pages 410-7 – 8

411.b Activity Credit Criteria

- (1) All studies and data must be displayed on a map
- (2) Must use the map/data in floodplain regulations
- (3) Study technique must be FEMA-approved or approved by the CRS technical reviewer
- (4) If study affects a length of stream/shoreline
→ must submit to FEMA to revise the FIRM
(It's OK if FEMA does not use it)



410 – Floodplain Mapping

Manual Pages 410-9 – 10

412.a New Studies (NS)

Studies not credited

- ✓ Minimum NFIP requirements
 - Developments greater than 50 lots or 5 acres
 - “Obtain, review and reasonably utilize” available data
 - No-rise or max 1 foot cumulative rise certificate
- ✓ Not adopted for regulatory purposes
- ✓ No engineering study or new map
- ✓ New BFE lower than BFE on the FIRM



410 – Floodplain Mapping

Manual Page 410-10

412.a New Studies (NS)

New BFE lower than BFE on the FIRM

If AE/VE Zone on the FIRM and the BFE ↓

SFHA → X Zone rates

→ No mandatory purchase requirement

→ No duplicate CRS credit

If no BFE on the FIRM or the BFE ↑

→ CRS credit



630 – Dams



FEMA



630 – Dams



FEMA

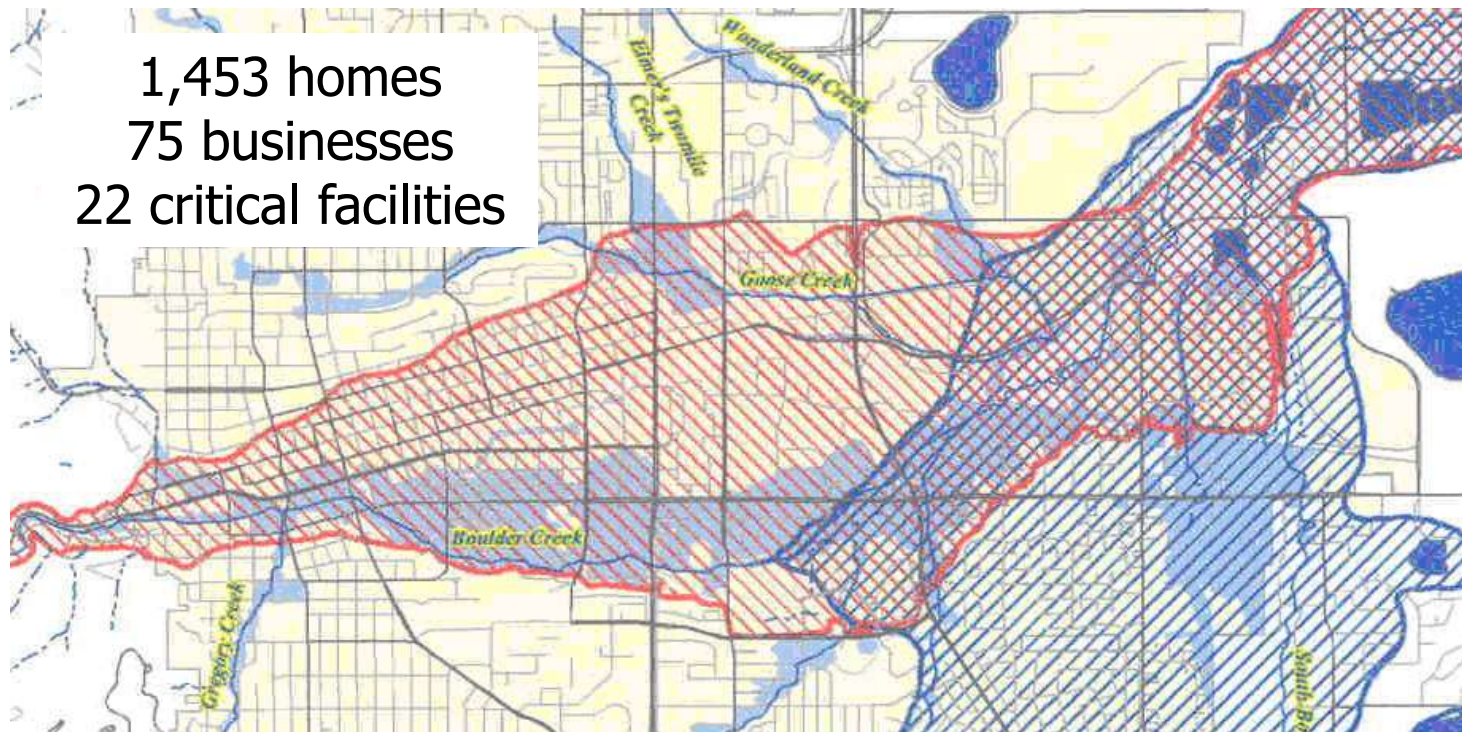


630 – Dams

Manual Page 630-3

631.b Activity Credit Criteria

- (1) ≥ 1 building subject to dam failure flooding
- (2) Description of the dam failure threat



630 – Dams

Manual Pages 630-3 – 5

631.b Activity Credit Criteria

- (1) ≥ 1 building subject to dam failure flooding
- (2) Description of the dam failure threat
- (3) Must obtain some credit in DFR, DFW, DFO, DCF
- (4) Adopted dam failure flood warning and response plan
- (5) Outreach project
- (6) Annual exercise



630 – Dams

Manual Page 630-5

632.a State dam safety program (SDS)

Assesses state program for:

- Assessment of condition of dams in the state
- Risk communication and public awareness
- Promotion of emergency action plans by operators

Documentation done by state office

Community must be in compliance with state program

Credit points

SDS = up to 45 points



630 – Dams

Manual Pages 630-6 – 13

Dam failure warning and response plan

632.b Dam failure threat recognition system (DFR)

632.c Dam failure warning (DFW)

632.d Dam failure response operations (DFO)

632.e Dam failure critical facilities planning (DCF)

