

National Flood Insurance Program
Community Rating System

Addendum to the 2017 *CRS Coordinator's Manual*

2021

FEMA

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FOREWORD

The Community Rating System (CRS) is a national program developed by the Federal Emergency Management Agency (FEMA). The *CRS Coordinator's Manual* is the guidebook for the CRS. The *Coordinator's Manual* spells out the credits and credit criteria for community activities and programs that go above and beyond the minimum requirements for participation in FEMA's National Flood Insurance Program. The *Coordinator's Manual* explains how the CRS operates, how credits are calculated, and what documentation is required, and also acts as guidance for communities in enhancing their flood loss reduction and resource protection activities.

From time to time, the *Coordinator's Manual* is revised, to respond to improvements in floodplain management and insurance practice, advances in technology, input from communities and other program stakeholders, and other factors. These changes ensure that the CRS continues to encourage, support, and recognize communities for ongoing efforts to minimize flood losses and protect floodplain resources. Revisions normally take place every three years and are issued in the form of a new edition of the *Coordinator's Manual*.

This *Addendum to the 2017 CRS Coordinator's Manual* is being issued by FEMA in lieu of producing a fully revised edition at this time. The Addendum, effective January 1, 2021, accompanies and becomes part of the 2017 edition of the *Coordinator's Manual*. With the issuance of this Addendum, FEMA incorporates into the existing CRS guidance some material that officially changes, adds to, or clarifies the CRS program. This includes new prerequisites for advancing in CRS class as well as new opportunities for communities to earn CRS credit for protecting threatened and endangered species, mitigating substantial damage, and promoting flood insurance.

The current *Coordinator's Manual,* issued in 2017, accompanied by this Addendum, will remain in effect until a new edition is released. Therefore, the expiration date on the 2017 *Coordinator's Manual* can be disregarded. Both documents can be downloaded from the FEMA website.

What Becomes Effective in 2021

The most significant changes taking place with the release of this Addendum are four new opportunities for communities to earn CRS credit, and two new prerequisites—one for attaining CRS Class 9 and one for Class 8.

Credit Opportunities

- Under Activity 370 (Flood Insurance Promotion), the credit for a flood insurance coverage plan (element CP) is increased, as is that for providing technical assistance (element TA). Three new elements are introduced, providing credit for distributing flood insurance information (element FIB), for holding insurance-related town hall meetings (element FIM), and for a state requirement for continuing education for flood insurance agents (element SCE).
- Under Activity 510 (Floodplain Management Planning), credit is made available for developing a floodplain species assessment in addition to, or as an alternative to, a natural functions plan (element NFP).
- A new creditable element is added under Activity 510 (Floodplain Management Planning) for communities that develop a plan for managing substantial damage properties within their jurisdictions (element SDP).
- Under Activity 610 (Flood Warning and Response), communities can receive credit for incorporating into their flood response operations plans specific measures for implementing substantial damage assessments after a flood (elements FRO2 and FRO5).

Class Prerequisites

- As a prerequisite to achieving CRS Class 9, communities must develop a plan for managing floodplain-related construction certificates (including Elevation Certificates) within their communities and must maintain each year a 90% accuracy rate for those construction certificates.
- As a prerequisite for achieving CRS Class 8, communities must adopt and enforce at least one foot of freeboard for residential buildings in all numbered zones of the Special Flood Hazard Area (SFHA).

Clarifications

- With the addition of construction certificate management procedures (element CCMP) as a prerequisite to achieving CRS Class 9, the background information and discussion about Elevation Certificates in Section 300 and Section 310 have been re-organized. Although some new material has been added, most of what appears in the Section 300 entry, below, is not new but previously appeared in the *Coordinator's Manual* in Section 310 instead of Section 300. Clarifications have been added to help communities develop a plan for managing floodplain-related construction certificates, and to explain that a community must maintain a 90% accuracy rate for its construction certificates every year.
- The CRS approach to crediting stormwater management regulations (element SMR) and watershed master plans (element WMP) under Activity 450 (Stormwater Management) is being modified with this Addendum. Beginning in 2021, the CRS focus is shifting from watershed-wide management to a focus on managing the area within the community's jurisdiction, i.e., what the community itself has authority to manage. This is reflected in the entries below by some changes in terminology and by modifications to the impact adjustments for elements SMR and WMP.
- Some typographical errors and confusing language have been corrected.

How to Use the 2021 Addendum to the 2017 *CRS Coordinator's Manual*

This Addendum material is presented in an order that corresponds to the 2017 *Coordinator's Manual*. Only those sections of the *Coordinator's Manual* that are being changed appear in this Addendum. Each section begins with a short summary of the changes for that section. This is followed by a series of bulleted entries that identify the section or subsection and page number in the 2017 *Coordinator's Manual* at which the change is to be incorporated. Significant changes in each section are listed first, followed by more minor corrections, if any, most of which are needed to make other parts of the *Coordinator's Manual* consistent with the new language (such as re-numbering where a new subsection has been inserted, or a implementing a change in terminology). Those portions of the 2017 *Coordinator's Manual* that are not included in this Addendum remain unchanged. The Index and Appendices have not been updated.

For the convenience of communities, the new inserts and the replacement language are presented mostly as one or more full paragraphs, rather than as word-by-word changes. This makes it possible for the community to more easily incorporate the new material into whatever format it uses.

Addendum to

Section 116 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

The discussion in Section 116 about the importance of protecting natural floodplain functions is expanded to place more emphasis on threatened and endangered species. Some new paragraphs are added and some of the rest has been re-organized slightly. For simplicity, the entire subsection Section 116.a is replaced with the language below. There are no changes to Section 116.b or 116.c.

Revised Subsection Focuses on Threatened and Endangered Species

◆ On page 110-12, the entire subsection 116.a is replaced with this revised material:

116.a. Natural Floodplain Functions and Threatened and Endangered Species

Floodplains in riverine and coastal areas perform natural functions that cannot be replicated elsewhere. The CRS provides special credit for community activities that protect and/or restore natural floodplain functions, even though some of the activities may not directly reduce flood losses to insurable buildings. There are many reasons to protect floodplains in their natural state.

When kept open and free of development, floodplains provide the necessary flood water conveyance and flood water storage needed by a river or coastal system. When a floodplain is allowed to perform its natural function, flood velocities and peak flows are reduced downstream. Natural floodplains reduce wind and wave impacts and their vegetation stabilizes soils during flooding.

Floodplains in their natural state provide many beneficial functions beyond flood reduction. Water quality is improved in areas where natural cover acts as a filter for runoff and overbank flows; sediment loads and impurities are also minimized. Natural floodplains moderate water temperature, reducing the possibility of adverse impacts on aquatic plants and animals.

Floodplains can act as recharge areas for groundwater and reduce the frequency and duration of low flows of surface water. Floodplains and coastal areas provide habitat—especially breeding and feeding areas—for diverse species of flora and fauna, some of which cannot live anywhere else, and some of which have been identified as needing special protection because their numbers are dwindling. Ways in which the CRS supports the protection of threatened and endangered species and their critical habitat are discussed at the end of this subsection.

Some Natural Functions of Floodplains

WATER RESOURCES

Natural Flood and Erosion Control

- Provide flood storage and conveyance
- Reduce flood velocities
- Reduce peak flows
- Reduce sedimentation

Water Quality Maintenance

- Filter nutrients and impurities from runoff
- Process organic wastes
- Moderate temperature fluctuations

Groundwater Recharge

- Promote infiltration and aquifer recharge
- Reduce frequency and duration of low surface flows

BIOLOGICAL RESOURCES

Biological Productivity

- Rich alluvial soils promote vegetative growth
- Maintain biodiversity
- Maintain integrity of ecosystems

Fish and Wildlife Habitats

- Provide breeding and feeding grounds
- Create and enhance waterfowl habitat
- Protect habitats for rare and endangered species

– *A Unified National Program for Floodplain Management*
FEMA-248 (1994)

Credit for Protecting Natural Floodplain Functions

The CRS encourages state, local and private programs and projects that preserve or restore the natural state of floodplains and protect these functions. The CRS also encourages communities to coordinate their flood loss reduction programs with other public and private activities that preserve and protect natural and beneficial floodplain functions. Credits for doing this are found in the following activities:

- Activity 320 (Map Information Service)—Credits advising people about areas that should be protected because of their natural floodplain functions.
- Activity 330 (Outreach Projects)—Credit is provided for outreach projects that include descriptions of the natural functions of the community's floodplains.
- Activity 350 (Flood Protection Information)—Credit points are available for a website that provides detailed information about local areas that should be protected for their natural floodplain functions and how they can be protected.
- Activity 420 (Open Space Preservation)—Extra credit is provided for open space areas that are preserved in their natural state; have been restored to a condition approximating their pre-development natural state; or have been designated as worthy of preservation for their natural benefits, such as being designated in a habitat conservation plan.
- Activity 430 (Higher Regulatory Standards)—Regulations that protect natural areas during development or that protect water quality are credited.

- Activity 440 (Flood Data Maintenance)—Adding layers to the community's geographic information system (GIS) with natural floodplain functions (e.g., wetlands, designated riparian habitat, flood water storage areas) is credited.
- Activity 450 (Stormwater Management)—Erosion and sediment control, water quality, and low-impact development techniques minimize the impacts of new development. These measures are credited, along with regulations that require the maintenance of natural flow regimes.
- Activity 510 (Floodplain Management Planning)—Extra credit is provided for plans that address the natural resources of floodplains and recommend ways to protect them.
- Activities 520 (Acquisition and Relocation), 530 (Flood Protection), and 540 (Drainage System Maintenance)—Measures such as capital improvement programs and drainage improvement projects can reduce flood losses. No such programs or projects can be credited unless a thorough environmental review is conducted and documented.

A community that wants to explore what it can do under the CRS activities listed above could start by preparing a natural functions plan (described and credited under Activity 510 (Floodplain Management Planning)). That will help to identify the existing and desired natural functions and to generate recommendations for how to preserve and increase those functions.

Credit for Protecting Threatened and Endangered Species

As noted in the previous section, floodplains and coastal areas can serve as habitat for many animals and plants. One group of animals and plants deserving special protection are threatened and endangered species. Because of their declining numbers, these species have been listed by the U.S. Fish & Wildlife Service or the National Marine Fisheries Service as needing protection under the provisions of the Endangered Species Act. They "are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people" (Endangered Species Act of 1973 (16 *U.S.C.* § 1531 *et seq*.)). In addition, many states maintain their own lists of species that are considered threatened, endangered, or "of concern."

More and more, floodplain managers are recognizing the close relationship between protection of flood-prone property and protection of threatened and endangered species. Many good floodplain management practices, such as keeping wetlands, stream banks, and beaches in their undisturbed natural condition, also support the protection of habitats that are essential for the survival of many threatened and endangered species.

Supporting the conservation and recovery of threatened and endangered species is a worthy goal in itself and also is called for under the Endangered Species Act. Section 7 of the Act gives all federal agencies a responsibility to use their authorities in support of the Act. Many states and communities have made protection of threatened and endangered species one of their own priorities.

The CRS encourages and credits actions that further the conservation and recovery of threatened and endangered species under the following activities.

- Activity 320 (Map Information Service)—This activity credits providing information about areas that have been designated as critical habitat, can serve as breeding grounds, or otherwise support threatened and endangered species.

- Activity 330 (Outreach Projects)—Outreach projects and programs for public information receive credit for messages on protecting threatened and endangered species that live in the area, such as explaining fishing restrictions or keeping pets on leashes.

- Activity 350 (Flood Protection Information)—Having materials on protecting local species in the local public library and on the community's website is credited.

- Activity 420 (Open Space Preservation)—Preserving open space in the floodplain helps many species. Bonus credit is provided if the open space is in its natural state and even more credit if it has been designated as critical habitat for a threatened or endangered species. Other credits that help species include preserving open space on eroding shorelines, offering incentives to developers to keep the floodplain open, zoning flood-prone areas for large lot sizes to preserve low density uses, and preserving stream banks and shorelines in their natural state.

- Activity 430 (Higher Regulatory Standards)—As an alternative to keeping floodplains open, this activity credits regulations that protect habitat when floodplains are developed. These include prohibiting filling in the floodplain and regulating development in areas subject to coastal erosion (which often are essential areas for many species, such as shore birds and sea turtles).

- Activity 440 (Flood Data Maintenance)—Including maps of the range and habitat for threatened and endangered species in the community's GIS is credited because it provides important information to GIS users, such as permit officials and highway planners, who need to take protection of these areas into account.

- Activity 450 (Stormwater Management)—Protecting and improving water quality and maintaining more consistent flows over time help many aquatic species and are credited by regulations that require new developments to use low impact development techniques, require control of the volume of runoff, or develop an overall plan for the watershed that addresses threatened and endangered species.

- Activity 510 (Floodplain Management Planning)—In addition to crediting inclusion of natural floodplain functions in a floodplain management or hazard mitigation plan, this activity has a separate element for plans that address protecting natural floodplain functions and a new credit for preparing and implementing a floodplain species assessment.

- Activities 520 (Acquisition and Relocation) and 530 (Flood Protection)—The prerequisite environmental and historic preservation certification process can identify opportunities for reuse of the sites to support the conservation and recovery of threatened and endangered species.

- Activity 540 (Drainage System Maintenance)—This activity encourages communities to regulate dumping in streams and to develop habitat-friendly approaches to clearing debris in drainageways.

A community that wants to explore what it can do under these activities could start with reviewing *CRS Credit for Habitat Protection* and preparing a Floodplain Species Assessment, which is credited under Activity 510 (Floodplain Management Planning). More information on these and on protecting threatened and endangered species and habitat in general can be found in Section 514.

Addendum to

Section 211 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

A new prerequisite to achieving Class 9 is introduced, requiring communities to develop a plan for managing floodplain-related construction certificates (including an annual 90% accuracy rate). A new prerequisite for achieving Class 8 is introduced, requiring communities to adopt and enforce freeboard for residential buildings in their SFHAs. The earlier Class 6 prerequisite—meeting the Class 9 prerequisites—is changed to require all Class 6 communities to meet the Class 8 prerequisites, including the freeboard requirement.

New Prerequisite for Class 9

◆ On page 210-1, under the Class 9 prerequisites, subsection (3) is replaced with the following:

(3) The community must

(a) Maintain all required floodplain-related construction certificates as described in Section 301.b for all buildings constructed, substantially improved, and/or reconstructed due to substantial damage in the Special Flood Hazard Area (SHFA) after the community applies for CRS credit.

(b) Achieve 90% accuracy on its floodplain-related construction certificates during its annual review. This is explained in Section 301.e.

(c) Receive credit for construction certificate management procedures (element CCMP) under Activity 310 (Elevation Certificates).

◆ On page 210-2, under the Class 9 prerequisites, the first sentence of subsection (5) is replaced with this sentence:

The community must maintain in force flood insurance policies for insurable buildings owned by the community and located in the SFHA shown on the community's Flood Insurance Rate Map (FIRM).

New Prerequisite for Class 8

◆ On page 210-4, a new subsection is inserted:

211.b. Class 8 Prerequisites

(1) The community must meet all the Class 9 prerequisites.

(2) The community must adopt and enforce at least a 1-foot freeboard requirement (including machinery or equipment) for all residential buildings constructed, substantially improved, and/or reconstructed due to substantial damage throughout its SFHA where base flood elevations have been determined on its currently effective FIRM or in its Flood Insurance Study (FIS), except those areas that receive open space credit under Activity 420 (Open Space Preservation).

The Class 8 prerequisite can be met through the enforcement of local ordinances or building codes, and/or state building codes, provided the freeboard standard applies to all residential buildings, whether single-family, multi-family, or manufactured. This includes the replacement of manufactured homes in pre-FIRM manufactured home parks.

The ordinance or building code must require that machinery or equipment be elevated to at least 1 foot above the base flood elevation for buildings newly constructed, substantially improved, and/or reconstructed due to substantial damage. This requirement includes machinery and equipment placed within attached garages and/or within enclosures below elevated buildings, with the exception of utility meters and equipment specifically designed to withstand inundation according to the standards of the International Residential Codes and the NFIP. The Class 8 freeboard prerequisite will be met provided that attached garages and enclosures below elevated buildings meet the minimum requirements of the NFIP (elevated to the base flood elevation or having proper openings).

Communities that enforce an adopted freeboard standard that meets the Class 8 prerequisite will be provided with freeboard (element FRB) credit under Activity 430 (Higher Regulatory Standards). Credit will be evaluated at the next CRS verification visit or next modification.

Updated Prerequisite for Class 6

◆ Under **Class 6 Prerequisites** on page 210-4, subsection (1) replaced with this:

(1) The community must meet all the Class 8 prerequisites.

Clarifications, Updates, and Corrections

◆ Under **Class 6 Prerequisites** on page 210-4, subsection 211.b is re-numbered to read:

211.c. Class 6 Prerequisites

◆ Under **Class 4 Prerequisites** on page 210-4, subsection 211.c is re-numbered to read:

211.d. Class 4 Prerequisites

◆ Under **Class 4 Prerequisites** where it continues on page 210-5, two typographical errors are corrected in subsection (3)(a)(ii) and in (3)(b). The replacement language reads:

(ii) The community must receive at least 700 points (after the impact adjustment) under the other elements of Activity 430 and under Sections 422.a, f, and g under Activity 420 (Open Space Preservation).

(b) Activity 450 (Stormwater Management)—The community must receive the following credits for its watershed management plan(s) (WMP) under Section 452.b:

◆ Under **Class 4 Prerequisites** where it continues on page 210-5, the fifth bullet of subsection (4) is clarified to read:

○ 450—Managing the volume of stormwater runoff (SMR, DS bonus credit),

◆ Under **Class 1 Prerequisites** on page 210-6, subsection 211.d is re-numbered to read:

211.e. Class 1 Prerequisites

◆ Under **Class 1 Prerequisites** where it continues on page 210-7, subsection 4(a)(i) is replaced with the following to clarify the scoring:

(i) The community must be enforcing regulations that discourage development in the floodplain. This is demonstrated by receiving a combined total of at least 150 points (before the impact adjustment) from open space incentives (OSI) in Section 422.e and development limitations (DL) in Section 432.a.

◆ Under **214.a. Modification Criteria** where it continues on page 210-14, a new subsection (7) is inserted, and the existing subsection is re-labelled (8). The replacement segment for the top of page 210-14 is this:

(4) If a community is modifying an activity previously applied for, its submittal must include documentation for both the new elements of the activity and those that were previously credited, if they are still being implemented.

(5) The ISO/CRS Specialist verifies only the activity(ies) being modified and reviews the rest at the next cycle verification visit. There are two exceptions to this, as noted under (6) and (7), below.

(6) The ISO/CRS Specialist will automatically update the community's credit points for

(a) The community's BCEGS classification (a Class 6 and Class 4 prerequisite and credited in Section 432(h));

(b) The community's credit for the state dam safety credit (Section 632.a); and

(c) The county growth adjustment (Section 710). If the growth adjustment is changed, the total points for all affected activities in the 400 series will reflect the new factor.

(d) If the community's repetitive loss category has changed since the previous cycle verification, the community must comply with Section 502.a, as applicable.

(7) A community that submits a modification that would result in a class change must meet the pertinent class prerequisites in effect at the time of the modification, as listed in the *Coordinator's Manual* and *Addendum* in effect at the time or the modification request. These prerequisites are in addition to the requirement for the additional credit points needed for a class increase.

(8) The community's entire program is verified with a verification visit under the following circumstances:

(a) If the modification will result in a two-class improvement, or

(b) If the *Coordinator's Manual* has substantially changed most of the rest of the community's credits.

In these situations, the verification visit counts as a cycle verification visit and the community's cycle schedule starts over.

Addendum to

Section 230 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

The revised procedures for collecting and reviewing construction certificates for CRS credit in Section 301 and under Activity 310 result in a slight change in the process followed by the CRS for verifying a community's credit. Accordingly, two changes are introduced in Section 230, Verification.

Updates and Clarifications

◆ Under **Preparation** on pages 230-7 and 230-8, the language is revised to reflect the new procedure for reviewing construction certificates. The two paragraphs are replaced with this single paragraph:

> **Preparation**
> The documentation that is needed for the verification visit is listed in the "Documentation Provided by the Community" section for each element or activity. The ISO/CRS Specialist will send a list of typical documentation with the meeting confirmation letter. Other documentation is collected during the visit and either reviewed then or taken by the ISO/CRS Specialist to review later.

◆ Under **Verification Thresholds** on page 230-9, the list of bullets is revised to reflect the new procedure for reviewing construction certificates. The three bullets are replaced with these two:

- Floodplain and stormwater management regulations in the 400 series: 80%; and
- All others: 50%.

Addendum to

Section 301 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

To provide better guidance for communities in managing the various construction certificates that are needed to mitigate flood damage and also receive CRS credit, a new Section 301 is created by relocating guidance from Sections 311.a, b, and c of the 2017 *Coordinator's Manual*, and revising and expanding that guidance. The figures in this new section have been relocated from the 2017 edition of Section 311 and renumbered.

Expanded Guidance on Construction Certificates

◆ On page 300-4, a new Section 301 is inserted:

301 Construction Certificate Requirements

The National Flood Insurance Program (NFIP) requires that participating communities 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 NFIP also requires that communities make their elevation and related building information available for public inspection and flood insurance rating.

Participation in the CRS requires that, in addition to the NFIP requirements, communities obtain other floodplain-related construction certifications and ensure that they are filled out completely and correctly. This should be done as soon as construction is complete, preferably by someone who is familiar with the NFIP, and before the certificate of occupancy or certificate of use is issued. It is vital to get accurate certifications filed while the community still has authority to get corrections made.

Accurate and readily available data on a building's flood zone, elevation, and other construction information are essential to insurance agents for processing an application for a flood insurance policy. Such information not only contributes to accurate insurance rating but also helps determine whether buildings are compliant with NFIP requirements.

Therefore, a prerequisite for participation in the CRS is that communities obtain, review, correct, and maintain all these certificates; make them available to the public; and have written procedures for this process, as described in Section 310.

301.a. CRS Participation Requirement

The community is required to maintain "finished-construction" Elevation Certificates and all other required floodplain-related construction certificates (see Section 301.b) on all buildings in the community's Special Flood Hazard Area (SFHA) that are constructed, substantially improved, and/or reconstructed due to substantial damage after the community applies for CRS credit. Communities must review the certificates and make sure at least 90% of them are correct according to the verification process. Written procedures for the management of construction certificates (see Activity 310), are required as well, and must meet the credit criteria in Section 312.a.

Those few NFIP communities that have no SFHA may still receive credit for this activity since credit is for having written procedures in place on how to handle construction certificates once they are obtained from property owners or developers. Communities should remember, however, that a CRS community with no SFHA that either subsequently receives a FIRM from FEMA that delineates areas of SFHA or annexes an area with an SFHA must begin maintaining construction certificates on the date of the FIRM or annexation or it will lose its credit.

Some communities require floodplain-related construction certificates for new buildings in flood-prone areas that are outside the SFHA but are regulated by the community. The CRS encourages this 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 certificates for buildings outside the SFHA be maintained or submitted for review.

The four specific participation requirements are these:

(1) The community must maintain the completed construction certificates listed in Section 301.b, Required Floodplain-related Construction Certificates, for all insurable buildings constructed, substantially improved, and/or reconstructed due to substantial damage in the SFHA every year and must supply these certificates annually as prescribed by the CRS (see Section 301.e, Construction Certificate Verification). "Buildings" are defined in Section 302.a.

(2) The community must review all its required construction certificates to ensure that they are complete and that the information is correct. This is described in in Section 301.c, Construction Certificate Checklists and Section 301.d, Getting Correct Construction Certificates. At least 90% of the certificates must be correct at each annual review in order for the community to remain in the CRS.

(3) The community must make copies of construction certificates readily available to anyone upon request. All participating communities must be able to retrieve the certificates, including those from projects whose permit files may have been archived or discarded.

(4) The community must have written procedures for the management of its floodplain-related construction certificates that includes a description for how the community implements requirements (1), (2), and (3), and following the criteria listed in Section 312.a.

301.b. Required Floodplain-related Construction Certificates

Under this activity a community is REQUIRED TO EMPLOY ALL FIVE OF THE FOLLOWING where appropriate. For CRS purposes, therefore, "construction certificates" means all required floodplain-related certificates listed in this sub-section that apply to the community's situation (e.g., inland communities will not have use for a V zone design certification).

- All new buildings or substantial improvement built in the SFHA must have a record showing that the lowest floor is at or above the base flood elevation, using the **FEMA Elevation Certificate** (FEMA Form 086-0-33).
- 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.
- A **V Zone design certificate** is required for all buildings constructed, substantially improved, and/or reconstructed due to substantial damage in coastal high hazard areas (V Zones and coastal A Zones, where credited) after the community's first verification visit under the 2013 edition of the *Coordinator's Manual*.
- A sample V Zone design certificate is shown in Figure 301-1. 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.
- When engineered flood openings are installed in the foundation of a building, an **engineered opening certification** must be attached to the Elevation Certificate. The International Code Council® Evaluation Service (ICC-ES) produces reports for engineered flood openings, and individual certifications also can be done provided that they cover all required items. Engineered opening certifications are required for all buildings constructed, substantially improved, or reconstructed due to substantial damage, since the community's first verification visit under the 2013 *Coordinator's Manual*.

Copies of the FEMA Elevation Certificate and the FEMA Floodproofing Certificate can be downloaded from FEMA's website. 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.

NOTE: *The most recent Elevation Certificate form was published by FEMA on February 21, 2020 (expiration date November 30, 2022). Even though it is unchanged from the previous one, this newer form must be used by anyone who signs and dates the form on or after February 21, 2020.*

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 301-1. A sample V Zone design certificate (from FEMA's *Home Builder's Guide to Coastal Construction*, Technical Fact Sheet No. 1.5).

301.c. Construction Certificate Checklists

As noted in Section 301.a, the community must review its required construction certificates to ensure that the information is correct and must meet a 90% accuracy threshold in doing so. The CRS Resource Specialist collects all certificates the community is required to submit and checks them for specific items. The CRS checklist for the 2006, 2009, 2012, 2015 and 2019 Elevation Certificate forms is shown in Figure 301-2. The CRS Resource Specialist can provide a form with the checklist items highlighted as well as similar checklists for earlier versions of the FEMA forms. Checklists for the Floodproofing Certificate, V Zone design certificate, and the Residential Basement Floodproofing Certificate can be obtained from the ISO/CRS Specialist.

If any of the items on the checklist are not completed or are incorrect, that certificate will count against the 90% accuracy requirement as explained in Section 301.e.

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, a community that does have them is encouraged to submit them with its certificates because they can contribute to understanding the building's construction. In addition, photos are encouraged and credited as part of the three inspections for regulations administration credit (element RA) in Section 432.q.

301.d. Getting Correct Construction Certificates

It is the community's responsibility to ensure that the construction certificates it maintains have been completed correctly. Certificates provided by surveyors must be proofread and corrected if errors or omissions are found. 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 to leave some entries blank in Section C of the Elevation Certificate form.

One way in which 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.

For certificates with omitted or incorrect checklist items, the community has these options:

(1) For any inaccurate or incomplete information in Section C2 of an Elevation Certificate, 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. As a general rule, and as law 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;

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.

A4 Building Use: must be filled in and accurately identifies the use of the building.

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.

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 vertical datum and datum used for entries a) through h) 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 301-2. CRS Checklist for the 2006, 2009, 2012, 2015, and 2019 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.

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 301-2 (cont.). CRS Checklist for the 2006, 2009, 2012, 2015, and 2019 FEMA Elevation Certificate forms.

- The local official can prepare a separate memo with the correct information and attach the memo to the form (see Figure 301-3). When the certificate is provided to an inquirer, the memo must be included with it; or
- For Elevation Certificates, the local official can note the changes or corrections in Section G.

[Community letterhead]

Memo of Review for Correctness 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.

****BUILDING ADDRESS MUST BE ENTERED****
****MUST BE SIGNED AND DATED****

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) Number 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 301-3. An example of a cover sheet for a correction to an Elevation Certificate. Some communities use a correction form like this 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. Note that the community assumes responsibility for the accuracy of the changes it makes. This form must include the address of the building and be signed and dated. A copy may be obtained from the ISO/CRS Specialist.

301.e. Construction Certificate Verification

Each year at its annual recertification date, a community must submit the following:

(1) A list of all permits (the "Permit List") issued for new buildings constructed, substantially improved, and/or reconstructed due to substantial damage in the SFHA since the previous recertification due date (February 1, May 1, August 1, or October 15) or since the date the community applied to the CRS, whichever is later. The list must include the address of each building; the use of each building (e.g., residential, non-residential, or other term used in Section A4 of the FEMA Elevation Certificate); FIRM zone (AE, A, VE, etc.); whether it is a new building, a substantial improvement, or a reconstruction due to substantial damage; the date of the permit; and whether the permit is final.

(2) Copies of all required construction certificates as described in Section 301.b for all new buildings, substantial improvements, and/or reconstructions due to substantial damage in the SFHA that have been collected since the previous recertification due date, or the date of the community's initial application to the CRS, whichever is later. All certificates are to be submitted to the CRS Resource Specialist.

(3) If the community is applying for or receiving credit for regulating areas outside the SFHA, it must let its CRS Resource Specialist know. The community will then be advised whether the list of permits and copies of certificates in (1) and (2), above, should include properties in those non-SFHA areas.

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.

The Permit List and certificates can be provided in paper or digital format, although digital format is preferred. Communities are encouraged to scan paper certificates at 300 dpi grayscale (no color). The fillable pdf versions of the certificates are preferred, for easier processing. 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. Individual certificate files, identified by address, should be submitted if at all possible. The community may charge inquirers a reasonable fee to cover the cost of copying the certificates.

For this credit, certificates are not needed for accessory structures; non-substantial improvements; or non-buildings such as fill, fences, swimming pools, cell towers, etc. Nor are certificates needed for properties outside the SFHA (except as noted in Section 301.e(3), above). If certificates are needed to verify credit under another activity, they should be submitted with that activity's documentation.

NOTE: *It is acceptable to show permits issued for buildings that do not yet have finished-construction certificates because construction has not been completed. It is also acceptable to have certificates for buildings that are not on the current Permit List because the permits were issued before the previous recertification's due date. A community should ensure that this is communicated to the CRS Resource Specialist.*

The CRS Resource Specialist should be notified if there have been no new buildings, substantial improvements, or reconstructions due to substantial damage in the SFHA since the last submittal.

The CRS Resource Specialist will review the certificates in accordance with the checklist and provide feedback to the community. For continued participation in the CRS, at least 90% of the community's certificates must be correct, i.e., have no errors on them (a missing certificate counts as an error). If less than 90% of the certificates pass, the community must correct them to maintain CRS participation. A community is given two chances (the initial submittal plus one opportunity to make corrections) to submit the proper certificates to achieve 90% accuracy.

A community's fulfillment of its construction certificate management requirement for achieving Class 9 is based on the review of certificates on the community's annual recertification due date: it is not part of the cycle verification process. During the year of a community's cycle verification, the required construction certificates will be reviewed by the CRS Resource Specialist in the same manner and at the same time as the community's recertification review, with one difference: only the Permit List and required certificates need to be submitted to the CRS Resource Specialist for that year's review. The rest of the documentation needed for recertification will be submitted and reviewed according to the cycle verification process (see Section 230). Separating the two processes during a verification year keeps the community's reporting period and due date for construction certificates the same from year to year.

If a community needs to make corrections to its Permit List and/or construction certificates, the reporting dates do not change. The list and certificates will be reviewed again at the next recertification due date. If a community cannot achieve the 90% accuracy requirement, it will lose its participation in the CRS at the effective date of the next *Flood Insurance Manual*.

Related Updates and Corrections

◆ On page 300-4, Section 301 is renumbered so that its title is replaced with this:

302 Impact Adjustments for Buildings

◆ On page 300-4, Section 301.a is renumbered so its title is replaced with this:

302.a. Definition of "Building"

◆ On page 300-5, Section 301.b is renumbered so its title is replaced with this:

302.b. Pre- and Post-FIRM buildings

◆ On page 300-5, Section 302 is renumbered so that its title is replaced with this:

303 Impact Adjustment Ratio

◆ On page 300-5, Example 302-1 is renumbered so its title is replaced with this:

Example 303-1.

◆ On page 300-6, Table 302-1 is renumbered so that its title is replaced with this:

Table 303-1. Impact adjustments for buildings.

◆ On page 300-6, section 302.a is renumbered so that its heading is replaced with this:

303.a. Counting Buildings

◆ On page 300-7, section 302.b is renumbered so that its heading is replaced with this:

303.b. bSF (buildings in the SFHA)

Addendum to

Section 310 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

As noted above, much of the background material from Section 311 was moved to the new Section 301. What remains has been re-organized slightly.

To better reflect the scope of the community's responsibility in applying construction standards to mitigate flood losses, the element EC is renamed CCMP, for construction certificate management procedures. A new Section 312.a is inserted as explanation.

◆ In the **Summary** box on page 310-1, Section 312.a is revised to read:

> **a. Construction certificate management procedures (CCMP)**: 38 points for a community's having written procedures that document how the community collects, reviews, corrects, maintains, and makes available to all inquirers the Federal Emergency Management Agency (FEMA) Elevation Certificates, FEMA Floodproofing Certificates, V-Zone design certificates, engineered openings certifications, and FEMA Residential Basement Floodproofing Certificates required for buildings built in the Special Flood Hazard Area (SFHA) after the date of application to the Community Rating System (CRS). All communities must receive credit for this element.

◆ In the **Summary** box on page 310-1, the Credit Criteria are replaced with this simplified revision:

> **Credit Criteria**
> Each element has a separate section describing its credit criteria.

◆ In the **Summary** on page 310-1, the Impact Adjustment section is replaced with this revision, which reflects the re-naming of element EC to CCMP:

> **Impact Adjustment**
> There is no impact adjustment for CCMP. The credit for ECPO and ECPR is adjusted based on the number of post-FIRM and pre-FIRM buildings in the community.

Revision of Activity 310

◆ Under **310 ELEVATION CERTIFICATE MANAGEMENT** on page 310-2, the introductory paragraph and all of **311 Background** are replaced with the following:

310 CONSTRUCTION CERTIFICATE MANAGEMENT

The OBJECTIVE of this activity is to maintain correct floodplain-related construction certificates—Federal Emergency Management Agency (FEMA) Elevation Certificates, FEMA Floodproofing Certificates, V-Zone design certificates, engineered openings certifications, and FEMA Residential Basement Floodproofing Certifications—for new and substantially improved buildings in the Special Flood Hazard Area (SFHA) as well as for development that existed before the community joined the CRS. This activity also addresses how a community provides for the management of certificates when development occurs.

311 Background

Because most building data are recorded on FEMA Elevation Certificates, Activity 310 is called "Elevation Certificates," but the discussion and criteria cover all other required floodplain-related construction certifications as well, as listed in Section 301.b.

The construction of new buildings, the substantial improvement of existing buildings, and the reconstruction of buildings due to substantial damage in the SFHA all require diligent oversight by a community. Comprehensive procedures that cover the collection, review, processing, maintenance, and public accessibility of all required certificates are essential to effective floodplain management. Unclear direction on when to require certain certificates, who performs inspections, who conducts reviews, or how certificates are stored for future use can result in mis-rated insurance policies as well as possible NFIP non-compliance. Casual procedures also result in inconsistent, missing, and lost permit documentation. Therefore, a community that participates in the CRS is required to create and update written management procedures for the handling of its floodplain-related construction certificates.

A prerequisite for reaching Class 9 in the CRS is maintaining required construction certificates from the date of a community's CRS application forward. This helps ensure appropriate development practices once a community joins CRS, but usually development already exists in the SFHA when the community joins the CRS. Accurate elevation and other data about those buildings, and whether they were built pre-FIRM or post-FIRM, are important for compliance and insurance purposes.

This activity provides credit to communities that create written procedures on how required floodplain-related construction certificates are obtained, reviewed, corrected, maintained, and made available to the public. Credit is also provided under this activity for complete and accurate Elevation Certificates on pre-FIRM and post-FIRM buildings.

◆ Beginning on page 310-2, portions of Section 311.a have been moved to new Section 301. Section 311.a is replaced with this revised subsection:

311.a. Activity Description

The maximum credit for Activity 310 is 116 points.

Credit is provided if the community creates written procedures that address the collection, review, correction, and maintenance of FEMA Elevation Certificates, FEMA Floodproofing Certificates, V-Zone design certificates, engineered openings certifications, and FEMA Residential Basement Floodproofing Certificates required for new buildings, substantially improved buildings, or buildings reconstructed due to substantial damage in the SFHA (see Section 301.b) after the community's initial date of application for the CRS. The procedures must describe how the community will make the construction certificates available to any inquirer. The community must review the certificates to ensure a minimum 90% accuracy.

Credit is also provided if the required construction certificates are obtained and correct for pre-FIRM and post-FIRM buildings in the SFHA. For CRS purposes, copies of these certificates may have been obtained recently or may have been part of the community's permit archive system. The certificates must be for "finished construction" and kept on FEMA forms. Elevation data for pre-FIRM or post-FIRM buildings can be entered on the current FEMA forms rather than on the form in effect at the time the building was built.

◆ On pages 310-5 through 310-11, subsections 312.b and 312.c are replaced with new subsections as follows:

311.b. Activity Impact Adjustment

There is no impact adjustment for CCMP. The impact adjustment ratios for ECPO and ECPO are included in the calculations for those two elements.

311.c. Credit Verification

For CCMP credit, the community must submit a copy of its current written procedures on how required construction certificates are obtained, reviewed, maintained, and made available to the public. If the community has all the items addressed in Section 312.a, Credit Criteria, credit will be given. Failure to have all items will result in no credit.

For ECPO and ECPR credit, the community must send its ISO/CRS Specialist a copy of the required construction certifications for all new buildings, substantial improvements, and reconstructions due to substantial damage in the SFHA during the appropriate time period (pre-FIRM or post-FIRM) since the last cycle verification visit. The information to be included is listed in Section 312.a, Documentation for ECPO [and ECPR] Provided by the Community.

The community also must submit the total number of buildings built during the pertinent time period (pre-FIRM or post-FIRM), along with the total number of construction certificates submitted for credit.

The Insurance Services Office, Inc., (ISO) will review the certificates in accordance with the checklist and current sampling procedures and provide feedback to the community. The community's credit for ECPO and ECPR is based on this first review. For example, if the community has 20 certificates but only 12 have no problems listed on the checklist, the community's credit will be

$$\text{ECPO} = 48 \times \frac{12}{20} = 28.80 \text{ points}$$

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

The certificates for ECPO and ECPR do not need to meet the 90% accuracy threshold. If there are problems on any certificates, the score is applied for the correct certificates and those that had problems can be corrected for the next cycle verification. There is no opportunity to increase the credit for the verification visit. The number of pre- and post-FIRM buildings is relatively static, unless there has been a map change or annexation in the SFHA since the previous verification. In those instances, the entire element will be re-evaluated and likely would be re-scored.

At each annual recertification date, the community again must provide a permit list, showing all buildings in the SFHA that are new, substantially improved, or reconstructed due to substantial damage during the previous year, along with copies of the required construction certificates for those buildings. These are reviewed and feedback given to the community. This review determines compliance with the Class 9 prerequisite. This is discussed in detail in Section 301. Annual verification of ECPO or ECPR is not required.

Revised Approach to Elevation and Other Certificates

◆ Under **312.a, Maintaining Elevation Certificates** on pages 310-12 and 312-13, the entire subsection is replaced with this:

312.a. Construction certificate management procedures (CCMP)

Credit for this element is 38 points.

CCMP credit is provided if the community maintains written procedures for the collection, review, correction, maintenance, and public accessibility of the required floodplain-related construction certificates (listed in Section 301.b) after the date of its application to the CRS.

If no buildings have been built or substantially improved in the SFHA since the CRS application date, the community can still receive credit for this element. The CRS prefers to see no buildings in the floodplain rather than provide credit for having records on those that have been built.

All communities are required to receive credit under this element in order to continue participation in the CRS (Class 9 prerequisite).

Credit Criteria for CCMP

(1) The procedures must be in writing, approved by the head of the department(s) that oversees the staff and duties included in the procedures, and updated when needed. The procedures must include the following:

(a) A description of **what types of construction certificates are required** by the community. The certificates required by FEMA and the CRS are listed in Section 301.b, but not all certificates are applicable to all communities, so the community needs to provide a list of which certifications are required within its jurisdiction.

(b) A description of **when the construction certificates are required** by the community. The written procedures must specify the points during the permitting process at which the various certificates are required to be submitted, along with the community requirements for obtaining a complete and correct finished-construction certificates before a certificate of occupancy is issued. For communities that do not issue certificates of occupancy, there must be an explanation that finished-construction certificates are required before a permit is finalized.

(c) A description of **what department or office collects** the required certificates and at what point this is done during the permitting process. A brief discussion should include how a certificate is processed through the permitting system.

(d) A description of **what department or office reviews** the required certificates and at what point this is done during the permitting process. Details must be included on who reviews the certificates (titles are acceptable), what their qualifications are (e.g., CFM or NFIP training), and at what point in the permitting process reviews are done.

(e) A description of **how the certificates are corrected**. The written procedures must give details on who specifically works with the certifier and how the process works. Attention must be given to how corrected certificates are relayed back to the professional who originally certified the form(s) so that future errors are minimized, and to the current property owner, because the error may affect the insurance rating of the building.

(f) A description of **how and where the certificates are maintained** by the community. Details must be included on whether certificates are stored as hard copies or digitally (or other), how soon they are filed/stored/archived after they are processed, where they are filed/stored/archived, any data backup procedures, and whether certificates for new development are stored differently than certificates on older buildings.

(g) A description of **how the certificates are made available to inquirers**. There must be an explanation of which department or office handles the request and the timeliness (and costs, if any) of fulfilling requests. If a community receives credit for having 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.

(h) If a community requires certificates for development outside of the SFHA, this should be addressed appropriately in the written procedures.

Credit Points for CCMP

CCMP = 38 points for maintaining written procedures that address the collection, review, correction, maintenance, and the public accessibility of the required floodplain-related construction certifications

Impact Adjustment for CCMP

There is no impact adjustment because communities must require, review, and maintain copies of required construction certificates on ALL new construction and substantial improvement. There is no credit under this activity if the written procedures do not cover all required credit criteria.

Documentation for CCMP Provided by the Community

(1) At each verification visit,

(a) The written procedures, including the signature/approval of the appropriate department head, describing how the community requires, reviews, corrects, maintains, and provides copies of construction certificates to inquirers as outlined in the credit criteria section for CCMP.

◆ Under **Credit Criteria for ECPO** on page 310-14, the one-sentence criterion is replaced by the following new criteria:

Credit Criteria for ECPO

(1) The community must maintain all required construction certificates described in Section 301.b for all buildings in the SFHA that have been newly constructed, substantially improved, or reconstructed due to substantial damage during the period credited. “Buildings” are defined in Section 302.a.

(2) The community must review the certificates to ensure that they are complete and that the information is correct, and make copies of the certificates readily available to anyone upon request, following the process described in the community’s construction certificate management procedures required in Section 312.a. See also Section 301.c, Construction Certificate Checklists and Section 301.d, Getting Correct Construction Certificates.

◆ Under **Credit Criteria for ECPR** on page 310-15, the one-sentence criterion is replaced with the following new criteria:

Credit Criteria for ECPR

(1) The community must maintain all required construction certificates described in Section 301.b for all buildings in the SFHA that have been newly constructed, substantially improved, or reconstructed due to substantial damage during the period credited. "Buildings" are defined in Section 302.a.

(2) The community must review the certificates to ensure that they are complete and that the information is correct, and make copies of the certificates readily available to anyone upon request, following the process described in the community's construction certificate management procedures required in Section 312.a. See also Section 301.c, Construction Certificate Checklists and Section 301.d, Getting Correct Construction Certificates.

◆ The calculation formula for Activity 310 on page 310-17 is replaced with this:

313 Credit Calculation

c310 = cCCMP + cECPO + cECPR, where

cCCMP = the verified credit for the element CCMP based on whether the written procedures met all criteria,

cECPO = ECPO x rECPO, and

cECPR = ECPR x rECPR

◆ In **Example 313-1** on page 310-17 the illustration of the scoring process is replaced with the following:

Example 313-1.

A community has had Elevation Certificates to submit at each recertification due date since its previous cycle. The community is required to produce written procedures covering all the required credit criteria. The ISO/CRS Specialist has determined the procedures have met all criteria.

cCCMP = 38

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 = 38 + 21.60 + 14.70 = 74.30, which is rounded to 74

Related Updates and Corrections

◆ Because element EC is changed to CCMP, reference to EC in the first bullet of Example 220.c-1 on page 220-3 is also changed:

Example 220.c-1.

The elements and their acronyms in Activity 310 (Elevation Certificates) are

- CCMP, credit for construction certificate management procedures;

◆ On page 220-4, in the paragraph below the bulleted list, reference to EC is eliminated. The replacement paragraph reads:

A community need not apply for all of the elements in an activity in order to receive credit points for the activity. However, in some cases, one element may be required in order to obtain any credit. For example, MI1 is a prerequisite for any Activity 320 credit. These requirements are shown in the "Credit Criteria" section of the activity or element.

Addendum to

Activity 370 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

The maximum credit points for a flood insurance coverage improvement plan (element CP) and for providing technical assistance on flood insurance (element TA) are increased. Three new creditable elements are introduced: providing credit for distributing flood insurance information (element FIB), for holding insurance-related town hall meetings (element FIM), and for a state requirement for continuing education for flood insurance agents (element SCE).

◆ In the **Summary** box on page 370-1, the credit points and elements sections are revised, and three new elements are added, to read:

Maximum credit: 220 points

372 Elements

a. **Flood insurance coverage assessment (FIA):** Up to 15 points for assessing the community's current level of coverage and identifying shortcomings.

b. **Coverage improvement plan (CP):** Up to 30 points for a plan prepared by a committee that has representation from local insurance agents.

c. **Coverage improvement plan implementation (CPI):** Up to 60 points for implementing the projects in the CP plan.

d. **Technical assistance (TA):** Up to 35 points for providing advice about flood insurance.

e. **Flood insurance brochures (FIB)**: Up to 25 points for including flood insurance information with building permits or other direct distribution.

f. **Flood insurance meeting (FIM)**: Up to 40 points for a community town hall meeting or open house to promote flood insurance.

g. **State-required continuing education (SCE)**: Up to 15 points for a state requirement for continuing education on flood insurance for insurance agents.

◆ Section 371.a, beginning on page 370-3, is replaced with new language through which the credit points for a coverage improvement plan—CP and for technical assistance—TA are increased, and the three new elements are summarized. The new Section 371.a appears below.

371.a. Activity Description

The maximum credit for this activity is 220 points.

As noted under Activity 330 (Outreach Projects), one of the most effective ways to get a message across is to have it tailored to local audiences and repeated by different sources. This activity credits a similar approach to improve flood insurance coverage in a community.

This activity provides credit for a three-step process that allows communities to assess their own needs and receive credit for improving their coverage:

Step 1. Flood insurance coverage assessment (FIA). This element provides credit for assessing the community's current level of coverage and identifying shortcomings. The maximum credit for FIA is 15 points.

Step 2. Coverage improvement plan (CP). The plan is prepared by a committee that has representation from local insurance agents. The maximum credit for CP is 30 points.

Step 3. Implementation of the coverage improvement plan (CPI), Flood insurance brochures (FIB), and Flood insurance meeting (FIM)). The plan's projects are implemented. The maximum credit for CPI is 60 points, FIM is 25 points, and FIB is 40 points.

Credit for the three steps or elements is provided incrementally. That is, a community first prepares an assessment and circulates it for review and may request credit for that step in element FIA (Section 372.a). If the community then decides to proceed with a coverage improvement plan, credit is provided for that step in element CP when the plan is submitted to the governing body (Section 372.b). Finally, implementing the projects described in the coverage improvement plan is credited in element CPI (Section 371.c).

Credit is also available under this activity for technical assistance (element TA), i.e., providing advice about flood insurance similar to the flood protection assistance service credited under Activity 360 (Flood Protection Assistance). The maximum TA credit is 35 points.

Credit is available for flood insurance projects that are credited in element CP and element CPI that involve handing a flood insurance brochure directly to people (element FIB in Section 371.d), and for flood insurance open houses or town hall meetings at which one-on-one flood insurance advice is provided (element FIM in Section 371.e). Credit for FIB and FIM are provided, as appropriate, with CPI.

Credit is also available to a community under element SCE when the state requires that insurance agents receive continuing education credit on flood insurance.

Increased Credit for Elements CP and TA

◆ Under **Coverage Improvement Plan** on page 370-6, the credit points for CP are increased by replacing the first paragraph with this sentence:

372.b. Coverage improvement plan (CP)

The maximum credit for this element is 30 points.

◆ Under **Credit Criteria for CP** when it continues onto page 370-9, a new alternative is introduced by inserting a new subsection (7):

(7) Additional credit is available when the committee in credit criterion (2) includes two or more insurance agents (and comprises at least six people) and at least one agent is an Associate in National Flood Insurance (ANFI™). The insurance agents must participate in all meetings.

◆ Under **Credit Points for CP** on page 370-9, the points are revised with this replacement:

Credit Points for CP

CP = 15 points, for the development of the coverage improvement plan, plus 15, if two local insurance agents participate on the committee and at least one is an Associate in National Flood Insurance (ANFI™)

More information on the ANFI® certificate can be found at http://www.aicpcu.org/anfi.

◆ Under **Technical Assistance** on page 370-12, the credit is increased by replacing the first paragraph with this sentence:

372.d. Technical assistance (TA)

The maximum credit for this element is 35 points.

◆ Under **372.d Technical assistance (TA)** on page 370-12, a typographical error is corrected by replacing the second paragraph with this:

This credit is separate from FIA, CP, and CPI. The community does not need to prepare a flood insurance assessment or coverage improvement plan for this credit. However, the coverage improvement plan should discuss providing this technical assistance as a way to encourage people to purchase, maintain, or improve their coverage. If the service is credited under TA, it cannot also be credited as a CPI or OP project.

◆ Under **Credit Points for TA** on page 370-13, the formula is revised to reflect the increased credit. The new formula is this:

TA = the total of the following:

20, for providing the technical assistance service,

plus

15, if the service is provided by an Associate in National Flood Insurance (ANFI™)

New Credit for Flood Insurance Brochures and Meetings and State-required Continuing Education

◆ On page 370-13, three new credit elements are added by inserting the following:

372.e. Flood insurance brochures (FIB)

The maximum credit for this element is 25 points.

FIB credit is provided when the community distributes flood insurance brochures to residents and property owners.

This credit is additional credit with CP, and CPI. If the brochure is credited under FIB, it cannot also be credited as an OP project.

Credit Criteria for FIB

(1) The community must be receiving CP and CPI credit. Element FIB provides additional credit for implementing a project described in the CP.

(2) If the distribution of brochures is done by including them with issued permits, then the brochures must be included with all building permits issued throughout the community.

(3) If the distribution takes the form of a mailing to all residents, then the brochure must be specifically related to flood insurance and must be mailed at least annually to all residents of the SFHA, at a minimum. Messages about flood insurance that are included in other documents do not qualify for this credit.

(4) Records of the brochure distribution must be kept and provided for credit documentation.

Credit Points for FIB

FIB = the total of the following: 15, for providing a flood insurance brochure along with every building permit issued throughout the community, and 10, for annually mailing a flood insurance brochure at least to all residents of the SFHA.

Documentation for FIB Provided by the Community

(1) At each verification visit,

  (a) A copy of the brochure.

  (b) A description of when and how the brochure is provided.

(2) With the annual recertification,

  (a) Same as above.

372.f. Flood insurance meeting (FIM)

The maximum credit for this element is 40 points.

Credit Criteria for FIM

(1) The community must be receiving CP and CPI credit. FIM is additional credit for plan implementation of a project described in the credited coverage plan.

(2) The townhall meeting or open house must be for the specific purpose of the promotion, education, and assistance with flood insurance. Other public information may be provided at the event.

(3) The townhall meeting or open house must be promoted to all community residents and property owners

(4) The townhall meeting or open house must be held at least once a year.

(5) Additional credit is provided if a representative of the State Insurance Commissioner's office participates each year in the townhall meeting or open house. Participation means the Insurance Commissioner attends the event or sends a representative, and he or she engages with attendees by speaking or being accessible to answer insurance questions.

Credit Points for FIM

FIM = the total of the following:

20, for an annual townhall meeting or open house about flood insurance,

plus

20, if the State Insurance Commissioner's office participated

Documentation for FIM Provided by the Community

(1) At each verification visit,

(a) A copy of publicity of the meeting or open house and a copy of a sign-in sheet from the townhall meeting or open house.

(b) Documentation of the involvement of the State Insurance Commissioner.

(2) With the annual recertification,

(a) [Same as above.]

372.g. State-required continuing education (SCE)

The maximum credit for this element is 15 points.

SCE credit is provided to all communities within a state where insurance agents are required by the state to obtain continuing education credits for flood insurance.

Credit Criteria for SCE

(1) The community must be receiving CP credit.

Credit Points for SCE

SCE = EITHER

7 points, if the state mandates an initial three continuing education credits in flood insurance and a renewal course at least every four years,

OR

15 points, if the state mandates continuing education credits in flood insurance at every license renewal for insurance agents

Documentation for SCE Provided by the Community

(1) At each verification visit,

(a) A copy of or link to the state statue or state order that requires continuing education.

◆ Under **374 Credit Calculation** on page 370-13, the formula is revised to include the new elements:

c370 = FIA + CP + CPI + TA + FIB + FIM + SCE

Addendum to

Section 403 of the *CRS Coordinator's Manual*, 2017 Edition

Correction

- Table 403-1 under Section **403 Impact Adjustment Map**, on page 400-7 shows that an impact adjustment is applied to the scoring for problem site maintenance, element PSM, under Activity 540 (Drainage System Maintenance). The element PSM is removed from the table. There is no impact adjustment for PSM.

Addendum to

Section 404 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

This section is revised slightly to explain that the CRS uses the National Climate Assessment's sea level rise projections and data, and to provide a formula for applying a multiplier to certain regulatory elements when a community takes sea level rise into account.

Updates to Sea Level Rise Projections

◆ Section **404 Sea Level Rise Projections and the CRS**, on pages 400-14 and 400-15, is replaced with this updated material:

404 Sea Level Rise Projections and the CRS

The CRS incorporates the consideration of sea level rise into a number of elements, including element HHS credit for higher study standards under Activity 410 (Flood Hazard Mapping); CEOS credit for coastal erosion open space under Activity 420 (Open Space Preservation); CAZ credit for Coastal A Zones under Activity 430 (Higher Regulatory Standards); and WMP credit for a watershed master plan under Activity 450 (Stormwater Management). Including sea level rise in WMP is required for coastal communities to meet the Class 4 prerequisite, and HSS and CAZ credit with future-conditions hydrology is a Class 1 prerequisite. CRS prerequisites are described in Section 211.

Recognizing that (1) there is uncertainty inherent in estimating future sea levels, and (2) the accuracy of the models continues to improve, the CRS has adopted a "best available data" baseline for crediting community efforts to address sea level rise.

In alignment with 13 federal agencies, the CRS defers to the Congressionally mandated National Climate Assessments produced by the U.S. Global Change Research Program to determine a baseline. These reports are accessible at https://www.globalchange.gov/what-we-do/assessment.

Because sea levels are changing at different rates in different parts of the country, global projections must be adjusted to take local conditions into consideration. To do this, the CRS uses and recommends the U.S. Army Corps of Engineers' "Sea-Level Change Curve Calculator," an online-tool available at https://coast.noaa.gov/digitalcoast/tools/curve.html. The CRS anticipates that findings from future National Climate Assessments will be

incorporated into the Sea-Level Change Curve Calculator. If not, then the CRS will provide further guidance to communities, as needed.

For information, outreach, and planning elements (including those under Activities 410, 450, and 510) and meeting CRS Class prerequisites, the community must project out at least to the year 2100 using the intermediate-high projection from the latest-available National Climate Assessment projection at the time of its planning process.

For regulatory elements (Activities 420 and 430), credit is awarded on a graduated scale based on comparing the projected sea levels the community uses for these elements to the most recent National Climate Assessment intermediate-high projection for 2100 at the time of the verification visit. This formula updates how the "CFSL" variable in 420 CEOS and 430 CAZ is calculated.

$$CFSL = 1.5 \times \frac{\text{Community projection}}{\text{Baseline projection}}$$, where

Community projection = the projected future sea level used by the community for the credited element in units of height,

and

Baseline projection = the intermediate-high projection of future sea level from the latest National Climate Assessment at the time of the community's verification visit, localized for 2100 in units of height.

The maximum value for CFSL = 1.5

Addendum to

Activity 420 of the *CRS Coordinator's Manual*, 2017 Edition

Corrections

◆ In Section **421. Activity Description** on page 420-2, a typographical error in the number of maximum points is corrected. The new line reads:

> **421.a. Activity Description**
>
> The maximum credit for Activity 420 is 2,870 points.

◆ In **Example 422.b-1** on page 420-13, a typographical error in the calculation is corrected. The new line reads:

$$rDR = \frac{aDR}{aSFHA} = \frac{55.30}{504.40} = 0.11$$

Addendum to

Activity 430 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

To simplify scoring and documentation, state-mandated standards are being eliminated as a separate creditable element of the CRS. Communities will continue to receive credit for all state standards (building codes, freeboard, stormwater, etc.) under other elements and activities in the CRS. As a result of this change, references to element SMS at other locations in the *Coordinator's Manual* are eliminated.

Discontinuation of State-mandated Standards (element SMS)

◆ In the **Summary** box on page 430-1, under Credit Elements, item (p) State-mandated regulatory standards, is deleted. Item (q) is re-labeled. The last element in the list is therefore:

> p. Regulations administration (RA): Up to 67 points for having trained staff and administrative procedures that meet specified standards.

◆ Sub-section **430.p, State-mandated standards (SMS)**, beginning on page 430-53, is deleted.

Related Updates and Corrections

◆ Because element SMS is discontinued, references to SMS on the following pages are deleted:

430-4 (**Impact Adjustment**), 430-60 **(Credit Calculation**), and 430-61 (**Example**)

◆ Sub-section **430.q, Regulations administration,** on page 430-55, is re-labeled to read:

430.p. Regulations administration

Addendum to

Activity 450 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

Some language for element SMR—stormwater management regulations—is revised to focus the credit on the area over which the community has jurisdiction, instead of on the entire watershed, which usually extends outside the community.

Focus on Community's Jurisdiction for Stormwater Management

◆ In the **Summary** box on page 450-1, the Impact Adjustment description is revised to narrow the focus to the community's jurisdiction:

> **Impact Adjustment**
> The credit points for SMR and WMP are adjusted by ratios reflecting the proportion of the community affected by the regulations or the plan. There is no impact adjustment for elements ESC or WQ.

◆ Under **452.a Stormwater Management Regulations** on page 450-4, the first sentence of the second paragraph is revised to narrow the focus to the community's jurisdiction. The new paragraph reads as follows:

> SMR credits the regulations used by the community to manage runoff from future development onsite. SMR credit is provided if new development is required to prevent or reduce the increase in runoff that results from urbanization. SMR credit is only provided for regulation of runoff from a 10-year storm or larger. Additional credit is available if the community addresses larger storms and controls the total volume of runoff from new development.

◆ Under **Credit Criteria for SMR** on page 450-5, criterion (1) is replaced with the following to focus on the community's jurisdiction:

> (1) A portion of the community must be subject to a regulation that requires the peak runoff from new development to be no greater than the runoff from the site in its pre-development condition.

◆ Under ***Credit Points for DS***, where it continues on page 450-8, a sentence is added to the first paragraph to clarify the calculation. The replacement paragraph is as follows:

> The regulations must require pre- and post-development hydrology calculations and post-development runoff must be limited to pre-development levels at the site boundary (credit criterion (5)). The standard used may be peak flow, volume, or a combination of the two. If the volume of runoff is controlled by retaining the runoff on site, infiltrating the runoff, or ensuring that the volume of runoff during all storms greater than half of the 2-year event remains constant, the credit is increased by 50%. If the modified rational method is used to design detention facilities for areas larger than one acre, the total credit for DS is reduced by 50%.

◆ The subsection **Impact Adjustment for SMR**, on page 450-11, is revised to reflect a focus on the community's jurisdiction. The entire subsection is replaced with the following:

> **Impact Adjustment for SMR**
>
> The impact adjustment for SMR is based on the area of the community that is regulated by the SMR regulations (aSMR) and the total area of the community (aW). See Sections 402 and 403 on calculating an impact adjustment.
>
> In order to determine aSMR when the regulations are not uniform throughout the community, the community must prepare an impact adjustment map (see Section 403.d) and calculate the area of the community and the area subject to each of the regulations. The base map for the impact adjustment map should be a map that shows the entire community and where each set of regulations is in effect within the community. The total area of the community is represented by aW.
>
> Many very large communities regulate stormwater only in portions of their jurisdictions. With appropriate documentation, parts of the community may be excluded from aW if, because of their ownership, they are unlikely to be developed. Such areas could be national forests, state parks, Tribal lands, or privately owned land dedicated to open space use.
>
> Communities are encouraged to cooperate with adjacent communities to manage stormwater. If a community only has regulatory jurisdiction over a portion of its watersheds, it cannot ensure that properties will be safe from increased runoff in the future, because of upstream development. However, if upstream communities also manage future development, either independently or through county-wide or watershed regulations, all communities can benefit.
>
> If the community does not regulate development throughout the entire community and wants an impact adjustment ratio greater than 0.15, it must develop an impact adjustment map to determine the areas required to calculate rSMR for each area with creditable regulations.

rSMR = $\frac{\text{aSMR}}{\text{aW}}$, where

aSMR = the area subject to stormwater management regulation,

and

aW = the area of the community

If the total calculated impact adjustment is less than 0.15, or the community does not prepare an impact adjustment map, then rSMR = 0.15.

Example 452.a-6.
A community regulates all watersheds within its corporate limits. Therefore, 1.0 is used for rSMR.

Related Updates and Corrections

◆ Under **Documentation for SMR Provided by the Community** on page 450-13, item (d) is eliminated and item (e) is re-labeled and revised to reflect the focus on the community's jurisdiction. The last two items of documentation now read:

(c) Drainage reports that demonstrate enforcement of the regulations. The ISO/CRS Specialist determines how many records are needed for a representative sample.

(d) If the community has varying regulatory standards within its jurisdiction, an impact adjustment map showing community boundaries and the calculated areas to which the different stormwater management regulations are applied.

◆ Under **452.b Watershed Master Plan** on page 450-14, the second and third paragraphs are revised to focus on the community's jurisdiction:

WMP credit is provided if the community implements measures to reduce stormwater flooding through an adopted watershed master plan. Credit is also provided for watershed master plans that

- Evaluate future conditions and long-duration storms,
- Evaluate the impact of sea level rise and climate change,
- Identify wetlands and natural areas,
- Address the protection of natural channels, and
- Provide a dedicated funding source for implementing the plan.

The objective of watershed master planning is to provide the community with a tool it can use to make decisions that will reduce the increased flooding from future conditions that include new development, redevelopment, and the impact of climate change and sea level rise, throughout a watershed or community. Although there is no doubt that stormwater management regulations reduce the future flood threat from a developing area, a watershed master plan goes much further in locating and dealing with existing problems and identifying potential future problems. An understanding of the watershed's behavior is necessary to ensure that established or enhanced stormwater management regulations requiring onsite control will prevent flood damage due to future development.

◆ Under **Credit Criteria for WMP** on page 450-15, paragraph (2) is revised to eliminate SMR credit as a prerequisite to receiving WMP credit. The replacement text reads:

(2) The community must have adopted a plan to address all flooding issues identified for at least the 10-year storm in addition to the 25-year event. Management of a 2-year storm is also recommended.

◆ Under **Impact Adjustment for WMP** on page 450-17, the subsection is replaced by the following, eliminating the requirement for a correlation between the impact adjustment map for SMR and that for WMP:

Impact Adjustment for WMP
The impact adjustment map for WMP is prepared, and the affected areas are calculated in the same manner as for SMR in Section 452.a.

$$rWMP = \frac{aWMP}{aW}, \quad \text{where}$$

aWMP = the area covered by a watershed master plan

If the total calculated impact adjustment is less than 0.15 or the community does not prepare an impact adjustment map, then rWMP = 0.15.

◆ Under **Documentation for WMP Provided by the Community** on page 450-18, item (vii) is eliminated and item (vi) is replaced with the following:

(vi) The impact adjustment map.

Addendum to

Section 501 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

In Section 501 a few changes are made to update statistics and to reflect alterations to the procedures by which communities obtain repetitive loss data.

Updates and Clarifications

◆ Under **501.a Repetitive Losses** on page 500-3, both paragraphs are updated and clarified by substituting these two paragraphs:

> Repetitive loss properties are those properties for which two or more claims of more than $1,000 have been paid by the National Flood Insurance Program (NFIP) within any 10-year period since 1978 (e.g., two claims during the periods 1978–1987, 1979–1988, etc.). Other definitions of "repetitive," such as those found in flood damage prevention ordinances, may not be used to determine the number of repetitive loss properties in a participating CRS community.
>
> Over $12 billion have been paid to repetitive loss properties, about one-fourth of all NFIP payments since 1978. Although the NFIP has resulted in over 50 years of successful floodplain management, and many of these structures are no longer insured, repetitive loss properties are still a drain on the NFIP.

◆ Under **501.b The Repetitive Loss List** on page 500-3, the third paragraph is replaced with this one, which updates the source from which data are obtained:

> Each year, communities can obtain updated data by contacting the appropriate FEMA Regional Office. This data reflects the community's previously submitted changes, new properties that have been added as a result of recent floods, and changes resulting from other communities' updates. Except during cycle verification and as specified in Section 502.b, a community is not required under the CRS to respond to each year's new list. However, the list can be a valuable planning tool and source of information about the location and extent of flooding within the community. Communities are encouraged to submit any known updates every year.

Addendum to

Section 510 of the *CRS Coordinator's Manual*, 2017 Edition

Summary

The total credit available under Section 510 is increased, and new opportunities are provided for earning credit. The options for obtaining credit for a plan that protects natural floodplain functions (element NFP) are expanded to make an assessment of threatened and endangered species creditable. New credit is made available in the form of a new element, SDP (for substantial damage management plan), for communities that devise written procedures for addressing issues related to the risk of substantial damage to buildings in their jurisdictions.

Credit Points and Opportunities Increase

◆ In the **Summary** box on page 510-1, the credit points are increased to read:

Maximum credit: 762 points

◆ In the **Summary** box on page 510-1, paragraph c. is revised to embrace a floodplain species plan and a new paragraph d. is added to incorporate the new element SDP. The replacement paragraphs are as follows:

c. **Natural floodplain functions plan (NFP)**: 100 points for adopting plans that protect one or more natural functions within the community's Special Flood Hazard Area. Within NFP is credit for a floodplain species assessment and for a floodplain species plan.

d. **Substantial damage management plan (SDP)**: Up to 140 points for a community plan to prepare for substantial damage estimates and determinations after a flood.

◆ In Section **512.a. Floodplain management planning** on page 510-4, the credit points are increased to read:

512.a. Floodplain management planning (FMP)

The maximum credit for this element is 762 points.

Species Assessments Qualify for Natural Functions Plan

The options for earning credit for a natural functions plan are being expanded to specifically provide that a species assessment can qualify as protecting natural floodplain functions. This is done by adding two new sub-elements, FSA and FSP (FSA for floodplain species assessment and FSP for floodplain species plan).

◆ Under **Section 512.c, Natural Floodplain Functions Plan** on page 510-35, a fifth bullet is added and the note that follows it is updated:

- A floodplain species assessment that identifies the threatened and endangered species that have range or critical habitat within the community and a floodplain species plan that recommends actions to support conservation or recovery of those species.

NOTE: *Element NFOS2, (section 2 of the natural floodplain functions open space credit under Activity 420 (Open Space Preservation)), provides bonus credit for open space parcels that are designated in a plan to protect natural functions. A plan that receives NFP or FSP credit qualifies parcels for this extra open space credit.*

◆ Under **Credit Criteria for NFP**, where it continues onto page 510-36, descriptions of the species assessment criteria are inserted. The three subsections that follow, **Credit Points for NFP** as well as **Impact Adjustment for NFP** and **Documentation for NFP Provided by the Community** are also updated to include the new sub-elements. The substitute language is as follows:

(4) For FSA: This sub-element credits a floodplain species assessment that identifies all threatened and endangered species that have been listed or proposed for listing by the U.S. Fish & Wildlife Service or by the National Marine Fisheries Service and that have range or critical habitat anywhere within the community, relates their locations to the floodplain, and reviews current and feasible conservation and recovery actions that could receive CRS credit. The draft document must be circulated to federal, state, and private organizations that have expertise in protecting threatened and endangered species. A floodplain species assessment must meet credit criteria (1)(a), (c), and (e).

(5) For FSP: This sub-element credits taking another step after a floodplain species assessment: a plan that revises the floodplain species assessment and adds action items based on the comments and input from the reviewers to make a plan of action. Credit for FSA is a prerequisite for FSP credit.

A plan for FSP credit must meet all of credit criterion (1) with the following exception: a plan for FSP credit (criterion (1)(d)) is not required to include an inventory of all threatened and endangered species but may focus instead on selected species, based on the comments and recommendations of the reviewers of the FSA-credited assessment.

The community must also prepare and submit an annual evaluation report that meets the credit criteria of a floodplain management plan in Section 512.a, Step 10.

Additional guidance for preparing assessments and plans for FSA and FSP credit is listed in Section 514.e.

Credit Points for NFP

NFP = the total of the following, up to the maximum of 100 points:

NFP1 = 100 points, for a plan, or combination of plans, that meets credit criteria (1) and (2) and covers the entire SFHA within a community

NFP2 = 15 x the number of plans that meet credit criterion (1), up to four plans (60 points maximum)

FSA = 15 points for preparing and circulating a floodplain species assessment

FSP = 85 points for preparing and adopting a floodplain species plan

Impact Adjustment for NFP

There is no impact adjustment for this element. The NFP1 plan must cover the entire community or all of the community's SFHAs. Each NFP2 plan receives 15 points regardless of the extent of the area covered.

The assessment for FSA credit must start with an inventory of all threatened and endangered species that have range or critical habitat anywhere in the community. For the action plan that qualifies for FSP credit, however, that list may be trimmed down to focus on selected species or areas. Thus, no impact adjustment is needed for either of these sub-elements.

Documentation for NFP Provided by the Community

(1) At each verification visit,

(a) A copy of each plan, assessment, or update that the community wants credited.

(b) A copy of the resolution or other formal adoption action for each plan credited under NFP or FSP.

(2) With the annual recertification,

(a) A copy of the FSP annual evaluation report (Section 512.c, credit criterion (5)). The recertification submittal must also document how the evaluation report and update were made available to the media and the public, if this information is not included in the evaluation report.

New Credit for a Substantial Damage Management Plan

◆ The new creditable element for a plan for managing substantial damage is inserted at the end of Section 512.c on page 510-36. The insert reads:

512.d. Substantial Damage Management Plan (SDP)

The maximum credit for this element is 140 points.

A management plan for substantial damage within the community is a detailed community plan, developed before a flood or other hazardous event, that describes the community's process for evaluating damage to buildings and addressing those that have been substantially damaged, as required by the NFIP. A management plan for substantial damage to properties outlines community responsibilities, identifies available data about buildings in the SFHA, describes the community's approach to damage estimation, and lists the steps the community will take if buildings are determined to be substantially damaged. CRS credit for a such a plan is provided in element SDP.

NOTE: *The CRS encourages communities to frame their management of substantial damage issues within the context of all potential sources of damage to structures (tornado, earthquake, hurricane, wildfire, etc.). Further, the definition of "substantial damage" used by the CRS specifies" damage of any origin" (see definitions box). Some of the language in this section is flood-specific, but the discussion is intended to apply to any hazardous event that could result in losses and/or damage.*

As with a floodplain management plan (element FPM), CRS credit is dependent upon the community's following an appropriate process. Both the steps for developing a substantial damage management plan and the content of the plan are important for CRS credit.

A committee is not required to develop a management plan for substantial damage; however, if it does so, the plan should be developed with participation of the community CRS Coordinator, the community floodplain administrator, and the building department.

A community may receive CRS credit for element FMP, a repetitive loss area analysis (element RLAA), and element SDP. A community need not have any repetitive loss properties on FEMA's list to receive SDP credit.

Addressing substantial damage after a flood or other hazardous event that can damage buildings is a requirement of a community's participation in the NFIP. This activity credits plans and actions that a community takes before a flood or other hazard-caused event to educate officials and departments, to obtain and utilize as much building data as is available for making estimates, and to ensure NFIP compliance. Although the NFIP does require that a community address substantial damage caused by any hazard, the substantial damage management plan and process for the CRS focuses on floods.

Three levels of SDP credit are available. The basic credit is 40 points for the development of a substantial damage management plan. An additional 50 points are available if FEMA's

Substantial Damage Estimator is pre-populated for all properties with the potential to be substantially damaged. Another 50 points are provided for communities that consider pre-flood mitigation alternatives.

Additional guidance for the development of a substantial damage management plan is available from the ISO/CRS Specialist.

Credit Criteria for SDP

(1) The substantial damage management plan must be developed using a definition of substantial damage that meets or exceeds the NFIP definition of substantial damage (see box at right).

(2) If a community is receiving credit for cumulative substantial improvement (element CSI) under Activity 430 (Higher Regulatory Standards), then the substantial damage management plan must reference the community's cumulative substantial damage definition credited under CSI and describe the community's process for tracking cumulative substantial improvements. If a community is receiving credit for having a lower threshold for substantial improvement (element LSI), then the definition of lower substantial improvement must be referenced.

Some Definitions

Substantial damage—As defined in 44 C*FR* 59.1 of the NFIP regulations, substantial damage is

> Damage of any origin sustained by a building whereby the cost of restoring the building to its before-damage condition would equal or exceed 50% of the market value of the building before the damage occurred.

Substantial improvement is

> Any reconstruction, rehabilitation, addition, or other improvement to a building, the cost of which equals or exceeds 50% of the market value of the building before the start of construction of the improvement.

NOTE: *Some ordinances may include the repair of flood damage as an "improvement" (reconstruction) to the building.*

(3) The plan must be the outcome of the following six-step planning process. All steps are required, but 2–5 do not have to be done in the order listed.

Step 1. Assess the community's vulnerability to substantial damage. This step requires the review of all buildings in the SFHA to determine those that are likely to be substantially damaged. The plan document for this step must include

(a) The definitions of substantial damage and substantial improvement and the delineation of a lower damage threshold, as adopted in the community's floodplain management regulations, community-adopted building code, and/or state building code. This must include any provisions for cumulative substantial damage, substantial improvement, or a lower threshold, if adopted.

(b) A description of substantial damage and substantial improvement determinations previously made by the community.

(c) A list and map of SFHA properties with buildings that have the potential to be substantially damaged. This could be all the buildings in the SFHA or a subset of SFHA buildings. At a minimum, the list should include

- Properties with buildings that are (or are suspected to be) below the base flood elevation.

- Properties within a repetitive loss area (identified per Section 502.c).
- Properties for which substantial damage estimates have previously been provided to the community after a federally declared disaster.
- Any buildings that could meet the cumulative substantial improvement definition, if applicable.

(d) A description of other building or flood factors that the community considered during the assessment. This could be an adopted procedure for tracking cumulative damage and/or improvements, or a community-determined flood zone not depicted on the FIRM.

(e) A general description of buildings on the potential substantial damage list, such as the proportion of residential and non-residential. Other information should be included, such as type of structure (single family, manufactured home, multi-family, etc.).

The list of properties that could be substantially damaged can be included in a document that is separate from the management plan (e.g., a spreadsheet or database developed for Step 4).

Steps to Develop a Substantial Damage Management Plan

1. Assess vulnerability
2. Assemble a team
3. Identify post-event actions
4. Build a database
5. Identify pre-event actions
6. Plan implementation & updates

Steps 2 through 5 may be done in any order.

An annual evaluation report is required.

Step 2. Identify the community's team for the management of substantial damage to properties. A committee is not required for the development of the management plan, but a team would be helpful for all the steps.

Although the community floodplain administrator is responsible for ensuring that flood damage estimates are obtained after a flood and that substantial damage determinations are made when the definition of substantial damage is met, other personnel or departments may need to be involved with post-event efforts. In addition to the community floodplain administrator, the community should build a team that

(a) Includes the department or office responsible for issuing permits for post-event repairs, and the department or office that tracks CSI, if applicable;

(b) Includes sufficient additional personnel for the substantial damage work effort after a major flood or other event. Note that the post-event work effort may be reduced depending on the pre-event work (see Step 4); and

(c) Is able to consider other personnel resources, such as the State NFIP Coordinator and/or FEMA post-disaster resources.

Step 3. Identify the post-event efforts related to substantial damage. For this step, the community should contact the State NFIP Coordinator to obtain any

substantial damage guides or templates that have been developed by the state for communities. The community plan must include

(a) Post-event coordination and communication efforts. For example,

- Meetings of the substantial damage management team and training for all team members,
- Assigned areas of responsibility for team members (for any or all steps),
- Determinations of whether interim permit procedures are needed,
- Communication with elected official, and
- Communication with property owners.
- (b) Damage estimate and substantial damage determination procedures, such as
- The conduct of damage inspections of floodplain buildings,
- Making damage estimates for each damaged floodplain building,
- Establishing a market value for each damaged floodplain building,
- Making substantial damage determinations,
- Making substantial improvement determinations,
- Establishing an appeal process for substantial damage/substantial improvement determinations, and
- Issuing damage determination letters.

(c) Post-substantial damage determination procedures for compliance, such as

- Enforcing permitting for repairs and mitigation compliance; and
- Providing periodic updates to the State NFIP Coordinator and the FEMA Regional Office (or disaster office, if applicable).

Step 4. Build a property database for substantial damage estimates. In Step 1, a list of properties that could be substantially damaged was prepared. This step requires developing a database for that list that includes the building, building value, and flood information.

(a) A basic substantial damage property database is required for SDP credit. Data regarding the building such as the property identification number, building type (residential/non-residential), foundation type, and the number of stories should be included. The fair market value of the building can be obtained from assessor's data. If available, lowest floor and/or first floor elevation should be added.

Communities with CSI credit may reference other databases or documentation for tracking cumulative substantial improvements, but all buildings identified in Step 1 must be included in a database.

Communities may not include in the substantial damage database any NFIP repetitive loss or claims data that are protected by the federal Privacy Act. The NFIP information provided to the community (through an Information Sharing and Access Agreement, known as an ISAA) is protected by the Privacy Act. The database can note which properties are included in a "repetitive loss area" (see Section 503).

Unknown data and desired data should be discussed in the plan. It is understood that the database may be expanded or otherwise improved for the annual evaluation report or at the time of a required update. Other building or property information, such as market value information, should be included as available.

(b) [Optional and for SDP2 credit] Pre-populate the FEMA Substantial Damage Estimator database. For guidance on using and pre-populating the Substantial Damage Estimator, see Section 514, For More Information, on page 510-37.

Step 5. Identify actions the community can take to address potential substantial damage.

(a) The substantial damage management plan must include at least one action the community will take to educate the community about substantial damage/substantial improvement and the requirements of the NFIP or the CRS. Some examples include

- Annual substantial damage training for the substantial damage management team members;
- Substantial damage and substantial improvement public information (newsletters, social media, information at kiosks);
- Handouts for property owners; and
- Communication with elected officials about community responsibilities regarding substantial damage, and if applicable about CSI. (This may be sharing the annual evaluation report with the elected officials.)

(b) [Optional and for SDP3 credit] Consider mitigation alternatives for areas of the community in which buildings have the potential to be substantially damaged. The best options for properties with a high risk of flooding are mitigation actions (buyout, elevation, floodproofing) taken before the next flood. The second-best approach is taking mitigation steps after the next flood.

SDP3 credit is provided when each appropriate mitigation alternative is identified for each neighborhood, area, or other segment of the list of properties identified in Step 1. This is beyond the level of detail included in multi-hazard mitigation plans. The plan must review alternate approaches and determine whether any property protection measures are feasible. The review

must examine appropriate measures for the types of buildings affected, including

- Relocation,
- Acquisition,
- Building elevation, and
- Retrofitting.

A review that looks only at drainage or structural flood control project alternatives is not sufficient. For each neighborhood, area, or subset, the review must also consider potential local, state, and federal funding sources.

Step 6. Determine implementation steps and procedures for updating the plan. The plan must

(a) Provide for an annual evaluation report. The plan document must describe who will prepare the annual evaluation and when (see credit criterion 4).

(b) Be shared with the elected officials, along with the evaluation reports. The implementation steps must describe the options for communicating the substantial damage management plan with the elected officials (see credit criterion 5).

(c) Propose an update process for the substantial damage management plan and/or schedule. Consideration should be given to updates to the plan any time it is used after a flood or other hazardous event.

(d) Note, in the implementation section, any steps that must be taken to adhere to the Privacy Act or any state or community privacy requirements.

(4) The community must prepare an annual evaluation report for its substantial damage management plan. The report must review the pre-event action items, describe what was implemented (or not implemented), and recommend changes to the action items as appropriate. It should highlight any flood damage that occurred since the development of the plan or since the previous annual evaluation. Updated substantial damage management plans can meet the annual evaluation requirement.

The annual evaluation report or an updated substantial damage management plan should note any changes to the community's regulations that affect substantial damage or substantial improvement (e.g., the definition of cumulative substantial damage or substantial improvement).

(5) The substantial damage management plan and the annual evaluation report must be submitted to the community's governing body. If private or sensitive information (such as names or street addresses) is included in the report, then a summary report(s) must be prepared for the governing body, committees, media, and the public.

(6) The community must provide its latest update or revision to its substantial damage management plan in time for each CRS cycle verification visit. The update or revision must include a review of each of the six planning steps.

(7) The substantial damage management plan must be made available to the State NFIP Coordinator and the FEMA Regional Office, if requested.

Credit Points for SDP

SDP = SDP1 + SDP2 + SDP3, up to the maximum of 140

SDP1 = 40 points, for a substantial damage management plan

SDP2, = 50 points, if FEMA's Substantial Damage Estimator is pre-populated

SDP3 = 50 points, if pre-event mitigation alternatives are considered

Impact Adjustment for SDP

There is no impact adjustment for SDP credit.

Documentation for SDP Provided by the Community

(1) At each verification visit,

(a) A copy of the substantial damage management plan (see Section 512.d) or, if the community is already receiving credit for a plan, a copy of the latest update or revision to the plan (see Step 6).

(b) A description of when and how the substantial damage management plan was shared with local officials.

(2) With the annual recertification,

(a) A copy of the annual evaluation report (or updated substantial damage management plan) and the date that it was shared with the elected officials.

NOTE: *Failure to submit the evaluation report for the substantial damage management plan with the annual recertification or the update at the next cycle verification visit will result in loss of the credit (i.e., SDP = 0).*

Related Updates and Clarifications

◆ Under **Credit Points for FMP Step 5** on page 510-16, subsection (b) is clarified by replacing it with this:

(b) 25 points, if the plan includes a description of the impacts that the hazards identified in the hazard assessment (Step 4) have on the features listed below:

(1) 10 points, for life safety and public health (e.g., the need for warning and evacuating residents and visitors and considering health hazards to individuals from flood waters and mold).

(2) 5 points, for critical facilities and infrastructure.

(3) 5 points, for the community's economy and major employers.

(4) 5 points, for the number and types of affected buildings (e.g., residential, commercial, industrial, with or without basements, etc.). For this credit, the assessment must include an inventory of all buildings owned by the community that are located in flood-prone areas and that identifies which buildings are insured for flood damage.

◆ Under **For More Information** on page 510-37, new sources for information about floodplain species and about substantial damage are inserted as follows:

e. Guidance, website links, and examples of floodplain species assessments can be obtained from a community's ISO/CRS Specialist.

f. *Substantial Improvement/Substantial Damage Desk Reference* (FEMA P-758) (2010) offers guidance on substantial damage provisions and management at the federal, state, and local levels, and discusses the variations among many building codes.

g. Explanations for working with the Substantial Damage Estimator can be found in *Substantial Damage Estimator User Manual and Field Workbook* (FEMA P-784) (2017).

h. Guidance on populating the Substantial Damage Estimator and using community data can be found in FEMA's *Substantial Damage Estimator Best Practices* (2017).

i. FEMA's Key Topics Bulletin, *Mitigation Planning and the Community Rating System* (2018), aligns the CRS planning process with the required hazard mitigation planning.

j. FEMA's Emergency Management Institute (EMI) offers independent and online training on substantial damage and substantial improvement. The course numbers and names are listed below. The State NFIP Coordinator may also offer training for communities.

Preparing for Post-Disaster Responsibilities (G0194.4)

Advanced Floodplain Management Concepts III (G0284)

Substantial Improvement/Substantial Damage (G0284.5)

Using the Substantial Damage Estimator 2.0 Tool (IS0284)

Substantial Damage Estimation for Floodplain Administrators (IS0285).

Addendum to
Activity 610 (Flood Warning and Response) of the *CRS Coordinator's Manual*, 2017 Edition

Summary

The changes to Activity 610 are clarifications to the language in the *Coordinator's Manual*, inserts to account for updated technology, and additions to incorporate a community's management of substantial damage assessments and post-disaster teams.

Updates and Clarifications

◆ Under **611 Background** on page 610-2, the second paragraph is clarified with this replacement:

> The National Weather Service (NWS) issues specific flood warnings for many locations along major rivers and coastlines. A community's ability to receive notifications 24 hours a day and 365 days a year is crucial to using such warnings. Many communities have their own flood threat recognition systems to enable advance identification of floods on smaller rivers and streams. The full benefit of early flood warning is only realized if the community disseminates the warning to the general public and to critical facilities and has a flood warning and response plan that includes appropriate tasks, such as directing evacuation, sandbagging, moving building contents above flood levels, performing damage assessments to provide data for community databases on cumulative damage and substantial improvements, and procedures for post-flood permitting and recovery.

◆ Under **611.b Activity Credit Criteria**, where the section continues on page 610-5, subsections (a) and (b) are replaced with the following:

(a) Describe the methods and warning devices used to disseminate emergency warnings to the general public that are credited under EWD. Studies have shown that flood damage can be reduced by 30% if people have 24 hours of warning during which to prepare for an event;

(b) Include specific flood response actions that are taken at the different flood levels or flash-flood-impact areas that are credited under FRO. This correlates the identified flood levels with emergency evacuation/rescue planning tasks, such as 1-foot depth—evacuate foot traffic; 2- or 3-feet depth—high-water vehicles only; 4- to 6-foot depth—boat evacuation; over 9 feet—helicopter evacuations on call; and

◆ Under **611.b Activity Credit Criteria**, where the section continues on page 610-6, subsections (d)(v) and (vi) are replaced with the language below, and a new subsection (vii) is added:

(v) The community must provide verification that the community participated in a drill/exercise or an actual activation of the plan within the past 12 months. This can be in the form of an after-action report/improvement plan or a similar "lessons-learned" report.

(vi) If EWD credit was provided for a warning system or systems, then the community must provide verification that the community tested those systems within the past 12 months. For EWD9 credit, the community must verify the facilities within its jurisdiction that meet this criterion.

(vii) If credit was provided for FRO4 in the parent plan, the community must provide verification of the special-needs population within its jurisdiction.

◆ Under **611.b Activity Credit Criteria**, where the section continues on page 610-7, the fourth sentence in subsection (6) is clarified. Subsection (6) is replaced with this:

(6) There must be at least one exercise and evaluation of the flood warning and response plan each year that is compliant with the National Incident Management System (NIMS). This process is described in the Homeland Security Exercise Evaluation Program. The exercise can be for a flood, levee failure, dam failure, or hurricane. This criterion can be met if the plan is implemented in response to an actual flood-related event or threat of a levee failure. In either case, there must be an evaluation of the performance of the plan and recommendations for needed change, as is usually documented in an after-action report/ improvement plan. This criterion is part of the national emergency preparedness cycle.

◆ Under **Documentation for FTR Provided by the Community** on page 610-10, subsections (1)(iv) and (v) are replaced with the following:

(iv) A description of the flood threat recognition system. The description must identify the rivers, streams, and coastal floodplains for which flood stage forecasts are prepared and each forecast point. If the community has its own gage system, such as an ALERT system, the description must include the locations of the stream and precipitation gages. For communities whose states have a web-based flood alert system or portal, the URL to the website and other information needed to gain access.

(v) If the community has its own gage system, such as an ALERT system, a copy of the maintenance procedures for the system and records showing that the system is being maintained. This also applies to any other interoperable flood sensors that the community owns and operates, such as those purchased through the Department of Homeland Security's Flood Apex Program.

◆ Under **612.c Flood Response Operations** on page 610-15, the fourth paragraph, beginning "Flood warning and response . . ." is updated with this paragraph:

> Flood warning and response planning must identify every opportunity to prevent loss of life and property damage during a flood. Using information from the flood inundation maps, the planning team should think about how flooding would occur—what areas will be affected and when. The team may refer to a database of repetitive loss structures or a tracking system for cumulative substantial improvement and/or substantial damage. This may include pre-populating FEMA's Substantial Damage Estimator with local data. Through this brainstorming, the team can decide what actions, resources, and training will be needed. The office of the State NFIP Coordinator may be included in training and recovery procedures.

◆ Under **Credit Criteria for FRO** on page 610-16, subsection (3) is replaced with the following, to incorporate a community's focus on substantial damage assessment:

(3) Bonus credit is provided under FRO5 if there is a list of the personnel, equipment, facilities, supplies, and other resources needed to complete each task. For full credit the list must identify what is available within the community and what is needed from private suppliers or other jurisdictions.

◆ Under **Credit Points for FRO** on page 610-17, the formula for FRO2 is revised to distinguish between estimates of needed personnel and time required and to account for a disaster response team. The formulae for FRO3 and FRO4 are unchanged. The new formula for FRO2 reads:

Credit Points for FRO

FRO2 = the sum of the following:

(a) 5 points, for identified flood response tasks and responsible staff,

(b) 5 points, for an estimate of the number of personnel needed for each task,

(c) 5 points, for an estimate of the time required for each response task,

(d) 10 points, for damage assessment tasks that are tied into a cumulative damage/improvement tracking system,

(e) 5 points, for identification of a floodplain management disaster response team,

(f) 5 points, for a list of equipment and supplies expected to be needed and how they will be obtained

◆ Under **Credit Points for FRO** where it continues page 610-18, the formulae for FRO5 and FRO6 are revised for clarification:

FRO5 = the sum of the following, up to 15 points:

(a) 5 points, if the plan includes instructions for an evacuation plan that addresses critical facilities, homes, and businesses, with instructions for when and how returning evacuees can reoccupy in compliance with the community's SFHA permitting policies;

(b) 5 points, if the plan includes instructions for substantial damage assessment procedures within the SFHA that are made before issuance of a permit during the recovery phase; and

(c) 5 points, if the plan includes instructions for implementing the community hazard mitigation plan's identified flood loss mitigation measures on community and private properties.

FRO6 = Up to 20 points, if the plan identifies actions that support property protection measures that are carried out in both the response and recovery phases.

◆ In **Example 612.c-1** on page 610-18, the paragraph for FRO5 is revised to account for substantial damage assessments:

FRO5 Instructions for the return of evacuees to affected areas are also in the plan, including credential instructions and area security assignments. Substantial damage assessments are prescribed before repair permits can be issued. [10 points, partial credit under FRO5]