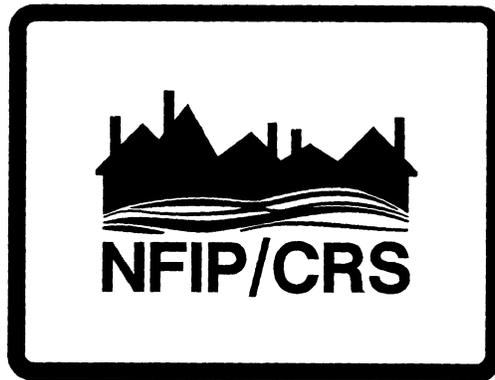


2012 *CRS Coordinator's Manual* Changes



OCTOBER 20, 2011

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Note on this paper: This document summarizes the non-editorial changes expected to be included in the 2012 *CRS Coordinator’s Manual*. The actual language is being drafted and is subject to the approval of FEMA. The complete 2012 *Manual* is expected to be approved and available in the first quarter of 2012.

Section 200 – Procedures

211 Prerequisites

- a. **Timing of Prerequisites:** A participating CRS community will need to meet the current and new prerequisites at the time of its cycle verification visit. No new requirements, including annual recertification requirements, will take effect until the ISO/CRS Specialist reviews them one-on-one with the community at the cycle visit.

b. **Application/Participation (Class 9) Insurance Prerequisite:**

Item 4 reads “The community must maintain all flood insurance policies that it has been required to carry on properties owned by the community.” The following will be added to the statement signed by the CEO:

“We understand that disaster assistance for any community-owned building located in the Special Flood Hazard Area is reduced by the amount of NFIP flood insurance coverage (structural and contents) that a community should be carrying on the building, regardless of whether the community is carrying a policy.”

- c. **Class 7 BCEGS Prerequisite:** The BCEGS prerequisite to be a CRS Class 7 or better will change to a Class 6 prerequisite. It will read:

“In addition to having sufficient points, in order to be a Class ~~7~~ 6 or better, a community must have received a classification of ~~6/6~~ 5/5 or better under the Building Code Effectiveness Grading Schedule (BCEGS). Both BCEGS classifications (residential/personal and commercial) must be a class ~~6~~ 5 or better.

“In accordance with Section 113, communities may propose alternative approaches to meet the objectives of a prerequisite. For example, communities that are prohibited by state law from adopting and enforcing building codes may submit comprehensive building construction regulations and administration and inspection procedures for review to determine the equivalent BCEGS classification. Such regulations must be enforced throughout the community, not just in the floodplain.”

d. **Class 4 Prerequisites:**

1. The current Class 4 prerequisites related to credits under Activities 430 – Higher Regulatory Standards, 450 – Stormwater Management, and 510 – Floodplain Management Planning
2. The BCEGS prerequisite to be a CRS Class 4 or better will change from 5/5 to 4/4. As with the Class 6 prerequisite, a community may propose an alternative approach.
3. Class 4 or better communities will need to obtain a minimum total score of ___ points [*points to be determined soon*] (after the impact adjustment) from one or a combination of the following elements that credit protecting natural floodplain functions:
 - 420 – Natural functions open space (NFOS)
 - 420 – Natural shoreline protection (NSP)
 - 430 – Prohibition of fill (DL 1)

- 444 – Additional map data (AMD) natural functions layer
 - 450 – Low impact development (LID)
 - 450 – Watershed management plan (WMP) items c, e, f, and g
 - 450 – Erosion and Sediment Control (ESC)
 - 450 – Water Quality (WQ)
 - 510 – Natural floodplain functions plan (NFP)
3. Class 4 600 Series Prerequisite: A Class 4 or better community must document the following life safety measures:
- (a) Have an inventory of levees that would result in a flood of developed areas if they failed or were overtopped during a flood, including a map of the area(s) affected.
 - (b) Have an inventory of dams that would result in a flood of developed areas if they failed, including a map of the area(s) affected.
 - (c) Assess the impact of a flood caused by the failure of the levees and dams on life and property.
 - (d) Obtain ____ points for Activity 610 – Flood Warning and Response. *[Points to be determined soon.]*

e. Class 1 Prerequisites:

1. Item 2.(c)(2), the requirement to receive credit under Activity 610 – Flood Warning and Response, will be replaced by the Class 4 prerequisite.
2. Item 2.(c)(5) states “At least 50% of the buildings in the community’s SFHA must be covered by a flood insurance policy.” A community may opt for an alternative: obtain at least 50% of the total points under the new Activity 370 – Flood Insurance Promotion.
3. Class 1 or better communities will need to obtain a minimum total score of ____ points *[points to be determined soon]* (after the impact adjustment) from one or a combination of the natural floodplain functions elements listed under the Class 4 prerequisite.
4. The rest of the Class 1 prerequisites will remain unchanged.

212 Application Documents

The current 50-page *CRS Application* will be replaced by a shorter “Quick Check” that will identify if the community is likely to receive at least 500 points for its activities. If so, a visit by an ISO/CRS Specialist will be scheduled. There will still be a need for the letter of full compliance from the FEMA Regional Office, which usually requires a Community Assistance Visit. The Quick Check will be available for completion on-line or downloading. It is hoped that states will help tailor the Quick Check for their state’s conditions.

214 Recertification

No changes to recertification procedures or documentation will take effect until after the community's cycle verification visit. The only change planned is the following data table.

Data table: The table below will be in a new worksheet. It will need to be completed when a community joins the CRS and submitted with every annual recertification.

This new recertification requirement will take effect after the community's next cycle verification visit, not for all communities in 2012, as was originally proposed. At the cycle visit, the ISO/CRS Specialist will explain the requirement and provide guidance on how to obtain the data.

The data will help both FEMA and the community track floodplain development and mapping changes. It will be used by FEMA to help schedule assistance activities and set mapping priorities. Accurate building counts help determine insurance market penetration and can guide insurance promotional efforts (which can be credited under the new Activity 370 – Flood Insurance Promotion).

Application and Recertification Program Data	In the SFHA	In a regulated floodplain outside the SFHA	In the rest of the community
1. Number of buildings in the SFHA (bSF) as of last report			
2. Number of new buildings constructed in the SFHA since last report	+		
If available, the following data would be useful:			
a. Number of new manufactured homes installed since last report	+		
b. Number of other new 1 - 4 family structures constructed since last report	+		
c. Number of all other structures constructed/installed since last report	+		
3. Number of buildings removed/demolished since last report	-		
4. Number of buildings affected by map revisions since last report (+ or -)			
5. Number of buildings affected by corporate limits changes (+ or -)			
6. Current total number of buildings in the SFHA (bSF) (sum of lines 1 – 7)			
7. Number of substantial improvement/damage projects since last report			
8. Number of repetitive loss properties mitigated since last report			
9. Number of LOMRs and map revisions (not LOMAs) since last report			
10. Acreage of area(s) (aSFHA) as of the last report			
11. Acreage of area(s) affected by map revisions since last report (+ or -)			
12. Acreage of area(s) affected by corporate limits changes (+ or -)			
13. Current acreage of the SFHA (aSFHA) (sum of lines 12 – 14)			

215 Modifications

Modifications are requests to revise the scores for selected activities. If the modification is for only a one-class improvement, the 2007 CRS Coordinator's Manual policy has been to only verify the activities submitted in the modification. If the modification will result in a two-class improvement, the community's entire program is verified and the cycle schedule starts again.

Because of all the changes in the 2012 *CRS Coordinator's Manual*, this policy will change. If the non-modified activities are changed in the 2012 *Manual*, then they will be verified, too. In effect, if a community submits a modification and has unmodified activities and elements that are substantially changed, then the community's entire program will be verified and the cycle schedule will start over.

240 Community Flood Risk Assessment

A new tool will be explained in this new section. It is an on-line interactive assessment to help communities identify which CRS activities would be of most benefit to them. The Demo version is available for anyone to try at www.crs2012.org, under "Community Self-Assessment." Certified Floodplain Managers who complete the Demo version and provide comments on it can earn three continuing education credits (CECs) through the Association of State Floodplain Managers CFM program.

Doing the assessment is voluntary. It is a recommended tool for local officials who want to step back, look at their communities' flood problems, and identify programs and activities that best deal with those problems.

Selected sections of the Community Flood Risk Assessment, or a similar assessment that looks at the same concerns, such as a floodplain management plan, will be a prerequisite for:

- Developing a Program for Public Information under Activity 330 – Outreach Projects,
- The flood insurance coverage assessment under Activity 370 – Flood Insurance Promotion, and
- The documentation to support Activity 610 – Flood Warning and Response.
- The Class 4 prerequisite for a levee and dam failure assessment.

Activity 310 – Elevation Certificates

Objective: Maintain correct FEMA Elevation Certificates for new and substantially improved buildings in the SFHA

2007 Manual	Max Points		2012 Manual	Max Points
EC – ECs after joining CRS	56	⇒	Same	38
ECPO – Post-FIRM ECs	56	⇒	Same	48
ECPR – Pre-FIRM ECs	15	⇒	Same	30
ECCF – ECs in Computer Format	15	⇒	Dropped, new credit in 440 AMD	
ECWS – ECs on Website	20	⇒	Moved to 350 Website credit	
ORS – Off-site Record Storage	10	⇒	Moved to 430 Regulations Administration	
Max	172			116

EC – Elevation Certificates: The FEMA Floodproofing Certificate (FEMA Form 81-65) is required for floodproofed buildings. Communities will also need to provide a V Zone Certificate for new construction in the V Zone. An example form will be in the 2012 *Manual*. Communities that want to use a different form will need to show that it includes the same information that is needed for flood insurance rating for a new building in the V Zone.

ECPO – Elevation Certificates for post-FIRM buildings: Only the points are changing.

ECPR – Elevation Certificates for pre-FIRM buildings: Only the points are changing.

ECCF – Elevation Certificates in a computer format: The credit is being dropped from the CRS. The software was very expensive for FEMA to keep updated and the data were never used for its original purpose. However, a new, similar credit is being added to Activity 440 – Flood Data Maintenance, Additional Map Data (AMD), new item m.

ECWS – Elevation Certificates on the community's website: This element is being moved to Activity 350 – Flood Protection Information, with the rest of the CRS website credits.

ORS – Off-site record storage is being moved to a new element, Regulation Administration in Activity 430 – Higher Regulatory Standards. That element will also have credit for inspections and photographs at the time of the final Elevation Certificate.

Verification: Beginning with its next cycle verification visit, a community will need to provide (1) a list of all new buildings and substantial improvements in the SFHA since the last visit and (2) copies of all of the Certificates issued since the last visit. This can be done digitally.

The verification threshold for credit for EC, ECPO, and ECPR will be increased from 80% to 90%. This means that for any credit, at least 90% of the Elevation Certificates reviewed must contain no errors or omissions (also known as “gigs”).

Recertification: After the next visit, (1) the list of new buildings and improvements and (2) copies of all of the previous year's certificates will need to be submitted annually, with each recertification. This can be done digitally. ISO will provide feedback on problems that are found.

Activity 320 – Map Information Service

Objective: Provide inquirers with flood hazard information

2007 Manual	Max Points		2012 Manual	Max Points
Read the FIRM for inquirers	140	⇒	MI 1– Same service	30
			MI 2 – LiMWA/floodway info/CBRS area	18
		<i>new</i>	MI 3 – Other flood problems not shown on FIRM	18
		<i>new</i>	MI 4 – Flood depth data (formerly in Activity 360)	18
		<i>new</i>	MI 5 – Special flood-related hazards	18
		<i>new</i>	MI 6 – Historical flood information/repetitive flood losses	18
		<i>new</i>	MI 7 – Natural floodplain functions	18
Max	140			90

The current credit is for reading the community's Flood Insurance Rate Map to inquirers and to provide basic information needed for rating an insurance policy (e.g., date of the FIRM). When the CRS was initiated in 1990, this was an important role, as most people did not have access to FIRMs and many had trouble reading them.

Things have changed since 1990. We now have a map determination industry that helps lenders. Insurance companies contract for centralized map information services for their agents. The public has direct access to FIRMs through FEMA's website. Accordingly, this credit will be reduced in the next *CRS Coordinator's Manual*. The remaining credit (MI 3 – 7) can be earned by providing additional flood hazard information from information sources other than the FIRM.

To receive the credit the community must

- Be receiving credit for reading the FIRM for inquirers (MI 1 is required);
- Have a map (or GIS layer) that shows the information provided;
- Volunteer the information to the inquirer (i.e., if the property is in an X Zone, but also in a repetitive loss area, the community does not wait for the inquirer to ask about any other hazards);
- Keep a log or other record of the service (no change from 2007); and
- Publicize the service (no change from 2007). There are three possible ways to do this:
 - An outreach project to the entire community, such as an article in a newsletter or a notice in a utility bill,
 - Notices sent to all local insurance agents, real estate agents, and lenders, or
 - Another approach as determined by a Program for Public Information (see Activity 330 – Outreach Projects)

The additional credit points add up to more than 100%, so the community can select what information it wants to provide and still receive the maximum credit.

Here are more details about the seven credited elements:

- MI 1– Same service, i.e., provide all information found on a FIRM that is needed for rating a flood insurance policy.
- MI 2 –LiMWA/floodway info/CBRS area: provide additional information found on a FIRM that is not related to rating the policy
- MI 3 –Other flood problems not shown on FIRM. Examples include areas predicted to flood in the future because of climate change or sea level rise, local drainage problems, areas mapped outside the SFHA (e.g., in smaller watersheds), and a dam failure inundation zone.
- MI 4 –Flood-depth data: the service would provide both the BFE and the ground or building elevation for a site or depths of flooding. The latter could be from flood depth maps that may be produced by RiskMAP.
- MI 5 –Special flood-related hazards: advising inquirers about the property being subject to one of the special flood-related hazards recognized for CRS credit, such as coastal erosion, migrating channels, and ice jams. The affected area will need to be mapped, but not necessarily regulated.
- MI 6 –Historical flood information/repetitive flood losses: areas flooded in the past (in or out of the SFHA), historic high water levels, mapped repetitive loss areas.
- MI 7 –Natural floodplain functions: areas mapped in the National Wetlands Inventory, designated habitat areas, areas receiving natural floodplain functions credit in Activity 420 – Open Space Preservation, etc..

The 240 Community Flood Risk Assessment can help the community determine what additional information (MI 3 – 7) could and should be provided.

Activity 330 – Outreach Projects

Objective: Provide information needed to increase awareness and motivate actions to reduce flood damage, encourage flood insurance coverage, and protect natural floodplain functions

2007 Manual	Max Points		2012 Manual	Max Points
OPA – Additional Outreach Projects OPC – Outreach Projects to Community OPF – Projects to Floodplain properties	250	⇒	OP – Outreach Projects	175
OPS – Public information Program Strategy	125	⇒	PPI (OP) – Program for Public Information	55
		<i>new</i>	STK – Stakeholder delivery	40
		<i>new</i>	ACT – Action resulting from outreach	60
		<i>new</i>	FRP – Flood response preparations	50
		<i>new</i>	PPI (FRP) – Program for Public Information	20
PFI promotion of flood insurance	65		Moved to new Activity 370	
Max	380			350
Note that the community's points could add up to more than 350, but the credit for OP is capped at 175 points and the total credit is capped at 350 points.				

The changes are explained in a more detailed report, “Changes to CRS Activity 330 Outreach Projects.” These pages only summarize the high points.

There will be two basic elements: Outreach projects (OP) and flood response preparations (FRP). In both elements, the community must identify the messages it wants to deliver and who they go to. For communities without a Program for Public Information (PPI), only messages that relate to the six priority CRS topics are credited:

1. Know your flood hazard (including the future flood hazard, e.g., sea level rise)
2. Insure your property for your flood hazard (at least one project must include this topic)
3. Protect people from the hazard
4. Protect your property from the hazard
5. Build responsibly
6. Protect natural floodplain functions

These six priority CRS topics replace the current 10 national topics. Communities with a PPI can add up to four more flood-related topics customized to local conditions.

A project disseminates a message. Certain projects are more effective at motivating change, so they are worth more points. For scoring purposes, there are three types of projects.

1. Informational materials: putting brochures and other materials out at public places; worth one point per message
2. General outreach: projects that reach out to people in general; worth two points per message
3. Targeted outreach: projects that reach out to 90% of the properties in the SFHA, the community's repetitive loss areas, or other target audiences identified in the PPI; six points per message

The credit points for OP are based on how many times the projects convey the same message each year. The credit for OP and FRP can be increased by 40% if the projects are designed as part of a Program for Public Information (PPI). A PPI is a plan, prepared by a committee in a similar manner as the current public information program strategy (OPS) or floodplain management plan (in Activity 510 – Floodplain Management Planning). Other activities' credits can be increased by a PPI, too. As with 510, the PPI will need to be updated at least every five years.

The credit for OP can be increased even more if there is a PPI and the projects are implemented by stakeholders (STK –30% bonus multiplier) and/or it can be shown that the messages have resulted in some desirable actions (ACT – 45% bonus multiplier). Because the maximum for OP is 175, OP plus the bonus credits could be greater than 350. However, the maximum possible score will be capped at 350.

FRP – Flood response preparations credits having a pre-flood plan of public information activities (news releases, handouts, templates, etc.), ready in advance of the next flood. The preparations must include proof copies of materials to be used, but they do not have to be copied or distributed until the flood occurs. FRP points are also increased if the projects are described in the PPI, but FRP is not eligible for the STK and ACT multiplier bonus points.

The scoring is based on the type of projects, the number of messages, the number of times the messages are repeated, plus the PPI, STK and ACT bonuses. This makes for a complicated scoring system that is best done on a spreadsheet. The following spreadsheet will be included with the 2012 *Manual* and will be available on-line as a Microsoft Excel file.

Outreach Project Worksheet																			
Outreach Projects	Project Points	Number of times message is repeated										OP	Multipliers						
		Msg 1	Msg 2	Msg 3	M 4.a	M 4.b	Msg 5	Msg 6	Msg 7	Msg 8	Msg 9		PPI?	PPI	STK?	STK			
OP 1	Insurance brochure	1											1	y	0.4	y	0.3		
OP 2	Insurance agents	2		1									2	y	0.8	y	0.6		
OP 3	Presentations	2	5	5		5		5		5			50	y	20.0	y	15.0		
OP 4	Cable TV	2	1	1		1		1		1			10	y	4.0	y	3.0		
OP 5	Mailing to SFHA	6	1	1	1		1		1		1		36	y	14.4		0.0		
OP 6	Storm drain stencils	2								1			2	y	0.8		0.0		
OP 7	Home builders meetings	6					2	2					24	y	9.6		0.0		
OP 8													0		0.0		0.0		
OP 9													0		0.0		0.0		
OP 10													0		0.0		0.0		
	Messages												0		0.0		0.0		
Msg 1	Is your house in the floodplain?												0		0.0		0.0		
Msg 2	All residents in the SFHA should have flood insurance												0		0.0		0.0		
Msg 3	Turn around, don't drown												0		0.0		0.0		
M 4.a	Don't dump in our streams and ditches												0		0.0		0.0		
M 4.b	Protect your house from flooding												0		0.0		0.0		
Msg 5	Floodplain filling needs a permit												0		0.0		0.0		
Msg 6	Don't dump in the storm drains, they drain to the bay												0		0.0		0.0		
Msg 7	Know your evacuation route and have a family rendezvous point												0		0.0		0.0		
													OP =	125					
	ACT?			y		y													
	ACT message points		0	21	0	12	0	0	0	0	0	0							
	ACT bonus		0.00	9.45	0.00	5.40	0.00	0.00	0.00	0.00	0.00	0.00	ACT =	14.85					
	FRP Projects	Points	Msg 1	Msg 2	Msg 3	Msg 4	Msg 5	Msg 6	Msg 7	Msg 8	Msg 9	Msg 10							
FRP 1	Media kits	2			1	1	1				1	1		10	y	4.0			
FRP 2	Pub svc announcemnts	2			1		1							4	y	1.6			
FRP 3	Door hangers	6			1	1	1			1	1			30	y	12.0			
FRP 4														0	y	0.0			
FRP 5														0		0.0			
														FRP =	44	PPI =	67.6	STK =	18.9
	c330 =				OP	125	+ PPI	67.60	+ STK	18.90	+ ACT	14.85	+ FRP	44	=	270.4			

Activity 340 – Hazard Disclosure

Objective: Disclose the flood hazard before the lender notifies prospective buyers of the need for flood insurance

2007 Manual	Max Points		2012 Manual	Max Points	Max W/PPI
DFH: Real estate agents' disclosure	46	⇒	Same	25	35
or State disclosure law	20	⇒	Dropped		
ODR: Other disclosure requirements	15	⇒	Same	25	25
REB: Real estate brochure	10	⇒	Same	8	12
DOH: Disclosing other hazards	10	⇒	Same	8	8
Max	81			66	80

Credit is given for disclosing the flood hazard before the mortgage lender has to notify prospective buyers of the hazard and of the need for flood insurance. Two elements (DFH and REB) receive a 42% bonus if they are designed in a Program for Public Information (element PPI under Activity 330) or if the community worked with real estate agents to design them. If the latter, there needs to be an annual meeting with the real estate representatives to evaluate and revise the program, similar to the PPI annual evaluation requirement.

DFH – Disclosure of flood hazard by real estate agents. This credit is keyed to disclosing the Special Flood Hazard shown on a Flood Insurance Rate Map. The minimum requirement for credit will also include a disclosure if the property is in a designated Coastal Barriers Resource System area, which is also shown on the FIRM.

The 20 point credit for a state disclosure law will be dropped, but still kept as creditable under ODR (5 points). This change is because upon closer review during the uniform minimum credit work, it was found that no state deserved the 20 points. If there is an effective state law, it would be reflected in a fully verified 46 points credit for DFH.

ODR – Other disclosure requirements, such as sellers must tell of known problems, the floodplain boundary must be shown on plats, or landlords must tell prospective tenants. Credit can be provided for state or local laws that require disclosure. A community can receive credit for up to five such requirements instead of three.

REB – Real estate disclosure brochure that advises the reader to check out if there's a hazard. As with DFH, full credit is only provided if the brochure was reviewed by the PPI committee or drafted with the involvement of real estate agents. It is recommended that real estate agents or communities provide the brochures to lenders as they would be valuable for people seeking pre-approval for a mortgage before they start house hunting.

DOH – Disclosure of other hazards by real estate agents, providing the community is already getting DFH credit. Creditable hazards must be flood-related, such as the coastal A Zone, erosion, subsidence, or wetlands. The 2012 *CRS Coordinator's Manual* will also include dam or levee failure flooding, coastal storm surge, and the seven CRS-credited special hazards as eligible for credit.

Activity 350 – Flood Protection Information

Objective: Provide the public with additional information

2007 Manual	Max Points		2012 Manual	Max Points	Max W/PPI
LIB – Flood protection library	25	⇒	Specific list of documents in library	16	16
LPD – Locally pertinent documents	5	⇒	Specific local documents	6	6
WEB – Website		⇒	Prerequisites revised		
WEB: 10 topics from 330	40	⇒	WEB 1 – 6 points per topic	36	60
WEB: Posting warning information	20	⇒	WEB 2 – Same	10	15
WEB: Posting real time gage links	10	⇒	WEB 3 – Same	10	10
WEB: noting where ECs are available	2	⇒	Part of WEB 4		
310 ECWS – Posting Elevation Certificates	20	⇒	WEB 4 – Posting ECs on the site	20	20
Max	102			98	127

The objective of this activity is to provide more detailed information on the messages that are introduced in the community's Activity 330 outreach projects and additional information that websites are very effective at disseminating, such as real time gage data. Full credit for two items is dependent on the community having a Program for Public Information (PPI) that includes these items as projects to be implemented and monitored.

There are three elements in the activity.

LIB – Keeping publications in a library. Full credit will be for having 12 specific FEMA publications (listed below) cataloged in the community's public library. All of them are available at no cost in hard or digital copy from FEMA.

If the state, region, community, or other entity has published documents that are more appropriate to the community's situation, then those may be substituted. References that are not relevant (e.g., the community has no coastal floodplain or manufactured homes) do not have to be included.

- Above the Flood: Elevating Your Floodprone House, FEMA-347
- Coastal Construction *Manual*, FEMA-55
- Elevated Residential Structures, FEMA-54
- Engineering Principles and Practices for Retrofitting Flood Prone Residential Buildings, FEMA-259
- Floodproofing Nonresidential Structures, FEMA-102
- Homeowner's Guide to Retrofitting: Six Ways to Protect Your House from Flooding. FEMA-312
- Mandatory Purchase of Flood Insurance Guidelines, FEMA-186
- Manufactured Home Installation in Flood Hazard Areas, FEMA-85
- Mitigation of Flood and Erosion Damage to Residential Buildings in Coastal Areas, FEMA-257,
- Protecting Building Utilities From Flood Damage, FEMA-348
- Protecting Floodplain Resources, FEMA-268.
- Repairing Your Flooded Home, FEMA-234

LPD – Keeping locally pertinent documents available in the library. Examples of creditable documents include:

- Floodplain management ordinance
- Flood Insurance Rate Map
- Flood Insurance Study
- Floodplain management or hazard mitigation plan
- Other relevant plan, such a comprehensive plan or the beach management plan
- Others documents as identified in the community's PPI.

Documents for LIB or LPD credit may be hard copies or digital versions that one can view on a monitor in the library. Digital versions must be located in the library and not be dependent on links to an outside source.

WEB – Providing information via a website. The website must meet the following criteria:

1. There must be a flood information home page, with a directory of the site's flood information. For examples, see www.pbcgov.com/publicsafety/emergencymanagement/floodawareness, and www.floodhelp.uno.edu. There will be no credit for items that are not connected to this flood information home page.
2. The flood information home page must include information on the community's flood assistance services, such as the map information service and flood protection assistance credited under Activities 320 and 360.
3. For full credit, coverage of the topic must be more thorough than what is provided in an outreach project. Simply posting the written portions of an outreach project does not earn full credit. The objective is to provide more in-depth information.
4. There must be a link to FloodSmart or FEMA's flood insurance page
5. The community must check and fix the site's links at least monthly (there is free or low-cost software that can identify broken links automatically). It must review the content to ensure that it is still current and pertinent at least annually (e.g., make sure names, addresses, phone numbers, etc. are still correct, update any ordinance changes, etc.).

A community can receive credit for a county or regional site, provided there is a link from the community's website and the information is locally pertinent.

WEB 1 points are provided for website coverage of the six topics listed in Activity 330. A community with a Program for Public Information (PPI) credited in Activity 330 can add additional topics that are described in its PPI. WEB 1 and WEB 2 credit will be increased by 42% if the community has a Program for Public Information (PPI) that includes these topics as website projects to be implemented and monitored.

The Elevation Certificate website credit formerly in Activity 310 (ECWS) will be moved to WEB 4. Credit will be provided if the entire certificate is viewable on-line or if the site has a list of addresses that have Elevation Certificates and instructions on how the user can obtain them.

Documentation: No documentation will be required for WEB credit, as it will be verified on-line.

Activity 360 – Flood Protection Assistance

Objective: Provide one-on-one help in protecting property from flooding

2007 Manual	Max Points		2012 Manual	Max Points	Max W/PPI
Site-specific flood data	10	⇒	Moved to 320		
Names of qualified contractors	4	⇒	Dropped (can be in 330)		
Handouts on contractors	3	⇒	Dropped (can be in 330)		
Retrofitting advice	14	⇒	PPA – Property protection advice	25	40
Site visits	35	⇒	PPV – Advice after a site visit	30	47
		<i>new</i>	FAA – Financial assistance advice	10	15
School trained advisor	5	⇒	TNG – New credit for grants training	10	10
Max	71			75	112

Credit is given to communities that provide one-on-one advice and assistance to residents on protecting their property from flooding. As seen in the table above, some points previously available are being moved to Sections 320 or 330 and some items' points will be increased if the community has a Program for Public Information (PPI) that includes these items as projects to be implemented and monitored.

PPA – Property protection advice: This is for *face-to-face* advice and/or assistance about property protection, such as retrofitting techniques, local drainage improvements, and flood insurance.

PPV – Property protection site visit: If the community receives credit for PPA, additional points are available for making *site visits* to review flooding, drainage, and sewer problems and providing one-on-one advice to the property owner about protection of property. No credit is provided if the only purpose of the site visit is to verify compliance with a regulation or to see if drainage work is needed by the city.

FAA – Financial assistance advice: There is additional credit if the face-to-face property protection advice includes advice on financial assistance that may be available, including FEMA mitigation grants and Increased Cost of Compliance.

TNG – Training credit is provided if the person providing the advice and assistance has graduated from Emergency Management Institute courses on retrofitting or grants programs.

The prerequisites have not been changed: To qualify for this credit, the service must be publicized through an outreach project that reaches everyone in the community, a project that reaches everyone in the floodplain, or other project identified in the community's PPI.

Publicity: The service must be publicized through an outreach project that reaches everyone in the community, a project that reaches everyone in the floodplain, or via another approach as determined by a Program for Public Information (no change from 2007).

Documentation: Records must be kept of the advice given (no change from 2007).

Activity 370 – Flood Insurance Promotion

Objective: Improve flood insurance coverage in the community.

2012 Manual	Max Points
FIA – Assessment of Flood Insurance coverage: review of existing policies in various target areas	15
CP – Coverage improvement Plan: the community's plan to increase coverage in targeted areas	15
PI – Plan Implementation: more credit is provided for doing more projects	60
TA – Technical Assistance: offering flood insurance advice and assistance to residents	20
CI – Coverage Improvement: bonus points if the projects result in a measurable increase in coverage	30
	140

The changes are explained in a more detailed report, “CRS Activity 370 – Flood Insurance Promotion.” This page only summarizes the high points.

This new activity credits communities that take an active role in encouraging residents and businesses to purchase and maintain adequate flood insurance coverage. Credit is for a four-step process that allows communities to assess their own needs and receive credit for improving their coverage. Credit for the four steps is provided incrementally.

Prerequisite: The community must prepare an inventory of all buildings owned by the community located in a floodprone area and note whether each building is insured for flood damage. See the more detailed report noted above for more information on this.

Step 1. FIA – Assessment of flood insurance coverage: the credit is provided for the assessment document. The assessment starts with the new Community Flood Risk Assessment that will be in Section 240 and policy data supplied to ISO every year. Errors found in the policy data (e.g., wrong community number) are reported to ISO.

Step 2. CP – Coverage improvement Plan: the plan is prepared by a committee that has representation from local insurance agents and lenders. The committee's recommended plan is submitted to the governing council. There is credit even if the plan is not adopted or implemented. The objective is to raise awareness of the current level of coverage and ways that it could be improved.

Step 3. PI – Plan Implementation: Projects are implemented pursuant to the plan. At least one of the projects must involve public support for flood insurance by one or more elected officials.

Step 4. CI – Coverage Improvement: Extra credit is provided if coverage goes up. A three-year running average is used to exclude short term variations in coverage.

TA – Technical assistance: Separate from the four planning steps, credit is available for having an expert advise people about flood insurance, similar to the credit for property protection advice under Activity 360. There will be more credit if the advisor is a licensed insurance agent and even more for an Associate in National Flood Insurance (ANFI™). See www.aicpcu.org/anfi for more information.

The planning process, adoption criteria, and scoring of projects is the same as for a Program for Public Information, credited in Activity 330. Having the same committee prepare one document that covers both activities is recommended, but not required.

Section 402 – Impact Adjustments for Areas

Changes in calculating the impact adjustment:

1. **aRF – The term “area of the regulatory floodplain,”** or aRF, will be replaced by the area of the Special Flood Hazard Area, or aSFHA. Communities that regulate an area larger than the SFHA shown on their Flood Insurance Rate Map will receive extra credit through the impact adjustment, up to a maximum of 150%.

For example, if the community's SFHA is 1,000 acres and it regulates new development in an area that totals 1,200 acres, the impact adjustment formula will multiply the credit times 1.2.

2. **Coastal wetlands:** Areas with coastal wetlands or marshes had been excluded from the area of the regulatory floodplain. This previous exclusion was based on an understanding that Corps of Engineers Section 404 permits and other regulatory programs effectively prevented development in these areas. This exclusion will be dropped.

This will likely increase the denominator used for the impact adjustment for many coastal communities, resulting in a reduction in credit. However, communities (and states) that prohibit development in their coastal wetlands will likely see an increase in credit in Activity 420 – Open Space Preservation.

3. **Default values:** Most activities have had an Option 2 default impact adjustment value. For example, communities that had at least five acres preserved as open space could use Option 2 and get 5% of the maximum credit ($rOS = 0.05$). The Option 2 default value will be dropped from Activity 420 – Open Space Preservation. For the credit for any element in Activity 420, the actual acreage of the open space and the SFHA will need to be calculated.

In most cases, it is expected that communities will receive higher scores because most of those using Option 2 have more than 5% of their SFHA in parks and other creditable preserved open space. It is expected that large communities have GIS that can easily calculate these areas. The ISO/CRS Specialists will help small communities that may have to do this manually. Note also that the total area of the SFHA is part of the new data table required at recertification.

4. **Developed areas:** Certain elements, such as the new Open Space Incentives (OSI) in Activity 420 and Development Limitations (DL) in 430, are not credited in areas already developed. The impact adjustment sections will explain where this happens.
5. **Undevelopable areas:** It has been noted that the CRS impact adjustment for areas treats all of the SFHA the same. Remote, “undevelopable” areas have equal weight with areas on the urban fringe that are prime for development. Rather than try to define, delineate, and eliminate such “undevelopable” areas from the impact adjustment formula, communities should zone them for little or low density development and receive LZ credit for those areas. LZ (low density zoning) will be moved from 430LD to 420.

Activity 410 – Floodplain Mapping

Objective: Regulate areas based on flood data not provided by FEMA, prepared to a higher study standard, and/or sharing in the cost of a Flood Insurance Study. The new name for this activity reflects this objective.

2007 Manual	Max Points		2012 Manual	Max Points
NS – New Study	410	⇒	Reduced credit for independent review	290
“with review”		⇒	SR – State Review	60
LEV – Leverage	1.0	⇒	Factor remains the same, 1.0	
HSS – Higher Study Standards	160	⇒	Up to 3 higher standards can be credited	160
FWS – More restrictive floodway standard	200	⇒	Same	110
CTP1 – Cooperating Technical Partners 1	20	⇒	Same	20
CTP2 – Cooperating Technical Partners 2	1.1	⇒	Multiplier increased to 1.18	112
AFDSH – Special Hazards credit	50	⇒	MAPSH – same credit, new acronym	TBA
Max	1386			* 752
* Higher points are possible if the impact adjustment is greater than 1.0				

NS – New study credit is for regulations based on flood elevations and other data not provided by FEMA. Credit is also for conducting restudies and assisting in FEMA funded flood insurance studies, subject to the leverage multiplier (LEV).

Credit under study scopes 3 or 4 will be provided for regulatory data based on high water marks that are higher than existing base flood elevations.

SR – State review is a new element that replaces the “with review” points in NS. It is provided where a study was given a detailed review by a qualifying state or regional agency. While a separate credit, the points are shown with NS in the table below.

Study scope	Original FIRM Zone					
	B, C, D, or X		A or V		AE, VE, A#	
	New Study	State review	New Study	State review	New Study	State review
1. Delineation of an approximate A Zone	70	-	60	-	-	-
2. Flood elevations for a site at time of development	100	20	80	20	45	10
3. New profile or length of shoreline, base flood elevations/depths in AH and AO zones.	225	45	175	35	110	20
4. New profile with floodway, length of shoreline with coastal velocity zone delineation, or converting coastal A Zones to V Zones or mapping the LiMWA.	290	60	230	45	140	25

HSS – Higher study standard credit is for conducting a study using future conditions, better topography, or other higher standard. “Future conditions” will be clarified to include sea level rise, subsidence, and climate change as well as watershed development, flood control projects, and new bridges. Up to three higher standards will be credited, instead of two.

Study scope	Original FIRM Zone			Max per Study
	B, C, D, or X	A or V	AE, VE, A#, V#	
1. Delineation of an approximate A Zone	20	15	–	60
2. Flood elevations for a site at time of development	30	20	15	90
3. New profile or length of shoreline	80	60	40	160

FWS – Floodway standard credit is for mapping the floodway using less than a 1 foot surcharge. Along with the reduction in points, the scoring is simplified:

1. FWS = 110, if the allowable rise was from 0 to 0.10 foot,
1. FWS = 90, if the allowable rise was from 0.11 to 0.25 foot,
2. FWS = 50, if the allowable rise was from 0.26 to 0.50 foot, or
3. FWS = 25, if the allowable rise was from 0.51 to 0.99 foot.

CTP – Cooperating Technical Partner. This is a bonus credit for being a CTP with FEMA. Studies completed pursuant to a CTP agreement will get a 18% credit bonus, up from 10%.

MAPSH – Special hazard credit is for mapping areas subject to one of the seven identified special flood-related hazards. Special hazards credits and points for all affected activities will be determined and published separately.

Activity 420 – Open Space Preservation

Objectives: (1) Prevent flood damage by keeping floodprone lands free of development and
 (2) Protect and enhance natural floodplain functions

2007 Manual	Max Points		2012 Manual	Max Points
OS – Open Space Preservation	725	⇒	Same (new acronym: OSP)	1,450
DR – Deed Restrictions	75	⇒	Same	50
NB – Natural and Beneficial functions	100	⇒	NFOS – Natural Functions Open Space	350
SHOS – Special Hazard Open Space	50	⇒	Same	TBA
430LD-LDC – Land Development Criteria *	100	⇒	OSI – Open Space Incentives *	250
430LD-LZ – Low density Zoning *	600	⇒	Same *	600
430-NBR – Natural functions Regulations	30	⇒	NSP – Natural Shoreline Protection	120
Max *	980		*	1,970
* These regulations are not credited in preserved open space areas that are credited under 420 – OSP. The impact adjustment accounts for this mutual exclusivity. Therefore, they are not included in the totals.				

OSP – Open space preservation credits keeping vacant lands vacant through ownership by a public agency, non-profit organization (such as a church camp), or restrictive regulations. To qualify, a property must be open, meaning there are no buildings, filling, or storage of materials. Note that OSP credit is limited to properties in the community’s regulatory floodplain. If there are preserved open spaces outside this area that have a flood protection benefit, they may qualify for credit under watershed management plan credit (WMP) in Activity 450 – Stormwater Management.

DR – Deed restrictions: bonus credit for ensuring that parcels credited for OSP will never be developed. No change is proposed other than a reduction in the maximum points.

NFOS – Natural functions open space: This new element will replace Natural and Beneficial Functions Open Space (NB). It has credit for having parcels credited for OSP preserved in or restored to their natural state, with bonus credits for additional attributes. The area affected must be mapped and the natural function being preserved or protected must be documented.

Natural Functions Open Space Credit	Max Points
1. Parcel is credited as OSP and is preserved in its natural state (required for any NFOS credit).	170
2. Parcel is designated in a plan to protect natural functions, e.g., a habitat conservation plan	50
3. Parcel is designated as critical habitat for threatened or endangered species or the species is present	50
4. Parcel is in a designated open space corridor or connected network	60
5. There is educational material on the site’s natural functions (10 points without a PPI)	20
Total	350

1. Parcel is credited as OSP and is preserved in its natural state: There is less credit if the area is preserved only for a set number of years. The property must be managed to stay in the natural state or otherwise managed to keep its designation. This will also credit areas restored

for a natural floodplain function, such as bioengineered channel stabilization projects, removal of seawalls to allow beach erosion, wetland or riparian habitat restoration, and moving levees back to allow channel meandering.

2. Parcel is designated in a plan to protect natural functions: The plan must meet the criteria for a Natural Floodplain Functions Plan (NFP) credit in 510.c.
3. Parcel is designated as critical habitat for threatened or endangered species or the species is present: "Threatened or endangered species" include those on a Federal or state list and those on an official Federal or state list as a species of concern or pending listing.
4. Parcel is in a designated open space corridor or connected network: This credits a designated open space corridor or connected network of wetlands, woodlands, wildlife habitats, wilderness and other areas that support native species, maintain natural ecological processes, and sustain air and water resources. "Designated open space corridor" means the property has been identified for its corridor or network value in an approved plan. In some areas, this is considered "green infrastructure."
5. There is educational material on the site's natural functions: Full credit is provided only if the information is covered in the community's Program for Public Information, credited in Activity 330. Such a program can be developed by a regional group.

SHOS – Special hazard open space: preserved open space in areas subject to a special flood-related hazard. Special hazards credits and points for all affected activities will be determined and published separately.

OSI – Open space incentives: This is a new element, but parts come from land development criteria (LDC) in 430LD. It will credit requirements and incentives that keep floodprone portions of developments open. OSI credit will not be provided in areas already developed or areas preserved as open space and credited under OSP.

Open Space Incentives Credit	Points
1. The regulations set aside all floodprone lands in a subdivision as open space, or otherwise keep them free from development. The credit can be prorated if smaller areas are set aside. *	250
2. Each lot in a new subdivision must provide a building site that is on natural high ground, out of the regulatory floodplain. *	150
3. <i>To the extent possible</i> , each lot in a new subdivision must provide a building site that is on natural high ground, out of the regulatory floodplain. If a lot does not have a buildable site out of the regulatory floodplain, all new structures, pavement, and other development must be sited on the highest land on the lot. *	65
4. The regulations include transfer of development rights language to encourage staying out of the floodplain. Fewer points are provided for a density bonus within the same development. *	70
5. The regulations allow cluster development or PUDs.	25
6. The community's land use plan recommends open space use or low density development of floodprone areas.	25
* These credits are mutually exclusive, so the points do not add up.	

LZ – Low density zoning provides credit for zoning districts that require lot sizes of one acre or larger. New in 2012: if the area is vacant, credit is only provided for minimum lot sizes of five acres or larger. LZ credit is not provided in areas preserved as open space and credited as OSP.

New language will be included for non-residential development and accounting for the number of units and lot coverage, rather than relying solely on the lot size to indicate low density zoning.

NSP – Natural shoreline protection: This new element credits programs that protect natural channels and shorelines, the area most valuable for protecting natural floodplain functions. The programs can be local policies followed on public lands and/or regulations that govern development on private lands. The credit will only be available for those channels or shorelines that are currently in their approximate natural state, i.e., there is no concrete, rip rap, levees, armoring, beach nourishment, dams, or other human intervention that constrains the natural processes of the river, stream, lake, or ocean shoreline.

While OSP and NFOS provide credit for open space and open areas with natural floodplain functions benefits, they treat all floodplain areas the same. NSP identifies the channel or shoreline, i.e., the area closest to the water, the first to flood, and the most important area to aquatic and riparian habitat, as worthy of special attention and additional credit. The credit is for allowing these areas to follow their natural processes, such as channel meandering and beach erosion, and to encourage natural shorelines that provide water quality benefits for runoff.

The credit is for a regulation or program that prohibits the following:

1. In channels and channel banks in riverine areas: rip rap or armoring, channel alterations, dredging, filling, or removal of vegetation.
2. On shorelines of lakes or oceans: filling or other alterations to a beach, including beach nourishment projects; alterations to sand dunes; or construction of seawalls, bulkheads, armoring, or other shoreline stabilization structures.

The regulation or program may allow human alterations that have a natural floodplain functions benefit, such as removing a levee, restoring habitat, reducing bank erosion with bio-engineering techniques, or planting to preserve sand dunes.

The following types of programs can be credited:

1. An ordinance or regulation that governs public and private activities, or
2. A written community policy that covers shorelines on the community's property, such as in city parks.

Programs to restore natural floodplain functions, such as re-establishing a wetland, are credited under NFOS. Regulations to require restoration activities, such as requiring a developer to set aside a habitat corridor, are credited under OSI.

There is only one score for the program. Unlike NFOS, there are no gradations of points. Therefore, the size of a buffer zone is irrelevant. However, a setback or buffer that prohibits buildings and filling can also qualify as preserved open space (OSP), subject to the OSP impact adjustment. The larger the buffer zone, the greater the OSP credit.

The impact adjustment for NSP will not be based on the area of the SFHA, but on the percentage of the length of affected shorelines divided by the total length of shorelines in the community.

The impact adjustment ratio is:

$$rNSP = \frac{aNSP}{aSL} \quad \text{where } aNSP = \text{the length of shoreline affected by the program} \\ \text{and } aSL = \text{the total length of shoreline in the community's SFHA}$$

Armored or concrete channels and ditches are counted toward aSL, but not toward aNSP. The option 2 default credit will be the same as for 430 elements, 0.25. Every channel that is counted towards CDR credit in Activity 540 – Drainage System Maintenance must be part of aSL. Therefore, the impact adjustment map will have to be in agreement with the impact adjustment map for Activity 540.

Credit for Natural Shoreline Protection can be provided in areas credited as preserved open space (OSP) to encourage communities to protect the shorelines on public lands.

Impact Adjustments

The table below summarizes what areas are included in the impact adjustment for the various elements in Activity 420. Credits for open space parcels (OSP, DR, NFOS, and SHOS) are only provided in areas that qualify for OSP. Credits for the regulatory elements (OSI, LZ, and all 430 elements except for BC and RA) are not provided in parcels that already qualify as preserved open space (OSP). Similarly, there is no 420 open space credit in areas already developed. The exception to these rules is that credit for protecting shorelines (NSP) will be available everywhere.

Activity 420 Impact Adjustment Criteria		
New Element	Open Space (OSP)	Developed areas
Open space preservation (OSP)	Included	Excluded
Deed restrictions (DR)	Included	Excluded
Natural functions open space (NFOS)	Included	Excluded
Special hazard open space (SHOS)	Included	Excluded
Open space incentives (OSI) *	Excluded	Excluded
Low density zoning (LZ) *	Excluded	Excluded
Natural shoreline protection (NSP)	Included	Included

Activity 430 – Higher Regulatory Standards

Objective: Require that new development be provided with more protection than is required by the NFIP's minimum criteria

2007 Manual	Max Points		2012 Manual	Max Points
		<i>new</i>	DL – Development Limitations *	1,330
FRB – Freeboard	300	⇒	More credit if fill prohibited * **	500
FDN – Foundation Protection	35	⇒	More credit if fill prohibited * **	80
CSI – Cumulative Substantial Improvement	110	⇒	Same *	90
LSI – Lower Subs. Improvement threshold	90	⇒	Same *	20
PCF – Protection of Critical Facilities	100	⇒	More flexible credit for partial protection *	80
PSC – Protection of Storage Capacity	80	⇒	Moved to new DL credit	
NBR – Natural/Beneficial Functions Regs	40	⇒	Moved to 420 Natural Shoreline Protection	
ENL – Enclosure Limits	300	⇒	Same * **	240
BC – Building Code	190	⇒	Same *	100
450-FRX – Freeboard in X Zones		⇒	LDP – Local Drainage Protection	120
STF – Staffing	50	⇒	Moved to new RA credit	
MHP – Manufactured Home Parks	50	⇒	Same *	15
CAZ – Coastal A Zones	650	⇒	Same * **	650
SHR – Special Hazards Regs		⇒	Same *	TBA
OHS – Other Higher Standards	100	⇒	Some credit incorporated in new DL credit *	20
SMS – State-Mandated Standards	45	⇒	Insurance agent training moved to new 370	20
		<i>new</i>	RA – Regulations Administration	67
430LD-LDC – Land Development Criteria	100	⇒	Moved to 420 Open Space Incentives	
430LD-LZ – Low density Zoning	600	⇒	Moved to 420 Low density Zoning	
	Max		**	1,862
* These regulations are not credited in preserved open space areas that are credited under 420 – OSP. The impact adjustment accounts for this mutual exclusivity.				
** FRB, FDN, ENL, and CAZ are mutually exclusive from DL, so they are not included in the total points				

Filling: The use of fill to elevate buildings has several advantages that make it very desirable for developers and homeowners. But, there are problems with using fill: it reduces floodplain storage capacity and it has an adverse impact on native vegetation, wetlands, drainage, and water quality. One method to offset the impacts of the use of fill is to require compensatory storage, but that does not compensate for the adverse impact on natural floodplain functions.

It was noted that all of the benefits of filling accrue to the development and the property owner while all of the problems accrue to neighbors, taxpayers, the community, the NFIP, or the environment. Therefore, the 2012 *Manual* is intended to show that filling is not a desirable floodplain management activity. This will be done by revising the credit criteria for three elements:

- 420 – Development Limitations (DL) will incorporate 430’s Protection of floodplain Storage Capacity (PSC) and increase the credit,
- 430 – Freeboard (FRB) will tie bonus credit for freeboard to restrictions on filling,
- 430 – Foundation protection (FDN) will tie full credit for foundations on fill to compensatory storage.

In all three cases, the new credits will address the two major concerns with filling: in riverine areas it has adverse impacts on natural floodplain functions and it can increase flood heights elsewhere due to loss of storage. In coastal areas it has adverse impacts on natural floodplain functions (flood heights are not impacted by fill in coastal areas).

Full credit will be provided in riverine areas where both impacts are addressed with a fill prohibition. Half credit will be provided for a compensatory storage requirement in riverine areas because comp storage does not protect natural floodplain functions. Half the credit will be provided in coastal floodplains, because prohibiting fill only affects the adverse impacts on natural floodplain functions.

In all cases, filling will be allowed to support projects to protect or restore natural floodplain functions, such as a channel restoration project.

DL – Development Limitations. This is a new credit for prohibiting fill (from the old PSC), prohibiting buildings, and/or prohibiting storage of materials in the floodplain. If all three items are included in the community’s regulations, the area affected probably qualifies for the higher credit for open space preservation (OSP in Activity 420). Note that there is no credit for DL and other higher regulatory standards in areas credited as OSP.

Development Limitations Credit	Points
1. Prohibit fill (including no CLOMR-Fs and LOMR-Fs) in riverine areas	280
1.a. Prohibit fill (including no CLOMR-Fs and LOMR-Fs) in coastal areas or require compensatory storage in riverine areas: 130	
2. Prohibit new buildings (pro-rated for prohibiting some types of buildings, e.g., residential)	1,000
3. Prohibit storage of materials	50
3.a. Prohibit storage of hazardous materials: 20	
3.b. Require hazardous materials to be stored above the base flood elevation: 10 points	
Total	1,330

In areas where the community prohibits new buildings under DL 2, there will be no credit for the following higher standards for new buildings: freeboard (FRB), foundation protection (FDN), enclosure limitations (ENL), and coastal A Zone regulations (CAZ).

Partial credit will be provided under DL 3 (prohibit storage of materials) for prohibiting the storage of hazardous materials. Somewhat less credit will be provided for requiring hazardous materials to be stored above the base flood elevation.

FRB – Freeboard: credit will be provided for up to three feet of freeboard. There will be additional credit if (1) the community prohibits construction of new buildings on fill or (2) requires compensatory storage where filling is allowed.

The table on the right shows the points. Separate credit may be developed to recognize more than three feet of freeboard where there are assurances that there is real growth potential, fill is prohibited, and the community does a thorough enforcement job.

Freeboard Credit			
Freeboard	No filling restrictions	Riverine areas: Comp storage required Coastal areas: fill prohibited	Riverine areas: fill prohibited
1 foot	100	110	120
2 feet	225	250	280
3 feet	375	440	500

The filling restrictions credit will be prorated if the community allows buildings on stem walls without compensatory storage. The current approach to providing more points for lower levels of freeboard in shallow flooding AO Zones will be kept. There will be additional credit if the freeboard requirement extends to properties outside the SFHA (e.g., all buildings on ground that is below the BFE + 2' must be elevated to two feet above the BFE, regardless of its FIRM Zone, up to the 150% limit on the impact adjustment).

There had been a proposal to provide credit for up to five feet of freeboard. That will still be possible, but it will be spelled out in a separate element, with additional provisions, such as a demonstrated expectation of new growth in the floodplain.

FDN – Foundation protection: requiring foundations to be engineered or constructed on compacted fill that is protected from erosion and scour. More emphasis will be placed on the engineering and less on filling.

This credit is not available in V Zones because an engineered foundation is a minimum NFIP requirement in V Zones.

Foundation Protection Credit	Points
1. Engineered foundations, no buildings on fill	80
2. Buildings on compacted fill, protected from erosion. In riverine areas, compensatory storage must be required	60
3. Buildings on compacted fill, protected from erosion and scour	35

The new credit is provided in more detail:

1. 80 points if ALL new buildings in the regulatory floodplain:
 - (a) Must be constructed on foundations that are designed and sealed by a registered design professional as complying with the requirements of the International Building Code, the International Residential Code, or ASCE 24, and
 - (b) New buildings are not allowed on fill.
2. 60 points if all new buildings built on fill in the regulatory floodplain must be
 - (a) Constructed on properly designed and compacted fill (e.g., Section 1803.5.8 and Section 1804.4 of the International Building Code, Section 2.4 of ASCE 24, as specified or equivalent),
 - (b) The fill has appropriate protection from erosion and scour, and
 - (c) In riverine areas, the building and fill must meet a compensatory storage requirement that meets the credit criteria of Section 431. Development Limitations (DL1a).
3. 35 points if all new buildings built on fill in the regulatory floodplain must be
 - (a) Constructed on properly designed and compacted fill (e.g., Section 1803.5.8 and Section 1804.4 of the International Building Code, Section 2.4 of ASCE 24, as specified or equivalent), and
 - (b) The fill has appropriate protection from erosion and scour.

CSI – Cumulative substantial improvements: counting multiple improvements so when they add up to 50% of the building's value, the substantial improvement rule applies. No change is proposed, other than a change in the points.

LSI – Lower substantial improvements threshold: having the substantial improvement rule apply when a project is valued at less than 50% of the building's value (e.g., 40%). A recent ruling by FEMA that Increased Cost of Compliance (ICC) will be made available to buildings that are deemed by a higher local code standard to be substantially damaged should make CSI and LSI more attractive to communities.

PCF – Protection of critical facilities: The maximum credit will be for preventing new critical facilities from being located in the 500-year floodplain. It is not feasible for some communities to locate critical facilities outside the floodplain, but they may be able to take some steps towards reducing future risk to these facilities and partial credit will be considered. Therefore, there will be gradations of credit to lesser standards. This will provide more opportunities for partial credit for different levels of protection to different types of critical facilities.

The following list is taken from community ordinances and suggestions and shows the variations in protection standards that could be submitted:

- Prohibiting all new critical facilities from the 500-year floodplain.
- Requiring all new critical facilities to be protected to the 500-year flood level + 1 foot of freeboard either by elevation or dry floodproofing.
- Regulating only one type of critical facility, such as hazardous materials sites or critical facilities owned and managed by the community
- A substantial improvement shall require the entire facility to be protected to the required elevation
- All additions (including those not meeting the substantial improvement threshold) must be protected to the required elevation.

- All new critical facilities must have access unless it is determined by the permitting authority that access is not needed. Full credit for access would necessitate an engineering study to ensure that the road (1) can withstand a 500-year flood and (2) would not cause an obstruction to flows.

Enclosure Limits Credit	Points
1. Regulations prohibit any building enclosures, including breakaway walls, below the base flood elevation, OR	240
2. Regulations prohibit enclosures of areas of 300 square feet or greater, including breakaway walls, below the base flood elevation and	190
a. There is a nonconversion agreement that meets the criteria of 3, below, OR	
b. There is no nonconversion agreement – 95 points	
3. Regulations require that the owner of a building sign a nonconversion agreement, promising not to improve, finish, or otherwise convert the area below the lowest floor and	90
a. The community will inspect the enclosed area at least once a year, OR	
b. Granting the community the right to inspect the enclosed area at any time – 60 points. OR	
c. No mention is made of inspections – 30 points.	

ENL – Enclosure limits: Credit is for prohibiting enclosing the bottom floor of elevated buildings or requiring a nonconversion agreement. There will be a change: to receive credit for limiting enclosures to less than 300 square feet, there must be a nonconversion agreement.

This change resulted from FEMA's experiences with claim payments for flooded buildings that had small enclosures that were converted to living areas. Credit points are further prorated based on the community's ability to inspect the enclosed area.

BC – Building code: credit is provided for adoption and enforcement of the International Codes or their equivalent. Enforcement of the codes will be verified. Where a community has two different BCEGS classes, the higher number will be used to calculate the credit.

The current approach of not having an impact adjustment for BC will be kept because (1) building codes help reduce flood and drainage problems outside the SFHA and (2) one of the main reasons for the credit is reduction of losses from other natural hazards.

Building Code Credit	Points	Points
Adoption of the International Building Code	20	
Residential Code	20	
Plumbing Code	3	
Mechanical Code	3	
Fuel Gas Code	2	
Private Sewage Disposal Code	2	
Total for code adoption		50
BCEGS classification of 5/5	10	
BCEGS classification of 4/4	20	
BCEGS classification of 3/3	30	
BCEGS classification of 2/2	40	
BCEGS classification of 1/1	50	
Max for BCEGS		50
Total		100

LDP – Local drainage protection: ensuring that new buildings are well above the street level or otherwise protected from shallow drainage flooding. This was moved from 450 – FRX. Items 3 and 4 in the table have new language.

MHP – Manufactured home parks: removing the elevation exemption for manufactured homes placed in existing manufactured home parks. The current exemption from having an impact adjustment will be kept because there won't be many points for this element and manufactured home parks comprise a small area of a floodplain. However, the community will need to provide (1) Elevation Certificates for recently installed manufactured homes and (2) documentation that the homes meet the required anchoring standards.

Local Drainage Protection Credit	Points
1. Credit is based on how high the lowest floor (including basement) must be above the crown of the nearest street or the highest grade adjacent to the building); [maximum is for 3 feet] OR	120
2. if the regulations require that as a condition for a building permit, the applicant must prepare a site plan that accounts for street flooding, local drainage from and onto adjoining properties and that protects the building from local drainage flows; OR	40
3. if the regulations require that the applicant provide positive drainage away from the building site to an approved point of collection that does not create a hazard or problem on neighboring properties. OR	20
4. if the regulations require that the increased volume of runoff due to the development is kept on site, such as via a low impact development measure.	20

CAZ – Coastal A Zones: enforcing V Zone rules and ENL enclosure limits inland from the V Zone boundary. The credited regulations and the total points are not proposed for change, but the impact adjustment needs to be clarified:

- 1.0, if 100% of the community's SFHA is covered by CAZ regulations.
- 0.5, if the community has a LiMWA or has mapped an area using the same criteria and 100% of that area is covered by CAZ regulations. Option 3, the actual ratio, can be used where the area subject to CAZ regulations is larger than 50% of the SFHA.

- 0.1, if the regulations apply to a community-defined "coastal A Zone" that does not meet FEMA's LiMWA mapping criteria.

SHR – Special hazards regulations: enforcing appropriate construction standards in areas subject to a special flood-related hazard. Special hazards credits and points for all affected activities will be determined and published separately.

OHS – Other higher standards: credit for regulations not credited elsewhere. Some past credits, such as prohibiting certain types of buildings, will be in DL.

SMS – State-mandated regulatory standards: bonus credit if a regulatory standard is required by the state. The part of this element that credits state insurance training requirements will be dropped as no state has ever met the credit criteria.

RA – Regulations administration: This is a new element with five parts, as shown in the table.

1. Staff training: The current element for staffing (STF) will be put in this new element (although the credit points may be different). STF provides five points for each Certified Floodplain Manager and each graduate of several four day classes conducted or sponsored by FEMA's Emergency Management Institute.

Regulations Administration Credit	Points
1. Staff training	25
2. Building department is IAS accredited	5
3. Conducting 3 detailed inspections	16
4. Conducting reinspections	16
5. Off-site record storage (old ORS)	5
	67

2. IAS is the International Accreditation Service, an arm of the International Code Council. It has a new program that reviews and accredits building department. The program is explained at www.iasonline.org/Building_Department_Program.
3. Conducting three detailed inspections: On the next page are specific criteria for when the inspections are conducted, what is inspected, and what documentation is needed.
4. Conducting reinspections, i.e., inspecting buildings when they are sold or rented to a new tenant or when a home improvement permit is applied for. For CRS credit, the regulations must clearly state that the community's inspector has a right to enter the building at the designated occurrences (e.g., sale of the property) and will inspect for compliance with the floodplain management permit that was previously issued. Documentation of the inspections will be needed at verification.
5. The off-site records storage credit is being moved from Activity 310 – Elevation Certificates. There will be more specific information on what qualifies as a "secure location" and how to credit off-site backups of digital data.

Because all Elevation Certificates will be collected with each year's recertification (see Activity 310) there will be no credit for off-site storage of Elevation Certificates. All of the credit will be based on backup storage of other permit records.

Regulations Administration Credit for Inspections

There will be a new credit for conducting three inspections as described below. There is no partial credit for two inspections or doing less than what is listed here.

For credit, the community must conduct at least three inspections for each permitted development project in the regulatory floodplain according to the following criteria:

1. The permit application records must include a site plan that shows:
 - a. The site plan's scale and north orientation arrow
 - b. The parcel boundaries and the location and names of adjacent streets
 - c. All watercourses on the parcel
 - d. All floodplain, V Zone, coastal A Zone, and floodway boundaries that run through the parcel
 - e. All required buffer or setback lines from shorelines or channel banks
 - f. All drainage and utility easements
 - g. All areas to be cleared, cut, graded, or filled
 - h. The location of all existing and proposed fences, walls, and other structures
2. If the permit includes a new building or an expansion to an existing building:
 - a. The site plan must show the footprint of all existing and proposed buildings and building additions.
 - b. The permit application papers must include:
 - c. The elevation of the lowest floor of the building (or addition) and of an attached garage, including the elevation of the interior grade or floor of a crawlspace,
 - d. The location and elevation of all mechanical and utility equipment servicing the building, and
 - e. For buildings with solid foundation walls and buildings with enclosures below the BFE, the total area of each enclosed area (sq. ft.) measured on the outside, the location and specifications of all flood openings, and (a) the total net open area (sq. in) of flood openings below the BFE, accounting for screens, louvers, faceplates, and grilles; or (b) a statement of certification if engineered openings are specified (see NFIP Technical Bulletin #1).
3. The first inspection is conducted when the site is staked out or otherwise marked. The inspector checks that areas subject to special requirements are clearly marked on the ground. For example, if the floodway, coastal A Zone, or V Zone line goes through the parcel or there is a natural area that is not to be disturbed, it could be staked out. If there are no such areas, then this inspection does not need to be conducted for CRS credit (however, it is still a good idea to place stakes or other markings to show the building footprint in order to verify setbacks and other code requirements).
4. The second inspection is conducted when the project involves a building. The builder provides the community with documentation of the surveyed lowest floor elevation. The inspector checks that:
 - a. The foundation or forms for the structure are correctly located on the site,
 - b. Where buildings have foundation walls or other enclosures below the BFE, the location and size of the openings are as specified on the approved plans.

The inspection records must include a record that the elevation of the lowest floor or the forms for the foundation walls were surveyed and found to be compliant. This could be, but does not have to be, a FEMA Elevation Certificate. At this point the inspector verifies that the lowest floor will be at or above the required elevation. This inspection is not needed if the project does not involve construction of a new building or a substantial improvement.

Regulations Administration Credit for Inspections (Continued)

5. The final inspection is conducted when the project is finished, the Elevation Certificate is submitted, and before a certificate of occupancy is issued. The inspector checks that:
 - a. The foundation and floor elevation have not been altered since the second inspection,
 - b. The building's lowest floor is at or above the required elevation and the correct information is recorded on the Elevation Certificate,
 - c. All areas below the required elevation are constructed with materials resistant to flood damage,
 - d. All required manufactured home tie downs are in place,
 - e. Where buildings have foundation walls or other enclosures below the BFE, the location and size of the openings are as specified on the approved plans and recorded on the Elevation Certificate,
 - f. All electrical, heating, ventilation, plumbing, air conditioning, ductwork, and other equipment is located, elevated or protected as specified on the approved plans and recorded on the Elevation Certificate.
 - g. In coastal high hazard areas (Zone V) and coastal A Zones, slabs placed under the building are not connected to the foundation.
 - h. The Elevation Certificate is complete and appears correct (e.g., the height of the lowest floor above the highest adjacent grade is accurate).
 - i. V Zone and Breakaway Wall Certificates are obtained, as appropriate, for new and substantially improved buildings in V Zone and coastal A Zone areas.
 - j. Buildings with enclosures in coastal A Zones meet the A Zone vent requirements.

The inspection records must include:

- Photographs of all sides of the structure,
- Close up photographs of typical openings,
- Photographs of all mechanical and utility equipment located outside the building, and
- A completed FEMA Elevation or Floodproofing Certificate, as appropriate.

Documentation: The community must have records for each inspection available for the verification visit that show that show how each item was checked. The records must include copies of the photographs and elevation surveys.

Activity 440 – Flood Data Maintenance

Objective: Make the community's floodplain data more current, useful, or accurate to improve local regulations, planning, disclosures, and property appraisals

2007 Manual	Max Points		2012 Manual	Max Points
AMD – Additional Map Data	129	⇒	Two new credited attributes	160
BMM – Benchmark Maintenance	90	⇒	Alternative approaches to be credited	27
EDM – Erosion Data Maintenance	-	⇒	Same	TBA
FM – FIRM Maintenance	20	⇒	Same	15
Max	239			202

AMD – Additional map data credit is for incorporating FIRM data into the community's GIS and using the results in its regulatory and mitigation programs. The minimum requirement is for a layer that shows the items in the first line, below. Additional credit is provided for having layers for other attributes, as listed below, with the new points. Items l and m are new for 2012.

Additional Map Data	Points
a. Floodplain boundaries, corporate limits, streets, and parcel or lot boundaries	20
b. Buildings, building outlines, or building footprints	26
c. Floodways or coastal high hazard areas	12
d. Showing base flood elevations	12
e. FIRM zone attributes (e.g., A3, VE, etc.)	10
f. 500-year floodplain elevations or boundaries	10
g. Areas subject to other natural hazards	10
h. (2) Including contour lines at a smaller contour interval than on USGS quads	8
i. Floodplain data in the tax assessment data base	10
j. All FIRMs in effect after the date of the community's application to the CRS	6
k. Other data used for regulation or mitigation programs	8
l. Areas with natural floodplain functions (e.g., wetlands, designated riparian habitat)	14
m. Building elevation data	14
	160

BMM – Benchmark maintenance credit is for ensuring that benchmarks are accurate and maintained. The 2012 *Manual* will recognize more frequent re-surveying of benchmarks that don't have the stability ratings of A or B and CORS systems that support GPS surveying. The credit will be based on the number of qualifying benchmarks and CORS stations in floodplains with regulatory flood elevations, rather than all floodplains.

EDM – Erosion data maintenance is a special flood-related hazard. Special hazards credits and points for all affected activities will be determined and published separately.

FM – FIRM maintenance credit is for keeping copies of all old FIRMs, Flood Insurance Studies and Flood Hazard Boundary Maps. Digital or paper copies will be credited.

Activity 450 – Stormwater Management

Objective: Minimize the impact of new developments on surface water drainage and runoff.

2007 Manual	Max Points		2012 Manual	Max Points
SMR– Stormwater Mgmt. Regulations	225	⇒		380
SZ – Size of development regulated	25	⇒	Same	110
DS – Design Storm	110	⇒	New credit for managing volume	225
PUB – Public maintenance	90	⇒	Credit only for the requirement	20
		<i>new</i>	LID – Low Impact Development	25
WMP – Watershed Master Plan	225	⇒	Same	315
FRX – Freeboard in X Zones	150	⇒	Moved to activity 430, LDP	
ESC – Erosion and Sedimentation Control	45	⇒	Less credit for NPDES criteria	40
WQ – Water Quality regulations	25	⇒	Same	20
Max	520			755

SMR – Stormwater management regulations credits requiring all new developments to manage their excess stormwater runoff on site. It will have four sub elements, one more than in the past, the scores for which are summed to obtain the score for SMR.

1. **SZ – Size of development regulated:** minimum credit is for regulating developments of five acres or smaller, maximum credit is for regulating all development.
2. **DS – Design storm:** minimum credit is for managing the 10-year storm, maximum credit is for managing all storms up to the 100-year. This credit has previously been limited to managing peak flows, but there will be more points for also limiting increases in the volume of stormwater runoff leaving the site.
3. **PUB – Public maintenance:** requiring new stormwater management facilities to be maintained and subject to inspection. The credit in 450 will be limited to the regulatory requirement. There is a new credit in 540 – Drainage System Maintenance for the inspections and maintenance of storage facilities.
4. **LID – Low impact development:** This is a new element for requiring developers to use low impact development or similar “soft” techniques to minimize the size of on-site detention and to replicate natural stormwater characteristics.

WMP – Watershed master plan credit is for having a master plan to best determine how to manage stormwater, using open space, man-made, and natural approaches. There will be a new credit for having a dedicated source of funding for implementation, such as a stormwater utility.

ESC – Erosion and sedimentation control regulations credit is for management of sediment-laden runoff from construction sites. ESC will provide minimal credit for programs that do not regulate construction sites smaller than the national NPDES requirement, one acre. Credit for regulating agricultural lands will be dropped.

WQ – Water quality regulations: requiring stormwater management facilities to incorporate permanent best management practices (BMPs) for water quality. No change is proposed.

Activity 510 – Floodplain Management Planning

Objective: Produce a program of activities that will best tackle the community’s vulnerability to the hazard and meet other community needs

2007 Manual	Max Points		2012 Manual	Max Points
FMP – Floodplain Management Planning	294	⇒	Refinements in the steps expected	417
RLAA – Repetitive Loss Area Analyses	50	⇒	Wider distribution of the analyses	140
HCP – Habitat Conservation Plan	15	⇒	NFP – Natural floodplain functions plan	100
Max	359			657

FMP – Floodplain management planning credits a 10-step process to prepare, adopt and implement a plan to mitigate the community’s flood problems and protect natural floodplain functions. The major 2012 changes to the 10 steps are noted below.

- Step 1. Organize to prepare the plan
- Step 2. Involve the public
- Step 3. Coordinate: This step will be simplified.
- Step 4. Assess the hazard
- Step 5. Assess the problem: Must cover all hazards identified in Step 4 and repetitive loss areas. Communities will get extra credit for assessing the impact of climate change, including sea level rise.
- Step 6. Set goals: Must address all problems identified in Step 5.
- Step 7. Review possible activities: The plan must describe the community’s capability to implement the activities reviewed.
- Step 8. Draft an action plan: Must address all problems identified in Step 5.
- Step 9. Adopt the plan
- Step 10. Implement, evaluate, and revise

The University of North Carolina reviewed 60 510 plans and found that many did not relate the problem to the recommended solutions. Therefore, plans will need to show how the problems described in Step 5 are addressed in steps 6 and 8. For example, if repetitive flood losses are a problem, the plan will need to show how the action plan relates to mitigating repetitive losses.

RLAA – Repetitive loss area analyses credits more detailed plans for identified repetitive loss areas, following a five step process. In 2012, the analysis reports must be made available to all the property owners in the repetitive loss areas and be submitted to and approved by the governing council. There must be annual progress reports. The National Flood Mitigation Data Collection Tool will be recommended, but no longer required.

NFP – Natural floodplain functions plan: HCP – Habitat Conservation plan will be replaced by credit for a natural floodplain functions plan that protects natural functions of the community’s floodplain. Examples include a habitat conservation or restoration plan or a green infrastructure plan.

Activity 520 – Acquisition and Relocation

Objective: Acquire, relocate, or otherwise clear buildings out of the flood hazard area

2007 Manual	Max Points		2012 Manual	Max Points
520 – Acquisition/Relocation	3,200	⇒	Same	1,866

This activity has always been straightforward: the number of points is based on the number of buildings that have been cleared out of the floodplain. Credit is also for clearing repetitive loss properties in any location. With the change in the maximum points for this activity, credit for each building removed will be reduced

Double and triple points are provided for clearing out repetitive loss properties and severe repetitive loss properties, respectively. This credit will be dependent on the community submitting updated AW-501 repetitive loss worksheets.

The changes include:

1. Double credit will be provided for removing critical facilities from the floodplain. This will treat critical facilities and repetitive loss properties the same way in both 520 and 530.
2. There will be a 50% credit bonus for buildings that are removed from the V Zone, coastal A Zone, or coastal erosion area. If a building was moved, it would have to be moved to a site outside these zones.
3. For CRS credit purposes, FIRM zone boundaries shall be as shown on the current FIRM or on a published preliminary FIRM, whichever shows the larger floodplain.
4. There will be new environmental review criteria to ensure that the CRS is not rewarding projects that have a negative impact on environmental, historical and cultural resources. Depending on the type of project, the procedures will require a review in accordance with applicable sections of the Federal programs listed in the box and corresponding state rules.

Environmental Review Regulations

National Historic Preservation Act
 Archeological & Historical Preservation Act
 Endangered Species Act
 Fish & Wildlife Coordination Act
 Clean Water Act
 Sec. 10 Rivers and Harbors Act
 Farmlands Protection Policy Act
 E.O. 11988 Floodplain Management
 E.O. 11990 Wetlands Protection
 E.O. 12898 Environmental Justice
 Coastal Zone Management Act
 Coastal Barriers Resources Act

Activity 530 – Flood Protection

Objective: Protect existing buildings from flood damage

2007 Manual	Max Points		2012 Manual	Max Points*
530 TU – Techniques Used				
Elevation	2,800	⇒	Same	1,540
Dry floodproofing		⇒	Same	635
Wet floodproofing		⇒	Same	675
Sewer backup protection	200	⇒	Same	455
Barriers, levees, floodwalls		⇒	Same	810
Reservoirs, detention, retention		⇒	Must account for future flood increases	1,300
Channel modifications	1,000	⇒	Must account for future flood increases	1,110

* The maximum points shown are the maximum points that a community can receive for that flood protection technique. The maximum credit a community can earn for Activity 530 for all protected buildings is 1,540 points.

Activity 530 credit is based on the flood protection technique used to protect buildings that remain in the floodplain. Credit is also provided for protecting repetitive loss properties in any location.

The credit in 530 is pro-rated based on the improvement in the flood protection level. In the 2007 *CRS Coordinator's Manual*, the maximum 530 credit is for elevating a building to one foot above the base flood elevation or to the 500-year flood elevation. The maximum credit level will change to the flood protection level designated in ASCE 24-09. An excerpt is on the next page:

For example, for Category II buildings, full credit will be provided if the building is protected to the base flood elevation plus one foot in an A Zone, or the design flood elevation (the BFE plus the community's freeboard), whichever is higher. Partial credit will continue to be provided for lower levels of protection.

Full credit for Category IV buildings will be based on either the standard in the table or the standard in Activity 430 – Higher Regulatory Standards for protecting critical facilities (the 500-year flood elevation), whichever is higher. Note that the DFE is defined by the community. A community's DFE may be the BFE plus 2 or more feet of freeboard.

For CRS credit purposes, the base flood elevation shall be as shown on the current FIRM or on a current published preliminary FIRM, whichever is higher.

The new environmental review criteria discussed for 520 will also apply to 530.

		Category I	Category II	Category III	Category IV
Elevation of Lowest Floor (A Zone)	All A Zones not identified as Coastal A Zones: elevation of lowest floor	DFE	BFE +1 foot or DFE, whichever is higher	BFE +1 foot or DFE, whichever is higher	BFE +2 foot or DFE, whichever is higher
Elevation of Bottom of Lowest Horizontal Structural Member (V Zone)	All V Zones and Coastal A Zones: where the lowest horizontal structural member is parallel to direction of wave approach	DFE	DFE	BFE +1 foot or DFE, whichever is higher	BFE +1 foot or DFE, whichever is higher
	All V Zones and Coastal A Zones: where the lowest horizontal structural member is perpendicular to direction of wave approach	DFE	BFE +1 foot or DFE, whichever is higher	BFE +2 feet or DFE, whichever is higher	BFE +2 feet or DFE, whichever is higher
<p>BFE: base flood elevation DFE: design flood elevation, i.e., the BFE plus the locally required freeboard. Category I: Structures that represent a low hazard to human life in the event of failure including, but not limited to agricultural facilities, certain temporary facilities, and minor storage facilities. Category II: All structures except those listed in Categories I, III and IV Category III: Structures that represent a substantial hazard to human life in the event of failure including, but not limited to schools, jails, health care facilities (see ASCE 24 for the full list) Category IV: Structures designated as essential facilities including but not limited to hospitals, police stations, emergency shelters (see ASCE 24 for the full list)</p>					

For credit for structural flood control projects (reservoirs, detention, retention, pump stations, and channel modifications):

- The project must either have been designed to account for future changes in flood levels (including sea level rise expected over the next 100 years) or the community must regulate the watershed to ensure no increases in future flood levels .
- If the project depends on a non-accredited levee (e.g., an improvement to a pump station), the community must also qualify for credit under Activity 620 – Levees.
- If the project changes the base flood elevation shown on the FIRM, credit will be dependent on submittal of a request for a Letter of Map Revision (LOMR). This is required by 44 CFR Section 65.3 of the NFIP regulations.

Activity 540 – Drainage System Maintenance

Objective: Keep the channels and storage basins clear of debris in order to maintain their flood carrying and storage capacity

2007 Manual	Max Points		2012 Manual	Max Points
CDR – Channel and basin Debris Removal	200	⇒	CDR – Inspecting and maintaining channels	208
		<i>new</i>	SBM – Inspecting/maintaining storage basins	118
More attention to problem sites	50	⇒	PSM – Problem site maintenance	50
Capital improvement program	50	⇒	CIP – Capital improvements program	70
SDR – Stream Dumping Regulations	30	⇒	SDR w/o publicity: 15, w/publicity: 25, w/PPI:	32
EPM – Coastal Erosion Protection Maint.		⇒	Same	TBA
Max	330			

The original CDR – Channel and basin debris removal will be divided into four parts:

CDR – Channel debris removal: Inspecting channels and removing debris to maintain conveyance. This will cover all natural, private and publicly owned drainage channels to ensure flood elevations along a channel do not increase due to debris.

SBM – Storage basin maintenance: Inspecting retention and detention basins and maintaining them as needed. This will cover flow control facilities that retain, detain, or infiltrate stormwater runoff to prevent downstream increases in flow. Communities that received public maintenance credit (PUB) in Activity 450 – Stormwater Management should be able to qualify for this credit. The revised PUB regulation will be a prerequisite for this credit.

PSM – Problem site maintenance: Providing special attention to known problem sites, such as more frequent inspections

CIP – Capital improvements program: Having a capital improvements program, i.e., a long-term program to correct or replace drainage problem sites

There will be better guidance on the definition of the drainage system for full credit. To receive full credit for inspecting and maintaining storage basins, underground facilities will need to be included.

Annual inspections will continue to be required for credit. The new environmental review criteria discussed for 520 will also apply to 540.

SDR – Stream Dumping Regulations will continue, with half of the points provided for the regulations and half for publicizing the regulations. Publicity will be scored using the same approach as outreach projects in Activity 330 – Outreach Projects. This will mean more credit for more projects and extra credit if the outreach is designed by a Program for Public Information, up to the maximum points available in SDR.

Activity 610 – Flood Warning and Response

Objective: Provide timely identification of impending flood threats, disseminate warnings to appropriate people, and coordinate flood response activities

2007 Manual	Max Points		2012 Manual	Max Points
FTR – Flood threat recognition system	40	⇒	More credit for predicting areas affected	75
EWD – Emergency warning dissemination	60	⇒	More attention to prepared messages	75
ORE – Other response efforts	50	⇒	FRO – flood response operations	120
CFP – Critical facilities planning	50	⇒	Same	75
SRC – StormReady community	25	⇒	Same	20
TsunamiReady community	30	⇒	TRC – TsunamiReady Community	30
Max				395

There will be new names for the 600 Series and all three activities. The series name will change from Flood Preparedness to Warning and Response.

New prerequisite: The community must provide information to residents and businesses on safety measures people should take before, during, and after a flood.

- Communities with riverine flooding must meet this requirement by sending a notice to at least 90% of the community’s properties annually. The notice will be eligible for credit as an outreach project (OP) under Activity 330 – Outreach Projects.
- Coastal jurisdictions with flooding only from tropical storms and hurricanes can meet this requirement by either (1) sending the annual notice described above or (2) providing repeated watch, warning and safety information, using written notices or mass media, and beginning at least 72 hours in advance of the storm. The second approach could be credited under Activity 330’s new flood response preparations element (FRP).
- A community that has more than one source of flooding may need to do different types of outreach to different audiences.
- A community with a Program for Public Information may use a different approach, providing the PPI document explains how the approach meets the objective of this prerequisite.

FTR – Flood threat recognition system credit is for having a system that forecasts flood elevations and arrival times at specific locations within the community. The element will have two parts:

1. Data collection, i.e., receiving predicted flood levels (40% of the credit) and
2. Flood forecast, i.e., relating the predictions to the areas affected through real time models or flood stage forecast maps (60% of the credit).

EWD – Emergency warning dissemination credits disseminating the warning to the general public using a variety of means. Full credit for door-to-door warnings and using the Emergency Alert System will require more advance preparations and messaging. New credit will be provided for critical facilities having NOAA Weather Radios and having prepared public messages for different scenarios. This section will also remind readers that there is credit for pre- and post-flood outreach efforts under Activity 330's flood response preparations element (FRP).

FRO – Flood response operations credits a plan with specific tasks to be taken at various flood stages to reduce or prevent threats to health, safety, and property. New credits are provided for more detailed planning and for including mitigation actions in the emergency response plan.

CFP – Critical facilities planning provides credit for coordination of flood warning and response activities with the operators of critical facilities, such as hospitals, nursing homes, and hazardous materials storage sites.

SRC – StormReady community and TRC – TsunamiReady community: These designations are made by the National Weather Service. No change in the credit criteria is proposed.

Recertification: The community will need to provide after action reports evaluating plan implementation during each year's response plan exercise or after a flood. The type of drill or exercise a community uses must be related to its flood hazard. A table top exercise, a full scale drill, or an actual event where the community's emergency operations center is fully activated will meet this requirement.

Activity 620 – Levees

Objective: Reduce the threat of a levee failure, but prepare for the flood if a failure does occur

2007 Manual	Max Points		2012 Manual	Max Points
LPL – Level Protection Level	900	⇒	Dropped as the basis for credit	
Prerequisite: Levee built before 1991 and protects to the 25 – 100-year flood		⇒	Removed, but the structure must meet FEMA's criteria for a "levee"	
Levee maintenance		⇒	LM – Levee maintenance	97
Emergency plan		<i>new</i>	LFR – Levee failure recognition system	30
		<i>new</i>	LFW – Levee failure warning	30
		<i>new</i>	LFO – Levee failure operations plan	50
		<i>new</i>	LCF – Levee failure critical facilities planning	30
Max	900			237

Previously, this credit has only been provided for structures built before 1991 that are not recognized as 100-year levees on a Flood Insurance Rate Map. The points were based on the level of protection provided by the levee. All three of these prerequisites will be dropped. The credit points for a community with a 50-year levee will be the same as for a 200-year levee, because the credit will not be for the protection level – it will be for maintaining the levee in good shape and preparing for the flood that will occur when the levee fails or is overtopped.

There will be an outreach project prerequisite. It will not be a credited element in 620, but the project can receive credit under Activity 330 – Outreach Projects.

LM – Levee maintenance: All levees will need to have an operations and maintenance plan and conduct and pass annual maintenance inspections. This will be a prerequisite for all the other credits, but it will also be worth points for non-accredited levees. Credit points are not available for accredited levees because maintenance is a minimum requirement for accreditation (but accredited levees are eligible for the rest of the activity's credits).

LFR – Levee failure recognition system: This is similar to 610's FTR – Flood threat recognition system. It is for having a system to advise the emergency manager when a levee may be in danger of failure or overtopping. The system must be tested monthly with communication checks between the levee owner and the community's emergency manager. This is required for the following credits.

LFW – Levee failure warning: This is similar to 610's EWD – Emergency warning dissemination, credit for different ways to warn people threatened by a levee that may overtop or fail.

LFO – Levee failure operations plan: This is similar to 610's FRO – flood response operations, specified steps to be taken at different flood levels. LFR and LFW are prerequisites. There must be annual exercises or drills of the plan.

LCF – Levee failure critical facilities planning: This is similar to 610's CFP – critical facilities planning. There will be more credit for more detailed coordination with the facilities.

A separate paper is available on how the new credits relate to the National Levee Safety Committee's draft report to Congress.

Activity 630 – Dams

Objective: Reduce the threat of a dam failure, but prepare for the flood if a failure does occur

2007 Manual	Max Points		2012 Manual	Max Points
SDS – State Dam Safety Program		⇒	Revised criteria	
		<i>new</i>	Condition Assessment (CA)	15
Regs of Construction of New Dams (CND)	15			
Regs of Modifications to Existing Dams (MED)	15			
Emergency Action Planning (EAP)	6		Emergency Action Planning (EAP)	15
Dam Owner Responsibility (DOR)	3			
Public Information and Training (PIT)	6		Risk Communication/Public Awareness	15
Technical Staff (TSF)	24			
Staff Education and Training (SET)	6			
Total SDS	75			45
DFP – Dam Failure Response Plan				
Dam failure recognition	25	⇒	DFR – Dam failure recognition system	26
Dam failure warning dissemination	25	⇒	DFW – Dam failure warning	26
Evacuation/critical facilities coord/notification	50	⇒	DFO – Dam failure operations plan	35
		<i>new</i>	DCF – Dam failure critical facilities planning	26
Total DFP	100			113
Max	175			158

SDS – State Dam Safety Program credit has provided the state program's score to all communities in a state. In 2012, SDS credit will be limited to communities downstream of a dam that could be flooded if the dam failed. It will be up to the community to obtain the dam failure inundation map(s) (or other documentation from the state dam safety office) needed to document this prerequisite. This will encourage community officials to determine if they face such a threat.

The 2012 credit criteria for SDS will reflect FEMA's efforts to get state programs more involved in emergency planning for dam failures and to work more with communities and the public.

There will be three parts to this credit, each worth up to 15 points for a maximum of 45 points:

- Condition Assessment (CA) (maximum credit: 15 points) – *New criteria*
- Risk Communication/Public Awareness (RC/PA) (maximum credit: 15 points) – *More points for current criteria*
- Emergency Action Planning (EAP) (maximum credit: 15) – *New criteria*

The one credit for local dam failure preparedness will be expanded into three elements that mirror the elements in 610 and 620.

DFR – Dam failure recognition system: This is similar to 610's FTR – Flood threat recognition system. It is for having a system to advise the emergency manager when a dam may be in danger of failure. The system must be tested monthly with communication checks between the operator of the dam and the community's emergency manager.

DFW – Dam failure warning: This is similar to 610's EWD – Emergency warning dissemination credit for different ways to warn people threatened by a dam that may fail. There are two prerequisites: DFR and a targeted outreach project, credited in Activity 330. The project must be targeted to the residents in the affected area and must advise them of the dam failure threat, and warning, evacuation, and safety procedures. There is no extra credit for this prerequisite in 630, but the outreach project can receive credit in 330.

DFO – Dam failure operations plan: This is similar to 610's FRO – flood response operations, specified steps to be taken at different flood levels. DFR and DFW are prerequisites. There must be annual exercises or drills of the plan.

DCF – Dam failure critical facilities planning: This is similar to 610's CFP – critical facilities planning. There will be more credit for more detailed coordination with the facilities.

Special Hazard Credit

The CRS provides credit for mapping, preserving open space, and regulating new development in areas subject to seven designated special flood-related hazards:

1. Uncertain flow paths: alluvial fans, moveable bed streams, and other floodplains where the channel moves during a flood.
2. Closed basin lakes: lakes that have a small or no outlet that may stay above flood stage for weeks, months, or years.
3. Ice jams: flooding caused when warm weather and rain break up a frozen river. The broken ice floats downriver until it is blocked by an obstruction, such as a bridge, creating a dam.
4. Land subsidence: lowering of the land surface caused by withdrawal of subsurface water or minerals or by compaction of organic soils.
5. Mudflow hazards: a river, flow, or inundation of liquid mud down a hillside, usually as a result of a dual condition of loss of brush cover and the subsequent accumulation of water on the ground, preceded by a period of unusually heavy or sustained rain.
6. Coastal erosion: areas subject to the wearing away of land masses caused primarily by waves on the oceans, Gulf of Mexico, and the Great Lakes.
7. Tsunamis: large ocean waves caused by an underwater earthquake or volcano.

These special flood-related hazards are addressed in separate publications that discuss their credit points, impact adjustment, and documentation requirements. They will be available after the 2012 *CRS Coordinator's Manual* is completed. The following changes to the credit criteria are planned:

1. **Alluvial fans and ice jams:** 410 MAPSH credit will be provided for mapping alluvial fans and areas subject to ice jams. Because there are mapping criteria for these two hazards in FEMA's *Guidelines and Specification for Flood Hazard Mapping Partners*, the policy had been to treat mapping them as a minimum requirement of the NFIP. However, few, if any regular Flood Insurance Studies have mapped these hazards.
2. **Coastal erosion:**
 - a. Include setbacks as eligible for open space preservation credit (420 – SHOS)
 - b. Expand the open space preservation credit (420 – SHOS) to include all of the lands within the erosion setback area and the coastal VE and AE zone areas, not just areas forward of the frontal dune.
 - c. Increase the maximum credit for coastal hazards open space (420 – SHOS).
 - d. Increase the credit for prohibiting hardened structures (430 – SHR).
3. **Tsunami:** To receive any credit, a community must map and regulate the area affected by the special hazard. It is very difficult to regulate new construction for a tsunami hazard that may exceed the base flood elevation by 10 or more feet. Therefore, an alternative prerequisite for tsunamis will be that the community map the hazard and have an appropriate tsunami warning and response program.

Appendices

The 2007 *CRS Coordinator's Manual* has nine appendices, an Index, and the Activity Worksheets.

- Appendices A, G, and H will be eliminated because this information can be better kept up to date and made available more widely on a website.
- Appendix C will be eliminated. This is a half page table that related points to classes and premium reductions. It was originally included as an appendix because it was thought that it might change. It has not changed in 15 years. It will be moved to the introductory section of the *Manual*.
- Appendix F will be eliminated because it is not needed any more. There have been no reports of anyone using it and the “For More Information” sections of each activity will have a list of relevant assistance agencies and links to their websites.
- Appendix I will be eliminated because of the move to a less formal Quick Check approach that will replace the formal application procedures. Application prerequisites will still be covered in Sections 212 and 213.
- Most of the activity worksheets will be eliminated as a separate publication. We’ll still keep those that a community needs to complete, such as the verification cover sheet that needs the CEO’s signature and the 450 – Stormwater Management and 610 – Flood Warning and Response worksheets needed for the technical reviewers. The ISO Calculation Software will still be made available to communities, which is an automated version of the worksheets, but there is no requirement that a community fill them out.

2007 Manual Appendices	
App A	– FEMA Regional Offices
App B	– Acronyms
App C	– Classification Points
App D	– Comparison with NFIP Regs
App E	– CRS Publications
App F	– Assistance Agencies
App G	– ISO/CRS Specialists
App H	– State Coordinators
App I	– Application Procedures
	Index
	Activity Worksheets

These changes will leave us with three appendices – acronyms, comparison with NFIP regulations, and CRS publications – and the Index.

The acronyms will be changed substantially. These changes are shown here.

Section	Acronym	Description
B-1	XXX	element acronym or variable number
110	CRS	Community Rating System
111	NFIP	National Flood Insurance Program
113	FEMA	Federal Emergency Management Agency
113	FIRM	Flood Insurance Rate Map
113	ISO	The Insurance Services Office
130	BFE	base flood elevation
130	CEO	Chief Executive Officer of a community
130	NAVD	North American Vertical Datum
130	NGVD	National Geodetic Vertical Datum
130	SFHA	Special Flood Hazard Area
210	AW- <u>nnn</u>	activity worksheet number <u>nnn</u>
211	BCEGS	Building Code Effectiveness Grading Schedule
211	<u>LiMWA</u>	<u>limit of moderate wave action</u>

Section	Acronym	Description
220	rXXX	ratio of the buildings or area affected by XXX
222	XXXn	element number "n," e.g., OPAn = OPA1, OPA2, and OPA3
223	cXXX	credit points for element or activity XXX
302	bXXX	number of buildings affected by element XXX
303	bSF	number of buildings in the SFHA
310	CFR	Code of Federal Regulations (in the Federal Register)
311	EC	maintaining FEMA elevation certificates
311	ECCE	maintaining elevation certificates in computer format
311	ECPO	maintaining post-FIRM elevation certificates
311	ECPR	maintaining pre-FIRM elevation certificates
311	ECWS	posting elevation certificate data on a website
311	ERS	off-site records storage
312	bPO	number of post-FIRM buildings in the SFHA
312	bPR	number of pre-FIRM buildings in the SFHA
320	CBRA	Coastal Barrier Resources Act
321	LOMA	Letter of Map Amendment
321	LOMR	Letter of Map Revision
321	MI	providing map information and FIRM data
330	PFI	promotion of flood insurance
<u>331</u>	<u>ACT</u>	<u>actions resulting from outreach projects</u>
<u>331</u>	<u>FRP</u>	<u>flood response preparations</u>
<u>331</u>	<u>OP</u>	<u>outreach projects</u>
331	OPA	additional outreach projects
331	OPC	outreach project to the entire community
331	OPF	outreach project to floodplain residents
331	OPS	outreach project based on a strategy
<u>331</u>	<u>PPI</u>	<u>Program for Public Information</u>
<u>331</u>	<u>STK</u>	<u>stakeholder implementation</u>
340	MLS	Multiple Listing Service
341	DFH	disclosure of the flood hazard by real estate agents
341	DOH	disclosure of other hazards, such as subsidence
341	ODR	other disclosure requirements
341	REB	real estate agent brochure (explains flood hazards)
351	LIB	flood protection library
351	LPD	locally pertinent documents for a library
351	URL	universal resource locator
351	WEB	flood protection website
<u>361</u>	<u>FAA</u>	<u>financial assistance advice</u>
361	FPA	flood protection assistance
<u>361</u>	<u>PPA</u>	<u>property protection advice</u>
<u>361</u>	<u>PPV</u>	<u>flood protection site visit</u>
<u>361</u>	<u>TNG</u>	<u>training credit</u>
364	EMI	FEMA's Emergency Management Institute
<u>371</u>	<u>CI</u>	<u>coverage improvement</u>
<u>371</u>	<u>CP</u>	<u>coverage improvement plan</u>
<u>371</u>	<u>FIA</u>	<u>assessment of flood insurance coverage</u>
<u>371</u>	<u>PI</u>	<u>plan implementation</u>
<u>371</u>	<u>SMT</u>	<u>state-mandated agent training</u>
<u>371</u>	<u>TA</u>	<u>technical assistance</u>
401	SH	special flood-related hazard
402	aRF	area of the regulatory floodplain
<u>402</u>	<u>aSFHA</u>	<u>area of the Special Flood Hazard Area</u>
402	aXXX	area affected by element XXX
411	AFD	additional flood data
411	AFF	advisory flood elevations
411	CTP	Cooperating Technical Partner
411	DAYS	the number of days before adoption of advisory flood elevations
411	FWS	more restrictive floodway standard

Section	Acronym	Description
411	HSS	higher study standard
411	LEV	leverage
<u>411</u>	<u>MAP</u>	<u>mapping credit (replaces AFD, the sum of all 410 elements)</u>
411	NS	new flood study
411	SR	state review of a new flood study
421	DR	deed restrictions placed on open space properties
<u>421</u>	<u>LZ</u>	<u>low density zoning</u>
<u>421</u>	<u>LZs</u>	<u>zoning: "s" = maximum minimum number of acres per building</u>
424	NB	open space with natural and beneficial functions
<u>421</u>	<u>NFOS</u>	<u>natural functions open space</u>
<u>421</u>	<u>NSP</u>	<u>natural Shoreline Protection</u>
424	OS	floodplain lands preserved as open space
<u>421</u>	<u>OSI</u>	<u>open space incentives</u>
<u>421</u>	<u>OSP</u>	<u>open space preservation</u>
430	SHR	special hazard regulations
431	ASFPM	Association of State Floodplain Managers
431	BC	building code
431	CAZ	coastal A zone regulations
431	CFM	Certified Floodplain Manager
431	CSI	cumulative substantial improvement regulations
<u>431</u>	<u>DL</u>	<u>development limitations</u>
431	ENL	regulations limiting enclosures below elevated floors
434	FB	feet of freeboard above the base flood elevation
431	FDN	foundation protection regulations
431	FRB	floodplain regulations that require freeboard
431	ICC	increased cost of compliance
<u>431</u>	<u>LDP</u>	<u>local drainage protection</u>
431	LSI	lower substantial improvement threshold
431	MHP	manufactured home park regulations
434	NBR	regulations to protect natural and beneficial functions
431	OHS	other higher regulatory standards
431	PCF	regulations that protect critical facilities
434	PSC	regulations that protect floodplain storage capacity
<u>431</u>	<u>RA</u>	<u>regulations administration</u>
431	SFIP	Standard Flood Insurance Policy
431	SMS	state-mandated regulatory standards
434 <u>LD</u>	LDC	land development criteria
441	AMD	additional map data
441	aRFM	area of the regulatory floodplain measured in square miles
441	BMM	benchmark maintenance
441	CAD	computer aided design (computer program)
441	EDM	erosion data maintenance
441	FHBM	Flood Hazard Boundary Map
441	FM	FIRM maintenance
441	GIS	geographic information system
441	NGS	National Geodetic Survey
441	NSRS	National Spatial Reference System
444	YCM	number of years between checks of reference marks
451	BMP	best management practices (for stormwater quality)
451	DS	design storms used in stormwater management regulations
451	ESC	erosion and sedimentation control regulations
454	FRX	freeboard for new buildings in B, C, D, and X Zones
<u>451</u>	<u>LID</u>	<u>low impact development</u>
451	PUB	stormwater facilities subject to public maintenance
451	SMR	stormwater management regulations
451	SZ	size of development subject to stormwater management
451	WMP	watershed master plan
451	WQ	stormwater management regulations for water quality

Section	Acronym	Description
452	aW	area of a community's watersheds
510	FMA	Flood Mitigation Assistance program
510	HMGP	Hazard Mitigation Grant Program
511	FMP	floodplain management planning
544	HCP	Habitat Conservation Plan
511	NFP	natural floodplain functions plan
521	AR	acquisition or relocation of floodprone buildings
521	bAR	number of buildings acquired or relocated, or otherwise removed
521	bRL	number of buildings on the repetitive loss list acquired or relocated, or otherwise removed
521	bSRL	number of Severe Repetitive Loss Properties acquired, relocated, or otherwise removed
531	FPB	flood protection level before the project was constructed
531	FPI	flood protection improvement
531	FPP	flood protection provided by the project
531	PB	protected buildings
531	PBi	protection credit for building "i"
531	TU _i	technique used to protect building "i"
541	CDR	channel and basin debris removal
541	CIP	capital improvements plan
541	EPM	coastal erosion protection maintenance
541	PSM	problem site maintenance
541	SBM	storage basin maintenance
541	SDR	stream dumping regulations
542	aDC	area of the developed portion of the community
611	CFP	critical facilities planning
611	EWD	emergency warning dissemination
611	FRO	flood response operations
611	FTR	flood threat recognition system
644	ORE	Other flood response efforts
611	SRC	StormReady community
611	TRC	TsunamiReady community
621	LCF	levee failure critical facilities planning
621	LFO	levee failure operations plan
621	LFR	levee failure recognition system
621	LFW	levee failure warning
621	LM	levee maintenance
621	LOP	levee outreach project
624	LP	levee protection
624	LPL	levee protection level
630	ASDSO	Association of State Dam Safety Officials
631	DF	Dam failure critical facilities planning
631	DFO	dam failure operations plan
634	DFP	dam failure emergency action response plan
631	DFR	dam failure recognition system
631	DFW	dam failure warning
631	EAP	dam failure emergency action plan
631	NOAA	National Oceanic and Atmospheric Administration
631	SDS	state dam safety program
635	NID	National Inventory of Dams
710	AGR	average growth rate
711	CGA	community growth adjustment
711	CMGR	community-supplied growth rate
711	USGR	U.S. Census growth rate
720	cT	community's total CRS credit points