National Flood Insurance Program Community Rating System

2014 Biennial Report to Congress

January 22, 2015

Homeland Security

Federal Emergency Management Agency

Message from the Administrator

I am pleased to present the 2014 National Flood Insurance Program Community Rating System Biennial Report to Congress, which has been prepared by the Federal Emergency Management Agency.

This document has been compiled in response to requirements set forth in Section 541(1) of the National Flood Insurance Reform Act of 1994 (Pub. L. No. 103-325) which direct that "Not later than 2 years after September 23, 1994, and not less than every 2 years thereafter, the Director shall submit a report to the Congress regarding the program under this subsection. Each report shall include an analysis of the cost-effectiveness of the program, any other accomplishments or shortcomings of the program, and any recommendations of the Director for legislation regarding the program."

This report is being provided to the following Members of Congress:

The Honorable Richard C. Shelby
Chairman, Senate Committee on Banking, Housing and Urban Affairs

The Honorable Sherrod Brown
Ranking Member, Senate Committee on Banking, Housing and Urban Affairs

The Honorable Jeb Hensarling
Chairman, House Committee on Financial Services

The Honorable Maxine Waters
Ranking Member, House Committee on Financial Services

Inquires relating to this report may be directed to me at (202) 646-3900 or to the Agency's Deputy Associate Administrator for Federal Insurance, Edward L. Connor, at (202) 646-3449.

Sincerely,

W. Craig Fugate
Administrator
Federal Emergency Management Agency

Executive Summary

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is administered by the Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA). The CRS was implemented in 1990 to recognize and encourage community floodplain management activities that exceed the minimum floodplain management standards of the NFIP. The National Flood Insurance Reform Act of 1994 codified the CRS within the NFIP. Under the CRS, flood insurance premiums for policyholders in a CRS participating community are reduced to reflect the added flood risk protection that results from community activities that meet the three goals of the CRS: (1) reduce and avoid flood damage to insurable property; (2) strengthen and support the insurance aspects of the NFIP; and (3) encourage a comprehensive approach to floodplain management.

As of May 1, 2014, there are 1,296 communities receiving flood insurance premium discounts through the CRS, based on their implementation of local flood risk reduction, outreach, protection of natural floodplain functions, and educational activities that exceed minimum Federal NFIP floodplain management requirements. These CRS-credited activities help shape sustainable and resilient communities.

The CRS was developed and implemented through a multidisciplinary, collaborative approach involving many stakeholders: federal, state, and local officials; professionals with expertise in floodplain management; insurance industry and underwriting experts; and academic researchers.

Part I of this report outlines the legislative requirements for this document. Part II provides an overview of the CRS. Part III highlights some of the program's many accomplishments, Part IV discusses some of its economic benefits, and Part V concludes the report and discusses future program directions. Major highlights are listed below.

- Over two-thirds of all flood insurance policies in the United States are located in the 1,296 CRS communities. The CRS continues to be a revenue-neutral component of the NFIP.
- The CRS continues to see growth both in the number of participating communities and in the number of communities that are moving to more advanced CRS Class levels. CRS participation is well distributed across the Nation, with the 12 top-rated communities now including nine unincorporated counties.
- The CRS can be regarded as a model of local government best practices. It supports research into mitigation techniques, emphasizes stronger multi-hazard building codes, fosters a Whole Community approach to establishing resilience through comprehensive floodplain management, encourages adaptation to current and future conditions, and encourages all-hazards planning. National recognition for achieving a CRS rating gives communities good cause to feel proud about themselves and the success they have achieved.
- The CRS continues to evolve in response to emerging technologies and science, quantitative and qualitative information about the value of mitigation and insurance, better understanding of flooding and other natural hazards, and deeper awareness of the importance of the natural functions of floodplains. The CRS has taken a substantial step in its ongoing program improvement with the 2013 C*oordinator's Manual*.

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I. Legislative Requirement

This is the tenth Biennial Report to Congress for the National Flood Insurance Program's Community Rating System. The Report is submitted pursuant to Section 541(1) of the National Flood Insurance Reform Act of 1994 (Title V of the Riegle Community Development and Regulatory Improvement Act of 1994) (Pub. L. No. 103-325), which amends Section 1315 of the National Flood Insurance Act of 1968 (42 U.S.C. 4022). Section 1315(b)(4) of the National Flood Insurance Act of 1968 states:

> *COMMUNITY RATING SYSTEM AND INCENTIVES FOR COMMUNITY FLOODPLAIN MANAGEMENT.*
>
> *(4) REPORTS.–Not later than 2 years after the date of enactment of the Riegle Community Development and Regulatory Improvement Act of 1994 and not less than every 2 years thereafter, the Director shall submit a report to the Congress regarding the program under this subsection. Each report shall include an analysis of the cost-effectiveness of the program, any other accomplishments or shortcomings of the program, and any recommendations of the Director for legislation regarding the program.*

The Community Rating System (CRS) is part of the National Flood Insurance Program (NFIP), which is administered by the Department of Homeland Security's Federal Emergency Management Agency (FEMA). Within FEMA, the CRS is administered by the Federal Insurance and Mitigation Administration.

This 2014 Biennial Report to Congress reviews the main activities of the past two years, how refinements have been made to the program's creditable activities and credit points, and how the program has fared in accomplishing its goals. The core of the report follows this section, and is split into three parts: **Program Overview**, **Program Accomplishments, and Conclusions**. More details on the topics covered here are available from FEMA. Most of the publications referenced can be found on www.CRSresources.org and on FEMA's website.

II. Program Overview

Floods are our Nation's most costly natural disaster. Reducing flood damage and flood-related losses has been a core purpose of FEMA since its creation in 1979. At the center of FEMA's flood-reduction efforts lies the NFIP. The NFIP, which functions through a private/public partnership, allows people and organizations to purchase federally backed flood insurance in communities that participate in the NFIP. As of May 2014, there were 5.4 million residential and commercial policies in force, with over $1.3 trillion in written coverage with annual premiums of about $3.8 billion. From 1978 through May 2014, over 1.6 million losses were paid, totaling over $50 billion. Because of the active floodplain management role the NFIP requires of participating communities, the NFIP has been recognized as the single most cost-effective natural hazard reduction program in the country's history.[1]

To battle a long-standing trend of increasingly costly floods, FEMA launched the CRS in 1990 as a way to engage local jurisdictions in implementing floodplain management techniques that exceed the minimum requirements of the NFIP and as a means of recognizing those communities that are implementing strong floodplain management programs. These techniques are ones that further reduce communities' susceptibility to flood damage, build disaster resilience, and help communities pursue broader sustainability goals. For example, a community can earn credit for improving its stormwater management system or by protecting portions of its floodplain from development. That CRS credit can translate into flood insurance premium discounts for the entire community.

Over the past two decades, the CRS has received increased recognition as an effective flood loss reduction initiative as a voluntary incentive program option. Almost 1,300 participating communities have chosen to use the progressive, research-backed techniques of the CRS to mitigate their flood risk, enable reduced flood insurance premiums, and build community resilience.

CRS Goals

The purpose of the CRS is to support the NFIP. All CRS efforts work toward meeting three goals.

Goal 1. Reduce and avoid flood damage to insurable property. The CRS supports the NFIP by working to minimize flood losses nationwide, both inside and outside of mapped floodplains. Communities are encouraged to decrease the exposure of the built environment, including building contents, to flood damage. This is especially emphasized for properties that are subject to repetitive flood losses. New buildings and their contents should be protected from known and future local flood risks. Standards that exceed the minimum criteria of the NFIP may be necessary to accomplish these objectives. The CRS encourages communities to map and provide flood data for all flood hazards, use the data in local regulatory programs, and share it with all users and inquirers.

[1] Thomas, E, and S Medlock, 2008. "Mitigating Misery: Land Use and Protection of Property Rights Before the Next Big Flood," *Vermont Journal of Environmental Law* 9: 155–198.

Goal 2. Strengthen and support the insurance aspects of the NFIP. The CRS recognizes communities whose activities generate and contribute data that assists with accurate actuarial rating of flood insurance. Communities are encouraged to implement flood risk studies and flood risk awareness initiatives that help improve the accuracy of the risk analysis for an individual property and reduce repetitive flood losses. To help expand the policy base, participating communities make their residents aware of their flood risk to encourage them to purchase and maintain flood insurance policies.

Goal 3. Foster comprehensive floodplain management. The CRS encourages communities to use all available tools to implement comprehensive floodplain management programs that extend beyond the protection of insurable property to building disaster resilience and advancing broader community sustainability goals. The CRS recognizes local efforts that protect lives; further public health, safety, and welfare; minimize damage and disruption to infrastructure and critical facilities; preserve and restore the natural functions and resources of floodplains and coastal areas; and ensure that new development does not cause adverse impacts elsewhere in the watershed. A community is encouraged to understand the physical and biological processes that form and alter floodplains and watersheds and take steps to minimize impacts related to flooding, erosion, habitat loss, water quality, and special flood-related hazards. A comprehensive approach includes planning, public information, regulations, financial support, open space protection, public works activities, emergency management, and other appropriate techniques.

CRS Program Priorities

In addition to its goals, the CRS has three guiding priorities.

Priority 1. Protect and Restore Natural Floodplain Functions. Floodplains in riverine and coastal areas perform natural functions that cannot be replicated elsewhere.

Priority 2. Promote an All-Hazards Approach to Mitigation.
All communities are threatened by a variety of natural and technological hazards. The staff and programs that address flooding may also help mitigate the risks of earthquakes, hurricanes, landslides, drought, hazardous materials incidents, and terrorism.

Priority 3. Encourage Consideration of Future Conditions and the Impacts of Climate Change
Floodplains change over time, driven by many natural and man-made influences. Good floodplain management acknowledges this, and includes considering how floodplains might look in the future under different scenarios including increased impervious surfaces in watersheds, erosion, new fill in floodways, rising sea levels, changes in natural functions, and many others.

Program Benefits

In addition to discounted insurance rates, participation in the CRS brings many other direct and indirect benefits to CRS communities and the Nation.

- CRS communities enhance public safety.
- The program's activities increase protection of public and private property and infrastructure, thereby contributing to community resilience by avoiding economic disruption and losses within the community as well as reducing flood insurance claims, disaster assistance payments, and lost tax revenue.
- Many aspects of the CRS help communities encourage environmental protection.
- NFIP premium discounts keep more money in the community, driving local economies.
- A community in the CRS can use nationally recognized benchmarks as metrics to evaluate the effectiveness of its flood program.
- Technical assistance is available to design and implement some CRS activities.
- CRS participation fosters an engaged, Whole Community approach to floodplain management and disaster resilience, both for present and future conditions.
- Communities that participate in the CRS find that their floodplain management activities are better organized and more formalized than before they joined the CRS. They are administered more effectively and are more likely to remain in operation after personnel changes.
- Local governing bodies understand that the community's CRS status could be jeopardized by the elimination of a flood-related activity or weakening of regulatory requirements for new development. A similar system used in fire insurance rating has strongly contributed to local government support for fire protection programs.
- The CRS public information activities help build a knowledgeable constituency interested in providing grassroots support for flood protection measures.
- Publicity that celebrates the success of CRS communities on various websites, brochures, and at events helps build community pride. Participation in the CRS shows that community leaders are actively engaged in protecting their people, property, and economies.
- CRS communities provide data to FEMA on a variety of floodplain management activities, helping the NFIP as a whole to make more informed policy decisions. New initiatives by FEMA can be guided by how communities tried them on their own, based on the metrics of CRS credits.

Flood Insurance Premium Discounts

The best known benefit of the CRS is the NFIP premium reduction that participating communities earn for their residents. The amount of discount, which can be up to 45%, is determined by the community's CRS Class.

There are 10 CRS Classes. Class 1 requires the most credit points and gives the largest premium reduction. Class 10 receives no premium reduction. Figure 1 outlines the discounts available to insurable structures in a community by CRS Class and by the structure's proximity to the Special Flood Hazard Area (SFHA).

Figure 1. Savings by CRS Class.

CRS Class	Savings in SFHA	Savings out of SHFA
1	45%	10%
2	40%	10%
3	35%	10%
4	30%	10%
5	25%	10%
6	20%	5%
7	15%	5%
8	10%	5%
9	5%	0

Earning CRS Credit

A community's CRS Class is determined by the number of points it earns by taking specific actions to reduce its flood risk. Creditable actions are organized into four *series*, which are made up of 19 *activities*, which, in turn, comprise over 100 creditable *elements* and *sub-elements*. For example, mailing information to floodplain residents is an *element* that receives credit. This is one element in the Outreach Projects *activity* (Activity 330), which is in the Public Information *series* (300 series). Below is a list of the series and elements of the CRS.

300 Series: 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 Series: Mapping and Regulation
- 410 Floodplain Mapping
- 420 Open Space Preservation
- 430 Higher Regulatory Standards
- 440 Flood Data Maintenance
- 450 Stormwater Management

500 Series: Flood Damage Reduction Activities
- 510 Floodplain Management Planning
- 520 Acquisition and Relocation
- 530 Flood Protection
- 540 Drainage System Maintenance

600 Series: Warning and Response
- 610 Flood Warning and Response
- 620 Levees
- 630 Dams

Program Participation

As of May 1, 2014, there are 1,296 communities receiving flood insurance premium discounts through the CRS. These communities represent a significant portion of the Nation's flood risk as evidenced by the fact that more than 67% of all flood insurance policies are in CRS communities. Communities receiving premium discounts through the CRS cover a full range of population sizes from small to large, and a broad mixture of flood risks, including coastal and riverine (Figure 2).

CRS COMMUNITIES: FOUR AT THE TOP

Roseville, California, is the only community to reach the highest CRS rating (Class 1). Floods in 1995 spurred Roseville to strengthen and broaden its floodplain management program. Today the City earns points in almost all of the CRS's creditable activities.

Comprehensive planning for floodplain management has been a key contributor to **Tulsa, Oklahoma**'s progress in reducing flood damage from the dozens of creeks within its jurisdiction. The City (Class 2) has cleared more than 900 buildings from its floodplains.

King County, Washington (Class 2), has preserved more than 100,000 acres of floodplain open space and receives additional CRS credit for maintaining it in a natural state.

Pierce County, Washington (Class 2), prohibits new buildings in areas of deep or fast-flowing water, a regulation adopted after a helicopter rescue of families that had built in the floodplain fringe. Its low density zoning regulations give the County almost enough points for an entire class improvement.

Figure 2. Number of CRS Communities, by State.

Program Administration

The CRS is guided by a partnership of public and private organizations.

Program Partners

- **FEMA**: The CRS is administered by FEMA's Federal Insurance and Mitigation Administration within the Department of Homeland Security. FEMA has 10 Regional Offices that serve as with field contacts with state and local government officials.
- **The CRS Task Force:** Because of the many disciplines required to manage the CRS, the Community Rating System Task Force was created as a forum to analyze and provide recommendations to FEMA. Its members collectively represent the fields of actuarial science, engineering, floodplain management, and insurance underwriting as seen below.
- **States and Communities:** State and local governments implement the activities credited by the CRS. Most of the activities are undertaken by local governments. However, communities can receive credit for activities implemented at the state, county, or regional level, or even by private organizations. It is estimated that 10%–20% of credited activities are implemented by a state or regional agency or because of a state or regional mandate—see the "Higher State Standards" sidebar later in this report for details. State and regional agencies also provide technical assistance to communities.
- **Insurance Companies**: Companies that write flood insurance policies are responsible for managing systems that apply the CRS discount to a policy bill and being involved with explaining the CRS and its benefits to their policyholders.
- **Insurance Services Office, Inc.** (ISO): ISO has an arrangement with FIMA and insurance companies to process applications and provide technical assistance to FEMA, states, and communities.

The CRS Task Force

The CRS Task Force provides recommendations to FEMA on all matters pertinent to the CRS. Its composition is shown in the "CRS Task Force" sidebar.

The CRS Task Force discusses numerous topics affecting the CRS, including improvements to floodplain management, flood insurance policy, integration of new loss reduction practices, and integration of input from experienced field personnel. The ongoing program improvements that result from this process have varied from adjusting the points of an individual element to major changes in the *CRS Coordinator's Manual.*

The CRS Task Force

Chair (consultant from the insurance industry)

FEMA Headquarters (5)
- Floodplain management
- Mapping
- Actuary
- Underwriting

FEMA Regional Offices (3)

Insurance companies (2)

Local governments (3)

Association of State Floodplain Managers (1)

National Association of Flood and Stormwater Management Agencies (1)

National Oceanic and Atmospheric Administration (1)

U.S. Army Corps of Engineers (1)

(The Assistant Administrator, FEMA Mitigation Directorate, is an *ex officio* member.)

III. Program Accomplishments

Overview

CRS efforts during 2012 and 2013 focused on

1. Implementation of the 2013 *Coordinator's Manual*,
2. Program growth, class improvements, and engagement,
3. Working towards CRS goals and priorities.

Putting the 2013 CRS Coordinator's Manual *into Practice*

Background

After several years of research and revisions—discussed in the previous Report to Congress—the latest edition of the *Coordinator's Manual* went into effect on April 1, 2013. It introduced the most substantive changes in the program's history and reflects the best practices in effective floodplain management, including (1) improved understanding of flood risk awareness; (2) innovative techniques to achieve mitigation; and (3) increased appreciation of natural floodplain functions. The 2013 *Coordinator's Manual* updates activity credits, how the credit is determined, and the number of credit points provided.

Highlights of Changes

Notable changes in the 2013 *Coordinator's Manual* include

1. **The first new activity in 20 years**. Activity 370 (Flood Insurance Promotion) provides credit for communities that take an active role in encouraging people to obtain and maintain their flood insurance coverage.
2. **More credit for preserving open space and for requiring added elevation above a minimum standard to provide extra protection as a factor of safety (freeboard) with new construction**. These two elements have been confirmed by research as having the greatest impact in reducing flood losses.
3. **A new approach to public information programs**. Credit has been increased for coordinated outreach projects.
4. **More points for protecting the natural functions of floodplains and coastal areas**. This includes a new credit for implementing regulations that encourage low-impact development.
5. **New credit for exemplary administration of local regulations.** This provides points for conducting field inspections and re-inspections.
6. **A short "Quick Check" has replaced the 50-page *CRS Application.*** This reduces paperwork and eases entry into the program for qualified communities.
7. **A new web-based community self assessment.** This exercise engages communities in identifying the CRS activities that will help them the most.
8. **Greater emphasis on prohibiting fill in the floodplain.** This includes credit for *not* approving LOMR-Fs (Letters of Map Revision based on Fill).
9. **Improved verification.** Additional documentation is being required with a community's annual recertification, including all Elevation Certificates collected during the previous year.

Effect of 2013 *Coordinator's Manual* on Existing CRS Communities

The transition of communities to the updated 2013 *Coordinator's Manual* requires extra effort. However, with added training forums and increased technical assistance, the conversion appears to be progressing smoothly. As anticipated, the 2013 C*oordinator's Manual* changes are affecting CRS communities differently. Some are seeing an increase in the points they receive, since points for certain activities have increased (e.g., Open Space Preservation). Other communities are receiving fewer points for certain activities (e.g., Map Information Service). A community that finds itself losing CRS credit with the 2013 *Coordinator's Manual* likely can identify activities deserving credit that it had not previously received. The CRS field staff are assisting communities to help identify additional activities eligible for CRS points.

In general, anecdotal feedback from field staff and others suggests that the 2013 *Coordinator's Manual* is being well received by communities. The streamlined organization and decreased paperwork are receiving the most favorable reviews.

Program Growth, Class Improvements, and Engagement

FEMA and its partners actively encourage and assist communities in joining the CRS and improving their community programs in order to improve their CRS Class. Significant storms and floods over the past two years and NFIP reforms enacted by Congress have increased interest in the CRS and performance within participating communities as illustrated in Figure 3 and Figure 4. As of May 2014, the program has one CRS Class 1 community, three CRS Class 2 communities, one CRS Class 3 community, and seven CRS Class 4 communities. The 12 top-rated communities include nine unincorporated counties. The other 1,284 CRS communities are distributed among Classes 5 through 9.

In 2012 and 2013 activities to encourage CRS participation and CRS Class improvement have included the following:

- Simplifying documentation needed to apply for the program, including the development of a short "Quick Check" tool;
- Building new websites to make accessing information about the CRS easier—see the "CRS Online" sidebar;
- Developing and delivering over 25 webinars to audiences around the country to introduce and familiarize stakeholders with the changes to the *Coordinator's Manual* and to promote the CRS to individual and partner organizations. The webinars reached a collective audience estimated at over 2,000 people;
- Posting CRS information and publications on FEMA's website;
- Providing technical assistance to participating communities;
- Conducting classroom style training forums on how to apply to and administer the CRS, which is also included in the "CRS Webinar Series";

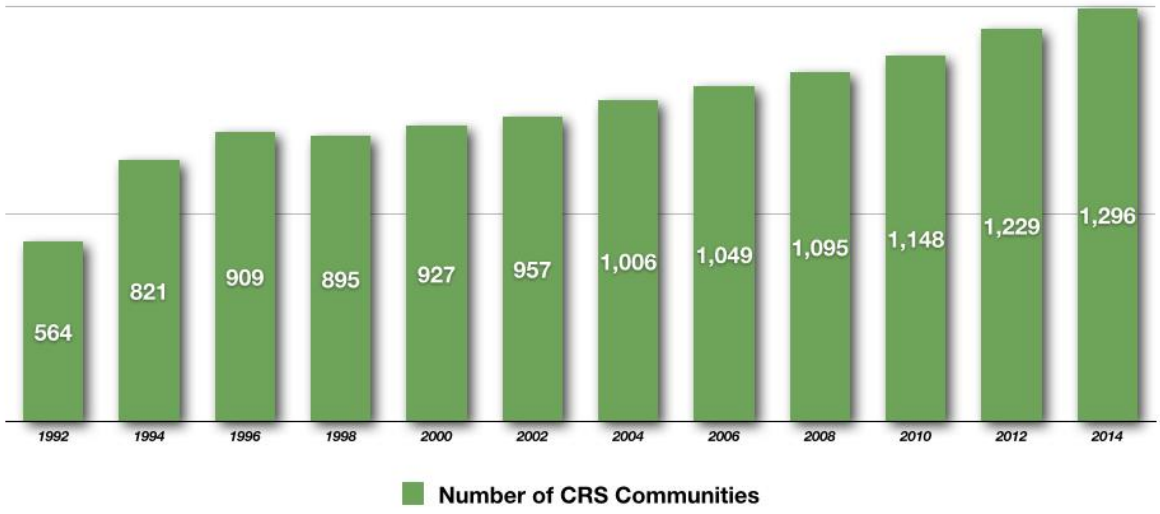

Figure 3. CRS Participation: Numbers of Communities.

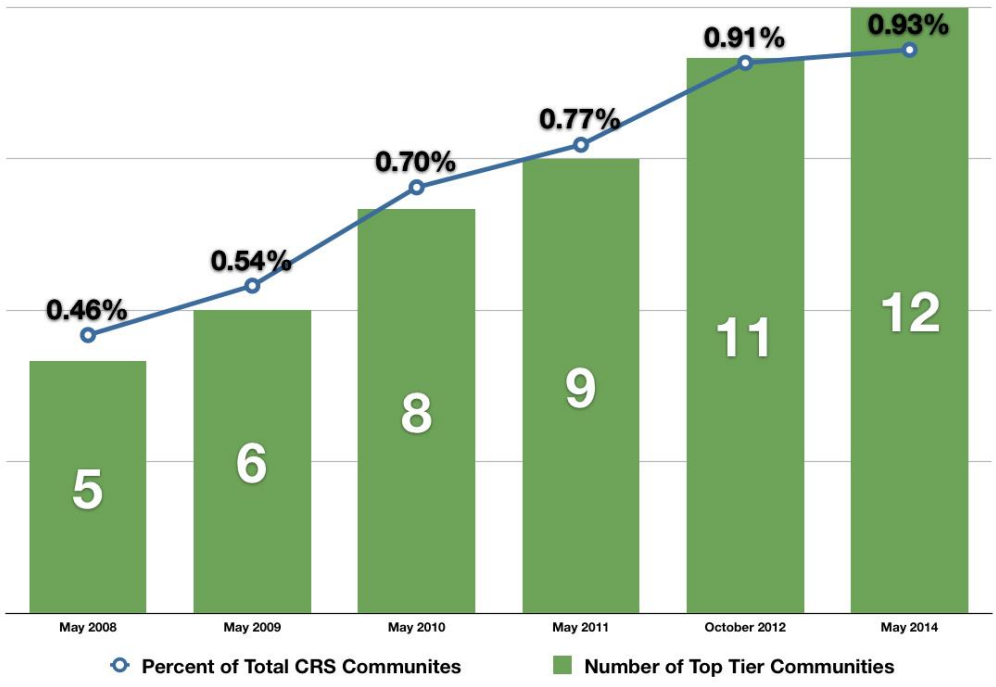

Figure 4. Number and Growth of Top-tier (Classes 1-4) CRS Communities, by Year.

- Promoting uniform minimum credit and master applications in states and counties that administer their own programs with higher standards—see the sidebar on Higher State Standards;
- Increasing the numbers of articles about the benefits of the CRS in newsletters of local official professional organizations and associations; and
- Strengthening the role of CRS Users Groups as referenced below.

CRS Users Groups

An indicator of the strong community engagement fostered by the CRS is the growth of professional peer support forums organized by CRS community officials in the form of "CRS Users Groups." The number of these self-organized and self-supported groups has reached 28 nationwide with additional groups in various discussion phases. The latest list at the time of this Report is shown in the box below.

HIGHER STATE STANDARDS: UNIFORM MINIMUM CREDITS

The CRS credits all of a community's actions that work toward program goals, regardless of what agency implements the actions. Therefore, when a state takes steps to ensure that its communities surpass minimum NFIP standards—for example, requiring that all construction is elevated to at least a foot above the base flood elevation—the CRS credits all CRS communities within that state.

The CRS Task Force aggregated and reviewed the CRS-creditable activities being undertaken by each state so that communities could more easily get the proper CRS credit. The number of uniform points found in some states was substantial. In Michigan, for example, communities may be eligible for enough points to move up one and one-half CRS classes.

The resulting report has greatly reduced the documentation requirements for participating communities and helped new communities get into the program by providing them with a leg up towards their first class.

These groups comprise community officials who want to improve their communities' CRS ratings; stay current on changes to the program; share the lessons they have learned with their peers; host and participate in webinars, training, and workshops; and seek greater understanding of new ways to help and protect their citizens. Many CRS Users Groups are focused on adapting to the revisions of the 2013 *Coordinator's Manual*. The CRS Users Groups also welcome communities that are preparing to join the CRS. Approximately 500 individuals are on the CRS User Groups email mailing lists.

CRS Users Groups as of March 2014	
Name	State
Arizona CRS Users Group	Arizona
Capital Region Area Floodplain Taskforce (CRAFT)	Louisiana
Citrus County Floodplain Management Group	Florida
Coastal Hazards Outreach Strategy Team (CHOST)	Mississippi
Colorado Association of Stormwater and Floodplain Management (CASFM) CRS Committee	Colorado
Community Outreach Awareness Support Team (COAST) of RI	Rhode Island
Delaware Users Group	Delaware
Flood Loss Outreach & Awareness Task Force (FLOAT)	Louisiana
Floodplain Awareness Success in Texas (FAST)	Texas
Georgia Users Group	Georgia
Illinois Users Group	Illinois
Jefferson Parish, LA Users Group	Louisiana
Maryland Users Group	Maryland
Miami-Dade County Users Group	Florida
MOKAN Users Group	Kansas, Missouri, Nebraska
Monmouth County Users Group	New Jersey
New York Users Group	New York
Northern Virginia Users Group	Virginia
Northwest Regional Floodplain Managers Association (NORFMA) CRS Committee	Washington, Alaska, Idaho, Oregon
Oklahoma CRS Workgroup	Oklahoma
Palm Beach County Users Group	Florida
San Joaquin County Users Group	California
Southern California Users Group	California
Southwest Florida Users Group	Florida
Tampa Bay Regional CRS Committee	Florida
Vermont CRS Interest Group	Vermont
Virginia Users Group	Virginia
Volusia County CRS Users Group	Florida

Working Towards CRS Goals and Priorities

This section reports progress the CRS has made towards its three goals in 2012 and 2013.

GOAL 1. Reduce and avoid flood damage to insurable property.

Ongoing Efforts

Efforts to reduce flood losses have always been at the core of the CRS. By exceeding the requirements set by the NFIP, almost 1,300 CRS communities lower their risk of damage from flooding and other hazards. This is well recognized and reflected in the program. The CRS program's series of activities are built around the following four broad approaches to reducing flood losses.

- Public Information Activities (300 Series): Credits programs that advise people about the flood hazard, encourage the purchase of flood insurance, and provide information about ways to reduce flood damage.
- Mapping and Regulations (400 Series): Credits programs that provide increased flood protection to new development.
- Flood Damage Reduction Activities (500 Series): Credits programs that reduce the flood risk in areas that have already been developed.
- Warning and Response (600 Series): Credits measures that protect life and property during a flood, through flood warning and response programs.

THE CRS ONLINE

The CRS has developed a new website for the program. Part of the NFIP's extremely popular FloodSmart outreach program, the site serves as a resource for people wishing to learn more about the CRS. The site is located at http://floodsmart.gov/crs.

Selected Changes within the 2013 *Coordinator's Manual*

When writing the 2013 *Coordinator's Manual*, FEMA and the CRS Task Force worked to assure that the CRS recognizes and encourages the most effective actions that lead to reduced losses, based on the best available knowledge. Listed below are several ways the program continues to integrate continuous improvements.

Improved understanding of flood hazards and mitigation options. Research commissioned and supported by the CRS Task Force is providing concrete data on what really works to reduce flood losses, and this information has been and will be used to guide the program towards encouraging the best loss-reduction practices.

New CRS class prerequisites and credit for activities proven to reduce risk. To achieve Class 4 or better, communities now need to have a freeboard requirement of at least one foot and obtain at least 700 points under Activity 430 (Higher Regulatory Standards) and Activity

420 (Open Space Preservation). The new credits for effective risk-reduction measures are listed below.

- The credit for elevating structures above anticipated flood levels has been effectively doubled. Research has shown this to be one of the most effective means of reducing flood losses.
- Increased credit is now offered for preserving floodplain areas as open space.
- There is new credit for regulations that prohibit or limit the enclosure of parts of buildings below the base flood elevation.
- Credit has been increased for programs that limit the stormwater runoff from new developments.
- There are more credits and more opportunities to receive credit for local mitigation plans to reduce flood losses.

GOAL 2. Strengthen and support the insurance aspects of the NFIP.

Ongoing Efforts

The CRS plays an important role within the NFIP in contributing to the actuarial, rate setting, and insurance promotion foundations of the program. Improving available data is a key component of many parts of the program. Relevant activities are listed below.

- Activity 320 (Map Information Service) requires that communities tell people about the mandatory flood insurance purchase requirements when they request information about the flood hazard and flood maps. Credit is provided under Activity 340 (Hazard Disclosure) to communities that require the sellers of property to disclose flood risks.
- Activity 410 (Floodplain Mapping) and Activity 440 (Flood Data Maintenance) help ensure accurate rating of insurance policies.
- Several activities give special attention and credits for programs and projects that mitigate repetitively flooded properties.

Selected Changes within the 2013 *Coordinator's Manual*

New activity specifically designed to promote the purchase of flood insurance. The 2013 *Coordinator's Manual* presented Activity 370 (Flood Insurance Promotion), the first new activity added in the program's history. The activity has three steps.

Step 1. Flood insurance coverage assessment. The credit is provided when a community assesses its current level of flood insurance coverage and identifies shortcomings.

Step 2. Coverage improvement plan. A plan to increase coverage must be prepared by a committee that engages local insurance agents and lenders.

Step 3. Implementation of the coverage improvement plan.

Credit is also available for "technical assistance," i.e., providing advice about flood insurance.

Verification of all of a community's new Elevation Certificates. Knowing the exact elevation of a building is critical to understanding its flood risk and determining its insurance rate. Requiring and maintaining Elevation Certificates are among the best ways to ensure that structures are built and insured correctly. Although the CRS has always sampled a community's Elevation Certificates for accuracy, beginning in 2013 the CRS began gathering and checking all of the Elevation Certificates, helping make sure structures are built as designed and that insurance rates for buildings accurately reflect their real risk.

GOAL 3. Encourage a comprehensive approach to floodplain management.

Ongoing Efforts

Through the breadth of its 19 creditable activities, the CRS encourages communities to look comprehensively at their flood risks, how they might be reduced, and how communities can achieve greater disaster resilience and work toward their broader sustainability goals.

- This approach is most explicitly addressed in Activity 510 (Floodplain Management Planning), which credits a 10-step approach to floodplain management. Its Whole Community approach engenders the development of a plan that takes into account all of the community's areas, departments, and stakeholders.
- There are credits for maintaining open space areas in their natural, unimproved, state in Activities 420 (Open Space Preservation) and 430 (Higher Regulatory Standards), in order to protect the natural functions of floodplain and coastal areas.
- The 600 Series of warning and response activities encourage communities to implement warning and response programs to protect life and health and support local emergency management.

Selected Changes within the 2013 *Coordinator's Manual*

Revisions to Activity 510 (Floodplain Management Planning). The CRS is helping to improve the local planning process in several ways.

- New criteria are being implemented for the planning committees, including multi-jurisdictional committees, to encourage partnerships and stakeholder engagement.
- A community's problem assessment must cover repetitive flood loss areas and all hazards identified in the hazard assessment.
- Communities will get extra credit for specifically assessing the impact of climate change, including sea level rise.
- Local goals stated in a plan must now address all problems identified in the assessment, fostering a Whole Community approach.

Increased focus on natural floodplain functions. There is an increasing recognition of the importance of the many benefits of maintaining naturally functioning floodplains in an undeveloped state. The CRS has long credited the preservation of open space, and provided extra credit if that open space was in its natural state. The CRS continues to evolve in response to the growing understanding of the importance of natural floodplains and coastal areas. For example,

- Increased credit is given for open space parcels that have been preserved in or restored to their natural state. There are bonus credits for additional attributes, such as having critical habitat for endangered species or educational materials about the site's natural floodplain functions.
- Natural shoreline protection is a new element that credits programs that protect natural channels and both riverine and coastal shorelines, the areas most valuable for protecting natural floodplain functions.
- Extra credit under Activity 440 (Flood Data Maintenance) is provided if a community utilizes map layers that show areas with natural floodplain functions—for example, wetlands, or designated riparian habitat.
- Under Activity 510 (Floodplain Management Planning), credit is provided for one or more plans that protect the natural functions of the community's floodplain. Examples include a habitat conservation or restoration plan or a green infrastructure plan.
- New environmental compliance criteria for Activity 520 (Acquisition and Relocation), Activity 530 (Flood Protection), Activity 540 (Drainage System Maintenance), and Activity 620 (Levees) ensure that the CRS is not rewarding projects and/or maintenance programs that have a negative impact on environmental, historical, or cultural resources.
- Class 4 or better communities will need to obtain a minimum total score of 100 points from one or a combination of elements that credit protecting natural floodplain functions.

Encouraging communities to consider future growth and changing conditions, including climate change. Comprehensive floodplain management cannot limit itself to considering only current conditions. Changes in the natural and man-made environment will alter our Nation's floodplains and coastal areas. The CRS recognizes this, and provides incentives to communities that look forward in many ways, including

- To become Class 4 or better, a community must demonstrate that it has programs that minimize increases in future flooding.
- To achieve Class 1, a community must receive credit for using regulatory flood elevations in its V Zone and coastal A Zone that reflect future conditions, including sea level rise.
- Credit is provided under Activity 320 for communities that provide information about areas not mapped on the Flood Insurance Rate Map that are predicted to be susceptible to flooding in the future because of climate change or sea level rise.
- Credit is provided under Activity 340 when prospective buyers of a property are advised of the potential for flooding due to climate changes and/or sea level rise.
- Under Activity 410, credit is provided when the community's regulatory map is based on future-conditions hydrology, including sea level rise.
- If a community's stormwater program manages runoff from future development, credit is provided under Activity 450.
- Communities whose watershed master plans manage future peak flows so that they do not exceed present values receive credit under Activity 450.

- Credit is provided under Activity 510 for flood risk assessments and problem analyses that address areas likely to be flooded and flood problems that are likely to get worse in the future as a result of (1) changes in floodplain development and demographics, (2) development in the watershed, and/or (3) climate change or sea level rise.
- Credits for mapping and managing development that is subject to coastal erosion can encourage programs to set new development back from areas that will be flooded by rising sea levels.

IV. Cost Effectiveness

Administrative Costs

The CRS is a revenue-neutral component of the NFIP. The total dollar amount of the flood insurance premium discounts given to one group of policyholders through the CRS is off-set by increased flood insurance policy premiums from another group of policyholders not located in a CRS community. The less-than $5 million annual costs for administering the CRS, like all other administrative expenses of the NFIP, are funded from policyholder premiums.

Fiscal Benefits

Described below are a few of the ways in which the CRS protects taxpayer dollars:

Reduced damage to insurable property. FEMA deploys Mitigation Assessment Teams to affected areas after flood disasters. These teams regularly observe that buildings constructed to CRS standards suffer less damage than buildings constructed only to the minimum floodplain management requirements of the NFIP. In 2014 FEMA initiated a study on "losses avoided" that will analyze flood damage resulting from the severe flooding in Colorado in 2013. This analysis will examine damage in many different Colorado communities including those participating in CRS and see if there appear to be any reduced levels of damage because of implemented CRS activities. The CRS will use these data and other ongoing research to continue strengthen the scientific and engineering bases of the credited activities.

A more actuarially-sound NFIP. Accurate information is required to determine appropriate flood insurance premium rates. Applicable information is found on documents such as the NFIP Elevation Certificate and the currently applicable Flood Insurance Rate Map or flood zone determination. The CRS provides incentives to communities to improve the accuracy and availability of these and other important documents and data.

Economically efficient floodplain management. One of the most recognizable benefits of CRS participation accrues to those communities that implement the flood warning, flood response, and exercise activities associated with the CRS credits under the Warning and Response series. Several CRS communities that were affected by the 2013 Colorado floods had credited flood warning and response plans that were activated "as planned." This resulted in the successful evacuation of individuals from imminent flooding conditions, protecting lives, and saving what would have been large expenditures in rescuing them.

V. Conclusions

As the leading voluntary incentive-based flood loss reduction feature of the NFIP, the CRS continues to make significant progress towards its stated goals and priorities. The CRS encourages communities to develop comprehensive floodplain management programs and address the spectrum of natural hazard risks they face. A galvanizing aspect to this is the adoption and implementation of disaster-resistant building codes and collaborative hazard planning processes that reduce more than just flood risks. The program helps communities identify their repetitive flood loss properties and requires that they take them seriously. The CRS is an important component of a national trend in mitigation.

No shortcomings to the program are apparent although keeping pace with and serving the growing interest by communities in the program presents challenges. There are no recommendations for legislative changes to Section 541 of the National Flood Insurance Reform Act of 1994.

This report has provided an overview of how the CRS operates, its current status, and how well the program is progressing toward achieving its goals. The main findings are summarized below.

- The 1,296 participating CRS communities represent over two-thirds of all flood insurance policies. Participating communities can be found nationwide.
- The program has grown steadily over the past decade, averaging 25–30 new communities each year. In addition, CRS communities are improving their floodplain management programs and receiving better CRS classifications in return. As a result, the number of Class 7 and Class 8 communities continues to increase as the number of Class 9 communities decreases.
- The CRS continues to evolve in response to emerging technologies and science, quantitative and qualitative information about the value of mitigation and insurance, better understanding of flooding and other hazards, and deeper appreciation of the importance of the natural environment. Since the last Report to Congress, the CRS has taken a substantial step in its ongoing program improvement with the 2013 *Coordinator's Manual*.
- In addition to the benefits of the CRS's basic approach of encouraging and crediting floodplain management activities, the CRS also helps reduce disaster losses related to other hazards. For example, the CRS illustrates how FEMA integrates an all-hazards risk approach to mitigation for communities; supports research into mitigation activities; emphasizes stronger multi-hazard and disaster-resistant building codes; and encourages a collaborative, Whole Community approach to all-hazards planning and other activities.
- The costs borne by communities in implementing activities credited under the CRS are offset by the benefits that ensue: enhanced public safety, reduced damage to property and public infrastructure, avoidance of economic disruption and losses, minimized human suffering, and protection of the environment. These benefits accrue to all residents, whether they have flood insurance or not.

- A CRS community benefits from having an added incentive to maintain its flood mitigation programs over the years. Communities that participate in the CRS find that their floodplain management activities are better organized and more formalized. They are administered more closely and effectively and remain in operation even after changes in personnel. The CRS celebrates community successes by providing national recognition for the effort a community puts into flood mitigation.