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Appendix D: 2024 Community Rating System Strategy Update



1. INTRODUCTION

The University of New Orleans' Center for Hazards Assessment, Response and Technology (UNO-CHART) led the development of a statewide Community Rating System (CRS) Strategy for Louisiana as part of the 2019 State Hazard Mitigation Plan Update. UNO-CHART accomplished this work in partnership with the State of Louisiana and various stakeholders, including the State Hazard Mitigation Plan Committee, CRS Users groups, and local floodplain management officials.

The goals of the CRS Strategy are to identify resources available to Louisiana CRS communities, and to improve coordination among the various state and regional programs that can help communities implement elements of the CRS to reduce flood losses and protect natural floodplain functions.


In 2023, UNO-CHART was asked to review progress since the 2019 Mitigation Plan and update relevant data and the overall CRS Strategy. This Update has five sections:

The Introduction provides an overview of the CRS as implemented in Louisiana and the major changes in the program since the 2019 Strategy.

- 1.** The CRS Activity Review looks at each activity and its elements, noting national and state participation rates and average points earned. This shows which elements are being implemented by the 39 Louisiana CRS communities and identifies some of the reasons why some elements are implemented more than others.
- 2.** The Summary of Key Findings identifies which activities and elements are relatively easy to implement and which require more work but are worth the effort. This discussion shows where a state level effort would help communities implement more creditable activities and/or earn more credit.
- 3.** Section 4, Resources, covers the agencies and organizations that may be able to assist CRS communities in the implementation of different activities.
- 4.** The Next Steps are to disseminate the Strategy to all CRS communities and establish a CRS Priorities Committee. The Committee would prioritize the projects identified in Section 3 and work with the agencies and organizations identified in Section 4 to help guide the ways they can assist the communities.

The Community Rating System

The CRS is a voluntary program, which provides incentives for communities to implement floodplain management activities that exceed those required by the National Flood Insurance Program (NFIP). The goals of the CRS are to (1) reduce flood damage to insurable property; (2) strengthen and support all insurance aspects of the NFIP; and (3) encourage a comprehensive approach to floodplain management².

 <https://www.fema.gov/floodplain-management/community-rating-system>

An incentive for communities to participate in the CRS is the provision of discounts on flood insurance premiums for local policyholders. A community earns points for each CRS activity completed; the number of points earned determines the amount of the flood insurance premium discount, as shown in Table 1.

Table 1 – CRS Premium Reductions

Credit Points	Class	Premium Reduction
4,500+	1	45%
4,000 – 4,499	2	40%
3,500 – 3,999	3	35%
3,000 – 3,499	4	30%
2,500 – 2,999	5	25%
2,000 – 2,499	6	20%
1,500 – 1,999	7	15%
1,000 – 1,499	8	10%
500 – 999	9	5%
0 – 499	10	0
https://www.fema.gov/floodplain-management/community-rating-system		

At the time of the 2019 Update, premium discounts were larger for policies on properties located within the Special Flood Hazard Area (SFHA). In 2021, the NFIP's new pricing approach, Risk Rating 2.0, eliminated this difference. Now, all policies receive the same discounts, regardless of location, which range from 5% for a Class 9 community to 45% for a Class 1.

This new pricing approach brought a second change to the distribution of CRS premium reductions. Before its implementation, Preferred Risk Policies (PRPs), which are policies for structures not in the SFHA, were not eligible for CRS premium discounts because they already had lower premiums than other policies. These policies were eliminated under the new pricing approach. Accordingly, now all NFIP policies receive the full CRS class premium discount, although they do not all get it right away. Other changes brought by the new pricing approach are explained in Section 1.2. Major Changes to the CRS since 2019.

Figure 1 – CRS Series and Activities*

300 Public Information Activities

- 310 Elevation Certificates
- 320 Map Information Service
- 330 Outreach Projects
- 340 Hazard Disclosure
- 350 Flood Protection Information
- 360 Flood Protection Assistance
- 370 Flood Insurance Promotion

400 Mapping and Regulations

- 410 Flood Hazard Mapping
- 420 Open Space Preservation
- 430 Higher Regulatory Standards
- 440 Flood Data Maintenance
- 450 Stormwater Management

500 Flood Damage Reduction Activities

- 510 Floodplain Management Planning
- 520 Acquisition and Relocation
- 530 Flood Protection
- 540 Drainage System Maintenance

600 Warning and Response

- 610 Flood Warning and Response
- 620 Levees
- 630 Dams

*National Flood Insurance Program Community Rating System Coordinator's Manual, FIA-15/2017



The CRS is made up of four series of activities, numbered from 300 to 600. Each series includes several activities, for a total of 19 (Figure 1), and each activity includes several elements, for a total of 94.

The 2017 CRS Coordinator's Manual explains how a community earns points. With a few exceptions, communities can select which elements they want to pursue for credit. The communities then provide the documentation that shows how they

Louisiana CRS Communities:

Forty-seven Louisiana communities are currently or have been in the CRS. They are listed in Table 2, with those no longer participating noted as Class 10.

The number of participating communities and their insurance coverage reported in the 2019 Update and in 2023 are summarized in Table 3.

Table 2 – Louisiana CRS Communities

Community	Class	Users Group
Ascension Parish	7	CRAFT
Baker, City of	9	
Bossier City, City of	9	
Caddo Parish	8	
Calcasieu Parish	8	R & S
Carencro, City of	7	RAIN
Central, City of	7	CRAFT
Covington, City of	8	FLOAT
Denham Springs, City of	8	CRAFT
Deridder, City of	10	
East Baton Rouge Parish	7	CRAFT
French Settlement, Village of	10	
Gonzales, City of	8	CRAFT
Gretna, City of	6	JUMP
Harahan, City of	10	JUMP
Houma, City of	7	FLOAT
Jean Lafitte, Town of	7	JUMP
Jefferson Parish	5	JUMP
Kenner, City of	6	JUMP
Lafayette Parish	7	RAIN
Lafayette, City of	7	RAIN
Lafourche Parish	10	FLOAT
Lake Charles, City of	10	R & S
Livingston Parish	10	
Lutcher, Town of	8	
Mandeville, City of	6	FLOAT
Monroe, City of	10	
Morgan City, City of	8	
Orleans Parish	7	FLOAT
Ouachita Parish	9	
Port Vincent, Village of	10	
Rayne, City of	9	RAIN
Ruston, City of	8	
Scott, City of	7	RAIN
Shreveport, City of	8	
Slidell, City of	6	FLOAT
Sorrento, Town of	9	
St. Charles Parish	7	FLOAT
St. James Parish	8	FLOAT
St. John The Baptist Parish	7	FLOAT
St. Tammany Parish	7	FLOAT
Tangipahoa Parish	8	FLOAT
Terrebonne Parish	7	FLOAT
Walker, Town of	8	CRAFT
West Baton Rouge Parish	8	
Westwego, City of	7	JUMP
Zachary, City of	8	CRAFT
As of 4/1/2023	R & S = RAIN and SWIFT Users Groups are discussed on page 5	



The 2019 Update listed 314 communities in Louisiana that participated in the NFIP. Of those, 43 (14%) participated in the CRS at that time. As shown in Table 3, the CRS numbers have dropped slightly. The number of NFIP flood insurance policies has also decreased. This is happening across the country due to the increase in the cost of NFIP premiums and the availability of more private flood insurance policies, many of them less expensive, although they do not necessarily provide the same level of coverage.

However, it is important to note that the State has consistently maintained a high level of CRS participation compared to the nation. While 12% of Louisiana NFIP communities participate in the CRS, only 6% of communities nationally in the NFIP are also in the Community Rating System.

To encourage a community to participate in the CRS, the benefits of participation need to be shown. One of the easiest benefits of the CRS to show is how many people or properties will be helped with lower insurance premiums. Therefore, communities with a large number of flood insurance policies are more likely to join³.

This is supported by Figure 2, which shows the 50 communities with the most NFIP policies in Louisiana. Thirty of these communities (60%) are in or have been in the CRS. Of the top 25 communities by number of policies, 21 (84%) are in or have been in the CRS. The map also shows that most of the communities in the top 50 are in the southern region of the state, where the coastal and riverine floodplains are larger and cover more populated areas.

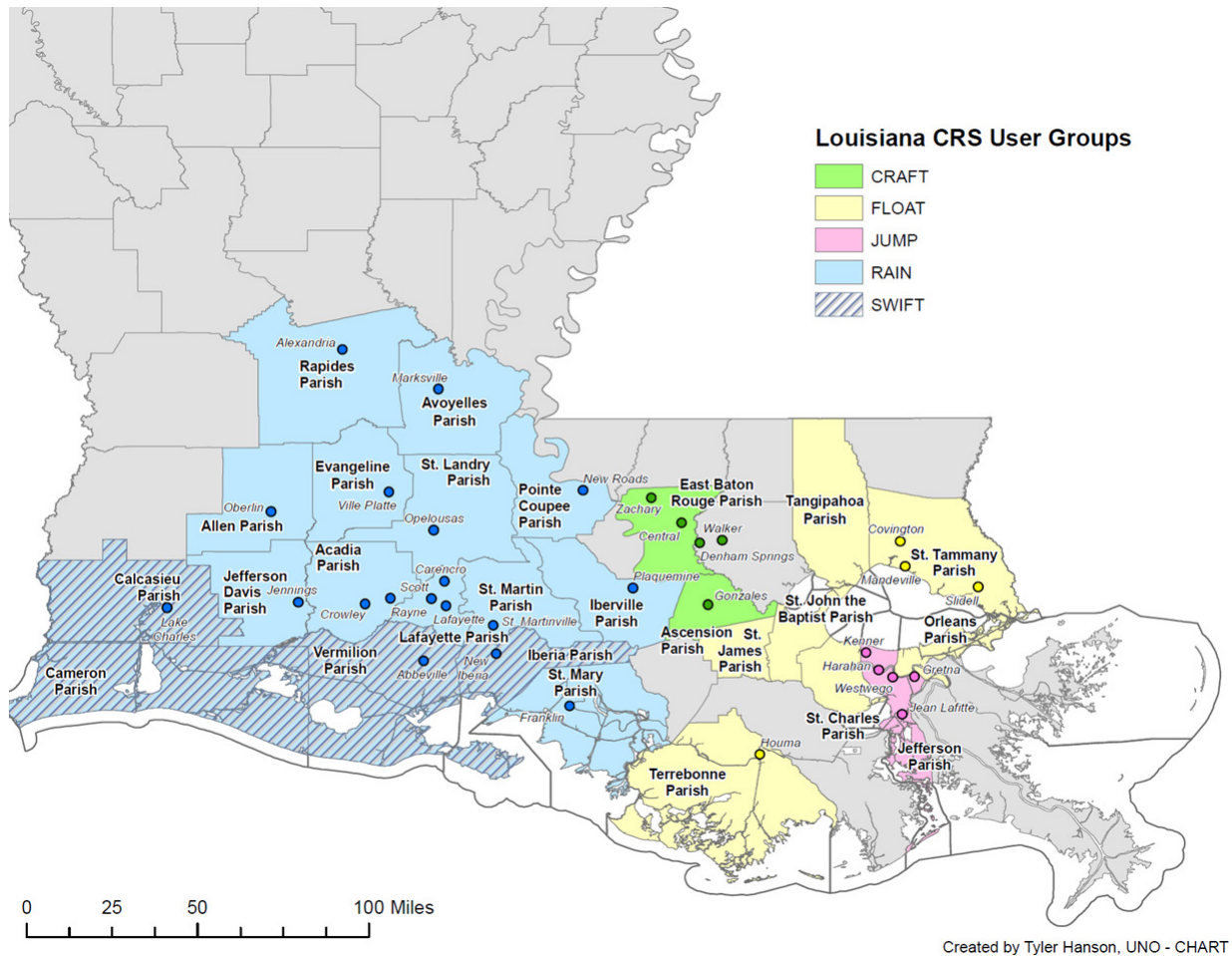
Table 3 – Participation Changes Since the 2019 Update

	2019	2023
Communities		
In the NFIP	314	318
In the CRS	43	39
Percent in the CRS	14%	12%
NFIP Policies		
Total in the state	489,260	467,250
% in CRS communities	85%	69%
Annual savings	\$29.4 mil	\$29.5 mil

³ Data on communities in the NFIP can be found at <https://www.fema.gov/openfema-data-page/nfip-community-status-book-v1>. Data on CRS communities can be found at <https://www.fema.gov/floodplain-management/community-rating-system#participating>.



Figure 3. Louisiana Users Groups Map



Major Changes to the CRS Since 2019

There have been two major changes to the program since the 2019 CRS Strategy Update was prepared. The first was the release of the Addendum to the 2017 CRS Coordinator's Manual that took effect on January 1, 2021. The major changes in the Addendum included two new prerequisites for obtaining certain CRS classes and four new ways to earn credit. Only one element was eliminated, 430 SMS - State mandated regulatory standards, and only one Louisiana community earned that credit.

The second program change resulted from the introduction of Risk Rating 2.0⁴. This is a new methodology to determine NFIP flood insurance premiums based on a property's individual risk. It relies on different criteria and data than what has been used over the previous 50 years. The new rating methodology was implemented in phases beginning on October 1, 2021; it has been fully implemented as of April 1, 2023.

⁴ For more information on Risk Rating 2.0, refer to <https://www.fema.gov/flood-insurance/risk-rating>



The new rating system has three impacts on the CRS:

1. Until 2022, a flood insurance policy's declaration page clearly showed the CRS Discount as the appropriate percentage of the listed premium. Now, the calculation of the CRS discount is not as clear on the declaration page. A renewal policy for a property in a Class 7 community may show a 6%, 11%, or some other amount depending on whether other discounts (such as pre-FIRM⁵ rating) are in effect. Over time, the other discounts are phased out as premiums increase each year. When a policy reaches the "full risk premium," the full CRS discount will be shown. It can take several years for many policies to reach "full risk premium".
2. Previously, the CRS benefit was different for properties inside the SFHA compared to those outside of the SFHA. The benefit was greater for properties in the SFHA because that area has the greatest flood hazard and most of a community's floodplain management activities are focused there. Under the new pricing approach, there is no differentiation between properties in or out of the SFHA. All properties in a community receive the full discount when they are at their full risk premium, e.g., 15% for a Class 7 community.
3. The premium dollar savings in each community was easy to obtain and understand. The information encouraged communities to join, to earn more CRS credit, and to preserve existing credited activities. The new methodology cannot produce the same information, partly because of the problems noted here. As a result, the premium dollar savings data currently available are based on the old system and are not an accurate statement of the true savings.

While the new pricing approach means more people benefit from a community's CRS discount, it is also harder to see the full discount on a policy's declaration page and the premiums for most renewed policies are increasing. The cost of flood insurance is considered the primary reason for the decrease in the number of NFIP policies since 2019 (as shown in Table 3). As a result it has been difficult for some local officials to show their constituents the benefits of joining or staying in the CRS.

The long term impact of the above changes remains to be seen.⁶ In the meantime, the day-to-day operations and verification procedures follow the provisions of the 2017 CRS Coordinator's Manual credit criteria and the 2021 Addendum.

⁵ This Strategy includes CRS terms like "pre-FIRM" and "ISO/CRS Specialist." These terms can be found in Section 120, Glossary, of the CRS Coordinator's Manual. The CRS Coordinator's Manual can be downloaded from <http://crsresources.org/manual>.

⁶ The confusion and consternation over these changes to the NFIP have been sufficient to warrant lawsuits requesting FEMA to stop or defer implementation of Risk Rating 2.0.



Methods and Findings

2019 Strategy: The team developed and implemented a survey for local and state floodplain management officials to identify: (1) the types of assistance needed to implement CRS activities (CRS communities) and (2) the obstacles to enter the CRS for non-CRS communities. UNO-CHART conducted the survey in two phases with the assistance of the Louisiana Department of Transportation and Development (LA DOTD) Public Works and Water Resources Division and the Louisiana Floodplain Management Association (LFMA).

With the assistance of the Insurance Services Office, Inc. (ISO), FEMA's CRS management contractor, team members analyzed CRS data for communities across the State of Louisiana. This analysis provided the team with a baseline for further data collection and recommendations.

As this strategy is part of the State's Hazard Mitigation Plan Update, the project team also surveyed members of the Mitigation Plan Update Committee. As the committee is composed of local, regional, and state entities, the survey results contributed to the list of potential resources for CRS communities. The survey also served as an education and outreach opportunity, allowing the agencies to become more familiar with specific CRS tasks – especially those in which they may be able to provide support.

Another important task in the development of this strategy was an inventory of state agencies. This allowed the project team to identify programs that can assist communities with floodplain management activities. The team also had the opportunity to reach out to other stakeholders including CRS Users Groups, participants at the 2018 Association of State Floodplain Managers (ASFPM) Annual Conference, and the 2018 LFMA Summer Workshop.

Finally, the team reviewed CRS programs in other states, as well as other states' CRS strategies and outside reports.

2024 Strategy Update: The objective of this 2024 Update is to see what has changed since 2019 and to identify the key factors that made those changes. The bulk of the initial work has been to use FEMA CRS data, such as community participation and points earned for the various activities and elements, to identify what changed.

Next, the team spoke to several stakeholders to determine what caused those changes. In some cases, such as a new credit introduced in the 2017 CRS Coordinator's Manual, the cause was easy to determine. In others, interviews with the affected local officials provided the answers.

The findings are provided in the next two sections of this Strategy Update: a review of the changes by activity and recommendations for CRS communities and supporting stakeholder organizations on how to improve local participation and the number of points earned.



2. CRS ACTIVITY REVIEW

As noted earlier, Figure 1 identifies the four Series and 19 Activities that make up the CRS from a community's perspective. CRS participation and points are reviewed at the activity level in this section. Each activity has from one to 14 elements, the level where the credits are identified, and how the points are calculated. Activities are identified by number, such as Activity 310 (Construction Certificate Management) while their elements are identified by the acronyms that are used in the credit calculation formulas, such as ECPO, maintaining FEMA Elevation Certificates on Post-FIRM buildings.

Each activity has a related table that shows the national and state rates of participation for each element. The average points for nationwide and Louisiana communities are also shown. The change in the Louisiana participation levels and points since the last Update are included. What these numbers mean and why they may be high or low is discussed in the "Participation" and "Points" sections after each activity's table. The last section for each activity includes the "Key Findings."

CRS Data for this Strategy Update: The following pages review the 2023 CRS participation rates and average points and compare the numbers with those reported in the 2019 Update. The data from the 2019 Update came from FEMA's May 1, 2017, CRS database. For ease of use, the CRS data in the 2019 CRS Strategy Update are referred to as 2019 data. The 2024 Update data are as of April 1, 2023.

In the 2019 Update, there were 42 communities in the CRS; in 2023, there are 39. In the interim, four communities left the program because they no longer met all the program prerequisites. One community, the City of Covington, joined after 2019.

Credit criteria and scoring formulas are in the 2017 CRS Coordinator's Manual which is revised periodically. The 2017 CRS Coordinator's Manual is the most recent and was used in the 2019 CRS Strategy and this Update. As noted above, some changes were made by the 2021 Addendum.

It is important to note that not all the community credit information is based on the most recent documents. A community's credits are reviewed and confirmed at a verification visit by the ISO/CRS Specialists on behalf of FEMA. Most communities are visited every five years, but communities with larger program premium discounts may be visited on a three-year cycle. After the visit, it may take up to six months for the community to supply all the information requested by the ISO/CRS Specialist. It takes additional time for the more technical elements to be reviewed by a separate technical reviewer. The resulting verification report is then double checked by ISO and submitted to FEMA. FEMA publishes the verified community CRS classifications twice a year, at least three months before they take effect to give insurance agents the time needed to process renewals.



This extensive verification process means that it may take up to two years for the results of a verification visit to take effect and be listed in the CRS database. Accordingly, most of the data in this report, taken from the April 2023 database, do not reflect the changes brought by the 2021 *Addendum*.

300 Series: Public Information Activities

310 Construction Certificate Management

Elements: This activity was substantially revised in the 2021 Addendum to the 2017 CRS Coordinator’s Manual. The first element, EC – Elevation Certificates, provided credit for maintaining FEMA Elevation Certificates on all new and substantially improved buildings in the SFHA from the date of joining the CRS and onwards. Maintaining elevation certificates is a prerequisite for participation, along with a list of new permits is required for annual recertification. The credit was based on the percentage of Certificates that were maintained and that were correctly completed.

The 2021 Addendum expanded the title to CCMP – Construction certificate management procedures as it also includes other floodplain-related construction certificates, such as the V Zone design and Floodproofing Certificates. The credit is now “for maintaining written procedures that address the collection, review, correction, maintenance, and the public accessibility of the required floodplain-related construction certifications.” While there is no adjustment in CCMP points for missing or incorrect certificates, the community must have a correct rate of 90% to remain in the CRS.

The other two credits in Activity 310, ECPO – Elevation Certificate on post-FIRM buildings and ECPR – Elevation Certificate on pre-FIRM buildings are now for maintaining all required construction certificates for buildings built before the community joined the CRS.

Figure 4 – FEMA Elevation Certificate

The 2019 FEMA Elevation Certificate has four pages of data completed by a licensed surveyor, two pages of photos, and 10 pages of instructions. The 2019 Certificate was replaced in 2023 to reflect changes under Risk Rating 2.0.



Activity 310 (Construction Certificate Management)							
Elements	Participation *			Points *			
	US Pct.	LA Pct.	** LA Change	Max	US Avg.	LA Avg.	** LA Change
EC – Elevation Certificates ***	84%	100%	0%	38	32	31	-2
ECPO – Elev. Certificates on post-FIRM bldgs	9%	8%	-18%	48	30	19	+9
ECPR – Elev. Certificates on pre-FIRM bldgs	2%	3%	+3%	30	13	0	0
Activity total	96%	100%	0%	116	36	33	-2

* All participation and points values are as of 4/1/2023.
 ** All Louisiana change values are from 2019 to 2023 . Louisiana change values are calculated by subtracting 2023 values from the 2019 values, with a negative value indicating a decline from the 2019 Update.
 *** The Participation data include both EC and the new CCMP while Points data are only for EC.

Participation: As noted under “CRS Data for this Strategy”, there is up to a two year time lag from when an element is verified and when the results appear in FEMA’s CRS database. Because of this, the 2023 database included the new CCMP credit for only five communities. The other 34 communities in the database were still receiving the 2017 Manual’s EC credit and that is the basis for the comparison of points since 2019. In effect, all Louisiana CRS communities are receiving credit for EC or CCMP, which is expected as that is a prerequisite for being in the CRS.

The number of communities that receive credit for maintaining Post-FIRM Elevation Certificates went from 26% (7) in the 2019 Strategy to 8% (3) in 2023. The loss of the credit was due to the communities being unable to produce the data needed for the impact adjustment (see “Impact Adjustments” following the discussion on 420 Open Space Preservation).

There are few communities in the nation and none in Louisiana receiving the credit for pre-FIRM buildings, primarily because the certificates were not needed for permitting and did not provide an insurance premium benefit for buildings eligible for the “subsidized” pre-FIRM rates.

Points: The drop of two points for EC is negligible but it is interesting to see an increase of nine points for ECPO when fewer communities are receiving the credit. One reason may be that the six communities that no longer get the credit had an average score of only nine points – they may not have felt the effort was worth the credit, although they could continue to earn the points for the Certificates already credited.

Key Findings: The first element in Activity 310, EC/CCMP, is a requirement for participation in the CRS, so it gets plenty of attention and communities must score well. The second and third element, ECPR and ECPO, are limited to certificates on buildings constructed before the community joined the CRS, which in some cases was at least 20 years ago. As reflected in the state and national participation rates, there is little that a state-level program can do to improve participation or points for this activity.



320 Map Information Service

Elements: This activity's credit is for providing information from the Flood Insurance Rate Map (FIRM) and other sources. The activity's seven elements are listed in the table. MI1, reading the FIRM, is a prerequisite for any credit under this activity.

Participation: In 2019, all of the Louisiana CRS communities earned this credit; currently, all but one community is receiving credit. One reason for the high participation rate is that most communities were already reading their FIRMs for inquirers. The participation rate is lower for providing other types of map information. For example, few communities have mapped special flood-related hazards, such as areas subject to subsidence or other special hazards that do not exist in Louisiana, such as ice jams and tsunamis.

There are two reasons for high participation rates for this activity. The increase in participation. First, there have been federal, state, and local studies that have produced additional information and/or made the data easily accessible to local officials. Second, communities can relatively easily find these and other existing maps and incorporate them into their map information service. Examples include their repetitive loss area maps prepared for the CRS participation prerequisite (good for MI6) and the US Natural Resources Conservation Service's National Wetland Inventory⁷ maps (good for MI7).

In other cases, the creditable data can be produced by the community's GIS staff. For example, overlaying the SFHA on a contour map of the community can produce a map showing flood depths that would qualify for MI4 credit. Of the 18 communities receiving MI4 credit in 2023, 13 (72%) are in either the FLOAT or CRAFT users groups, although those two user groups did not address Activity 320 as a group.

Activity 320 (Map Information Service)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
MI1 – Providing basic information from the FIRM	89%	97%	-3%	30	30	30	+1
MI2 - Additional FIRM information	60%	23%	+18%	20	20	20	0
MI3 – Flood problems not shown on the FIRM	29%	10%	+5%	20	20	20	0
MI4 – Flood depth data	30%	46%	+35%	20	20	20	0
MI5 – Special flood-related hazards	9%	0%	-5%	20	20	0	-20
MI6 – Historical flood information	55%	49%	+38%	20	20	20	0
MI7 – Natural floodplain functions	47%	36%	+36%	20	20	20	+20
Activity total	89%	97%	-3%	90	78	62	+27
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

⁷ National Wetlands Inventory | U.S. Fish & Wildlife Service (fws.gov)



Points: The credits for each element are the maximums listed – there is no partial credit. The maximum credit for the activity, 90 points, means that the activity max is reached by having credit for MI1 (the prerequisite) and only three of the other six elements. While community participation and total points have increased since 2019, there is still room for more credit – only 14 communities are getting the max 90 points, and the state average is 16 points below the national average.

Key Finding: The main reason for the increases in participation for MI2, 3, 4, 6 and 7 is likely due to local staff effort to access and utilize additional flood-related maps. The “easiest” three optional elements to implement are MI4, 6 and 7, which are currently the ones with the most Louisiana participation (MI1 is not counted as it is mandatory for any credit).

This is a good example of the CRS offering more points for an improved or expanded public information service that is well within most communities’ capabilities. Continuing such efforts can result in the maximum credit for all the communities.

330 Outreach Projects

Elements: This activity credits projects that provide information to the public. There are four elements, the first two credit the method of dissemination and the number of topics covered. Dissemination methods range from having handouts in public places, sending information to the public, and sending specific information to target audiences, with the last being worth the most points. The maximum credit is provided if all six of the credited topics listed in Figure 5 are covered.

Figure 5 - Credited Outreach Project Topics

1.	Know your flood hazard
2.	Insure your property for your flood hazard
3.	Protect people from the hazard
4.	Protect your property from the hazard
5.	Build responsibly
6.	Protect natural floodplain functions

OP - Outreach projects are disseminated throughout the year. **FRP -** Flood response projects are developed in advance, but distributed during or after a flood, when people are most interested in flood response and recovery information.

Credit for OP and FRP projects can be increased if the community develops them as part of a Program for Public Information (PPI). PPI projects are prepared by a committee with representation from local officials, the target audiences and stakeholder organizations, following a prescribed planning process that identifies and focuses on the community’s needs. PPI projects can cover more than the six regular topics and the PPI process allows for more target audiences. Projects can also receive additional bonus points if they are implemented by stakeholder organizations identified in the PPI.



Activity 330 (Outreach Projects)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
OP – Outreach projects	96%	100%	0%	200	110	140	+92
FRP – Flood response preparations	16%	21%	+16%	50	42	31	+25
PPI – Program for Public Information	12%	49%	+44%	100	77	51	+14
STK – Stakeholder	10%	36%	+31%	50	21	21	+8
Activity total	100%	100%	0%	350	116	145	+97
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

Participation: The first element, OP – Outreach projects, has a very high participation rate, partly because so many communities already implement outreach projects, such as handouts in government buildings and materials included in utility bills. Participation in the other three elements is much lower nationally and, in the State, likely because most communities were not already doing them.

Louisiana’s participation rates for all four elements are higher than the national rates. Nineteen of the 39 (49%) CRS communities have their own or participate in parish or regional PPIs, up from five in the 2019 Strategy. The PPIs include attention to stakeholder organizations, with a corresponding increase in the STK - Stakeholder credit. It is important to note that all 19 communities getting PPI and STK credit are in the first three users groups.

Points: As with the participation rate, the average points for OP and the activity as a whole are greater than the national averages. The Louisiana average points for each of the four elements increased since 2019 by a total of nearly 100 points. This is one activity where attention given by the users groups brings clear results: 19 communities receive PPI credit and all of them are in one of the first three users groups. The average score for Activity 330 in 2023 is 195 for the users group communities and 80 for the rest of the communities.

Key Finding: Every CRS community is interested in, and getting credit for, outreach projects. Only those in users groups are getting PPI and STK credit. As with other public information efforts, the needed ingredients are primarily staff time and knowledge of the credit criteria. The last three elements in Activity 330 (Outreach Projects) would be good candidates for a technical assistance program to provide guidance to community staff.



340 Hazard Disclosure

Elements: This activity credits various methods of advising people that a property is in the SFHA or has been flooded. It is most effective before a person unknowingly buys a property subject to flooding, so the most credit is for the real estate agent disclosure (DFH). There is also credit for real estate agents giving a brochure to house hunters (REB), credit for other ways to disclose the hazard (ODR, e.g., laws requiring landlords to tell renters), and credit for providing information on other flood-related hazards (DOH) such as subsidence or part of the property being a wetland.

Activity 340 (Hazard Disclosure)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
DFH – Real estate agent disclosure of SFHA	4%	10%	+10%	25	25	10	+10
ODR – Other disclosure requirements	81%	100%	0%	25	12	17	+1
REB – Real estate brochure	22%	54%	+12%	12	9	10	+2
DOH – Disclosure of other hazards	1%	0%	0%	8	8	0	0
Activity total	84%	100%	0%	80	15	23	+4
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

Participation: As seen in the table above, getting real estate agents to be active in hazard disclosure can be difficult and only 4% of the communities in the CRS get DFH credit. However, 62 of the 73 (86%) communities receiving DFH credit nationally are in four coastal states where the flood hazard is well known: California, Florida, Massachusetts, and Louisiana.

The four Louisiana communities with DFH credit have received it in the last five years. They are all parishes in users groups, they have all prepared Programs for Public Information that include disclosure messages, and they also REB credit.

There is a potential for every community to receive up to 37 points for the two elements, dependent on the cooperation of real estate agents, DFH and REB. Feedback from real estate agents states that a key reason they may not want to get involved is that they are not experts on flood hazards. This concern can be allayed by using the community's map information service, credited under Activity 320. If the service includes information on flood-related hazards (MI5), it could be coordinated with materials that would qualify for DOH – Disclosure of other hazards.



Per Louisiana Revised Statute § 9:3196-3200, sellers are required to complete the Louisiana Residential Property Disclosure statement which discloses whether a property is in a wetland, has been flooded, is in a flood zone, has a flood insurance policy, and/or has an elevation certificate. This is why 100% of the state's communities receive some ODR credit.

FEMA considers Louisiana a model for strong state disclosure requirements and included the disclosure statement in its guidebook.⁸ However, the requirement is for sellers and not specifically for real estate agents. Only four communities (all parishes) are receiving credit for real estate agents' actions. It would be beneficial to investigate the role of real estate offices in advising sellers and buyers about the state requirements to see if communities would also qualify for DFH and REB credit.

Points: The table for Activity 340 shows that most communities did not earn a lot of credit for Activity 340 in 2019 and the points did not increase much over the next five years. The four communities with DFH credit receive an average of 38.5 points. The other 35 communities have an average of 21.3 points, of which 15 come from the state law that provides everyone ODR credit.

Key Findings: If local real estate agents are supportive, it may not be difficult for every community to receive DFH and REB credit. Some lessons could be learned from the four parishes that have done this. The cities in the four parishes receiving DFH and REB credits should capitalize on what real estate agents are doing in their area, coordinate with the real estate organizations, and apply for the credit. The same goes for the other parishes and cities in those users groups.

A state or regional-level initiative with the state and regional real estate associations could also be productive if local agencies are advised and supported by others in their profession.

350 Flood Protection Information

Elements: While Activity 330 credits disseminating messages to the public, Activity 350 credits having resources for people who take the initiative to look for more information. Two resources are credited: the local public library (LIB) and the community's website (WEB). More points are allocated for the website because it is easier to access and can include or link to many different sources of information.

⁸ "Flood Risk Disclosure - Model State Requirements for Flood Risk Disclosure during Real Estate Transactions" (FEMA, 2022) found at https://www.fema.gov/sites/default/files/documents/fema_state-flood-risk-disclosure-best-practices_07142022.pdf



Activity 350 (Flood Protection Information)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
LIB – Library	84%	90%	+11%	10	8	8	+1
LPD – Locally pertinent documents in library	62%	62%	+15%	10	8	8	+5
WEB – Website	83%	90%	+11%	105	40	41	+20
Activity total	92%	95%	+6%	125	48	50	+24

All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.

Participation: As the table above shows, participation in this activity is very high – 95% of the State’s CRS communities are earning credit. With additional information and examples of what qualify as locally pertinent documents, more communities would likely earn LPD – Locally pertinent documents credit.

Points: The communities getting both library credits are getting close to the maximum now. While the state average credit increased by 20 points since 2019, it is still only 39% of the maximum possible points. Also, community scores vary greatly - the range of credit is 8 to 90 points with four communities earning no credit.

The average score for this activity is 55 for users group communities and 36 for those not in one of the first three users groups.

Key Findings: More communities could and should get more credit for putting locally pertinent documents, such as their FIRM, floodplain management ordinance, and hazard mitigation plan, in their public library. A list of examples might facilitate pursuit of this credit.

The big points, however, are found in expanding local websites. Often just providing links to appropriate state or regional webpages qualify for WEB credit points. Again, just having more examples publicized might provide sufficient help and motivation for many local CRS Coordinators.

360 Flood Protection Assistance

Elements: While Activities 330 and 350 credit making information available to the public, 360 credits site-specific advice and assistance provided by a knowledgeable person. This is usually a local permit, local building, or public works official but could be someone else who works for the parish or a regional agency.



The first element, **PPA** – Property protection advice, is for providing one-on-one advice to a resident or property owner on topics such as retrofitting a house or yard to reduce flood damage. If the advice is given after the advisor visits the site, additional points are provided under PPV – Protection advice provided after a site visit.

Under FAA - Financial assistance advice, often a different office provides advice or assistance on sources of financial assistance, such as state and federal grants or private organizations like Habitat for Humanity. The last element, TNG - Training provides credit if the person giving the assistance has successfully completed one or more of the Emergency Management Institute’s courses on retrofitting or grants.

Activity 360 (Flood Protection Assistance)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
PPA – Property protection advice	46%	59%	+17%	40	28	33	+8
PPV – Advice after a site visit	43%	56%	+19%	45	33	38	+8
FAA – Financial assistance advice	8%	23%	+23%	15	11	12	+12
TNG – Training	2%	3%	-2%	10	5	7	+3
Activity total	46%	59%	+17%	110	59	74	+22
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

Participation: Louisiana communities are participating in Activity 360 at a level 13% higher than the national rate and their numbers have increased by 17% over the last five years. Nineteen of the 22 communities in the first three users groups are receiving this credit while only four of the other 17 non-users group communities are receiving 360 credit.

Points: Similarly, communities are improving their programs, resulting in more points, again well above the national numbers. Further, the 19 users group communities have an average score of 78 while the other four communities have an average of 55.

Key Findings: More communities are meeting with and helping their residents and property owners. However, there are 44% of the CRS communities not earning this credit and the average points are still only two-thirds of the maximum possible, so there is room for improvement.



370 Flood Insurance Promotion

Elements: The 2017 *CRS Coordinator's Manual* has three elements in Activity 370 that follow a prescribed planning process: assess the community's flood insurance coverage (FIA), develop a plan to improve it (CP), and implement the plan (CPI). The first two elements are prerequisites for the following elements. The fourth element, providing direct technical assistance (TA) on flood insurance topics, is separate from the planning elements.

The 2021 *Addendum* added three new elements, but the April 2023 database does not show any communities receiving these new credits, so they are not included in the activity table on the next page.

The new elements in the 2021 *Addendum* are:

- ▶ **FIB** - Flood insurance brochures: Up to 25 points for including flood insurance information with building permits or other direct distribution.
- ▶ **FIM** - Flood insurance meeting: Up to 40 points for a community town hall meeting or open house to promote flood insurance.
- ▶ **SCE** - State-required continuing education: Up to 15 points for a state

Activity 370 (Flood Insurance Promotion)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
FIA – Flood insurance assessment	14%	41%	+36%	15	15	15	0
CP – Coverage plan	6%	36%	+36%	15	15	15	+15
CPI – Plan implementation	6%	28%	+28%	60	57	53	+53
TA – Technical assistance	5%	15%	+15%	20	15	15	+15
Activity total	18%	46%	+41%	110	40	62	+47

All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.



Participation: Activity 370 was added to the CRS in the 2013 CRS Coordinator’s Manual. Since 2019, 36% of the state’s CRS communities have advanced in the process and most are getting credit for their plan (CP) and implementing it (CPI).

As a result, Louisiana has a much higher participation rate than the country as a whole. This is true for all four elements and reflects the State’s need for flood insurance coverage and the high level of public interest in it. Seventeen of the 18 communities receiving credit for this activity are in one of the first three users groups. All 17 communities receiving credit for the assessment and the plan are also getting 330 PPI credit. This is not surprising as the planning process and tracking of projects is the same for both and the assessment, plan, and implementation can all be part of a PPI.

The exception to the PPI dependence is the last element, TA. It is dependent on a local insurance expert, usually an insurance agent or agency, agreeing to perform the service. Only six communities receive this credit: four in the Jefferson Parish users group, St James Parish, and West Baton Rouge Parish (the only community receiving any 370 credit that is not in a users group).

Points: As with the rate of participation, Louisiana’s average points are higher than the national average. The first two elements, FIA and CP, are 15 points each, with no partial credit. CPI - Plan implementation credit is scored similar to outreach projects in Activity 330, with projects that are considered more effective getting more points. There is more diversity here – for the 17 communities credited with a plan, the points for plan implementation range from zero to 60. All of the Jefferson Parish users group (JUMP) communities earned the maximum points for the first three elements and four of them fell only five points short of maxing out on the entire activity.

The State’s average points are a little more than half the maximum and 59% of the communities are not getting any credit. These facts, coupled with the three new elements which can provide up to 80 more points, show that there is a lot of room for more credit in Activity 370.

Key Finding: Once again, there is a great increase in participation and points for a public information activity due to the local government’s initiative and energy. The higher scoring examples underline the benefit of coordinating an activity with other, similar activities to facilitate implementation.



400 Series: Mapping and Regulations

410 Floodplain Mapping

Elements: There are six elements which credit different aspects of providing new data for floodplain management purposes. NS - New study credit is for augmenting the data provided by FEMA in a Flood Insurance Study (FIS), usually data in unstudied areas. NS points are multiplied by a value that reflects how much of the study was funded by FEMA. LEV - Leverage of 1.0 means the study had no FEMA funding and full credit is provided. A leverage value of less than 1.0 means the community cost shared with FEMA, usually to have a FIS cover more areas of interest. The credit for NS is adjusted based on the LEV value.

Some states mandate a state review (SR) of data before it is used for regulatory purposes. Louisiana is not one of those, so there is no SR credit. Some states and communities have flood study standards higher (HSS) than FEMA's Flood Insurance Study criteria and/or a more restrictive floodway standard (FWS) than FEMA's allowable one foot rise. The sixth element is for mapping a special flood-related hazard (MAPSH), such as coastal erosion or subsidence, provided the study is used in regulating development in those hazard areas.

Activity 410 (Floodplain Mapping)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
NS - New study	9%	8%	-3%	350	174	39	N/A
LEV - Leverage	10%	13%	+2%	1	1	1	N/A
SR - State review	15%	0%	0%	60	22	0	N/A
HSS - Higher study standards	3%	0%	0%	200	43	0	N/A
FWS - Floodway standard	12%	0%	0%	140	117	0	N/A
MAPSH - Special hazards mapping	2%	0%	0%	100	43	0	N/A
Activity total	28%	8%	-29%	850	78	39	N/A
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							



Participation: Nationally not many communities receive credit for the various elements and no Louisiana communities receive credit for four of the six elements. New studies are expensive, so the national rate is only 9%, essentially the same as Louisiana's 8%. SR and FWS elements are limited to seven states that have state mapping regulations.

Obtaining new studies is dependent on gaps in a community's flood insurance study and local funding to fill those gaps. Of the five communities that received this credit in 2019 and 2023, four are parishes – the type of community most likely to want more detailed data that are not provided by FEMA in less developed areas and to have the resources to conduct such studies.

Points: In 2019, three Louisiana communities received an average of 66 points for NS. In 2023, three communities received an average of 39 points for NS and LEV, but two of the three were new. One community received new maps that did not qualify and the other could no longer document the credit.

Key Finding: Floodplain mapping is site-specific and each community's needs are often unique. Because of these factors, there are no models or templates that can help communities qualify for most of the credits in Activity 410. As a result, mapping can be a very expensive undertaking. The key conclusion is that this activity is usually worth pursuing only if the community already has new maps or maps prepared under the credited HSS - Higher study standards.

420 Open Space Preservation

Elements: The basic credit in Activity 420 is for the first element, OSP - Open space preservation. The next four elements provide extra credit if the preserved open space also has a deed restriction (DR), is preserved in or restored to its natural state (NFOS), and/or is also subject to one of the special flood related hazards (SHOS) or coastal erosion (CEOS). The last one, CEOS, was added in the 2017 CRS Coordinator's Manual, so it was not reflected in the 2019 database used in the 2019 CRS Strategy Update and no Louisiana communities have earned the credit.



Activity 420 (Open Space Preservation)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
OSP - Preserved open space	90%	92%	+3%	1,450	427	243	+40
DR - Deed restriction	26%	5%	+5%	50	6	1	1
NFOS - Natural functions open space	41%	41%	+4%	350	43	47	+13
SHOS - Special hazards open space	1%	0%	0%	150	67	0	0
CEOS - Coastal erosion open space	**	0%	0%	750	**	0	0
OSI - Open space incentives	16%	21%	+10%	250	30	8	-7
LZ - Low density zoning	12%	0%	0%	600	204	0	0
NSP - Natural shoreline protection	1%	0%	0%	120	39	0	0
Activity total	92%	95%	0%	2,870	471	259	+52
<p>** Data not in the national database. All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.</p>							

The last three elements are not related to the first five. OSI - Open space incentives credits regulatory incentives that encourage developers to set aside floodprone areas as open space (if the regulations mandated set asides, the areas would qualify for OSP credit). LZ - Low density zoning (one building on a minimum of five acres) does not keep parcels open but provides a flood damage prevention benefit and receives fewer points than OSP. NSP - Natural shoreline protection credits keeping riverine and lake shorelines in their natural states, which means no hardened banks.

Participation: Most communities have some preserved open space within their corporate limits, such as a public park, so most get some OSP credit. Most deed restrictions on open space lands are from federal funding requirements. Federal funds are typically used to purchase and clear properties with floodprone buildings on them, resulting in a deed restriction on each individual parcel. When the impact adjustment is factored in (see next page), the final points are very small. As a result, many communities do not bother with collecting the needed documentation for every parcel to be credited.

NFOS - Natural functions open space areas are more prevalent in many undeveloped areas of Louisiana and 41% of the communities are getting credit for keeping them open. Of the 16 communities getting the credit, 12 (75%) are in the first three users groups.

Few Louisiana communities have the types of special hazards that warrant the SHOS credit or have the prerequisite development regulations for those hazards. While more Louisiana communities face coastal erosion hazards, it is likely that they do not have the qualifying development regulations.



OSI can be relatively easy to adopt or to include in a land use plan. Interestingly, of the eight communities receiving OSI credit, six are parishes, i.e., those communities with more room for development outside the SFHA. It is likely that more communities have such ordinances or do not realize the full range of credits, from 10 points for encouraging floodplain open space in the land use plan up to 250 points for very restrictive rules.

It is surprising that no communities are getting LZ credit. There are surely some parishes with requirements for lots in the floodplain to be five acres or larger. Often this is accomplished with zoning districts for agricultural areas.

NSP credit requires prohibiting armoring channel banks, dredging, and other channel, beach, or sand dune alterations. Because so many communities rely on man-made drainage ditches, there are not many opportunities for this credit.

Points: While Louisiana has essentially the same percentage of communities receiving OSP and NFOS credits as the national averages, the points for OSP are lower, reflecting the fact that the preserved areas are a smaller percentage of their floodplain. Because of the impact adjustment, the few OSP properties that have a deed restriction produce relatively little credit. The points for NFOS are only slightly higher than the national average.

Louisiana communities have some incentives for developers to set aside vacant floodprone areas, but a review of the database confirms that they are not very strong. The good news is that the State's average points for OSP and OSI are rising.

Key Findings: The fact that 92% of Louisiana communities receive credit for the most important element, OSP, shows that staff are aware of the credit and know how to document it. They may find more qualifying properties as they prepare for each verification visit. The same should apply to receiving NFOS credit. It is hard for most communities to obtain sufficient credit for DR or SHOS.

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Figure 17-9. A zoning ordinance can designate wetlands and floodprone areas for agricultural, conservation, or other uses that suffer minimal damage from a flood.

Source: Louisiana Floodplain Management Desk Reference, p. 17-19



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IMPACT ADJUSTMENTS

The credit calculations for several activities include an impact adjustment. This step adjusts the points based on how much of the floodplain or what portion of the community's floodplain buildings are impacted by the element. Here's an example from Activity 420 Open Space Preservation:

The credit points for preserving areas as open space are modified by the impact adjustment that reflects the ratio of the area of the creditable parcels to the area of the community's Special Flood Hazard Area. For example two communities may each have 50 acres that qualify for 1,450 points as preserved open space (OSP).

The community with 100 acres of SFHA receives a total of $1,450 \times 50/100 = 725$ points while the community with 1,000 acres in its SFHA receives a total of $1,450 \times 50/1,000 = 72.5$ points. It is not the total acreage that counts but how much of the community's SFHA is impacted.

Because of the impact adjustment, some communities do not apply for or fully document creditable elements that have small impact adjustment ratios. An example is a community that purchased and cleared 20 houses from the SFHA. The area affected would be 20 quarter-acre lots or a total of five acres. If the SFHA is, say, 250 acres, the impact adjustment for the deed restrictions on those 20 parcels would be $5/250 = 0.02$. The final credit would be $50 \times 0.02 = 1$ point.

On the other hand, the impact adjustment for Activity 520 (Acquisition and Relocation) is based on the number of buildings in the SFHA. If the same community had only 40 buildings in the SFHA and it cleared 20 of them, the impact adjustment ratio would be 0.5 and the credit would be $1,900 \times 0.5 = 950$ points.

While the concept of the impact adjustment makes sense and is easy to explain, some problems have been noted in implementation. For example, undevelopable portions of the SFHA do not have to be counted. The community can and should mark up its floodplain map to exclude areas such as lakes and national forests.



It has been reported that one community did not eliminate undevelopable water and land, resulting in the area of the SFHA being twice as large as the area of the developable portion of the SFHA. Because the ratio's denominator was twice what it should be, the credit would have been half of what the community actually deserved. Luckily this particular case was caught by the ISO/CRS Specialist, but the community had to recalculate and document the credit.

There are other fine points in the impact adjustment procedures that are not so obvious and easy to catch and correct. The national guidance document is six years old and does not address Louisiana issues, such as whether bayous are treated as water or developable land. Accordingly, state-specific guidance, training or technical assistance on impact adjustments and the credit calculation formulas would result in higher and more accurate scores for Louisiana communities.

There is potential for substantial credit for CEOS, OSI, LZ, and NSP. This is especially true for most parishes because they have sparsely developed areas where it is easier to qualify for the last two elements. A program to provide communities with more information and examples of qualifying programs and regulations could prove helpful. The higher percentage of users group communities earning NFOS credit shows that sharing information can facilitate getting credit for open space elements.

430 Higher Regulatory Standards

Elements: Because there are so many ways to regulate development to reduce the potential for flood damage, this activity has the most elements of any CRS activity. The elements cover a wide range of regulatory tools and standards. Their names are generally self-explanatory.



Activity 430 (Higher Regulatory Standards)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
DL - Development limitations	39%	26%	+15%	1,330	73	107	+37
FRB - Freeboard	88%	72%	+30%	500	108	86	+34
FDN - Foundation protection	28%	28%	+28%	80	30	35	+35
CSI - Cumulative substantial improvements	34%	18%	-8%	90	41	64	+4
LSI - Lower substantial improvements	6%	3%	-2%	20	11	19	-1
PCF - Protection of critical facilities	21%	5%	+5%	80	30	20	+20
ENL - Enclosure limitations	12%	15%	+10%	390	54	102	-112
BC - Building code	89%	100%	0%	100	63	53	+1
LDP - Local drainage protection	81%	87%	-2%	120	16	30	+12
MHP - Manufactured home park	4%	8%	+8%	15	15	15	+15
CAZ - Coastal A Zone regulations	5%	0%	0%	500	183	0	0
SHR - Special hazards regulations	3%	0%	0%	100	71	0	0
OHS - Other higher standards	13%	0%	-5%	100	99	0	-25
SMS - State mandated standards	60%	0%	-3%	20	11	0	-5
RA - Regulations Administration	69%	82%	+14%	67	17	16	+4
Activity total	100%	100%	0%	2,462	220	272	+138
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

Participation and Points: These two topics are covered together for each element.

An important point to note is that most of these elements have an impact adjustment that eliminates areas credited under Activity 420 (Open Space Preservation). The rationale is that development regulations have no impact in areas that will not be developed. As a result, most communities do not receive the maximum credits for these elements in Activity 430.

DL - Development limitations: The first element credits prohibiting fill, buildings, and/or storage of materials in the SFHA. It is difficult for most communities to enact regulations restrictive enough to qualify for this credit. However, 26% of Louisiana communities get the credit and have an average score that is 34 points higher than the national average.



Most of the credited communities require compensatory storage, which provides 130 points before the impact adjustment.

FRB – Freeboard: FRB is a requirement to protect new buildings to a level higher than the base flood elevation. While fewer communities get credit in Louisiana than the national average, 72% of the state’s CRS communities are getting some credit. Further, participation increased by 30% since 2019. The higher the protection, the greater the credit. One foot of freeboard equates to 100 points before the impact adjustment; two feet warrant 225 points, etc. Of the 28 communities that earn the credit, eight require more than one foot of freeboard. As with the participation rate, Louisiana’s average credit is lower than the national average. But the participation rate should increase to 100% due to the recent addition of one foot of freeboard in the state building code. Per the 2021 Addendum, one foot of freeboard is now a prerequisite for Class 8

FDN - Foundation protection: This element requires foundations to be engineered or otherwise designed to protect against differential settling, scour and erosion. All 11 communities receiving this credit require buildings to be built on compacted fill that is protected from erosion and scour. This is a good standard that may be implemented by conscientious builders anyway. However, CRS credit is for adoption of an explicit requirement that is enforced and recorded.

CSI - Cumulative substantial improvements: CSI is designed to stop an all-too-common practice that gets around the substantial improvement requirement: getting a permit for a relatively small improvement project, finishing the project, applying for another permit for the next small project, and repeating the practice. The result can be a relatively new house that does not meet the requirements for new houses. The 18% of the Louisiana CRS communities that earn CSI credit require all the pieces that add up to a credit of 80 or the maximum 90 points but the impact adjustment reduces the average to 64 points. Note that this is still 50% higher than the national average.

LSI - Lower substantial improvements: The NFIP required substantial improvement threshold is when the value of the improvement or repair project equals or exceeds 50% of the market value of the building. LSI credits lowering that threshold to have smaller projects trigger the mandate to bring an existing building up the new building standards. It is not a common practice nationally and only one Louisiana community earns CRS credit for it.

PCF - Protection of critical facilities: “Critical facilities” include places vital to the community, such as hospitals, nursing homes, and utilities, as well as properties that if flooded would make conditions worse, such as hazardous materials sites. It is recognized that such facilities warrant a protection level higher than the base flood elevation. This element encourages communities to prohibit critical facilities from hazardous areas or



(for fewer points) to protect them from at least the 500-year (0.2% chance) flood. While 21% of the nation's CRS communities have some higher standards to protect critical facilities, only two Louisiana CRS communities are getting this credit. The max of 80 points is for prohibiting critical facilities from the 500-year floodplain. The national and state average points of 30 and 20 respectively, reflect that the max credit is too tough a standard for most communities.

ENL - Enclosure limitations: The problem with enclosed lower areas under elevated buildings is that the owner can modify the areas out of sight from permit officers. Especially when the lowest floor is eight feet or more above grade, there is a great temptation to convert what was permitted as a floodable area to a finished family room or even an apartment. ENL credits regulations that either prohibit walls under elevated buildings (max 240 points), limit enclosed areas to 300 square feet (100 points), or require a nonconversion agreement from the owner (max 90 points).



Figure 17-2. This coastal building suffered extensive damage to the enclosed lower area.

One Louisiana community adopted the full credit standard for 240 points and four adopted the 300 square feet limitation. These are tough standards but very effective in preventing human-caused flood damage. As a result, the state average is almost twice the national average.

BC - Building code: The International Building Code is the standard for United States communities. It includes a variety of flood protection standards and ensures a higher quality of construction. Partly because of a state mandate enacted after Hurricane Katrina, Louisiana has a higher participation rate than the national average.

There are two parts to scoring BC:

- ▶ **BC1:** Every community gets 48 out of 50 possible points for adopting the State-required provisions of the International Code.
- ▶ **BC2:** Credit is based on the community's Building Code Effectiveness Grading Schedule (BCEGS) classification. BCEGS is a voluntary program which measures the effectiveness of the community's administration and enforcement of the adopted code. BC2 scores range from zero for 26 communities to 40 for one community (St. John the Baptist Parish).

Improving scores for BC is dependent on improving the community's code administration and getting a new BCEGS rating. A prerequisite for a Class 6 is for the community to maintain a BCEGS rating 5/5 or better; the prerequisite for a Class 4 is a BCEGS rating of 4/4 or better.



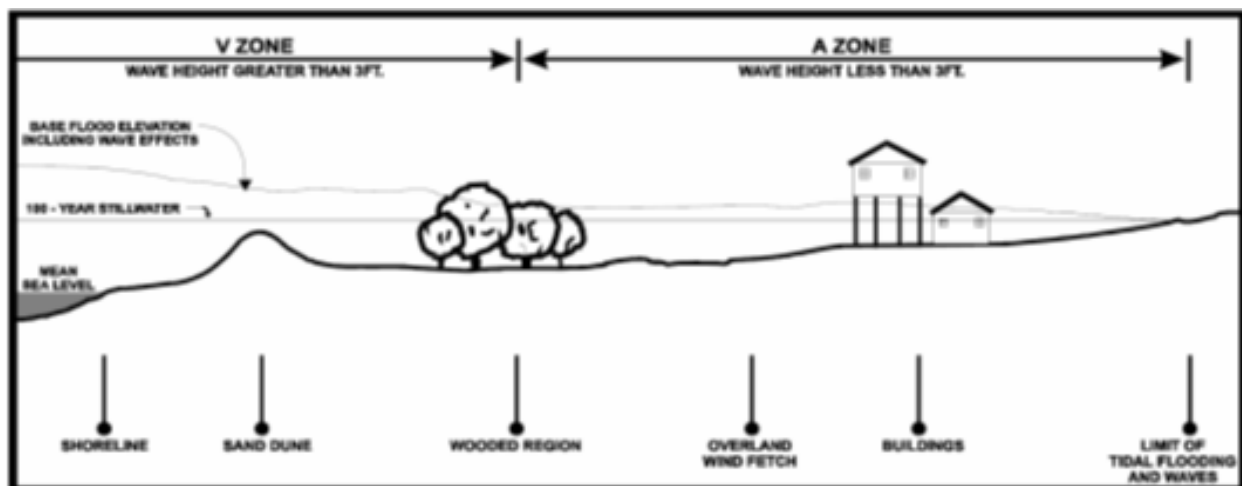
LDP - Local drainage protection: Communities in flat Louisiana have recognized the importance of addressing local drainage. In some areas, rain will fill up a depression and flood buildings, especially buildings on slab foundations with the lowest floor close to grade. As a result, most Louisiana communities have adopted one or both of two simple requirements for new buildings: buildings on fill must have positive drainage away from the building and/or the lowest floor must be a designated height above the crown of the nearest street or the highest adjacent grade. Note that this credit is dependent on the standard being enforced throughout the community; it is not limited to the floodplain.

Thirty-four Louisiana CRS communities (87%) get LDP credit, but they range from 10 points for only having positive drainage (17 communities) to the maximum possible of 120 points for requiring the lowest floor to be three feet above the street (one community – Gretna). Recognition of the local drainage hazard and adoption of these standards has resulted in an average State score that is almost twice the national average.

MHP - Manufactured home park: The NFIP regulations only apply to manufactured home parks or subdivisions built after the community's floodplain management ordinance was adopted. New manufactured homes placed in an existing park did not have to be protected to the base flood elevation. Instead they would have to be elevated at least three feet above grade, exposing them to flood damage where the base flood is more than three feet deep.

MHP credit is for treating new or substantially improved manufactured homes in existing parks the same as new “stick built” buildings. The low participation rate is likely due to the requirement that the community must already have at least one existing manufactured home park where the base flood elevation is more than three feet. Louisiana has twice the participation rate of the national average. All communities get the same credit -15 points.

CAZ - Coastal A Zone regulations: Coastal floodplains, where the wave heights during the base flood are calculated to be as high as three feet, are mapped as V Zones (see graphic, below). V Zones are subject to additional regulatory standards, including a requirement that the area below the elevated first floor must be kept open or be enclosed by breakaway walls.



Source: Louisiana Floodplain Management Desk Reference, p. 7-4



Studies and NFIP claims have shown that coastal waves less than three feet high can cause considerable damage. Coastal A Zones can be defined by the community or can be mapped by FEMA and designated with a line called the Limit of Moderate Wave Action or LiMWA. If a community enforces the V Zone standards in this area, it can receive CAZ credit.

As seen in the Activity 430 table, no Louisiana communities are getting this credit.

SHR - Special hazards regulations: The preferred way to address areas subject to the flood-related special hazards such as tsunamis and subsidence is to preserve the areas as open space and not allow new buildings (which is credited in Activity 420 (Open Space Preservation)). Where that is not feasible, the CRS credits higher standards for new buildings that address the impact of the hazards. As with CAZ, there are no Louisiana communities receiving this credit and only 3% of the nation's CRS communities are getting it.

OHS - Other higher standards: This is a place holder for regulatory standards that are not credited elsewhere in the CRS Coordinator's Manual. Thirteen percent of the nation's CRS communities are earning credit for something, but no Louisiana CRS communities are at this time.

SMS - State mandated standards: This element was deleted by the 2021 Addendum. At the time, only one community was getting the credit and it was for only five points. Therefore, its elimination does not adversely impact the program in Louisiana.

RA - Regulations Administration: This credit is for a community's program to meet certain administrative standards and/or for staff having been trained or certified. Louisiana has seen a 14% increase in community participation with average scores close to the national average. Most of the points have been for staff training and off-site storage of permit records. The average of 16 out of a maximum possible 67 points shows there is plenty of room for improvement.

The maximum credit for training (RA1) is 25 points. The state average is half that; nine communities get no credit; and only three communities are receiving the maximum for training (or for having a Certified Floodplain Manager review all permits in the floodplain).

Key Findings: For most of the higher regulatory standards, Louisiana has a lower participation rate than the national rate. On the other hand, the average scores for Louisiana communities are higher than the national averages for six of the 12 credited elements.

The 22 communities in the first three users groups have a higher average total score for Activity 430, 236 points, compared to 199 points for the 17 communities in the rest of the state. However, unlike many of the 300-series activities, there was no element where most of the participating communities were in those three users groups.



Three general conclusions are drawn from the data.

1. While there are now 14 elements that credit higher regulatory standards, some are more effective than others in preventing flood damage to new and existing buildings. The participation rates show that some of these are already part of many Louisiana CRS communities' programs. These include:

FRB - Freeboard,
BC1 - Adopting the International Building Code,
LDP - Local drainage protection (LDP), and
RA - Regulations administration.

2. Other standards are similarly effective, but not many Louisiana communities are getting credit for them. This is in spite of the fact that average Louisiana scores for several of them are above the national averages. These elements can be very important in preventing damage from future floods and may warrant efforts to qualify more communities for these credits or for more points:

FDN - Foundation protection,
CSI - Cumulative substantial improvements,
PCF - Protection of critical facilities,
ENL - Enclosure limitations for buildings more than four feet above grade,
BC2 - the Building Code Effectiveness Grading Schedule scores, and
RA - more training on regulations administration topics.

3. As with Activity 420 (Open Space Preservation), Activity 430 has an element specifically for coastal areas that provides very high maximum points. In 420, it is CEOS - Coastal erosion open space (max 750 points) and in 430 it is CAZ - Coastal A Zone regulations (max 500 points). The maximum points are high because the coastal flood hazard is high, and these elements can reduce flood losses in those areas. Even so, no Louisiana community is earning either credit.

440: Flood Data Maintenance

Elements: The objective of Activity 440 is to ensure that key floodplain management regulatory data sets are kept current. The first element, AMD - Additional map data, addresses keeping FIRMS up to date. Most communities do this using GIS mapping. The second element, FM - FIRM maintenance, credits preserving copies of all the past FIRMs, amendments, and revisions.

BMM - Benchmark maintenance encourages a local system to ensure that elevation reference marks, which are vital to determining building and ground elevations, are available for surveyors. The last element, EDM - Erosion data maintenance, supports a similar program that maintains reference marks that track coastal erosion.



Activity 440 (Flood Data Maintenance)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
AMD - Additional Map Data	96%	95%	0%	160	115	100	+6
FM - FIRM maintenance	51%	64%	+11%	15	12	11	0
BMM - Benchmark maintenance	35%	28%	+17%	27	23	23	-4
EDM - Erosion data maintenance	1%	0%	0%	20	12	0	0
Activity total	97%	100%	+5%	222	127	109	+7
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

Participation: Louisiana CRS communities have participation rates close to the national average. The high level of support for AMD, usually with GIS platforms, is impressive.

More participation in BMM would be useful, given that many communities are subject to subsidence, where this element is even more important. As with some other elements, participation is much higher in communities in the first three users groups – all 11 communities getting BMM credit participate in those groups.

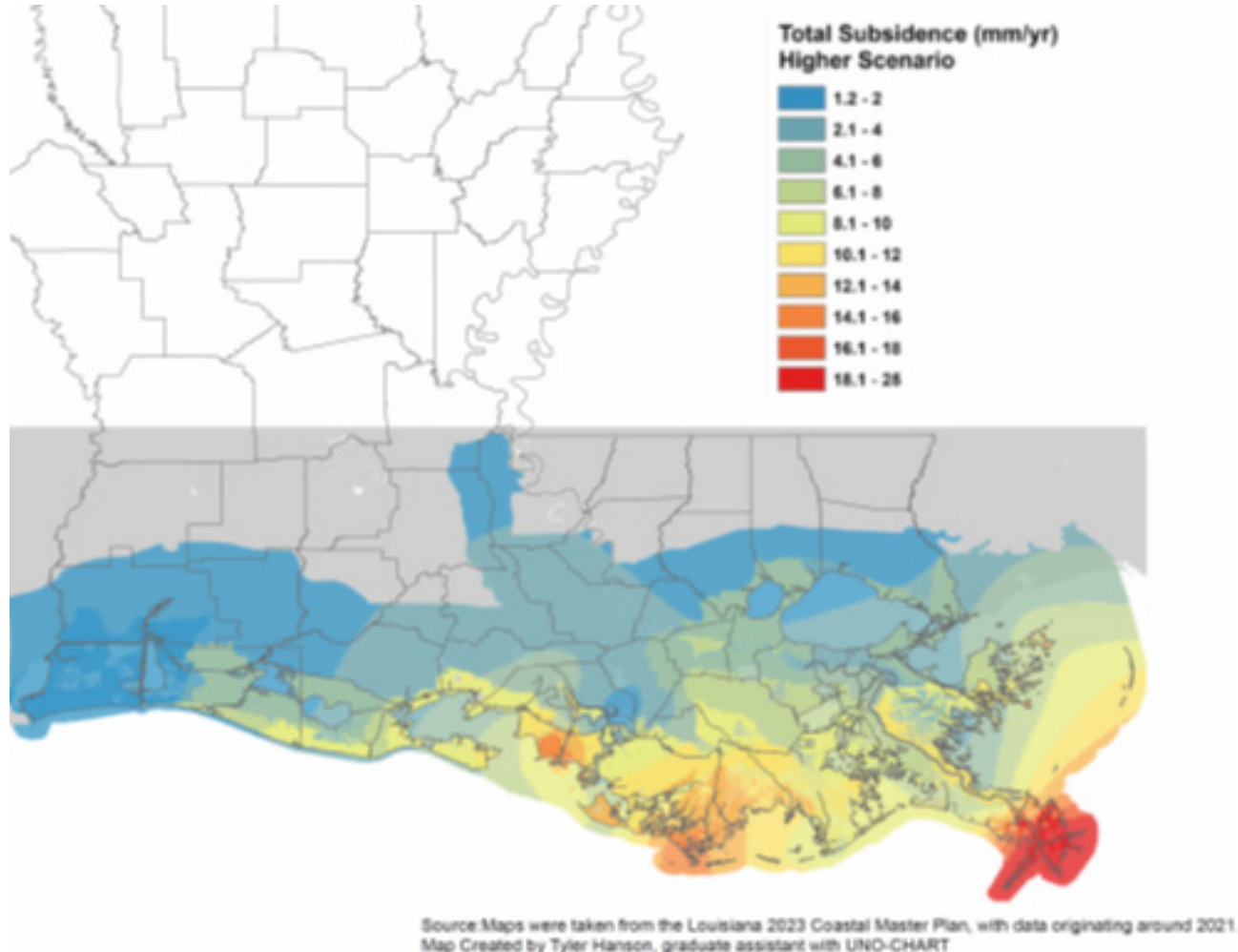
Points: As with participation, Louisiana credits are close to the national averages. There is always room for improvement, especially for AMD.

Key Finding: As these elements are staff-dependent, credit points for Additional Map Data can be increased if staff have the time and resources.

Similarly, the remaining 72% of the CRS communities can receive BMM credit if they are given the resources needed to establish and maintain a program. Such a program would be particularly useful to communities subject to subsidence, where unchecked elevation reference marks can sink and become unusable. The areas affected are shown on the map in Figure 6.



Figure 6. Areas subject to subsidence



450: Stormwater Management

Elements: As with some other activities, this one starts with credit for a basic program that is also a prerequisite for other elements. SMR – Stormwater management regulations credits key regulatory standards that new developments need to meet to minimize increasing runoff on other properties. The regulations are enforced community-wide, not just in the SFHA.

Communities with SMR credit are encouraged to develop a watershed master plan (WMP) that replaces some of the community-wide requirements with standards that address the specific conditions in sub-watersheds, including runoff conditions based on expected future development.



Activity 450 (Stormwater Management)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
SMR - Stormwater management regulations	45%	49%	+12%	380	119	57	-2
WMP - Watershed master plan	6%	0%	0%	315	121	0	0
ESC - Erosion and sedimentation control	76%	79%	0%	40	18	14	+3
WQ - Water quality regulations	62%	44%	+12%	20	20	20	0
Activity total	90%	85%	+1%	755	110	56	+12
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

The last two elements, ESC – Erosion Sediment Control and WQ – Water Quality regulations, address the water quality impacts of runoff from new developments. These programs are usually set by the state’s environmental agency, often independently from the floodplain manager’s focus on water quantity.

Participation: Louisiana CRS participation rates are close to the national averages for this activity. It is somewhat surprising that given the drainage problems that come with very flat land, more communities are not getting the SMR credit and no community is getting WMP credit. One reason for the latter is the high cost of preparing a watershed master plan.

Another surprise is the relatively low rate of participation in the two water quality credits. In many states, every CRS community receives ESC credit because of state rules under the National Pollutant Discharge Elimination System (NPDES).

Points: As with the participation rate, Louisiana communities should earn more points for their stormwater management regulations. The 2021 Addendum brought a change that should increase the credit for SMR and WMP, especially for cities. Previously, the impact adjustment for these two elements was based on how much of the watershed(s) was subject to the regulatory standards.

Municipalities that do not have regulatory authority outside their corporate limits would have relatively low scores because their program does not impact most of their watershed. Now, the impact adjustment is based on how much of the community is regulated. As a result, municipalities that regulate all development in their corporate limits will get full credit.



Key Finding: It is suspected that most communities in the state have some level of stormwater management regulations, although it may go by a different name. Given the change in the impact adjustment, there is a new reason for communities to review their ordinances to identify what qualifies or what changes are necessary to qualify for SMR, ESC, and WQ credits.

500 Series: Flood Damage Reduction Activities

510: Floodplain Management Planning

Elements: Three types of plans are credited in Activity 510. The first element, FMP – Floodplain management planning, credits a comprehensive review of the community’s flooding problem(s) and a full range of mitigation options that could be implemented to prevent and reduce flood damage, including structural flood control and non-structural floodplain management measures. In recent years, the credit criteria have been incorporated into parish-wide hazard mitigation plans and all participating communities in the parish receive the same scores.

The second element, RLAA – Repetitive loss area analyses, credits more focused plans to reduce flood damage in repetitive loss areas. The third element, NFP – Natural floodplain functions plan, provides credit for adopting plans that protect one or more natural functions within the community’s SFHA.

The 2021 Addendum added a fourth element to Activity 510: SDP – Substantial damage management plan which credits a community plan to prepare for substantial damage estimates and determinations after a flood. As of the April 2023 database, only one community in the country had received this new credit.

Activity 510 (Floodplain Management Planning)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
FMP - Floodplain management planning	73%	92%	+3%	382	191	157	+10
RLAA - Repetitive loss area analyses	4%	10%	+10%	140	132	102	+102
NFP - Natural floodplain functions plan	8%	3%	+3%	100	25	15	+15
Activity total	74%	92%	+3%	622	197	168	+21
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							



Participation: Louisiana has close to a 100% participation rate for FMP plans, well above the national average. One reason for this is the coordinated and cooperative parish-wide mitigation plans that incorporate the CRS planning criteria. For half of the CRS communities getting this credit, (18 of 37), the city scores for FMP are the same as the parish scores. The other communities may have worked together but received different scores for a variety of reasons.

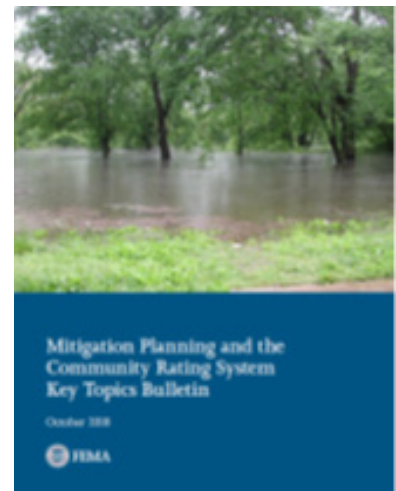
Communities with 50 or more repetitive loss properties are required to prepare and adopt a floodplain management or hazard mitigation plan that addresses repetitive loss areas or prepare and adopt a Repetitive loss area analysis for those areas. The requirement impacts 47 Louisiana communities, of which 24 are currently in the CRS. Historically, most communities have used the former approach to save time and money.

No Louisiana communities were getting RLAA credit five years ago. While 10% of the State’s CRS communities are getting it now, it is still an unexpectedly low participation rate given that most Louisiana communities have some number of repetitive loss properties. UNO/CHART has also prepared model RLAA’s in different areas of the state, so there are many good examples.⁹

The table on the previous page shows that natural floodplain functions plan (NFP) participation is relatively low nationwide and even lower in Louisiana. The 2021 Addendum introduced a new way to obtain this credit through assessments and plans that address threatened and endangered species. Jefferson Parish participated in the pilot program and is the first community in the country to be approved for the full 100 points. Its plan is one of three national models available to help communities.

Points: Although point totals are higher than five years ago, the average points for all three elements in Louisiana are well below the national averages. However, for the 18 communities credited with parish-wide hazard mitigation plans, the average score for FMP in 2023 was 186. For the other 19 communities, the average for FMP was 131, another reason for cities and their parishes to work together on hazard mitigation/floodplain management planning.

Key Finding: Because these plans need to be updated every five or ten years, it should not be hard for the planners to adjust the planning process to increase the points during their communities’ next rounds of updates. There is even FEMA guidance on how to do this.



FEMA now has a guide on how to prepare a mitigation plan that accounts for CRS credit.

⁹ Need link to CHART’s repetitive loss area analyses

¹⁰ https://crsresources.org/files/500/fsa-example_floodspeciesassessmentplan_jefferson_parish_12_2020.pdf



While the repetitive loss planning requirement can be met with a thoughtful process for an FMP plan, such an approach misses the benefits of the additional RLAA credit for a more focused plan that addresses specific chronic flood problems.

The new way to receive credit for a natural floodplain functions plan by doing a relatively simple assessment first and then determining if a plan would be useful should be considered by all communities. Not only would there be more CRS credit earned, the plan will identify how steps to protect threatened and endangered species can also strengthen a local floodplain management program. Communities could also use some guidance to learn about and implement the newest element – the substantial damage management plan.

520: Acquisition and Relocation

Elements: This activity credits removing insurable buildings from the floodplain. There are five elements, each a different way to calculate credit for a different type of building. The basic credit is bAR – Buildings acquired or relocated. Clearing a repetitive loss building (bRL) or a critical facility (bCF) is worth twice the basic credit and removing a severe repetitive loss building (bSRL) gets three times the credit.

Participation: The Activity 520 table below shows that participation by Louisiana communities is two to three times the national rates. This is likely due to the many floods the state has suffered and the resulting availability of FEMA and HUD post-disaster mitigation grants.

Points: There are two ways to calculate the points. Option 1 totals the points up to a maximum of 190. Option 2 has an impact adjustment with the maximum being the activity max of 2,250. Option 1 is used when there is a relatively small number of buildings acquired or relocated. The table shows the average number of buildings for each element, not the points.



Activity 520 (Acquisition and Relocation)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	* US Avg.	* LA Avg.	LA Change
bAR - Buildings acquired or relocated	22%	44%	+3%	**	54	6	-3
bRL - Buildings on the repetitive loss list	15%	46%	+5%	**	10	8	-1
bSRL - Severe Repetitive Loss properties	6%	31%	-7%	**	6	5	+1
bCF - Critical facilities	0%	0%	0%	**	0	0	0
bVZ - Buildings in V or coastal A Zones	1%	0%	0%	**	14	0	0
Activity total	28%	56%	+8%		176	74	-5

All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.

* The database does not provide credit points per element. Instead, it shows the number of buildings per element, which is what is shown here.

** There are no maximum points for each element, only the maximum for the activity as a whole. The "Activity total" line does show points.

One may wonder how the points could decrease when the buildings are gone, and the property must remain open. What decreased was the average. As more communities applied for this credit over the last five years, the new ones had lower counts or lower scores, bringing down the averages.

Note that the "average points" are not points but the average number of buildings credited under each element. Louisiana communities that have applied for credit have fewer creditable buildings than national applications. While larger numbers would bring in better CRS scores, it would require substantial funds to purchase or relocate many more buildings.

Key Finding: Given the time and cost of acquiring and clearing property, CRS credit is not likely to be a motivator for acquisition and relocation projects. Assistance for this activity should focus on the documentation requirements. As communities clear more buildings from floodprone areas, they can apply for 520 credit and/or document the additional work for additional points.

530: Flood Protection

Elements: The CRS Coordinator's Manual shows three elements for Activity 530, but there are actually three steps in calculating the points for protecting one building at a time. The credit factors are the technique used (TU)(e.g., elevating the building (TUE) is worth more than dry floodproofing (TUD) because it is more dependable), how much



better protected the building is (FPI)(e.g., more points for protecting a building to the 500-year flood elevation), and the value of protecting the building (e.g., a critical facility is counted as two buildings). The resulting points for each building are added to get the activity total.

Activity 530 (Flood Protection)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA
Change							
Retrofitted buildings	12%	28%	+2%	1,600	64	86	+29

All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.

Participation: As noted for Activity 520 - Acquisition and Relocation, Louisiana has had more floods and hurricanes than other states, so it has received more mitigation funds than most other states. That money has been put to good use on clearing buildings out of the floodplain (520) or protecting them on site (530).

While 56% of the CRS communities are getting 520 credit, only 28% are getting 530 credit even though there have been more buildings elevated than acquired.

Points: Unlike 520, the average credit for this activity in Louisiana is higher than the national average. It jumped ahead since 2019. The major reason for the higher average in 2023 is that communities already getting credit added more properties to their lists. Ten communities in the first three users group have applied for this credit compared to one in the rest of the state. They have averaged 93 points compared to the one community's 12 points.

Key Finding: Unlike acquiring floodprone buildings, this activity credits actions that individual property owners can fund for their own protection. Many do, often with cost sharing from FEMA or other mitigation funding programs. Therefore, unlike Activity 520, implementation is not dependent on community funding or a lot of staff time. A good deal of credit can be obtained by documenting the elevation and other retrofitting projects that have been conducted in the community.

540: Drainage System Maintenance

Elements: Drainage maintenance is very important in flat areas like much of Louisiana. If a channel is obstructed, normal flows can run over banks and flood many properties. Activity 540 provides credit for a formal, written program that conducts inspections of



the system at least annually and can track follow up to correct problems found. Such a program is credited under the first element, CDR – Channel debris removal. Additional points for the maintenance program are provided for paying special attention to problem sites (PSM), such as more frequent inspections or monitoring them during a storm.

As seen by its name, CDR focuses on debris, i.e., minor problems that can be removed relatively quickly. There is separate credit under CIP – Capital improvements program for written and funded capital improvement programs to correct major problems. Stream dumping regulations (SDR) credits ordinances to prevent dumping trash and other materials in a channel that make more work for the maintenance crews. The last element, SBM – Storage basin maintenance) is like CDR, but it is for storage basins rather than channels.

Activity 540 (Drainage System Maintenance)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
CDR - Channel debris removal	28%	51%	-41%	200	153	135	-41
PSM - Problem site maintenance	25%	38%	+12%	50	49	49	+8
CIP - Capital improvements program	16%	23%	-19%	70	33	29	+1
SDR - Stream dumping regulations	21%	33%	-41%	30	24	25	+3
SBM - Storage basin maintenance	7%	0%	-5%	120	74	0	-120
Activity total	35%	51%	-28%	470	203	201	-22
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

Participation: The last five years have seen a decrease in the State’s participation rates for all elements except problem site maintenance. Sixteen of the 36 communities receiving credit in 2019 received no credit in 2023. This is likely due to a change in the 2017 CRS Coordinator’s Manual that limited the credit to natural channels. Many Louisiana communities have extensive networks of man-made drainage ditches that are no longer counted after 2019.

If the community has an inspection program that is credited under SDR, it can receive credit for its stream dumping regulations. Because of the CDR prerequisite, the same 16 communities went to zero credit for SDR in 2023. At least five of them also went to zero for CIP credit.



While four of the elements are dependent on staff and regulations, a capital improvements program is usually based on an engineering study, which can be expensive. To maintain the credit, the community must fund capital projects on a regular basis.

Points: The 41 point drop in CDR is likely due to the 2017 CRS Coordinator’s Manual revision. There is an impact adjustment for CDR and SBM that reflects how much of the system in developed areas is covered by the program. Eliminating manmade ditches from credit could have resulted in fewer components in the developed areas in the communities’ program.

The “-120” in the last column stands out, but it simply means that the only two communities in the State that were getting storage basin maintenance credit are no longer getting it. This was not related to the 2017 Manual’s changes. The two communities opted to focus their efforts on other CRS credits.

Key Finding: While the State participation rates for the first four elements are well above the national averages, every community should pursue this credit. Not only is drainage system maintenance important in the typical Louisiana terrain, but most communities also have a maintenance program. Often, they only need to formalize it with an inventory and written procedures.

Technical assistance with the records and mapping the affected channels and basins and with adopting and enforcing SDR regulations would help improve participation and points for all the elements except for the capital improvement program, which requires funding. However, if a community already has such a program, it may simply need to document it for CIP credit.

600 Series: Warning and Response

610: Flood Warning and Response

Elements: This is the first of the three 600 series activities. It addresses the “natural” floods along rivers, lakes, and the oceans. The other two address floods caused by levee and dam failures.

All three activities have a similar set of four elements that follow the usual chronological progress in response to the hazard. In 610 they are:

- A. A flood threat recognition system (FTR) predicts flood elevations and arrival times at specific locations within the community**
- B. Emergency warning dissemination (EWD) to the public**
- C. Flood response operations (FRO), i.e., specific tasks to reduce or prevent threats to health, safety, and property**
- D. Critical facilities planning (CFP) that coordinates flood warning and response activities with operators of critical facilities**



610 has two more elements that provide credit for qualifying under National Weather Service programs – SRC – StormReady and TRC – TsunamiReadyCommunity.

Activity 610 (Flood Warning and Response)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
FTR - Flood threat recognition system	21%	23%	+23%	75	73	74	+70
EWD - Emergency warning dissemination	21%	23%	+23%	75	69	69	+69
FRO - Flood response operations plan	21%	23%	+23%	115	82	97	+97
CFP - Critical facilities planning	21%	23%	+23%	75	30	25	+25
SRC - StormReady community	10%	13%	+13%	25	25	25	+25
TRC - TsunamiReady community	1%	0%	0%	30	30	0	0
Activity total	21%	15%	+15%	395	266	285	+285
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

Participation: In 2019, no community in Louisiana was getting credit for Activity 610. Since then, nine communities have qualified, four of them in Jefferson Parish. For any credit, the community must have a program that receives credit for the first four elements. This explains why they have the same participation rates of 23%. Of the five communities receiving SRC credit, four are in Jefferson Parish. Jefferson Parish is a great example of the benefit of developing floodplain management programs in cooperation with its municipalities.

Points: The credits for the six communities compare favorably with the national averages. Except for CFP, they also compare favorably with the maximum possible points.

Key Finding: Preparing a CRS-credited flood warning and response plan requires a lot of work from the emergency manager and the floodplain manager. It can be a significant undertaking, but it pays off with the early evacuation and emergency building protection measures that it facilitates. While technical assistance can help, most of the work must be done by local staff. Because most emergency management agencies are at the parish level, it makes the most sense to prepare them for the parish with appropriate attention to municipalities.

Figure 7. StormReady Parishes in the CRS

Caddo
Calcasieu
East Baton Rouge
Jefferson
Lafayette
Orleans
Ouachita
St. Charles
St. Tammany
Tangipahoa
Terrebonne
West Baton Rouge



There is an apparent correlation between credit for Activity 610 and the StormReady Community designation. The latter indicates a heightened interest in the type of flood warning and response work credited in 610. There are 24 parishes and one city (Lake Charles) with the StormReady designation, including 12 of the 16 parishes in the CRS (listed in figure 7). These communities might be good candidates for tackling the preparations needed for 610 credit. There are no TsunamiReady communities in Louisiana.

620: Levees

Elements: As with 610, 620 has four elements that follow the flood response timeline: be alerted to a potential flood (LFR), warn the public (LFW), conduct emergency operations (LFO), and address critical facilities (LFC).

Activity 620 has one more element than 610. That element is also a prerequisite for the other elements in 620: have a written levee maintenance program (LM). Note that there are no LM credit points for levees that are recognized as providing protection from the base flood on a Flood Insurance Rate Map. This is because a maintenance program is already required for the map recognition, i.e., it is a minimum requirement of the NFIP. However, a community still needs to provide all the relevant LM documentation to receive credit under the other elements.

Activity 620 (Levees)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
LM - Levee maintenance	1%	0%	0%	95	78	0	0
LFR - Levee failure threat recognition system	1%	0%	0%	30	21	0	0
LFW - Levee failure warning	1%	0%	0%	50	26	0	0
LFO - Levee failure response operations	1%	0%	0%	30	20	0	0
LCF - Levee failure critical facilities	1%	0%	0%	30	10	0	0
Activity total	1%	0%	0%	235	111	0	0

All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.

Participation: There are only six CRS communities in the country receiving this credit, none of them are in Louisiana. A key reason for this is that most levee programs are operated by levee districts, not by a city or parish, and it is often hard to expect districts to devote time and resources to help a community obtain CRS credit.

Points: Louisiana communities receive no points for this activity.

Key Finding: This situation is unfortunate as few states are as dependent as Louisiana is



on large and safe levees. Time and effort spent developing one creditable model program might pay off if it helps other communities and levee districts. Such models have been quite useful in other activities, such as model ordinance language and mitigation plans.

630: Dams

Elements: As with 620 Levees, this activity has the same four warning and response elements. The fifth element is credit for the state’s dam safety program (SDS). It is provided only to those communities that would be affected by a flood from the failure of a high-hazard-potential dam, i.e., a dam that should be regulated by the state’s program.

Activity 630 (Dams)							
Elements	Participation			Points			
	US Pct.	LA Pct.	LA Change	Max	US Avg.	LA Avg.	LA Change
SDS - State dam safety program	33%	10%	-6%	45	37	45	0
DFR - Dam failure threat recognition system	1%	0%	0%	30	22	0	0
DFW - Dam failure warning	1%	0%	0%	35	15	0	0
DFO - Dam failure response operations	1%	0%	0%	30	12	0	0
DCF - Dam failure critical facilities	1%	0%	0%	20	7	0	0
Activity total	33%	33%	+17%	160	38	45	0
All participation and points values are as of 4/1/2023. All Louisiana change values are from 2019 to 2023. Louisiana change values are calculated by subtracting 2023 values from 2019 values, with a negative value indicating a decline from 2019.							

Participation: While one-third of the nation’s CRS communities are getting credit for their state’s dam safety program, only four in Louisiana are: Ouachita, Caddo, and St. Tammany Parishes and Mandeville. This may be due to (1) the requirement that they must be downstream of a high-hazard-potential dam (which is easier for a parish to determine) or (2) a lack of knowledge of their exposure to such a hazard.

No Louisiana communities are getting credit under the other four elements. Some may have a dam failure warning and response program, but either it has not been submitted for credit or it is known to not meet all the credit criteria.

Points: Communities do not determine the points for their SDS credit; the state’s program does. Louisiana’s state program receives the maximum credit of 45 points.

Key Finding: A statewide map of the high-hazard-potential dams and their impact areas might help additional communities receive the state dam safety credit.

Dam failure inundation maps and warning and response plans for the facility are required as a condition of federal permits for certain dams. A review might find a dam operator willing to assist in preparing a model program, which also heavily depends on the level of involvement of the community’s (usually the parish’s) emergency manager.



3. SUMMARY OF THE KEY FINDINGS

The long term goals of the CRS strategy are to increase the resources available to Louisiana CRS communities and to improve coordination among the various state and statewide or regional programs that can help communities reduce flood losses and protect natural floodplain functions. By implementing creditable CRS activities and elements, flood losses will be reduced, and natural floodplain functions will be better protected.

The CRS is a tool to reach long term goals. To make the tool more effective, this Strategy Update focuses on how to improve participation and increase points in the CRS. In effect, by improving use of the tool, Louisiana communities will reach greater goals.

Element types: The previous section and the key findings identify what has worked (i.e., where communities earn credit) and what facilitates getting the credit. This state-wide level summary catalogs the CRS elements under five types which are based on how hard it is to earn the credit:

- A. Elements that most communities are already getting. These are either mandated elements, elements that most communities were already doing, or elements that are easy for most communities to start. Adopting and implementing the International Building Code (430 BC1) is an example of a mandated element.**
- B. Elements where a little staff time and effort can obtain a good score. These are often called “low hanging fruit” in that the points are easy to earn for most communities. Many of the elements in the 300 series of public information fall under this type.**
- C. Elements that require more work, but the benefits of implementation are worth the extra effort. Examples are some of the higher regulatory standards that can take a lot of time and effort to explain and get adopted and the 600 series of emergency management plans. These can have a major impact on the protection of new and substantially improved buildings and on life safety during a flood.**
- D. Elements a community should pursue if it has already done most of the work. Usually the CRS credit alone does not warrant the time and expense necessary to do the job. Buyouts and the credits under Activity 520 Acquisition and Relocation fall under this type.**
- E. Elements where only a few communities qualify (e.g., a coastal credit that is not available for inland communities) so a state-level effort may not be warranted.**

Not every element fits cleanly into one of these five types and some elements are not categorized at all, primarily because they are viewed as too difficult or not relevant for most Louisiana communities.

Here are this Strategy Update’s recommendations for each type of CRS element.



A. Elements that most communities are already getting credit for. The following elements are currently being implemented by at least 90% of the CRS communities in the State.

- ▶ **310 Construction Certificate Management**
 - ▶ EC - Elevation Certificates after CRS application

- ▶ **320 Map Information Service**
 - ▶ MI1 - Providing insurance information from FIRM

- ▶ **330 Outreach Projects**
 - ▶ OP - Outreach projects

- ▶ **340 Hazard Disclosure**
 - ▶ ODR - Other disclosure requirements

- ▶ **350 Flood Protection Information**
 - ▶ LIB - Library
 - ▶ LPD - Locally pertinent documents
 - ▶ WEB - Website

- ▶ **420 Open Space Preservation**
 - ▶ OSP - Preserved open space

- ▶ **430 Higher Regulatory Standards**
 - ▶ FRB - Freeboard
 - ▶ BC - Building code
 - ▶ LDP - Local drainage protection

- ▶ **440 Flood Data Maintenance**
 - ▶ AMD – Additional Map Data

- ▶ **510 Floodplain Management Planning**
 - ▶ FMP - Floodplain management planning



B. Elements where a little staff time and effort can obtain a good score. State-level support would provide information or text templates, instructions on what is needed to get the credit, links to good examples, and where to get help.

320 Map Information Service: All but one Louisiana community is getting 320 credit. All are earning MI1 credit, which is Type A because it is a prerequisite to getting more credit. Four of the remaining elements are considered Type B because it is relatively easy to get the map information and expand the service to tell people about it:

- ▶ **MI2 LiMWA/floodway info/CBRS area**
- ▶ **MI4 Flood depth data**
- ▶ **MI6 Historical/repetitive flood information**
- ▶ **MI7 Natural floodplain functions**

Seventeen communities are currently getting the maximum credit of 90 points. The rest have scores ranging from zero to 70. Adding one, two, or three elements from MI2, 4, 6 and 7 would give all communities the maximum credit points of 90.

330 Outreach Projects: Outside the JUMP users group, no community is getting the maximum credit for OP – Outreach projects. Thirty-one of the 39 CRS communities are getting no credit for FRP flood response preparations. In short, all communities could use more examples or language to use in outreach projects.

350 Flood Protection Information: Participation and credit points for all three elements could be improved with lists of publications that could augment what is in the public library and with ideas, examples, and links for local websites. Other than the possible cost of printing publications, the work is all staff time.

420 Open Space Preservation: If the community has collected the property information needed for OSP – Open space preservation, documentation for NFOS – Natural functions open space credit for a parcel can be relatively simple, such as an existing report or a letter from a naturalist or other professional.

440 Flood Data Maintenance: The average Louisiana points for AMD – Additional map data is 100 out of 160. Most of the ways to get credit include GIS layers that can be easy to obtain. Examples are layers showing previous FIRMs, areas with natural floodplain functions, such as wetlands, and the 500-year floodplain boundaries.

FM – FIRM maintenance requires collecting and keeping all FIRMs, floodway maps, and Flood Insurance Studies that have been published for the community. If the community cannot find them all, digital copies may be available on FEMA's Map Service Center or with help from the LSU AgCenter FloodMaps Portal. DOTD may also have copies of historical FIRMs.



510 Floodplain Management Planning: The new credit for NFP natural floodplain functions plan is for a two-step process. The first step is an assessment that a lay person can do in a day or two. It is worth 15 points and is considered “low hanging fruit.” The real benefit is that the assessment supports the decision whether to pursue a plan worth 85 points. Several Louisiana communities are earning the assessment credit and Jefferson Parish’s plan is a national model.

C. Elements where more work is required, but the benefits of implementation may be worth that effort. Activities and elements that require working with another local office are listed here, even though there may not be a lot of effort needed on the part of the CRS Coordinator.

State-level support would be to provide instructions on what is needed to get the credit, information or text templates, links to good examples, and/or where to get help. In several cases, instructions and templates have been published by FEMA, such as the PPI guidance. Additional assistance for this group of elements would include a source of advice who can also review a community’s work while it is underway. For some elements, there are ISO technical reviewers who can provide this service.

330 Outreach Projects: The PPI – Program for Public Information and STK – Stakeholder credits require staff effort and an advisory committee. The product can boost other credits totaling 100 points or more. The PPI is also an activity that can be done, and has been done, at the Parish or users group level, reducing the workload on individual communities’ staff.

340 Hazard Disclosure: A program worthy of DFH – Disclosure of the flood hazard, REB -Real estate brochure, and DOH – Disclosure of other hazards credit could be developed in cooperation with the area Boards of Realtors. The entire state is covered by such Boards whose members should want to support full disclosure of the hazards facing the properties they help sell.

360 Flood Protection Assistance: This activity requires the time of a staff member who is knowledgeable about property protection measures. This person also needs to work well with people. Assuming property owners take that person’s advice, there can be a significant reduction in flood damage to buildings subject to flooding and drainage problems. The workload can be reduced by sharing it with other communities, such as having an agreement with the parish to provide the service.

370 Flood Insurance Promotion: Preparing the FIA – Flood insurance assessment, CP – Coverage improvement plan, and CPI – Coverage plan implementation are similar to preparing and implementing a PPI and are often included in PPIs, so the level of effort is similar. Providing TA – Technical assistance is like providing 360 technical assistance, except that it needs to be done by an expert in flood insurance. As with 360, this element would benefit by sharing the work with other communities in the

¹¹ https://crsresources.org/files/500/fsa-example_floodspeciesassessmentplan_jefferson_parrish_12_2020.pdf



parish or users group.

420 Open Space Preservation: Three elements in this activity can be credited with a bit of work, including working with other offices and recommending revising an ordinance. OSI - Open space incentives standards range from encouraging floodplain open space in the community's land use plan (10 points) to transfers of development rights (70 points) to requiring subdivisions to set aside the floodplain as open space (250 points).

Staff work would also be required to research the zoning and subdivision ordinances and, if needed, draft and support an ordinance revision. Similar work would be needed for researching and drafting the LZ - Low density zoning ordinance language, which provides up to 600 points. Most parishes have open space or agricultural zoning districts that require at least 5 acres minimum lot sizes. Much of the work would be comparing the zoning map to the floodplain map, which could be done by the GIS office.

As with the two previous examples, a community may already have something on the books that effectively protects natural shorelines. NSP credit would require identifying the natural shorelines along the streams, lakes, and the Gulf and determining if there are existing regulations to preserve them as natural. The inventory work could already have been done as part of the community's credit for its channel and debris removal program (540 - CDR).

430 Higher Regulatory Standards: As noted under Activity 430, the following elements can be very effective in preventing damage from future floods. However, fewer than one-third of the State's CRS communities are getting credit for them, even though the average Louisiana scores for several of them are above the national averages.

- ▶ **FDN - Foundation protection,**
- ▶ **CSI - Cumulative substantial improvements,**
- ▶ **PCF - Protection of critical facilities,**
- ▶ **ENL - Enclosure limitations for buildings more than four feet above grade,**
- ▶ **BC2 - the Building Code Effectiveness Grading Schedule scores**

The staff work required for these ordinance provisions would be similar to what's described for the 420 elements on the previous page. However, they are less likely to be found in existing codes and it is more likely that work would be needed to draft and adopt new regulations. Again, such regulations would be worth it as they clearly would improve protection of new and existing buildings from flood damage, and they are not specifically included in the NFIP minimum requirements.

440 Flood Data Maintenance: One element in this activity requires some staff work but



a great deal of coordination with others, in this case, surveyors. A BMM – Benchmark maintenance program involves identifying qualifying elevation reference marks, making their location known to surveyors, and taking appropriate steps if any are found missing or disturbed. Surveyors will readily see the advantages of such a program and should be willing to cooperate.

450 Stormwater Management: As with the regulatory credits in 420 and 430, credit for SMR – Stormwater management, ESC – Erosion and sediment control, and WQ – Water quality regulations requires a review of existing ordinances. At one time or another, most communities have adopted such provisions. If the current standards do not qualify, appropriate ordinance language would be needed. This work would need to be closely coordinated with (and preferably done by) the community’s engineer and/or surface water management office. In addition to lots of CRS points, the full benefit is from fewer drainage problems, better management of runoff during storms, and cleaner runoff.

510 Floodplain Management Planning: Most CRS communities are getting credit for the first element, FMP – Floodplain management planning, but the state average of 157 is 34 points below the national average and 225 points below the maximum credit of 382. Higher scores are possible – 14 Louisiana communities are getting over 200 points for FMP and Terrebonne Parish/City of Houma is getting over 300 points. Higher points are possible if the typical hazard mitigation planning process includes attention to key flood provisions that are discussed in FEMA’s *Mitigation Planning and the Community Rating System Key Topics Bulletin*.

Most communities are not getting credit for the other two elements, RLAA – Repetitive loss area analysis and NFP – Natural floodplain functions plan. These are standalone activities that are not usually incorporated into mitigation planning or a community’s land use or comprehensive planning. Completing each requires staff or a consultant’s time, but no advisory committee. The easier Type A Floodplain Species Assessment can also help determine if a Floodplain Species Plan should be pursued for NFP credit.

As with other credits in this section, the payoff from these three planning efforts is a more effective local program that reduces the impacts of repetitive flooding and protects threatened and endangered species habitat, both of which strengthens a community’s overall floodplain management program.

540 Drainage System Maintenance: Four of the five elements in this activity are mostly staff efforts to prepare and implement a formal program to inspect and maintain drainage channels and storage basins. This program must be closely coordinated with, and preferably prepared by public works or drainage staff. The required implementation and record keeping is mostly done by public works or drainage staff.



Most communities have such staff and at least an unwritten program. For CRS credit, the bulk of the work is formalizing and documenting what is done. If the existing program does not warrant a lot of points, community staff can discuss the benefits of the CRS standards and upgrade the existing program to meet those national standards.

SDR – Stream dumping regulations should be tackled like other regulatory provisions: review existing ordinances and, if something is missing, draft and help adopt ordinance revisions.

600-series Warning and Response: The three activities in the 600 series have the lowest Louisiana community participation rates. Obtaining credit under any of them requires a commitment on the part of the community’s emergency manager. In many parishes, the parish emergency manager is effectively responsible for the cities’ programs.

Preparing a flood, levee failure, or dam failure warning and response plan can be a major undertaking. However, there are examples and once a flood response plan is completed, the other two are easier to develop because they build on the procedures of the first.

Dam and levee response plans have the additional need to work with, and depend on, the owners of the dams and levees that would impact the community if they failed. This can be difficult because most agencies that own and manage dams are outside of the local government structure and the dam and its owner may be some distance upstream, even in the next parish or state.

Despite these challenges, all three credits are worth pursuing as they can have a major impact on life safety and property damage from future floods. There are good examples that can help with flood response and dam safety response planning, but one is not known for levee failure warning and response.

Training credits are provided in Activities 360 Flood Protection Assistance (TNG) and 430 (RA). The easiest way to get these credits is to attend the noted free classes at FEMA’s Emergency Management Institute (EMI). The benefits of having a trained staff go well beyond CRS premium discounts.

There is also an EMI class on the Community Rating System (Eo278). Attendance at that class would help staff become more familiar with all the credits in the program and how the other attendees’ communities are addressing them. Sometimes, this class may be field deployed to Louisiana or a nearby state.



D. Elements worthwhile if most of the work has already been done. Usually the CRS credit alone does not warrant the time and expense necessary to pursue these credits if the community starts from scratch. But, if there already is an ongoing program, it may not take much to collect what is needed to document the credit. Experience has shown that most of such programs need some tweaking to meet all the credit criteria.

State-level support would be to provide national examples and contact information for Louisiana communities that are getting the credit.

310 Construction Certificate Management: If the community required FEMA Elevation Certificates before they were required, staff could collect them and submit them for ECPO post-FIRM or ECPR pre-FIRM credit.

410 Floodplain Mapping: NS – New study and LEV – Leverage credit are provided for non-FEMA studies that the community uses in its permit program. This includes studies that FEMA reviewed and incorporated into its FIS and FIRM. “Non-FEMA” studies can include mapping and studies done by the Corps of Engineers or other entity, not just the community.

450 Stormwater Management: As noted, three of the four elements are Type C and can be credited with just staff work. The fourth, WMP – Watershed master plan, requires a hydrological and hydraulic engineering study of the streams in the watershed(s) that drain into the community. These are usually considered affordable only if done as part of a master plan to identify where channel improvements, flood control structures, etc. are warranted. One may have been done at the parish or larger scale and the community is not aware of or does not use it. Some digging would discover if such a master plan has been done, but note that it must meet certain credit criteria, such as addressing at least the 25-year storm.

520 Acquisition and Relocation: The CRS credit points alone do not warrant the expenditures to acquire and clear floodprone buildings. But even if only a few buildings have been cleared, they are worth 3 points each under the Option 1 credit calculation alternative. Repetitive loss and severe repetitive loss properties are worth 6 points and 9 points each, respectively. Getting these points depends on collecting the records that show a parcel that had a building on it is preserved as a vacant lot (which also documents credit for Activity 420 Open Space Preservation).

530 Flood Protection: The same approach as in 520 applies to Activity 530. Under Option 1, each building in the floodplain that was elevated voluntarily (not because the community was enforcing its NFIP requirements) is worth 2.4 points.



540 Drainage System Maintenance: As with Activity 450, all but one of the elements can be credited if staff can do the required work. The exception is CIP – Capital improvements program. As noted in the activity discussion, “a capital improvements program is usually based on an engineering study, which can be expensive. To maintain the credit, the community must fund capital projects on a regular basis.” If one has been done and the community is committed to implementing it, it should go for the credit.

E. Elements where only a few communities can qualify. There are some elements that apply only in certain situations but that can be worth hundreds of points. No Louisiana communities are receiving these credits; many may not qualify (e.g., inland communities cannot get the coastal credits) and/or it may take some work to qualify. In these cases, further discussions should be held to determine the work needed and the level of interest in the few communities that would benefit.

Coastal communities: Coastal areas may qualify for 420 open space and 430 regulatory credits: CEOS – Coastal erosion open space and CAZ – Coastal A Zone regulations. The maximum points warrant investigating the possibilities – 750 and 500 points, respectively. The first step is to identify which coastal communities are interested. One place to start is to identify which communities currently have V Zones on their FIRMs.

Communities with subsidence: A community with a subsidence problem would benefit from the following activities and elements:

- ▶ **320 MI5 special flood-related hazards map information (max 20 points)**
- ▶ **420 SHOS special flood-related hazards open space (max 150 points)**
- ▶ **430 SHR special flood-related hazards regulations (max 100 points)**
- ▶ **440 BMM benchmark maintenance (max 27 points)**

While some of the point totals seem high, those in 420 and 430 are subject to the impact adjustment that accounts for how much of the SFHA is subject to subsidence. There are general maps of the state showing subsidence areas that would be a good place to start to identify which communities might be interested.

Communities protected by levees: If there is interest from those communities with levees, a pilot model program involving a levee district and the communities would be worth preparing.

On the following pages is a matrix that shows which elements are considered worth the most attention, their maximum points, and their type. The last column identifies offices or organizations that might be able to provide assistance or who are vital to implementing the element and would need close coordination. In the latter case, sometimes the other office just needs a copy of the *CRS Coordinator’s Manual* credit criteria to see how they fit in.



Table 4. Elements Recommended for Attention

Series/Activity Element		Max Pts	Type					Assistance/Coordination
			A	B	C	D	E	
300 Series: Public Information Activities								
310 Construction Certificate Management *								
EC	Elevation Certificates after CRS **	38	A					
ECPO	Elevation Certificates, post-FIRM bldgs.	48				D		
ECPR	Elevation Certificates, pre-FIRM bldgs.	30				D		
320 Map Information Service								
MI1	Providing basic information on the FIRM	30	A					
MI2	LiMWA/floodway info/CBRS area	20		B			Community GIS	
MI3	Other flood problems not on the FIRM	20						
MI4	Flood depth data	20		B			Community GIS	
MI5	Special flood-related hazards	20				E	Community GIS	
MI6	Historical/repetitive flood information	20		B			Community GIS	
MI7	Natural floodplain functions	20		B			Community GIS	
330 Outreach Projects								
OP	Outreach projects	200	A	B			Public Information Officer	
FRP	Flood response preparations	50		B			Emergency manager	
PPI	Program for Public Information bonus	100			C		P-UG, ISO technical reviewer	
STK	Stakeholder bonus	50			C		P-UG, ISO technical reviewer	
340 Hazard Disclosure								
DFH	Real estate agent disclosure of SFHA	35			C		Area Board of Realtors	
ODR	Other disclosure requirements	25	A					
REB	Real estate brochure	12			C		Area Board of Realtors	
DOH	Disclosure of other hazards	8			C			
350 Flood Protection Information								
LIB	Library	10	A	B			Parish or regional library system	
LPD	Locally pertinent documents in the library	10	A	B			Parish or regional library system	
WEB	Website	105	A	B			Webmaster	
360 Flood Protection Assistance								
PPA	Property protection advice	40			C		P-UG	
PPV	Advice after a site visit	45			C		P-UG	
FAA	Financial assistance advice	15			C		P-UG	
TNG	Training	10			C			
370 Flood Insurance Promotion								
FIA	Flood insurance assessment	15			C		P-UG, ISO technical reviewer	
CP	Coverage plan	15			C		P-UG, ISO technical reviewer	
CPI	Plan implementation	60			C			
TA	Technical assistance	20			C		P-UG	

* Name changed in 2021 Addendum to Construction Certificate Management
 UG – help or a cooperative effort could be pursued with the parish or users group
 TYPES:

- A. Elements that most communities are already getting credit for
- B. Elements where a little staff time and effort can obtain a good score
- C. Elements where more work is required
- D. Elements worthwhile if most of the work has already been done
- E. Elements where only a few communities can qualify

Table 4. Elements Recommended for Attention

Series /Activity Element		Max Pts	Type					Assistance/Coordination
			A	B	C	D	E	
400 Series: Mapping and Regulations								
410 Floodplain Mapping								
NS	New study	350						
LEV	Leverage	N/A				D		
SR	State review	60				D		
HSS	Higher study standards	200						
FWS	Floodway standard	140						
MAP	Special hazards mapping	100						
420 Open Space Preservation								
OSP	Preserved open space	1,450	A		C			
DR	Deed restriction	50						
NFO	Natural functions open space	350		B			Parks or naturalist office, Nature	
SHO	Special hazards open space	150				E		
CEO	Coastal erosion open space	750				E		
OSI	Open space incentives	250			C		Community planning	
LZ	Low density zoning	600			C		Community zoning	
NSP	Natural shoreline protection	120			C		Public works/drainage	
430 Higher Regulatory Standards								
DL	Development limitations	1,330	A	B				
FRB	Freeboard	500		B				
FDN	Foundation protection	80			C			
CSI	Cumulative substantial improvements	90			C			
LSI	Lower substantial improvements	20			C			
PCF	Protection of critical facilities	80	A					
ENL	Enclosure limits	240			C			
BC	Building code *	100			C		Building official	
LDP	Local drainage protection	120	A	B				
MHP	Manufactured home park	15	A	B				
CAZ	Coastal A Zone regulations	500	A	B				
SHR	Special hazards regulations	100			C			
TSR	Tsunami hazard regulations	50			C			
CER	Coastal erosion regulations	370			C			
OHS	Other higher standards	100			C			
SMS	State-mandated standards	20			C		Dropped in the 2021 Addendum	
RA	Regulations administration	67			C			
440 Flood Data Maintenance								
AMD	Additional map data	160	A	B			Community GIS	
FM	FIRM maintenance	15		B			Community GIS	
BMM	Benchmark maintenance	27			C	E	Community, local surveyors	
EDM	Erosion data maintenance	20				E		

* A for BC1 (adoption), C for BC2 (BCEGS)

TYPES:

- A. Elements that most communities are already getting credit for
- B. Elements where a little staff time and effort can obtain a good score
- C. Elements where more work is required
- D. Elements worthwhile if most of the work has already been done
- E. Elements where only a few communities can qualify

Table 4. Elements Recommended for Attention

Series/Activity Element		Max Pts	Type					Assistance/Coordination
			A	B	C	D	E	
450 Stormwater Management								
SMR	Stormwater management regulations	380			C			Community planning, engineer
WMP	Watershed master plan	315				D		Community engineer
ESC	Erosion and sedimentation control	40			C			
WQ	Water quality regulations	20			C			
500 Series: Flood Damage Reduction								
510 Floodplain Management Planning								
All	Acquisition and relocation of buildings	382	A		C			Parish planning or emergency
RLAA	Repetitive loss area analysis	140			C			Community planning/public works
NFP	Natural floodplain functions plan **	100		B	C			ISO technical reviewer
520 Acquisition and Relocation								
All	Acquisition and relocation of buildings	2,250				D		
530 Flood Protection								
PB(R)	Retrofitted buildings	1,600				D		
PB(S)	Structural flood control & drainage	1,000				D		
540 Drainage System Maintenance								
CDR	Channel debris removal	200			C			Public works/drainage
PSM	Problem site maintenance	50			C			Public works/drainage
CIP	Capital improvements program	70				D		Public works/engineering
SDR	Stream dumping regulations	30			C			
SBM	Storage basin maintenance	120			C			Public works/drainage
600 Series: Warning and Response								
610 Flood Warning and Response								
FTR	Flood threat recognition system	75			C			Emergency management
EWD	Emergency warning dissemination	75			C			Emergency management
FRO	Flood response operations plan	115			C			Emergency management
CFP	Critical facilities planning	75			C			Emergency management
SRC	Storm Ready community	25						National Weather Service
TRC	TsunamiReady community	30						National Weather Service
620								
LM	Levee maintenance	95			C		E	Levee district
LFR	Levee failure threat recognition	30			C		E	Levee district, emergency mgmt.
LFW	Levee failure warning	50			C		E	Levee district, emergency mgmt.
LFO	Levee failure response operations	30			C		E	Levee district, emergency mgmt.
LCF	Levee failure critical facilities	30			C		E	Levee district, emergency mgmt.

** B for FSA, C for FSP

- Types: A. Elements that most communities are already getting credit for
- B. Elements where a little staff time and effort can obtain a good score
- C. Elements where more work is required
- D. Elements worthwhile if most of the work has already been done
- E. Elements where only a few communities can qualify

Table 4. Elements Recommended for Attention

Series /Activity Element		Max Pts	Type					Assistance/Coordination
			A	B	C	D	E	
630 Dams								
SDS	State dam safety program	45		B				LA DOTD dam safety program
DFR	Dam failure threat recognition	30			C			Dam operator, emergency mgmt.
DFW	Dam failure warning	35			C			Dam operator, emergency mgmt.
DFO	Dam failure response operations	30			C			Dam operator, emergency mgmt.
DCF	Dam failure critical facilities	20			C			Dam operator, emergency mgmt.

** B for FSA, C for FSP

- Types: A. Elements that most communities are already getting credit for
- B. Elements where a little staff time and effort can obtain a good score
- C. Elements where more work is required
- D. Elements worthwhile if most of the work has already been done
- E. Elements where only a few communities can qualify

4. RESOURCES

The previous sections review the individual credited elements in the CRS, identifying those with the greatest potential for implementation. The objectives are to identify those elements that are more attainable and to help communities do them. Section 3 identifies the types of assistance that would be most productive. This Section 4 reviews the potential agencies and organizations that could help CRS communities improve their programs.

This section builds on a survey conducted for the 2019 CRS Strategy that identified key state agencies that could assist with CRS activities. That work also contacted a variety of local, state, federal and private agencies and organizations. The information gathered was updated for this Strategy.

Where to start: There are four levels of assistance for community CRS staff:

1. The ISO/CRS Specialist should be the first person to contact with questions about an activity. The Specialist can clarify what is needed and can identify other communities that have good programs.
2. The next level of help is from fellow community officials. These can be neighboring communities or the parish government. Not only do parishes normally have more full time staff devoted to the CRS and CRS credited activities than the smaller cities, but many activities are also, or could be, implemented parish-wide.

The success of the users group communities discussed earlier in the Strategy underlines the effectiveness of local officials helping each other. Users groups seemed particularly useful in the 300-series of public information activities.

3. The third level is the other staff members in the community who would be involved in implementing an activity or element. In many cases, implementation is already their responsibility. Examples are public works staff who do drainage system maintenance (540) and the emergency manager (600 series). They need to be part of the design of a new program as well as implementation.
4. Finally, there are state agencies and organizations who can provide a lot of technical assistance. They are identified in the following pages.

Facilitating coordination and cooperation: The first three levels of assistance would be through one-on-one discussions with the CRS Coordinator. There should be continuous communication and coordination with these offices over the years.

Getting technical assistance from a state level agency or organization could be more difficult, especially if each community is expected to find the right person to talk to. It



would also be difficult for the agency or organization if they got calls from 39 different CRS Coordinators who explain what they need in 39 different ways. Finally, it would be good to provide feedback to the agency or organization on how helpful they have been.

Currently, at the state level there is a NFIP State Coordinator and a CRS Coordinator in the Louisiana Department of Transportation and Development's Public Works and Water Resources Division. This Strategy proposes the CRS Coordinator be a focal point for state level assistance to CRS communities.

It is proposed that a "CRS Priorities Committee" of interested community representatives (e.g., one from each users group plus others from other areas) be established, possibly through LFMA. The committee would prioritize assistance needs and work with the state CRS Coordinator to contact the priority offices and explain what communities may ask for. The state CRS Coordinator would report on progress and lessons learned back to the state Hazard Mitigation Plan Update Committee.

The CRS Priorities Committee, in cooperation with the state CRS Coordinator, could also identify training needs and even organize training sessions, webinars, and/or materials that would help communities in general or in support of specific elements. These would complement the training currently given by ISO through a series of one-hour webinars that cover general topics, such as annual recertification procedures and many activity-specific topics (<https://crsresources.org/training>).

Technical Assistance by CRS Activity: This section identifies potential sources of assistance by CRS activity. Contact information for the identified state level agencies and organizations follows the activity reviews.

As noted in the 2019 Strategy, "During this process, the research team found that missions and resources often change over the years. What an agency does today may change over time. Therefore, this section only summarizes what could be done." That caveat applies to this Strategy Update, too.

Activity 310 Elevation Certificates

The Louisiana Society of Professional Surveyors could assist in training surveyors on completing Elevation Certificates. This would be especially helpful now as a new version of the FEMA Elevation Certificate has just been released.

Activity 320 Map Information Service

The first contact should be with the community's GIS office, which may already have layers or paper maps that would meet the needs of one or more of the non-FIRM credits. Additional maps or layers for the community may be available from the US Army Corps of Engineers (e.g., levees, historical flood levels), the US Fish and Wildlife Service (e.g., the National Wetlands Inventory), and the National Oceanic and Atmospheric Administration (coastal hazards, coastal erosion data). Other communities, such as users group members, can provide guidance based



on experience with flood depth data, special flood-related hazards, historical and repetitive flood information, as well as natural floodplain functions.

Activity 330 Outreach Projects

Outreach projects: The first step is the community’s public information officer, if there is one. Checking with other community departments often finds a sizable number of flyers and other public information materials that are related to one of the six credited topics (see Figure 5, page 14).

The emergency manager is often the key contact for outreach projects that would qualify under FRP – Flood response preparations. This is an element where other communities’ experiences would be most helpful. Collecting, organizing, and disseminating good examples could be a task for a users group or the CRS Priorities Committee.

Brochures and publications from any agency can receive credit, if they have a message on one or more of the six credited outreach project topics. Here are two good examples from various state sources

Louisiana Sea Grant

Homeowners Handbook to Prepare for Natural Hazards

<https://www.laseagrant.org/slegal/publications/other/homeowners-handbook>



LSU AgCenter

Wet Floodproofing handout

<https://www.lsuagcenter.com/topics/family-home/hazards-and-threats/publications/wet-floodproofing>



Program for Public Information: CRS users groups can be very helpful in organizing, implementing and sharing templates related to Programs for Public Information. The users group or the parish could be sponsors or hosts for multi-jurisdictional PPIs.

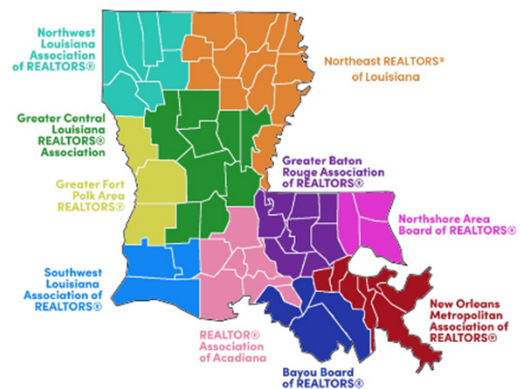
The ISO PPI technical reviewer can answer questions and review a draft, even a partial draft, to help reassure the local authors that they are on the right track. All questions and requests for an ISO technical reviewer go through the community's ISO/CRS Specialist.

Stakeholder activities deserving of STK credit are identified as part of preparing the PPI.

Activity 340 Hazard Disclosure

All CRS communities receive credit for state laws that require sellers to disclose whether a property is in a wetland, has been flooded in the past, or is located in a flood zone. The ISO/CRS Specialist can provide information on the latest credited laws.

Communities, PPI committees, or users groups should contact their regional real estate associations to determine what they are already doing and/or to mutually develop new activities or materials to advise house hunters about flood hazards. Because CRS credit is dependent on all real estate agencies in the area participating, contact should be made with the area Board of Realtors®. At the state level the best place to start is with Louisiana Realtors®, who can pass the word to member boards.



Activity 350 Flood Protection Information

Library: Publications from any organization that cover topics pertinent to the local flood situation or natural floodplain functions in the area can receive LPD credit. Users groups or the CRS Priorities Committee could develop lists of the best references to be included in local libraries that would be credited under LIB and LPD.

Website: As with library references, users groups or the CRS Priorities Committee could develop lists of qualifying local websites and links to other agency and organization sites that would qualify for individual credits. Examples include:

- ▶ LADOTD maintain a website with information helpful - <http://floods.dotd.la.gov>
- ▶ UNO-CHART's website has a "Disaster Toolkit" with lots of information that communities can link to for information on protecting property (<https://www.uno.edu/chart/disaster-toolkit>).
- ▶ Louisiana State University's Ag Center has information on property protection (http://www.lsuagcenter.com/topics/family_home).
- ▶ LaHouse Resource Center ([lsuagcenter.com](http://www.lsuagcenter.com))
- ▶ The National Weather Service has several useful websites:
 - ▶ <https://www.nhc.noaa.gov/?atlc> – shows the status of hurricanes and tropical storms
 - ▶ <https://water.weather.gov/ahps/region.php?rfc=lmrhc> – shows coastal and river gages, including river gages that will provide flood level predictions
 - ▶ <https://www.spc.noaa.gov/> – the Storm Prediction Center has information on inland thunderstorms, tornadoes, hail and other weather hazards.
- ▶ Communities that do not have their own FIRMs online can link to http://maps.lsuagcenter.com/flood_maps/. FEMA has a similar site at its Map Service Center, <https://msc.fema.gov/portal/home>.
- ▶ The National Oceanic and Atmospheric Administration's Digital Coast details future flood hazards (<https://coast.noaa.gov/digitalcoast>).
- ▶ <https://www.floodsmart.gov> is a good source for links on flood risk and flood insurance.

Activity 360 Flood Protection Assistance

All elements: The best training for implementing this activity is the Emergency Management Institute's retrofitting course, E0279 Retrofitting Flood-Prone Residential



Buildings, or the home study version, ISO279. There is another home study course, ISO280 Overview of Engineering Principles and Practices for Retrofitting Flood- Prone Residential Structures. Information about these courses can be found at <https://www.firstrespondertraining.gov/frts/nppcatalog>. Completing these courses also results in points for the TNG advisor training element.

Financial assistance advice: Communities can obtain the information needed for FAA credit from the agencies that provide the financial assistance. These include GOHSEP, CPRA, and the Division of Administration's Office of Community Development (OCD). FEMA grants are managed through GOHSEP and HUD community development grants are managed by OCD. A master list of federal, state, and private sources of financial assistance would be a good project for the CRS Priorities Committee.

Activity 370 Flood Insurance Promotion

Credit for the first three elements is dependent on preparing a document that follows the Program for Public Information model, so most communities include what is needed in their PPI. See Activity 330 for relevant sources of assistance.

As noted, the 2021 Addendum created three more elements for this activity. A conference session, webinar, or other venue would be helpful to explain these new credits to communities and insurance agencies. Such a project would be most appropriate for a users group or the CRS Priorities Committee.

Upon request, the Louisiana Department of Insurance (LDI) can provide brochures and assist with local presentations on flood insurance in support of this activity. Other useful materials are available from FEMA's FloodSmart website, <https://www.floodsmart.gov>.

Activity 410 Floodplain Mapping

A review of the Engineering Methods and the Bibliography and References sections of the community's Flood Insurance Study will show what agencies assisted in floodplain mapping. These sections will identify whether an agency other than FEMA provided mapping data. Where that is the case, the community may be able to obtain NS - New Study credit for the earlier work.

DOTD and the Water Institute are partners in FEMA's Cooperating Technical Partnership (CTP) Program.

Activity 420 Open Space Preservation

Open space preservation: Local and state parks, school district open areas, and private golf courses can all qualify for open space credit. Often the owning agencies can provide materials that can document the property's natural floodplain functions.

The Water Institute and LSU's Coastal Sustainability Studio may also provide support for this activity.



Deed restrictions: Properties purchased or improved with funding support from FEMA and other agencies often have deed restrictions that the community should have. If they cannot be found, the funding agencies may have copies.

Natural functions open space: Nonprofit organizations that own or work on protecting natural floodplain functions can help with documentation. An example is the Nature Conservancy, which has taken its own initiatives to help communities map areas that are creditable under the CRS. (<https://www.nature.org/en-us/about-us/where-we-work/united-states/louisiana>) See also <https://www.nature.org/en-us/about-us/where-we-work/priority-landscapes/gulf-of-mexico/stories-in-the-gulf-of-mexico/community-rating-system-flood-risk>.

Other groups that could help include the LA Department of Wildlife and Fisheries and the Audubon Society. FEMA has created FRESH Map (Flood Risk and Endangered Species Habitat Mapping Tool) which shows areas within the range or critical habitat of threatened and endangered species (<https://www.fema.gov/floodplain-management/wildlife-conservation/fresh-mapping-tool>).

Regulatory credits: Two of Activity 420's elements are for land use regulation – OSI – Open space incentives and LZ – Low density zoning. The community's planning and/or zoning offices would know whether there are such regulations on the books. Developing model regulatory language would be an appropriate task for the CRS Priorities Committee and could be incorporated into the new floodplain management desk reference that will be out soon.

Activity 430 Higher Regulatory Standards

As with the 420 regulatory credits, the community's planning, zoning, and building code offices would know what is currently enforced. All communities receive BC – Building Code credit for adopting the Louisiana State Uniform Construction Code. The ISO/CRS Specialist knows the specific provision and how to document the credit.

Examples of creditable ordinance language could be developed by the CRS Priorities Committee and DOTD. The language could also be put in DOTD's model ordinance and even in the Louisiana State Uniform Code. Otherwise users group members and neighboring communities could share the language they have that earn 430 credit.

Activity 440 Flood Data Maintenance

Map credits: The community's GIS office is the first point of contact for AMD – Additional map data and FM – FIRM maintenance. Both credits should receive a sizable number of points with a little work to ensure the credit criteria are met.

The first place to look for past FIRM panels is on FEMA's Flood Map Service Center website, <https://msc.fema.gov/portal/home>. If they are not there, DOTD may have copies of old Flood Insurance Rate Maps. Another possible source is the parish. Benchmark maintenance: BMM requires documenting the location and status of



qualifying elevation reference marks in the community. Start with the community's engineering or public works offices to see what they have. Other entities that would know of local benchmarks include DOTD district engineer offices (http://www.sp.dotd.la.gov/Inside_LaDOTD/Divisions/Mgmt_Finance/HR/Pages/Contacts_Districts.aspx), local surveying firms and other offices that need to use benchmarks. There are also the National Geodetic Survey, the Louisiana Geological Survey, and the Louisiana Society of Professional Surveyors.

Activity 450 Stormwater Management

Stormwater management regulations: These stormwater management regulations would be drafted and enforced by the community's engineering and/or planning offices. They usually emerge during reviews of proposed subdivisions and other large developments.

Water quality regulations: Both ESC – Erosion and sediment control and WQ – Water quality regulations are usually adopted to meet state water quality standards. If the planning and engineering offices are not familiar with them, see if a city or parish environmental protection or surface water management office could help.

While there are agencies and organizations that could help with drafting creditable ESC and WQ language, such as the Louisiana Department of Environmental Quality and the Louisiana Environmental Action Network (<https://leanweb.org/>), a single state-wide model for each would be more useful than expecting every community to draft their own version. Preparing model ordinance language would be an appropriate assignment for the CRS Priorities Committee.

Section 503 Repetitive Losses

Resources that can help communities meet these CRS prerequisites can be found in the 2024 Mitigation Plan's Appendix E: Repetitive Loss Strategy.

Activity 510 Floodplain Management Planning

Floodplain management plan: Most plans that qualify for FMP credit are parish-wide or city hazard mitigation plans. A model plan would not work because most parishes have mitigation plans that have been accepted by GOHSEP and FEMA. They are not going to start over just to fit in a different model. Therefore, a more useful tactic would be to advise the mitigation planners about incorporating CRS credited provisions in the next update. The best guide for this would be FEMA's "Mitigation Planning and the Community Rating System Key Topics Bulletin"

(https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-planning-and-the-community-rating-system-key-topics-bulletin_10-1-2018.pdf).

Once a community or parish tries this recommended approach, the participants should document the lessons learned and share them state-wide.

Repetitive loss area analysis: Unlike other floodplain management plans, RLAAAs



are reports that focus on a community's repetitive loss area(s) and recommend specific mitigation measures that can range from elevating a house to constructing drainage improvements to a flood warning program. RLAAAs can vary greatly for each area. There is a guide to the planning process at <https://crsresources.org/files/500/rlaa-guide-2017.pdf>.

UNO-CHART has prepared more repetitive loss area analyses (RLAA) than any other organization in the country. These can be useful templates for others. Most are located online at floodhelp.uno.edu [Need CHART link].

Natural floodplain functions plan: It is recommended that staff start with a review of local plans to see if they would qualify. These can be plans developed by the community or by another agency or organization with property or interest in one or more natural floodplain functions in the community.

Staff can also investigate the credit that came out with the 2021 *Addendum*, preparing a Floodplain Species Assessment (FSA) and, if the Assessment concludes one would be beneficial, preparing a Floodplain Species Plan (FSP). The Assessment can be prepared by a lay person following guidance published at

https://www.fema.gov/sites/default/files/documents/fema_fsa-preparing-flood-species-assessment-plan.pdf.

Substantial damage management plan: SDP is a new credit in the 2021 *Addendum*. As with the new credits in Activity 370, a conference session, webinar, or other venue would be helpful to explain the new credit to communities. Such a project would be most appropriate for the CRS Priorities Committee.

Activity 520 Acquisition and Relocation

There are funds and technical assistance available for acquiring and clearing floodprone buildings at GOHSEP, CPRA, and OCD. As a Type D activity (worthwhile if most of the work has already been done), this Strategy focuses on receiving CRS credit for what has been done by the local community development, planning or public works department. The ISO/CRS Specialist can readily explain the required documentation.

Activity 530 Flood Protection

This Strategy recommends the same approach as for 520, above; instead of explaining how to design and fund a building elevation or drainage improvement project, efforts should focus on helping the community earn credit for those properties that have been protected by a creditable measure. The ISO/CRS Specialist can readily explain the required documentation.

Activity 540 Drainage System Maintenance

This activity is designed and managed locally, with the cooperation and support of the local public works or drainage office. Users groups have been helpful with



this activity by sharing procedures, records, and similar aspects of a maintenance program. UNO-CHART helped the City of Covington prepare a model program which can be found at *[Need CHART link]*. It needs a little updating to reflect the latest credit criteria.

Stream dumping regulations: SDR should be approached like the other regulatory elements – check the community’s current ordinances. If they don’t qualify, draft and work for adoption of a new ordinance or amendment. Note that full credit requires a publicity effort that explains the rules.

The CRS Priorities Committee could collect regulatory and publicity examples from communities and review them with ISO to prepare model ordinance and model publicity language that would fit Louisiana’s needs and receive the maximum credit.

Activity 610 Flood Warning and Response

The most important player in this activity is the community’s (or the parish’s) emergency manager. Without his/her support, the credit should not be pursued.

Flood warning and response guidance comes from the CRS, but agencies such as GOHSEP, and organizations like the Louisiana Emergency Preparedness Association (<https://lepa.org>) could provide training and more localized templates. Working with the Association could also help develop interest on the part of their members and be an important assignment for the CRS Priorities Committee.

StormReady/TsunamiReady: These programs are managed by the National Weather Service. If a community meets the activity credit criteria and is designated as a StormReady or TsunamiReady by the Weather Service, the credit is provided. The requirements for the designations are found at <https://www.weather.gov/StormReady> and <https://www.weather.gov/TsunamiReady>.

Activity 620 Levees

As with Activity 610, the most important player in this activity is the community’s (or the parish’s) emergency manager. If there’s no interest on his/her part, the credit should not be pursued.

The second most important player is the organization responsible for the levee(s) that protects the community. In some cases, this may be a city or parish department, like public works. But in most cases, especially where a levee protects more than one community, it is a separate district that does not report to the community’s government. It can be a challenge for the district, the emergency manager, and the CRS Coordinator to work together to develop a program that qualifies for 620 credit, especially if it appears that the levee district and the emergency manager do all the work and the community reaps the flood insurance discount benefit.

There are no known model programs. Given the importance of levees to the survival



of so many Louisiana communities, a state-wide example would be well worth developing. Unlike other state-wide examples, it would take some work developing a new program for what would be a large levee district. DOTD or CHART might want to seek funding for such a project.

At a minimum, if there is a CRS community interested in piloting a program for credit, the Association of Levee Boards of Louisiana (<https://albl.org>) should be approached to see if there might be interest on its or its members' part to assist.

Activity 630 Dams

State dam safety credit: It is likely that more than the current three CRS communities getting this credit deserve the points. The key is whether the community is downstream of, and impacted by a failure of, a high-hazard-potential dam.

There are three approaches to helping communities with determining and documenting this credit:

1. Develop instructions on how to access the dam failure inundation maps.
2. Ask either the NFIP or the dam safety office in DOTD to make the determination as a public service to inquirers. Since there would be no more than 39 inquiries, it may be more cost effective to provide the service than to develop and explain procedures that would apply to every situation.
3. Ask someone, such as a volunteer, to check the maps for each interested community and provide the documentation.

Dam failure warning and response plan: Developing a local plan for the other four elements in 630 has the same challenges as getting 620 Levees credit. No Louisiana communities and only three CRS communities in the country are getting these credits.

If there is community interest in a state-wide example or model, DOTD's Dam Safety Program staff and the Louisiana Emergency Preparedness Association may consider options to determine the workload and benefits to all parties.



Table 4. Elements Recommended for Attention

Agency/Organization	Acronym	Relevant CRS Activities
LA DOTD Water Resources		All, 410
ISO/CRS Specialist		All
Louisiana Floodplain Management Association	LFMA	All
UNO – Center for Hazards Assessment, Response & Technology	CHART	330, Users Groups
Governor’s Office of Homeland Security and Emergency Preparedness	GOHSEP	360, 510, 520, 530, 610, 620, 630
Association of Levee Boards of Louisiana		620
Audubon Society		420, 510
Board of Realtors		340
Coastal Protection and Restoration Authority	CPRA	360, 520, 530
DOTD Dam Safety		630
DOTD District Engineers		440
FEMA – Emergency Management Institute	EMI	350, 430
FloodSmart.gov		350, 370
LA Department of Wildlife and Fisheries		420, 510
Louisiana Department of Environmental Quality		450
Louisiana Department of Insurance	LDI	370
Louisiana Emergency Preparedness Association		610, 620, 630
Louisiana Environmental Action Network		450
Louisiana Geological Survey		440
Louisiana Sea Grant		330
Louisiana Society of Professional Surveyors		310, 440
Louisiana State Uniform Construction Code Council	LSUCCC	430
Louisiana State University AgCenter		330, 350
LSU’s Coastal Sustainability Studio		420
National Geodetic Survey		440
National Oceanic and Atmospheric Administration	NOAA	320, 350
National Weather Service	NWS	350, 610
Office of Community Development	OCD	360, 520, 530
The Nature Conservancy		420
The Water Institute of the Gulf	TWIG	410, 420
US Army Corps of Engineers		320
US Fish and Wildlife Service	US FWS	320, 420

Note: it is hoped that reviewers can identify additional agencies and organizations that they have had experience with.



5. NEXT STEPS

This Strategy Update reviews what has changed and what has improved since the 2019 Strategy in Section 2. In Section 3, it identifies those CRS activities, elements, and credits that take a little effort (Type B), that take more work but are worth the effort (Type C), that are worthwhile where most of the work has already been done (Type D), and that warrant further investigation to determine if enough communities would benefit from assistance on them. The findings are summarized in Table 4 on pages 49 – 51. Section 4 reviews the best way to approach each credit and what agencies and organizations can help.

Any community can use this Strategy as a guide to improve their CRS program. However, a joint, coordinated effort to support CRS communities is recommended. This effort would be organized and led by the proposed CRS Priorities Committee in coordination with the DOTD CRS Coordinator.

Here are the recommended actions to take once this Strategy is adopted.

- 1. Action:** Disseminate this Strategy to all CRS communities and to communities interested in the CRS. It has a lot of useful information on the CRS and on the agencies and organizations that can help.
 - ▶ Responsible office: GOHSEP/Hazard Mitigation/DOTD
 - ▶ Timetable: Once this Strategy is adopted
- 2. Action:** Establish the CRS Priorities Committee. Include a call for volunteer members with the dissemination of the Strategy to CRS communities.
 - ▶ Responsible office: DOTD CRS Coordinator and LFMA
 - ▶ Timetable: Two months after this Strategy is adopted
- 3. Action:** Identify the activities and elements listed in Section 2 that would benefit from assistance ranging from links to websites, outreach projects, and resources to direct technical assistance. Prioritize them for attention. Circulate the priority list among CRS communities for feedback.
 - ▶ Responsible office: DOTD & CRS Priorities Committee
 - ▶ Timetable: Within three months of establishment

Action: Contact the relevant agencies and organizations for the top priority activities and elements and help them prepare appropriate levels of assistance to the communities. All proposed models and templates should be reviewed by ISO to ensure they deserve the expected credit.
- 4.**
 - ▶ Responsible office: CRS Priorities Committee
 - ▶ Timetable: Within six months of establishment



- 5. Action:** Establish a library of templates and good examples of local programs.
 - ▶ Responsible office: DOTD CRS Coordinator
 - ▶ Timetable: Within six months of adoption of this Strategy

- 6. Action:** Disseminate information on the assistance available to the CRS communities. Keep a running record of the assistance available and provided.
 - ▶ Responsible office: DOTD CRS Coordinator / CRS Priorities Committee
 - ▶ Timetable: Ongoing

- 7. Action:** Seek feedback from community CRS staff on what services they used and their recommendations on how to improve the services. This could be done at an appropriate forum such as the annual conference of LFMA.
 - ▶ Responsible office: DOTD CRS Coordinator, CRS Priorities Committee, LFMA
 - ▶ Timetable: Once a year

