

Appendix D

A HISTORY OF CHANGES TO CRS CREDITS

This appendix notes the major changes in the scoring for CRS activities that have been made since the CRS was initiated in 1990. The changes were introduced in the year noted. Other changes, such as added examples, minor revisions to documentation requirements, and alterations to format, are not discussed.

1994: Each section and activity in the 200 through 700 series was summarized in an outline on the first page of the section.

2013: Pursuant to the *CRS Strategic Plan* and after the first full weighting forum since the program began, the credit points for all the activities were re-weighted, resulting in a redistribution of credit points while maintaining the same overall level of premium discount.

2017: The credit criteria, credit points, scoring, and documentation information for special-flood related hazards were incorporated into appropriate sections of the *CRS Coordinator's Manual*. The Special Hazards Supplements were discontinued.

Application Procedures

In each year, one or more activities had additional documentation required with the initial application instead of being reviewed at the verification visit. This approach has helped to prevent communities from losing credit points after the verification visit.

1992: The application worksheets were revised to reduce the amount of work needed to complete them.

1993 and 1994: The procedures for submitting modifications were revised. A modification of one element in an activity required an application worksheet and documentation for all the elements of the activity. A modification that resulted in a two-class improvement required a reverification that included the application worksheets and documentation for all activities.

1994: A new Section 234 was added to explain the criteria for reverifying a community's credit points every few years.

1994: A new *Short Form Application* was introduced as a separate publication to provide a simpler way to submit an initial application.

1996: The *Short Form Application* was expanded to include all activities and elements and was named the *CRS Application*. New applicants for CRS credit were required to use the *CRS Application*.

1999: A new requirement was added for a community to attain a Class 7 or better classification: a Building Code Effectiveness Grading Schedule (BCEGS) of Class 6 or better. To attain a Class 4 or better, a community must demonstrate that it has taken appropriate steps to eliminate or minimize future flood losses.

2013: The formal application process was replaced with a letter of intent plus documentation showing that the community can obtain at least 500 points for its floodplain management activities. The full processing of the community's program is set to take place at the verification visit conducted in response to the letter of intent.

2017: The term "uniform minimum credit" was changed to "state-based credit" to emphasize the importance of state confirmation of the implementation of CRS-creditable activities by the state or regional agency.

Activity 240 (Floodplain Management Plan)

1992: Credits for planned activities were changed to modify the activities rather than the elements. The "p" credit for an element was changed to a "p" credit for that activity's total credit.

Calculating the credits for the plan was moved from the activity's application worksheet to AW-720. As a result of this scoring change, the total credit points for a given activity either remained the same or increased.

1994: The planning process was revised to be more explicit and to include reviewing activities that protect natural and beneficial functions. Credit for five activities could be increased by 15% if natural and beneficial functions are protected.

1996: Credit for the floodplain management plan was moved to Section 510 and revised to provide credit for the planning process rather than the content of the plan.

2013: A new Section 240 was initiated to describe the CRS Community Self Assessment.

300 Series (Public Information)

Activity 310 (Elevation Certificate)

1992: To simplify the formulae, ECCF—Elevation certificates in computer format, was changed from being a multiplier worth up to 12.7 points to a separate variable worth up to 15 points. The total possible points increased from 140 to 142. However, few if any communities had enough points for the multiplier to be worth more than 10 points. Therefore, for most communities, the total credit for this activity either stayed the same or increased slightly.

1994: A default impact adjustment was added for communities holding elevation certificates for at least 25% of their post- or pre-FIRM buildings or at least 25% in computer format.

2002: A new element, ECWS—Elevation certificate data on a website, was added.

2013: Three elements were moved to other activities. ECCF—Elevation certificates in a computer format, became a new, similar credit termed AMD—Additional Map Data, under Activity 440 (Flood Data Maintenance). ECWS—Elevation certificates on the community’s website, was moved to Activity 350 (Flood Protection Information), with the rest of the CRS website credits. ORS—Off-site record storage was moved to a new element, Regulation administration (RA), under Activity 430 (Higher Regulatory Standards).

Activity 320 (Map Information Service)

1994: More guidance was provided about telling inquirers of the flood insurance purchase requirement.

1999: More explicit guidance was given on providing information about areas designated as part of the Coastal Barrier Resources System.

2006: Partial credit was allowed for providing the service through a website or remote computer terminal.

2013: Having all the credit dependent on reading the Flood Insurance Rate Map for inquirers was replaced with a menu of map information from which a community can choose topics to provide for credit. Reading the Flood Insurance Rate Map (FIRM) is a prerequisite for the other credits.

Activity 330 (Outreach Projects)

1994: Three new topics were added, bringing the total possible points up from 175 to 250: a map of the local flood hazard, the substantial improvement requirements, and natural and beneficial functions. A fourth element, FML—Floodplain mailing list, was added.

1996: FML was dropped.

2006: A new element was added to credit outreach projects that encourage the purchase or retention of a flood insurance policy.

1999: A new element was added to allow a community to receive more points by implementing outreach projects pursuant to an adopted public information program strategy (OPS).

2013: The emphasis on nation-wide, standard project formats was replaced with an emphasis on locally selected messages and more credit for more repetition of the messages. The public information program strategy (OPS) was replaced with a Program for Public

Information (PPI) and two new credits were introduced: Flood response preparations—FRP, and credit for projects delivered by stakeholders—STK.

Activity 340 (Hazard Disclosure)

1992: To simplify the formulae, REB—Real estate agents’ brochure, and DOH—Disclosure of other hazards, were changed from being multipliers worth 9.2 points to separate variables worth 10 points. The total credit for this activity either stayed the same or increased slightly.

1999: An alternative approach was initiated for crediting DFH—Disclosure of the flood hazard by real estate agents.

Activity 350 (Flood Protection Information)

1994: Credit was increased for having documents related to protecting natural and beneficial functions and the Floodplain Management Resource Center. The requirement for publicity and related documentation was dropped, but documents were still required to be kept in the card catalog or equivalent retrieval system.

2002: New credit was provided for reference material available on or through a community’s website. The points were increased and the title of the activity was changed from “Flood Protection Library” to “Flood Protection Information.”

2013: The relative credit for the website was increased and the prerequisites were revised.

Activity 360 (Flood Protection Assistance)

1994: The credit criteria were substantially revised, although the total possible points remained the same.

1996: Points were added if the person providing the assistance graduated from the Emergency Management Institute’s retrofitting course.

2013: The activity was reorganized to focus on providing one-on-one property protection advice to an inquirer (PPA), with more credit for providing it on the inquirer’s property during a site visit (PPV). New credits were introduced for providing advice on financial assistance programs (FAA) and for attending training on those programs (TNG).

Activity 370 (Flood Insurance Promotion)

2013: This new activity was added to credits communities that take an active role in encouraging residents and businesses to purchase and maintain adequate flood insurance coverage. A three-step planning and implementation process is credited, along with credit for providing technical assistance.

400 Series (Mapping and Regulations)

1994: More references to the special flood-related hazards were added. Coastal erosion was added as a creditable special hazard. More information was provided in *CRS Commentary Supplement for Special Hazards Credit*, which can be ordered as explained in Appendix C.

2017: The credit criteria, credit points, scoring, and documentation information for special-flood related hazards were incorporated into appropriate sections of the *CRS Coordinator's Manual*. The Special Hazards Supplements were discontinued.

Activity 410 (Flood Hazard Mapping)

1992: The approach to identifying and measuring the elements in this activity was significantly revised and simplified. The scoring was also changed, so a direct conversion was not possible. The three elements NDS—New detailed study, SSA—Site-specific analysis, and HED—Higher standards for existing data, were replaced by one, AFD—Additional flood data.

The relative scores for the NDS and SSA approaches were incorporated into a new variable, RFE—Regulatory flood elevation. If a community received credit for NDS (a detailed study on a relatively long reach), then $RFE = 50$. An SSA approach (a study of only the development site before a permit is issued) resulted in $RFE = 25$.

Credit for additional data in areas studied in detail on the FIRM was formerly credited by HED. If the Federal Emergency Management Agency (FEMA) provided a base flood elevation, then $RFE = 0$, similar to the credit for HED. However, a new credit was added for a new study of an area that was already studied in detail on the FIRM. While previously there was no credit for such a restudy, RFE became $= 20$.

To simplify the formulae, the old variables of AD—Additional delineations, HHS—Higher hydrology standard, and SRAD—State review of additional data, were changed from multipliers. They were combined into one element, ADS—Additional data standards.

FWS—More restrictive floodway standard, was still worth approximately the same, but the basis of its credit points was shifted from a formula to discrete value ranges. A similar simplification was done to calculate the local cost sharing. The former variable, LCS—Local cost sharing, was replaced by NFS—Non-FEMA share. Applicants no longer needed to research the original study costs because credit was based simply on whether there was any non-FEMA cost sharing.

Three options were introduced for the impact adjustment. The inclusion of a default value was expected to make using the impact adjustment easier.

The denominator in the impact adjustment has been changed from aRF—area of the regulatory floodplain, to aSFHA—area of the Special Flood Hazard Area. The maximum

value for the impact adjustment changed from 1.0 to 2.0. These changes resulted in higher scores, especially where the activity covered large areas not mapped as SFHA on the FIRM.

The maximum points for Activity 410 increased from 247 to 360. The maximum was attainable only if the impact adjustment was 2.0. If a more common impact adjustment of 1.0 was used, the maximum would decrease from 247 to 180.

1996: The *Coordinator's Manual* clarified the credit for providing additional flood data in areas affected by one of the special hazards that covered in the *CRS Commentary Supplement for Special Hazards Credit*.

1999: Credit points for most of the elements were increased and the credit criteria revised.

2002: A new element, CTP, was added to credit studies and mapping done under a Cooperating Technical Partner agreement with FEMA.

2006: The activity was substantially revised to better support FEMA's Map Modernization effort and to increase the credit points for new maps and those done to higher standards.

2013: The credit for state review of new studies was made a separate element—SR.

2017: Credit criteria, points, and discussion for mapping coastal erosion hazard areas and mapping tsunami areas were inserted from the *Coastal Erosion Hazards* supplement and the *Tsunami Hazards* supplement, and both supplements were discontinued.

Credit for Cooperating Technical Partner (CTP) was discontinued. The element's 180 points were distributed among other elements of Activity 410, to raise the available credit for HSS, Using higher flood study standards; FWS, More restrictive floodway standard; and MAPSH, Mapping special flood-hazard areas.

Activity 420 (Open Space Preservation)

1992: To simplify the formulae, DR—Deed restrictions, was changed from being a multiplier worth up to 75 points to a separate variable worth 75 points. There was no change in the total credit for DR when combined with the impact adjustment.

The impact adjustment then had three options, including a default value for those who do not want to calculate the affected areas.

1994: A new element was added: NB—Natural and beneficial functions, worth up to 100 points for open space preserved or restored to its natural state.

1999: The credit points for Preserving open space—OS, were significantly increased.

2013: NB—Natural and beneficial functions, was replaced with NFOS—Natural functions open space, with more points and more options for credit. Two elements, OSI—Open space incentives, and LZ—Low-density zoning, were transferred from Section 430LD (Land

Development Criteria), which was eliminated. A new credit was introduced for keeping shorelines in their natural state—NSP.

2017: Credit criteria, points, and discussion for CEOS—coastal erosion open space were inserted from the *Coastal Erosion Hazards* supplement and the supplement was discontinued.

Credit for LZSH—low density zoning in special flood-related hazard areas was discontinued.

Activity 430 (Higher Regulatory Standards)

Most of the changes to Activity 430 have been aimed at simplifying the formulae and crediting partial approaches to an element. Maximum points increased from 35 to 100 for five special hazards. Incorporating low-density zoning from Activity 420 increased the total possible points.

1992: Another partial credit was made possible for tracking improvements over 5–10 years. The changes did not alter existing applications; they only made it easier to credit alternative approaches to CSI.

The formula for the LSI—Lower substantial improvement threshold, was replaced with discrete value ranges.

The impact adjustment had three options, including a default value for those who do not want to calculate areas.

1994: Credit was provided under foundation protection for adopting the soil testing and compaction language of one of the three national building codes. The credit for regulating additions was no longer mutually exclusive from other cumulative substantial improvement credit. Prohibiting fill under PSC—Protection of storage capacity, increased from 50 to 80 points while compensatory storage decreased from 80 to 70.

Three new elements were added, bringing the total possible points up to 905 (including low-density zoning):

NBR—Natural and beneficial functions regulations: Up to 25 points for prohibiting development in the floodplain that is hazardous to public health or water quality.

ENL—Enclosure limits: 50 points for prohibiting first floor enclosures.

OHS—Other higher standards: Up to 25 points for other regulations that will be reviewed and scored by FEMA.

1996: Points were added if the person responsible for floodplain permitting graduated from the Emergency Management Institute’s course on managing floodplain development.

1999: The credit points were significantly increased for FRB—Freeboard, PCF—Protection of critical facilities, and ENL—Enclosure limits. Credit for CSI—Tracking cumulative substantial improvements, was revised. Two new elements, credit for SMS—State-mandated regulatory standards, and BCS—Building code and staffing, were introduced.

2002: The Building Code and Staffing element was split into two new elements, BC—Building code, and STF—Staffing. More points were provided under each new element. Two other new elements were added: MHP—Manufactured home parks, to credit protection of manufactured homes in existing parks, and CAZ—Coastal A Zones, to credit higher regulatory standards in these hazardous coastal areas.

2002: Section 430LZ, Low-density Zoning, was renamed 430LD, Land Development Criteria. Points were added under an new element, LDC—Land development criteria, to recognize local regulations that encourage preserving floodplain lands as open space.

2013: Various credits for discouraging floodplain development were consolidated into a new element, DL—Development limitations, for credit for prohibiting fill, buildings, and/or storage of materials in the floodplain. FRB—Freeboard, and FDN—Foundation protection, credits were increased, with the higher credits tied to prohibiting fill or requiring compensatory storage. LDP—Local drainage protection, was revised and transferred from Activity 450 (Stormwater Management). A new element, RA—Regulations administration, was added to encourage better management of local floodplain management regulations. Credits for natural and beneficial functions regulations (NBR) were transferred to NFOS and NSP under Activity 420 (Open Space Preservation).

2017: Credit points for limiting enclosures below the base flood elevation were transferred from CAZ—enforcing V-Zone rules in coastal A Zones to element ENL—Limiting enclosures below the base flood elevation. Bonus credit under a new element ENL_{CAZ} was made available for communities that enforce creditable enclosure regulations within their CAZ-credited areas.

Credit criteria, points, and discussion for TSR—Tsunami hazard regulations and for CER—Coastal erosion hazard regulations were inserted from the *Coastal Erosion Hazards* supplement and the *Tsunami Hazards* supplement, and both supplements were discontinued.

The element DR2—Prohibition of buildings in the floodplain was modified to require prorating of credit if the community allows Conditional Letters of Map Amendment based on Fill (CLOMR-Fs) or Letters of Map Amendment based on Fill (LOMR-Fs).

Activity 440 (Flood Data Maintenance)

1992: DMD—Digitized map data, was split into two elements, GIS—Geographic information system, and DPD—Digitized parcel data. More credit was provided for GIS mapping. MAM—More accurate base map, and OM—Overlay map, were combined so that more credit is provided for OM.

GIS, DPD, and OM were made no longer mutually exclusive, which allowed more credit where new systems are being installed gradually or where one system does not receive maximum credit. Due to the elimination of MAM as a separate element, the maximum points decreased slightly, from 125 to 120.

The impact adjustment had three options, including a default value for those who do not want to calculate areas.

1994: The element GIS was renamed DMS—Digital mapping system to avoid confusion with real geographic information systems. Full credit was only possible if the community had a real GIS that works on FEMA’s systems.

Ten more points became available for DMS, DPD, and OM for showing special hazard areas, including coastal erosion. A new element was added: EDM—Erosion data maintenance, for keeping track of coastal erosion. It was described in *CRS Commentary Supplement for Special Hazards Credit*.

1996: Credit for DMS, DPD, and OM were modified slightly for clarification and consistency.

1999: Three approaches to maintaining flood data were combined under one element, AMD—Additional map data. A new element was added to provide credit for maintaining copies of all FIRMs that have been issued for the community—FM.

2013: New credit for supporting GPS surveying was added to the benchmark maintenance element—BMM.

Activity 450 (Stormwater Management)

1992: A review of this activity resulted in several credit point revisions. SZ—Size of development, dropped from a maximum of 64 to 40 points, and PUB (Public Maintenance) was reduced from 32 to 30 points. These reductions were offset by an increase in DS—Design storm, from 130 to 155 maximum points.

To simplify the calculation, the formulae for SZ and PUB were replaced by discrete range values. This changed the credit for SMR—Stormwater regulations, for many communities. Total credit for communities with 100-year design storms increased, while the scores for communities that regulate to 10-year or smaller storms generally decreased.

SMP—Stormwater management master plan, and SRS—State review of stormwater management plans, were changed from 10% multipliers to discrete values of 25 points. ESC—Erosion and sediment control, was moved from Activity 540 to this activity. The 45 points for ESC accounted for most of the increase in the maximum points, from 331 to 380.

1994: There was some reorganization to clarify the importance of the stormwater management regulation language. No credit was to be provided under this activity if only very large developments are regulated.

A new element was added: WQ—Water quality, for stormwater management regulations that require use of best management practices to minimize the impact of stormwater runoff from new development.

1999: The points for the various sub-elements in SMR—Stormwater management regulations, were revised to provide relatively more credit for PUB—Public maintenance of stormwater facilities. The maximum for SMP—Stormwater management master plan, was greatly increased and the points for partial credit were clarified.

2013: Credits were increased for management of volume and LID—Requiring low-impact development techniques that improve downstream natural floodplain functions. Most of the credits for PUB—Public maintenance of new storage basins, were moved to Activity 540 (Drainage System Maintenance).

500 Series (Flood Damage Reduction)

1994: The description of the repetitive loss list and application requirements was clarified. A new Section 503 discussed why the CRS does not credit structural projects.

1996: The repetitive loss requirements were moved from Section 510.

2017: The definition of a Category B repetitive loss community was changed from a community with from 1-10 repetitive loss properties to one with 1-50 such properties. The definition of a Category C repetitive loss community was changed to mean a community with 50 or more such properties.

Activity 510 (Floodplain Management Planning)

1992: The formula for the credits from Activity 330 was corrected to account for the number of years between projects. Because Activity 610 was revised, the credits for the contributing elements from 610 were revised. As a result, the maximum points decreased from 444 to 441.

1996: This section was changed to 510 (Floodplain Management Planning). Credit for floodplain management planning was moved from Section 240. Repetitive loss requirements were moved to Section 500. Credit for floodplain management planning and repetitive loss planning were combined and revised to provide credit for the planning process rather than the content of the plan.

2002: The credit criteria were revised and expanded to be consistent with the mitigation planning requirements for other FEMA programs. Additional points were provided to encourage preparing multi-hazard plans and involving more stakeholders in the planning process.

2006: A new element was added to credit a detailed analysis of the community's repetitive loss areas and identify ways to mitigate flood damage to each building.

2013: The credit criteria for FMP—Floodplain management planning, were revised to improve implementation of plans. The habitat conservation plan element was replaced with a new element that credits more types of natural floodplain functions plans—NFP.

Activity 520 (Acquisition and Relocation)

1994: A default impact adjustment was added. If the community has acquired or relocated at least 5 buildings, it can receive 16 points.

1999: The credit points were significantly increased. Additional credit was provided for acquiring or relocating buildings on FEMA's repetitive loss list. A new default impact adjustment formula was instituted.

2006: Bonus points were added to encourage acquiring or relocating buildings from among the Severe Repetitive Loss Properties.

2013: Bonus points were added to encourage acquiring or relocating buildings in V Zones and critical facilities. A new bonus was introduced for clearing out more than 30% of the buildings in the community's SFHA.

Activity 530 (Flood Protection)

1994: The retrofitting credits were substantially revised to provide less credit for projects that were not engineered or otherwise have a higher possibility of failure. A default impact adjustment was added. If the community has at least 5 buildings that have been retrofitted, it can receive 14 points. A new five-page supplement explained retrofitting techniques.

1999: The credit points were significantly increased. Additional credit was provided for acquiring or relocating buildings on FEMA's repetitive loss list.

2002: CRS credit for protecting buildings with structural flood control projects was incorporated into this activity. The name was changed from "Retrofitting" to "Flood Protection."

2006: Bonus points were added to encourage protecting buildings from among the Severe Repetitive Loss Properties.

2013: New environmental compliance review criteria were introduced.

Activity 540 (Drainage System Maintenance)

1992: Because it is a stormwater management regulation, ESC was moved to Activity 450 (Stormwater Management). This resulted in a lowering of the total possible points from 375 to 330. However, the maximum points for Activity 450 were increased accordingly.

To simplify the formulae, SDR—Stream dumping regulations, was changed from being a multiplier worth up to 30 points to a separate variable worth up to 30 points. The impact adjustment had three options, including a default value for those who do not want to calculate areas.

The requirements for the documentation for CDR—Channel and basin debris removal, were changed. Most communities would need to prepare new program explanations when resubmitting their application for this activity.

1994: In most cases, the application documentation was required to include a map of the drainage system. A new prerequisite was introduced for stream dumping regulations: the community must publicize the regulations through an annual outreach project. A new element was added: EPM—Coastal erosion protection maintenance, as described in *CRS Commentary Supplement for Special Hazards Credit*.

1999: The approach to crediting CDR—Channel and basin debris removal, and SDR—Stream dumping regulations, was revised to allow more flexibility in recognizing local programs.

2013: Credits for problem site maintenance and capital improvement programs were created as separate elements (PSM and CIP). Storage basin maintenance was separated from CDR—Channel and basin debris removal, and incorporated credits from Activity 450 (Stormwater Management). New environmental compliance review criteria were introduced.

2017: The element EPM—Coastal erosion protection maintenance was eliminated.

The credit criteria for CDR—Channel debris removal was revised to clarify that credit is provided for removing debris from natural channels only, not from manmade portions of the drainage system.

600 Series (Warning and Response)

2013: The three activities' elements were aligned to follow a standard flood preparedness process.

Activity 610 (Flood Warning and Response)

1992: This activity was completely revised. Credit was no longer given for LSDS—Local data sharing. The same basic documentation was required: a description of the flood threat recognition system and excerpts from the flood response plan. However, all the elements and the scoring were changed.

The impact adjustment had three options, including a default value for those who do not want to calculate the affected areas. The maximum points decreased slightly from 205 to 200.

2002: A new element was added: SRC—StormReady Community, to credit communities that participate in the National Weather Service's StormReady Community Program.

2013: The credit criteria were revised to encourage more attention to planning response actions at different predicted flood levels.

Activity 620 (Levees)

1994: A default impact adjustment was added. If the levee protects at least five buildings, the community can receive 9 points. The requirements for levee certification were revised to allow determinations made by the U.S. Army Corps of Engineers.

2013: This activity was reorganized and renamed. Credit prerequisites include an inventory of all areas protected by levees, a documented maintenance program (LM), and an outreach project to protected areas. Four new elements more closely coordinate a levee failure warning and response program with the community's emergency management program:

LFR—Levee failure threat recognition system,

LFW—Levee failure warning,

LFO—Levee failure response operations, and

LCF—Levee failure critical facilities planning.

2017: The credit criteria were revised to require an inventory of buildings and critical facilities within the expected inundation area.

Activity 630 (Dams)

1992: The impact adjustment had three options, including a default value for those who do not want to calculate the affected areas.

2002: Credit for dam failure regulations was deleted. The credit for DFP—Dam failure emergency action plans, was expanded, with a net increase in points.

2013: This activity was reorganized and renamed. SDS—State dam safety program, credit criteria were revised to reflect FEMA’s new directions to have state programs more active with local emergency preparedness programs. Credit prerequisites for local programs included an inventory of all areas subject to flooding from the failure of a high hazard dam and an outreach project to affected areas. Four new elements more closely coordinate a dam failure warning and response program with the community’s emergency management program:

DFR—Dam failure threat recognition system,

DFW—Dam failure warning,

DFO—Dam failure response operations, and

DCF—Dam failure critical facilities planning.

2017: The credit criteria were revised to require an inventory of buildings and critical facilities within the expected inundation area.

Activity 710 (Community Growth Adjustment)

1994: The Donnelley Report Growth Rate was dropped from the calculations for average growth rate.

2013: A new approach was initiated that uses a 10-year average growth in dwelling units for the county. Averaging city growth rates that may be higher than the overall growth pressure in the whole county was eliminated.