310 ELEVATION CERTIFICATES—Summary

Maximum credit: 116 points

312 Elements

a. **Maintaining Elevation Certificates (EC)**: Up to 38 points for maintaining Federal Emergency Management Agency (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

The OBJECTIVE of this activity is to maintain correct Federal Emergency Management Agency (FEMA) Elevation Certificates and other needed certifications for new and substantially improved buildings in the Special Flood Hazard Area (SFHA).

311 Background

According to insurance agents, one of the greatest impediments to selling flood insurance is the difficulty of obtaining accurate data on the flood insurance rating zone and building elevation. All of the technical data an agent needs should be recorded on the FEMA Elevation Certificate. Communities are required to maintain a record of the elevation of the lowest floor of any new building or substantial improvement built in the SFHA (see the *Code of Federal Regulations* (44 *CFR* §60.3(b)(5)(iii))).

In 44 *CFR* §59.22(a)(9)(iii), the National Flood Insurance Program (NFIP) also requires that communities make their elevation and related building information available for public inspection and flood insurance rating. The NFIP requires insurance agents to use the FEMA Elevation Certificate form when processing an application for an insurance policy. The application data are usually more accurate when the FEMA Elevation Certificate form is prepared at the time of construction by someone who is familiar with the NFIP and when the form is readily available from the local building department.

This activity requires communities to obtain and review Elevation Certificates and other certifications on new construction and to ensure that they are filled out completely and correctly. This should be done as soon as construction is complete and before the certificate of occupancy or certificate of use is issued. It is vital to get an accurate Elevation Certificate filed while the community still has some authority to get any needed corrections made.

The CRS considers accurately completed Elevation Certificates to be evidence of a community's full compliance with the minimum requirements of the NFIP. Therefore, Elevation Certificates that are not accurately completed are taken as an indication that the community may not be in full compliance, and continued participation in the CRS may become an issue.

311.a. Activity Description

The maximum credit for Activity 310 is 116 points.

Credit is provided if the community maintains FEMA Elevation Certificates for new and substantially improved construction. To participate in the CRS, a community must maintain completed FEMA Elevation Certificates on all buildings constructed, substantially improved, or placed in the SFHA after the community's initial date of application for the CRS. The community must review the certificates to ensure accuracy, and make copies available to any inquirer.

Copies of all final certificates for new and substantially improved buildings must be made available to inquirers and provided to the CRS for review. It is recommended that the community establish a separate file and place a copy of each new certification in this file. If the community maintains digital copies of building permit records, digital copies of the certificates should be separated from the rest of the file so that they can easily be collected to meet this requirement. The community may charge a reasonable fee to cover the cost of copying the certificates for inquirers.

All discussions here in the *CRS Coordinator's Manual* about Elevation Certificates also apply to the other specialized certifications described in the next section.

Required Certificates

Almost all buildings constructed to meet NFIP criteria are raised so that the lowest floor is at or above the base flood elevation. The appropriate record that shows that the building meets the code requirement is the FEMA Elevation Certificate (FEMA Form 086-0-33).

Because most building data are recorded on Elevation Certificates, this activity is called "Elevation Certificates." However, full credit for this activity requires that the community also use the following where appropriate:

- Floodproofed non-residential buildings require FEMA's Floodproofing Certificate for Non-Residential Structures (FEMA Form 086-0-34). A separate Elevation Certificate is not needed for these buildings. The 2015 Floodproofing Certificate requires elevations based on finished construction.
- In addition to an Elevation Certificate, a V Zone Design Certificate is needed for new and substantially improved buildings in coastal high hazard areas (V Zones and coastal A Zones, where credited). These are required for buildings constructed or substantially improved after the community's first verification visit under the 2013 *Coordinator's Manual*.
- The V Zone Design Certificate is found in FEMA's *Home Builder's Guide to Coastal Construction*, Technical Fact Sheet No. 1.5. It is shown in Figure 310-1 and can be found at http://www.fema.gov/residential-coastal-construction. Communities with alternative forms or certifications may submit them to their ISO/CRS Specialists to see if they meet this activity's criteria.
- Communities that have received a residential basement floodproofing exception must use FEMA's Residential Basement Floodproofing Certificate (FEMA Form 086-0-24) where applicable.

Copies of the FEMA Elevation Certificate and the FEMA Floodproofing Certificate are available free in quantity from FEMA and can be downloaded from FEMA's website at http://www.fema.gov/national-flood-insurance-program-2/elevation-certificate. Instructions are included with the forms.

For new construction, only the current FEMA forms are acceptable. A community may receive credit by transferring data from other forms onto a FEMA certificate.

V ZONE DESIGN CERTIFICATE

Name_____Policy Number (Insurance Co. Use)_____

Building Address of 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.

Figure 310-1. The V Zone Design Certificate (from FEMA's *Home Builder's Guide to Coastal Construction*, Technical Fact Sheet No. 1.5).

CRS Participation Requirement

As noted earlier, properly completed FEMA Elevation Certificates are a key indicator of community compliance with the requirements of the NFIP. Therefore, obtaining, reviewing, and maintaining elevation and the other certificates is a minimum requirement of participation in the CRS (see also Section 211.a).

The community is required to maintain certificates on all new SFHA buildings and substantial improvements permitted after the community applies for CRS credit, as credited under Section 312.a. Communities applying to the CRS may receive 38 points for EC under Section 312.a, provided that Elevation Certificates are provided with each annual recertification for new buildings and substantial improvements within the SFHA.

Those few NFIP communities that have no SFHA may not receive credit for this activity. However, if such a CRS community with no SFHA later receives a FIRM from FEMA that includes areas of SFHA or annexes an area with an SFHA, it must begin maintaining Elevation Certificates on the date of the FIRM or annexation or it will lose its credit.

Elevation Certificates Completed by the Community

Elevation Certificates can be completed by a local official who is authorized by law or ordinance to administer the community's floodplain management program, provided that the original surveyed elevations in Section C were obtained by a registered design professional.

A community can transfer data from a surveying project to the FEMA Elevation Certificate form if it can demonstrate that the source of the data was appropriate and if the source is described in Section G of the certificate.

Some communities require FEMA Elevation Certificates for new construction in flood-prone areas that are outside of the SFHA but are regulated by the community. This is encouraged as a good floodplain management practice. However, because the certificates are not used in flood insurance rating, there is no requirement under this activity that they be maintained or submitted for review. The documentation requirement is limited to Elevation Certificates for new construction or substantial improvements in the SFHA.

311.b. Activity Credit Criteria

(1) The community must maintain completed FEMA Elevation Certificates showing the "finished construction" elevations for all buildings constructed or substantially improved in the SFHA during the period credited. "Buildings" are defined in Section 301.a.

(2) If the building was floodproofed, 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 (see "Required Certificates," above).

(3) The community must review the certificates to ensure that they are complete and that the information is correct. This is described in more detail under "Elevation Certificate Checklist" and "Getting Correct Certificates," below.

(4) The community must make copies of Elevation Certificates readily available to anyone upon request. If a community receives credit for having Elevation Certificates from

before it applied to the CRS, it must be able to retrieve those certificates, including those from projects whose permit files may have been archived or discarded.

Elevation Certificate Checklist

As noted in "Activity Credit Criteria," above, the community must review the certificates to ensure that the information is correct. The ISO/CRS Specialist collects all Elevation Certificates for which the community requests credit and checks them for specific items. The CRS checklist for the 2006, 2009, 2012, and 2015 Elevation Certificate forms is shown in Figure 310-2. There is also a form with the checklist items highlighted available at www.CRSresources.org/300. The ISO/CRS Specialist can provide similar checklists for earlier versions of the FEMA forms.

If any of the items on the checklist are not completed or are incorrect, the ISO/CRS Specialist will reduce the element's credit points as explained in Section 311.c.

Note that, although Item A6. of the instructions to the Elevation Certificate form requires photos of the structure, the photos are only required for purchasing flood insurance. Photos are not required for the community's permit records nor are they required for CRS credit. However, photos are encouraged and credited as part of the three inspections under Regulations Administration (RA) in Section 432.o.

Checklists for the Floodproofing Certificate, V Zone Design Certificate, and the Residential Basement Floodproofing Certificate can be found at www.CRSresources.org/300.

Getting Correct Certificates

It is the community's responsibility to ensure that the certificates it maintains have been completed correctly. Certificates provided by surveyors must be proofread and corrected if there are errors or omissions. Although the surveyed elevations are likely to be correct, it is not unusual for surveyors to enter the wrong FIRM date or diagram number or fail to complete all the entries in Section C of the Elevation Certificate form.

If there are certificates that have items on the checklist omitted or incorrectly filled out, the community has the following options:

(1) For any inaccurate or incomplete information in Section C2, the local official should request a new certificate.

(2) If incomplete or inaccurate information is found in the other sections, the local official can do the following. Note that in some states, the local official SHOULD NOT mark up a signed and sealed form.

- The forms may be returned to the surveyor with instructions on what needs to be changed or corrected;
- The local official can prepare a separate memo with the correct information and attach the memo to the form (see Figure 310-3). When the certificate is provided to an inquirer, the memo must be included with it; or
- The local official can note the changes or corrections in Section G.

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 and suffix.

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."

Figure 310-2. CRS Checklist for the 2006, 2009, 2012, and 2015 FEMA Elevation Certificate forms.

SECTION D—CERTIFICATION BY A REGISTERED DESIGN PROFESSIONAL

Certifier's name and license number

Certifier's signature

Date

If there is a signature and/or date in the box, there does not have to be a separate signature or date on the line.

SECTION E—BUILDING ELEVATION INFORMATION (when a survey is not required in a Zone AO or a Zone A without a base flood elevation)

E1 a) and b) Enter the difference between the top of the bottom floor and the highest and lowest adjacent grade.

E2 For Building Diagrams 6–9 with openings, enter the difference between the top of the next higher floor and the highest adjacent grade.

E3 Enter the difference between the top of the garage slab and the highest adjacent grade.

E4 Enter the difference between the top of the platform for machinery or equipment and the highest adjacent grade.

E5 Zone AO (only) Elevation of bottom floor complies with the ordinance (if there is no base flood depth provided).

Note: If Section E is used, then Sections F or G must be completed.

SECTION F—PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

This section is used if Section E is completed by the owner or owner's representative. If used, this section must include the property owner's or representative's name in the first line and the signature in the third line.

SECTION G—COMMUNITY INFORMATION

If G1 or G2 is checked, then the first and third lines after G10 (the local official's name and signature) must be completed.

NOTE: If a local official authorized by law to complete an Elevation Certificate fills out ALL the information (including elevation data), then G8, G9, and the signature block must be completed.

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

One way communities have improved the quality of their Elevation Certificates is by completing Sections A and B at the time of the permit application. The partially completed form then is given to the applicant or to the surveyor who then can focus on completing the surveyed information in Section C. This has been shown to reduce many of the more common errors.

[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 | FOR 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. | Company NAIC Number:

City State ZIP Code

A3. Property Description (Lot 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: ☐ NAD 1927 ☐ 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):
- a) Square footage of crawlspace or enclosure(s) _____ sq ft
- b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade _____
- c) Total net area of flood openings in A8.b _____ sq in
- d) Engineered flood openings? ☐ Yes ☐ No

A9. For a building with an attached garage:
- a) Square footage of attached garage _____ sq ft
- b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade _____
- c) Total net area of flood openings in A9.b _____ sq in
- d) Engineered flood openings? ☐ Yes ☐ No

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP 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 AO, use base flood depth)

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

B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☐ NAVD 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

Figure 310-3. An example of a cover sheet for a correction to an Elevation Certificate. Some communities use a "correction form" like this one when an error or omission is found that can be corrected by the local official. It is stapled to the certificate that is made available to inquirers. It should be noted that the community assumes responsibility for the accuracy of the changes it makes.

311.c. Credit Verification

Two months before each verification visit, the community sends the ISO/CRS Specialist a list of all new buildings and substantial improvements constructed in the SFHA since the last cycle verification visit. See the information that should be included on the list in Section 312.a, "Documentation for EC Provide by the Community." The community also sends copies of the Elevation Certificates (and/or V Zone, Floodproofing Certificates, etc., as appropriate) for those buildings and substantial improvements.

The Insurance Services Office, Inc., (ISO) reviews the certificates in accordance with the checklist and brings the findings to the visit. The community's credit for the first element, EC, will be based on this review. For example, if the community has 20 certificates and only 12 have no problems listed on the checklist, the community's credit will be

$$EC = 38 \times \frac{12}{20} = 22.80 \text{ points}$$

The community is given feedback on all the certificates. To stay in the CRS, at least 90% of the community's certificates must be correct, i.e., have no problems. If less than 90% of the certificates pass (as in the example above), the community must correct them in order to stay in the CRS.

The credit for EC is based on the review of certificates submitted for the verification visit. It will not change after the community makes the needed corrections, but EC will be rescored at the next visit based on a review of the next batch of certificates.

The certificates for ECPO and ECPR credit are reviewed in the same way and the 90% threshold applies to them as well. However, if the certificates with problems are corrected, they can be reviewed again and the community will receive a revised credit. The number of pre- and post-FIRM buildings is relatively static. Because EC reflects new construction, it needs to be rescored at every verification visit.

At each annual recertification, the community again provides the list of new buildings and substantial improvements constructed in the SFHA during the previous year and copies of the elevation and other certificates for those buildings. These are reviewed and feedback on the findings is given to the community.

There is no change to the community's credit based on the recertification findings, but those Elevation Certificates will be reviewed at the next cycle verification visit. Therefore, it is in the community's best interest to correct the Elevation Certificates as soon as possible so the EC credit is not lowered at the community's next verification visit.

At the next verification visit, the ISO/CRS Specialist will review all certificates collected since the previous visit (or, at the community's option, only those submitted at the annual recertification that had problems plus all certificates collected by the community since the last recertification). Credit for EC will be revised, based on this review. Because the community will have had most of the certificates reviewed and critiqued after each annual

recertification, the community should have had adequate time to assemble a corrected set of Elevation Certificates for the next verification visit.

Example 311.c-1.

A coastal county's cycle verification visit was in 2014. Two months before the visit, the building department provided the ISO/CRS Specialist with a list of all new buildings and substantial improvements that were built in the SFHA since the last visit. There are 134 such projects. The department also provides 133 Elevation Certificates, one Floodproofing Certificate, and six V Zone Design Certificates, for a total of 140 forms.

ISO reviewed all of the forms and found 16 buildings with problem forms and 118 buildings with correct forms. The verified credit for EC for the county was 38 x 118 ÷ 134 = 38 x 0.88 = 33.44. However, the county needed 121 forms with no problems to meet the 90% verification threshold (134 x 90% = 121). The ISO/CRS Specialist gave the county a deadline to correct at least three certificates. If this was not done, the county would have been converted to a CRS Class 10.

The county staff made the corrections and submitted them to the ISO/CRS Specialist. The county met the verification threshold and the county's credit for EC remained at 33.44 until the next cycle verification visit.

At each annual recertification, the county submits the list of permits and copies of all of the certificates collected during the previous year. They are reviewed and the county is advised of any problems that are found. At the next verification visit, the ISO/CRS Specialist collects the list of permits. The community has the option of providing copies of all the certificates collected by the county since the 2014 visit or just those that the ISO/CRS Specialist has not seen (i.e., since the last annual recertification submittal), plus the corrected certificates that had problems in the previous year or years.

This time, the list has 508 permits and the building department provides 483 Elevation Certificates, five Floodproofing Certificates, 22 V Zone Design Certificates, and an explanation that 20 permitted projects are still under construction, for a total of 488 building with certificates. A technical review finds that 478 (98%) buildings have correct certificates and the county meets the verification threshold. The credit for EC is based on the latest visit's findings, so EC = 38 x (478 ÷ 488 = 37.24. The county is encouraged to correct the five certificates with problems, but the credit will remain at 37.24 until the next visit.

312 Elements

312.a. Maintaining Elevation Certificates (EC)

The maximum credit for this element is 38 points.

EC credit is provided if the community maintains Elevation Certificates for all new buildings and substantial improvements constructed in the SFHA since the date of application to the CRS.

EC is adjusted to less than 38 points if the verification findings warrant such a reduction. The credit points are reduced if incorrect or incomplete information appears on the Elevation Certificate forms checked during the verification process.

As described in the Section 311.c, the community must have at least 90% of its elevation and other certificates correct in order to meet one of the prerequisites to be in the CRS. This prerequisite only applies to element EC, i.e., certificates on buildings built or substantially improved after the community applied to join the CRS, not to ECPO or ECPR.

If no buildings have been built or substantially improved in the SFHA since the CRS application date, the community receives full credit for EC. The CRS prefers to see no buildings in the floodplain rather than provide credit for records on those that have been built.

Credit Criteria for EC

The activity credit criteria in Section 311.b must be met.

Credit Points for EC

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

and

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

Impact Adjustment for EC

There is no impact adjustment because communities must require, review, and maintain copies of Elevation Certificates on ALL new construction. There is no credit under this activity for having Elevation Certificates on only some of the buildings constructed or substantially improved since the community's CRS application.

Documentation for EC Provided by the Community

(1) At least two months before each verification visit,

(a) A list of all permits issued for new buildings and substantial improvements in the SFHA since the last cycle verification visit. The list needs to include the address of

each building; the type of building (e.g., residential, commercial, or other term used in Section A4 of the FEMA Elevation Certificate form); FIRM zone (AE, A, VE, etc.); whether it is a new building or substantial improvement; the date of the permit; and whether the permit is final.

(b) Copies of Elevation Certificates (and/or V Zone and Floodproofing Certificates, as appropriate) for all new buildings and substantial improvements in the SFHA that have been collected since the last visit.

(c) If the community is applying for or receiving credit for regulating areas outside the SFHA, the ISO/CRS Specialist will advise whether the list of permits and copies of Elevation Certificates in (a) and (b) should include properties in those non-SFHA areas.

The list and certificates can be provided in paper or digital format. Certificates on detached garages, non-substantial improvements, and properties not in the SFHA are not needed for this activity's credit. If they are needed to verify another activity, they should be submitted with the documentation for the other activity.

Note that it is acceptable that there are permits issued for buildings that do not yet have Elevation Certificates because construction has not been completed. Likewise, it is acceptable that there are Elevation Certificates on buildings not on the current permit list because the permits were issued before the last visit.

If there have been no new buildings or substantial improvements in the SFHA since the last submittal, a letter or memo to that effect is needed, signed by the permit official.

(2) At each verification visit,

(a) A description of how the community maintains, stores, and provides copies of certificates to inquirers.

(3) With the annual recertification,

(a) A list of all permits issued for new buildings and substantial improvements in the SFHA since the last recertification submittal, and

(b) Copies of all Elevation Certificates (and/or V Zone and Floodproofing Certificates, as appropriate) for new buildings and substantial improvements in the SFHA that have been collected since the last submittal.

The list and certificates can be provided in paper or digital format. If there have been no new buildings or substantial improvements in the SFHA since the last submittal, a letter or memo to that effect is needed, signed by the permit official.

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

The maximum credit for this element is 48 points.

ECPO credit is provided if completed and correct certificates are maintained for all buildings built or substantially improved in the SFHA between the date of the effective FIRM at the time of construction and the date of the community's application to the CRS.

If there are no post-FIRM buildings in the SFHA, the community receives full credit for ECPO because there are no post-FIRM buildings or substantial improvements without Elevation Certificates. The CRS would prefer to see no buildings in the floodplain rather than provide credit for records on those that have been built. However, if the community annexes lands that include buildings in the SFHA constructed since the date of its initial FIRM, the credit is based on how many of those buildings have Elevation Certificates.

Credit Criteria for ECPO

The activity credit criteria in Section 311.b must be met.

Credit Points for ECPO

ECPO = up to 48 points, for maintaining Elevation Certificates for post-FIRM buildings

Impact Adjustment for ECPO

If the community only has certificates for some of its post-FIRM buildings, then the value for ECPO is adjusted.

$$rECPO = \frac{bECPO}{bPO}, \text{ where}$$

bECPO = the number of post-FIRM buildings with Elevation Certificates, and

bPO = the number of buildings built or substantially improved in the community's SFHA between the initial FIRM effective date and the date the community applied to the CRS

Section 301 describes how to count buildings for the impact adjustment and has an alternative way to calculate bPO that favors post-FIRM, i.e., compliant, buildings in the SFHA.

If no buildings have been built or substantially improved in the SFHA since the community entered the Regular Program of the NFIP, then bPO = 0. As noted above, the community would still receive full credit for this element because the CRS would prefer to see no buildings in the floodplain rather than provide credit for records on those that have been built.

Example 312.b-1.

A community's CRS credit was verified by its ISO/CRS Specialist during the spring of 2004. Its initial FIRM effective date is May 15,

1980. Between then and when it applied to the CRS in 2003, 22 buildings were built or substantially improved. bPO = 22

The community began using FEMA's Elevation Certificates after FEMA conducted a community assistance visit in 1986. It has completed certificates for all buildings built since then. There are 10 buildings with correct Elevation Certificates. bECPO = 10

$$rECPO = \frac{10}{22} = 0.45$$

Documentation for ECPO Provided by the Community

(1) At each verification visit,

(a) Copies of Elevation Certificates (and/or V Zone and Floodproofing Certificates and other certificates, as appropriate) for new buildings and substantial improvements constructed between the date of the community's initial FIRM and the date of application to the CRS.

(b) Demonstration that the community still has access to all the credited certificates and provides them to inquirers.

(c) Documentation showing how bPO was determined. Note that this number can change if the community annexes areas in the SFHA or a FIRM revision changes the number of post-FIRM buildings in the SFHA.

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

The maximum credit for this element is 30 points.

ECPR credit is provided if completed and correct certificates are maintained for buildings that were constructed in the SFHA before the date of the initial FIRM of the community in which the building was constructed.

Although most communities did not keep elevation records before they joined the Regular Program of the NFIP (which is usually the same date as their initial FIRM), lowest floor elevations may have been determined for a flood protection study. If the data are transferred to the FEMA forms, credit can be provided under ECPR. ECPR is adjusted in the same manner as ECPO, as described in the Impact Adjustment section.

If there are no pre-FIRM buildings in the SFHA, the community receives full credit for ECPR because there are no pre-FIRM buildings without Elevation Certificates. However, if the community annexes lands that include buildings that were constructed in the SFHA before the date of its initial FIRM, the credit will be based on how many of those buildings have Elevation Certificates.

Credit Criteria for ECPR

The activity credit criteria in Section 311.b must be met.

Credit Points for ECPR

ECPR = up to 30 points, for Elevation Certificates for pre-FIRM buildings

Impact Adjustment for ECPR

If the community only has certificates for some of its pre-FIRM buildings, then the value for ECPR is adjusted.

$$rECPR = \frac{bECPR}{bPR}, \text{ where}$$

bECPR = the number of pre-FIRM buildings with correct Elevation Certificates, and

bPR = the number of pre-FIRM buildings in the community's SFHA

Section 301 describes how to count buildings for the impact adjustment.

Example 312.c-1.

A community has 250 pre-FIRM buildings. bPR = 250

As part of a flood control study, the U.S. Army Corps of Engineers surveyed the first-floor elevations of all buildings in one of the community's floodplains. Because there are no basements in the community, the first floor is the same as the lowest floor. *[**NOTE**: This is not always the case. Other sources of elevation data must be carefully checked to ensure that the records are for the lowest floor.]* The study provided correct elevations for 122 of the community's 250 pre-FIRM buildings, and the community subsequently recorded the data on FEMA's Elevation Certificates. bECPR = 122

$$rECPR = \frac{122}{250} = 0.49$$

Documentation for ECPR Provided by the Community

(1) At each verification visit,

(a) Copies of Elevation Certificates (and/or V Zone and Floodproofing Certificates and other certificates, as appropriate) for buildings and substantial improvements constructed before the date of the community's initial FIRM.

(b) Demonstration that the community has access to all the credited certificates and provides them to inquirers.

(c) Documentation showing how bPR was determined. Note that this number can change if the community annexes areas in the SFHA or a FIRM revision changes the number of pre-FIRM buildings in the SFHA.

313 Credit Calculation

c310 = cEC + cECPO + cECPR, where

cEC = the verified credit for the element EC based on the number of correct certificates,

cECPO = ECPO x rECPO, and

cECPR = ECPR x rECPR

Example 313-1.

After the initial review of Elevation Certificates at a community's cycle verification visit, only five of the seven new Elevation Certificates for new and substantial improvements are correct.

cEC = 38 x (5 ÷ 7) = 38 x 0.71 = 26.98

Note that the community must correct the two Elevation Certificates with problems in order to meet the 90% requirement. If this is not done, the community will be reclassified as a CRS Class 10 community.

The community has correct Elevation Certificates for 10 of its 22 post-FIRM buildings. As discussed above, rECPO = 0.45.

cECPO = 48 x 0.45 = 21.60

The community has Elevation Certificates for 122 of its 250 pre-FIRM buildings. As discussed above, rECPR = 0.49.

cECPR = 30 x 0.49 = 14.70

c310 = cEC + cECPO + cECPR

c310 = 26.98 + 21.60 + 14.70 = 63.28, which is rounded to 63

314 For More Information

a. Additional information, reference materials, and examples can be found at www.CRSresources.org/300.

b. The FEMA Elevation and Floodproofing Certificates include detailed instructions for completing them. The latest version can be downloaded from FEMA's website at http://www.fema.gov/national-flood-insurance-program-2/elevation-certificate. The FEMA Regional Office and State NFIP Coordinating Office can provide help in completing and maintaining the certificates.

c. *Elevation Certificate*, FEMA's Floodplain Management Bulletin 467-1, provides questions and answers on completing the form and using the Elevation Certificate to verify building compliance. The bulletin can be downloaded from www.fema.gov/library/viewRecord.do?fromSearch=fromsearch&id=1727.

d. Instructions on completing the V Zone Design Certificate can be found in FEMA's *Home Builder's Guide to Coastal Construction* Technical Fact Sheets 1.4, 1.5, and 8.1 at http://www.fema.gov/residential-coastal-construction.

315 Related Activities under the Community Rating System

- Elevation Certificate data can be very helpful when estimating flood depths under Activity 320 (Map Information Service). The base flood elevation can be compared to the lowest floor or garage elevation to give the inquirer a good idea of how deep the base flood would be. Even if there is no Elevation Certificate on the property in question, describing the flood depth on a neighboring property can still be useful.
- If the community develops a Program for Public Information (credited under Activity 330 (Outreach Projects)), the PPI committee should discuss how insurance agents and property owners can learn about the availability of Elevation Certificate data.
- Providing building elevation data on a website is credited under Activity 350 (Flood Protection Information) and having it in the community's geographic information system (GIS) or other property data base is credited under Activity 440 (Flood Data Maintenance).
- Elevation Certificate data can also be helpful when advising an inquirer about flood protection alternatives, credited under Activity 360 (Flood Protection Assistance) and flood insurance rating, credited under Activity 370 (Flood Insurance Promotion).
- Elevation Certificates are used by the ISO/CRS Specialist to verify some regulatory credits, such as development of new base flood elevations (NS) under Activity 410 (Flood Hazard Mapping) and freeboard (FRB) under Activity 430 (Higher Regulatory Standards).