National Flood Insurance Program Community Rating System

Biennial Report to Congress

2008

Homeland Security

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 Federal Emergency Management Agency (FEMA). The CRS was implemented in 1990 to recognize and encourage community floodplain management activities that exceed the minimum NFIP standards. The National Flood Insurance Reform Act of 1994 codified the CRS within the NFIP. Under the CRS, flood insurance premiums are adjusted to reflect the reduced flood risk that results from community activities that meet the three goals of the CRS: (1) reduce flood damage to insurable property; (2) strengthen and support the insurance aspects of the NFIP; and (3) encourage a comprehensive approach to floodplain management.

There are 10 CRS classes: Class 1 requires the most credit points and gives the largest premium reduction; Class 10 receives no premium reduction. The CRS recognizes 18 creditable activities, organized under four categories numbered 300 through 600: Public Information, Mapping and Regulations, Flood Damage Reduction, and Flood Preparedness.

As of October 1, 2008, there are 1095 communities receiving flood insurance premium discounts based on their implementation of local mitigation, outreach, and educational activities that go well beyond minimum NFIP requirements. Although premium discounts are one of the benefits of participation in the CRS, it is more important that these communities are carrying out activities that save lives and reduce property damage. These 1095 communities represent a significant portion of the nation's flood risk as evidenced by the fact that they account for over 70% of the NFIP's policy base. Communities receiving premium discounts through the CRS cover a full range of sizes from small to large, and a broad mixture of flood risks, including coastal and riverine.

The CRS was developed and implemented with the benefit of advice from and effort by federal, state, and local officials; professionals with expertise in floodplain management and insurance; and academics. A multidisciplinary approach led to successful implementation of the program and this same approach has been employed in reviewing and refining the CRS over the last 18 years.

Part II of this report provides summary statistics on community participation in the CRS and on the costs of administering the program. Part III reviews how the CRS operates and how the program activities have been implemented. Part IV describes progress toward the strategic goals that were posed in prior reports.

The major highlights of this report are:

- The 1095 participating CRS communities represent over two-thirds of all flood insurance policies.
- Participation in the CRS is well distributed across the country, although it is higher in Florida, where policy counts are greater, and in those states that are the more active leaders in floodplain management.
- In addition to the benefits of the CRS's basic approach of encouraging and crediting floodplain management activities and providing reductions on flood insurance premiums, the CRS also helps reduce disaster losses in a wide variety of ways, such as acting as a model

for communities, supporting research into mitigation activities, emphasizing stronger multi-hazard building codes, and encouraging all-hazards planning.

- The program has been steadily growing over the past nine years and CRS communities are improving their floodplain management programs and receiving better CRS classifications in return.
- The first Class 1 ranking earned by any CRS community was awarded to Roseville, California in 2006. This milestone indicates the importance communities place on improving their rating within the CRS to receive additional flood insurance discounts for their residents, on enhancing their floodplain management programs, and thereby reducing their risk of flood loss.
- In addition to one Class 1 community, the program has two Class 2 communities, one Class 3 community, and two Class 4 communities. The six top-rated communities include three counties, all in the State of Washington.
- The costs borne by communities to implement activities credited under the CRS are justified by the benefits that ensue: enhanced public safety, a reduction in damage to property and public infrastructure, the avoidance of economic disruption and losses, reduced human suffering, and protection of the environment. These benefits accrue to all the residents, whether they have flood insurance or not. Implementing some CRS activities, such as floodplain management planning, can help a community qualify for certain federal assistance programs. Further, the CRS provides national recognition for a community's flood mitigation efforts.
- A CRS community's flood program 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 after personnel changes.

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I. Legislative Requirement

This is the seventh National Flood Insurance Program Community Rating System Biennial Report to Congress. It is submitted pursuant to Section 541(4) of the National Flood Insurance Reform Act of 1994 (the Riegle Community Development and Regulatory Improvement Act of 1994), which 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 Federal Emergency Management Agency (FEMA) of the Department of Homeland Security.

This Biennial Report reviews the main activities of the past two years, how the program has made refinements to the creditable activities and points, and how the program has fared in its efforts to accomplish its strategic goals. The report is in three parts.

Part II., CRS Facts and Figures, provides a summary of the CRS, its history, current statistics on community participation, and the costs and benefits of the program.

Part III., Program Management, addresses management issues, including routine operational activities and how the scoring system is monitored and improved.

Part IV., Progress toward Goals, looks at progress toward four strategic goals:

- Support FEMA's pre-disaster mitigation emphasis.
- Encourage CRS communities to improve their classes.
- Encourage the communities not in the CRS to join.
- Encourage an all-hazards planning approach.

More details on the topics covered here are available from FEMA. Most of the publications referenced can be found at the Community Rating System Resource Center on FEMA's website, http://training.fema.gov/emiweb/CRS/index.htm.

II. CRS Facts and Figures

How the CRS Works

Communities that regulate new development in their floodplains are able to join the NFIP. In return, the NFIP provides federally backed flood insurance for properties in participating communities. Today 20,100 communities are in the NFIP and there are over 5.5 million policies in effect.

The CRS is a part of the NFIP. The CRS reduces flood insurance premiums for policyholders in certain communities to reflect what the community does above and beyond the NFIP's minimum standards for floodplain management. The objective of the CRS is to reward communities for what they are doing, as well as to provide an incentive for new flood protection activities.

In order to recognize community floodplain management activities in this insurance rating system, those activities must be described, measured, and evaluated. A community receives a CRS classification based upon the credit points it receives for its activities. The criteria for CRS classification, the application procedures, and the credit points and calculations used to determine and verify CRS credit are all contained in the *CRS Coordinator's Manual.*

Classification. There are ten CRS classes: Class 1 requires the most credit points and gives the largest premium reduction; Class 10 receives no premium reduction (see Table 1.). A community that does not apply for the CRS or that does not obtain the minimum number of credit points is a Class 10 community.

Community application for the CRS is voluntary. Any community that is in full compliance with the rules and regulations of the NFIP may apply for a CRS classification better than Class 10. The applicant community submits documentation that it is doing activities recognized under the CRS.

A community's CRS classification is assigned on the basis of a field verification of the activities described in its application.

Table 1. Community Rating System Premium Discounts.

Class	Premium Discount SFHA*	Non-SFHA
1	45%	10%
2	40%	10%
3	35%	10%
4	30%	10%
5	25%	10%
6	20%	10%
7	15%	5%
8	10%	5%
9	5%	5%
10	0	0

* Special Flood Hazard Area. Non-SFHA premium reductions apply to B, C, D, X, A99, and AR Zones.

Activities Credited. The CRS recognizes 18 creditable activities, organized under four categories numbered 300 through 600 (see Table 2). The credit points are based upon how well an activity meets the goals of the CRS. Formulas and adjustment factors are used to calculate credit points for each activity.

Communities that are affected by one or more of seven special hazards, such as coastal erosion, tsunamis, or ice jams, have the opportunity to earn additional credit under several activities. These credit criteria are explained in separate publications for these hazards.

Table 2. Credit Points Awarded for CRS Activities.

ACTIVITY	MAXIMUM POSSIBLE POINTS	AVERAGE POINTS EARNED	MAXIMUM POINTS EARNED	PERCENTAGE OF COMMUNITIES CREDITED
300 Public Information Activities				
310 Elevation Certificates	162	69	142	100%
320 Map Information	140	138	140	95%
330 Outreach Projects	380	90	290	86%
340 Hazard Disclosure	81	19	81	61%
350 Flood Protection Information	102	24	66	87%
360 Flood Protection Assistance	71	53	71	48%
400 Mapping & Regulatory Activities				
410 Additional Flood Data	1,346	86	521	29%
420 Open Space Preservation	900	191	734	83%
430 Higher Regulatory Standards	2,740	166	1,041	85%
440 Flood Data Maintenance	239	79	218	68%
450 Stormwater Management	670	98	490	74%
500 Flood Damage Reduction Activities				
510 Floodplain Management Planning	359	115	270	20%
520 Acquisition and Relocation	3,200	213	2,084	13%
530 Flood Protection	2,800	493	813	6%
540 Drainage System Maintenance	330	232	330	69%
600 Flood Preparedness Activities				
610 Flood Warning Program	225	93	200	30%
620 Levee Safety	900	198	198	1%
630 Dam Safety	175	66	87	81%

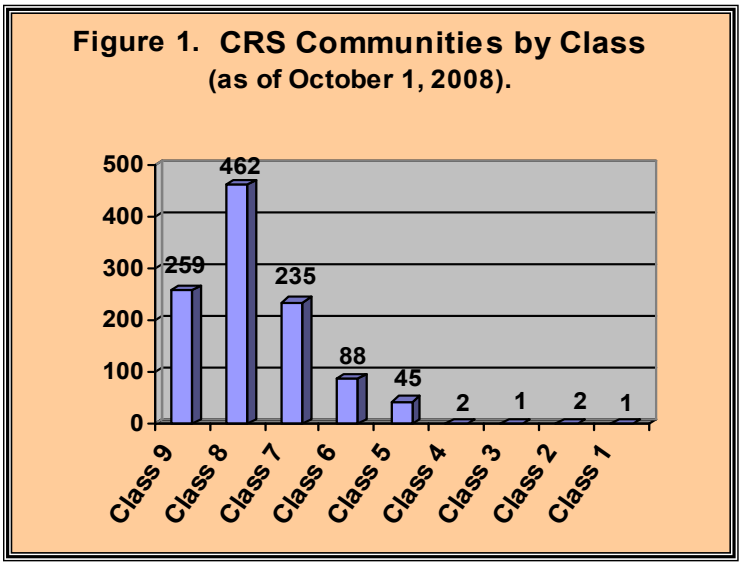
Participating Communities

As of October 1, 2008, there are 1095 communities in the CRS. Their class distribution is shown in Figure 1. It can be seen that over three-quarters of all CRS communities are Class 8 or better.

There are more than 20,000 communities in the NFIP. The 1095 CRS-participating communities represent 5% of all NFIP communities. However, these cities and counties account for over 70% of all flood insurance policyholders. CRS communities have the bulk of the nation's flood challenges.

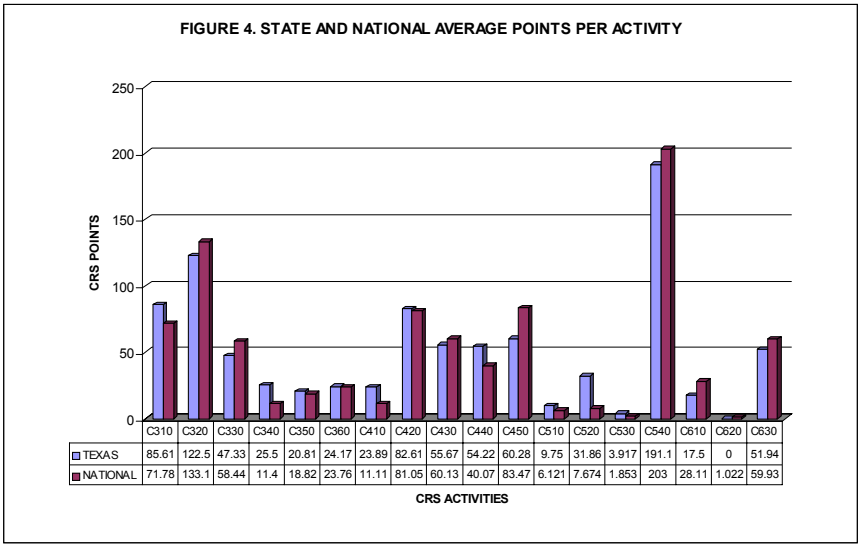
The six best-rated CRS communities in the nation are Roseville, California (Class 1, with a 45% premium discount); Tulsa, Oklahoma; and King County, Washington (both Class 2, with 40%

premium discounts); Pierce County, Washington (Class 3, with a 35 % premium discount); and Fort Collins, Colorado, and Skagit County, Washington (both Class 4, with 30% premium discounts).



On October 1, 2006, Roseville became the first-ever Class 1 community in the CRS, earning an unprecedented 45% premium discount for its policyholders. The city's new status culminated a 15-year process that began when it joined the CRS with a Class 8 rating and was spurred by damaging floods in 1995. Since then Roseville has implemented a combination of flood protection activities including higher regulatory standards, stormwater projects, public awareness efforts, acquisition of floodprone buildings, elevation of structures, and floodwalls and berms. In the last two years King County, Washington, improved to a CRS Class 2; Pierce County, Washington, has achieved a Class 3; and Skagit County, Washington, has improved to Class 4.

State Profiles. The CRS State Profile provides a narrative and graphic summary of each state's communities' scores by activity. Readers get a quick view of which communities are participating, what scores they get for each activity, and their flood insurance premium savings.



	C310	C320	C330	C340	C350	C360	C410	C420	C430	C440	C450	C510	C520	C530	C540	C610	C620	C630
TEXAS	85.61	122.5	47.33	25.5	20.81	24.17	23.89	82.61	55.67	54.22	60.28	9.75	31.86	3.917	191.1	17.5	0	51.94
NATIONAL	71.78	133.1	58.44	11.4	18.82	23.76	11.11	81.05	60.13	40.07	83.47	6.121	7.674	1.853	203	28.11	1.022	59.93

Figure 2. A sample graphic from a CRS State Profile.

Readers can also see how the state's community scores compare to the national averages (see Figure 2). This helps identify state training needs.

Distribution by State. The distribution of participation in the CRS is shown in the chart and map in Figure 3. Participating communities are well distributed across the country. Participation is particularly high in Florida, which has more flood insurance policies than any other state and a high level of awareness of its exposure to flooding. Relatively high participation rates in Florida, North Carolina, California, New Jersey, and Colorado are also due to active state programs that help promote the CRS.

Region I

CT	9	176	20%
ME	19	970	33%
MA	14	334	17%
NH	5	203	8%
RI	3	40	16%
VT	3	228	14%
	53		

Region II

NJ	45	546	50%
NY	26	1485	9%
	71		

Region III

DE	8	47	21%
MD	7	133	44%
PA	23	2460	14%
VA	18	275	33%
WV	3	272	2%
	59		

Region IV

AL	12	379	56%
FL	213	452	93%
GA	30	473	68%
KY	15	323	47%
MS	23	292	60%
NC	76	506	67%
SC	33	209	76%
TN	9	333	21%
	411		

Region V

IL	38	813	22%
IN	17	410	33%
MI	18	804	18%
MN	3	535	2%
OH	14	736	8%
WI	13	512	19%
	103		

Region VI

AR	13	394	25%
LA	38	298	79%
NM	11	88	52%
OK	11	384	27%
TX	44	1144	53%
	117		

Region VII

IA	2	507	10%
KS	6	361	7%
MO	2	606	5%
NE	3	370	30%
	13		

Region VIII

CO	45	240	55%
MT	12	130	46%
ND	2	295	33%
SD	1	205	6%
UT	10	191	18%
WY	5	81	36%
	75		

Region X

AZ	25	102	80%
CA	71	518	57%
HI	1	4	21%
NV	8	33	51%
	105		

Region X

AK	6	32	24%
ID	21	164	55%
OR	31	259	40%
WA	30	291	47%
	88		

Figure 3. CRS Participation and CRS Policies, by State and FEMA Region.

The first column of figures in each Region shows the number of CRS communities in that state; the second column shows the total number of NFIP communities in that state. The last column shows the percentage of that state's NFIP policies that are held in CRS communities.

Dollars and Cents

Administrative Costs. The annual costs for implementing the CRS program, like all other administrative expenses of the NFIP, are funded from policyholder premiums. The costs fall into two categories: staff resources and operating costs.

The staffing category covers the investment of time by state, federal, and associated Task Force staff involved in direct program management and implementation of the CRS. That time can be summarized as an average annual total cost of $776,000, for 11.4 FTEs.

The total contracted operating costs are $3.8 million annually and include office and field review of all community applications, program oversight and quality control, preparing and printing various CRS publications, and other miscellaneous program costs. Other direct FEMA operating expenses are about $505,000 and include program travel, assisting community and state participation at three annual CRS classes at FEMA's Emergency Management Institute; printing the *CRS Application* and *CRS Coordinator's Manual*, and other miscellaneous costs.

The total staffing and operating costs for administering the CRS program are currently estimated to be over $4.8 million for the 2008 calendar year.

Insurance and Mitigation Savings and Benefits. The CRS strategy has been twofold: to recognize floodplain management and insurance activities that meaningfully distinguish one class of community from another; and to act as a catalyst to encourage communities to initiate new activities. Since 1990, 50% of all CRS communities have improved their CRS classes (see Figure 5 on page 20), indicating that more flood loss reduction activities are being undertaken. Since 1996, there has been a steady increase in the number of communities in the better CRS classes. In that year, 32% of CRS communities were Class 8 or better; in the year 2000, over 50% were so classified; and today, over 75% of the CRS communities are rated Class 8 or better. Over the long term, this increases the benefits of the CRS and justifies the added administrative expense of having these classifications in the flood insurance rating system.

Further, the CRS has become an important tool for mitigation as well as a mechanism for integrating mitigation with insurance. This is consistent not only with grading systems that have been successfully employed for many years in the insurance industry, but also with new industry initiatives for relating insurance premiums to community efforts to reduce losses from natural hazards. In addition, a community that implements these mitigation activities provides benefits to all its residents—insured or not—and thereby reduces the need for taxpayer-funded flood response and recovery efforts. The overwhelming responses from various surveys of local officials and floodplain residents indicate that the CRS is a strong catalyst for communities to undertake new activities.

The costs borne by communities in implementing activities credited under the CRS are justified by the reduction in losses to property and lives in the communities. These benefits accrue to all the residents, whether they have flood insurance or not. The full costs and benefits of undertaking activities can only be assessed by the individual communities. The CRS provides a partial benefit in

two ways: national recognition of local flood mitigation efforts, and premium reductions for those prudent enough to purchase flood insurance. The latter benefit totals just over $220 million annually in what policyholders pay for purchasing coverage in the 1095 participating CRS communities, compared to what they would pay as non-CRS communities.

Taken together, the above results provide evidence that the federal and community costs of implementing the CRS are more than justified by the benefits being obtained.

The best way to view the benefits of the CRS is to list how they impact communities and FEMA. Community benefits include these:

- The activities credited by the CRS result in enhanced public safety, a reduction in damage to property and public infrastructure, the avoidance of economic disruption and losses, reduced human suffering, and protection of the environment.
- A community in the CRS can evaluate the effectiveness of its flood program against nationally recognized benchmarks.
- Residents save on flood insurance premiums.
- Technical assistance is available to design and implement some activities.
- A CRS community's floodplain management program benefits from having an added incentive to maintain its flood mitigation efforts over the years. The fact that the community's CRS status could be affected by the elimination of a flood-related activity or weakening of the regulatory requirements for new development should be taken into account by the local governing body when considering such actions. A similar system used in fire insurance rating has strongly affected local government support for fire protection programs.
- Communities that participate in the CRS find that their floodplain management activities are better organized and more formalized. They are administered more effectively and remain in operation after personnel changes.
- Implementing some CRS activities, such as floodplain management planning, can help a community qualify for certain federal assistance programs.
- The public information activities build a knowledgeable constituency interested in supporting and improving flood protection measures.

FEMA and the federal taxpayers benefit from the CRS in several ways, too. These include:

- Credited floodplain management activities have been shown to reduce flood losses and, therefore, flood insurance claims, disaster assistance payments, and lost tax revenue.
- Communities publicize flood insurance and help insurance agents get rating information.
- Loss reduction activities benefit all residents, insured or not. Flood insurance policy holders are the catalyst for community-wide programs that help everyone.
- The CRS has been a sort of laboratory, providing data to FEMA on different ways to implement floodplain management activities. New initiatives by FEMA can be based on how communities have tried them on their own, as measured by CRS credits.

III. Program Management

Program Partners

FEMA. The CRS is administered by FEMA's Mitigation Division within the Department of Homeland Security. FEMA has ten Regional Offices that coordinate the field contacts with states and communities (see map in Figure 3).

Task Force. Because of the many disciplines required to develop and monitor the CRS, FEMA created the Community Rating System Task Force. Its members bring together the fields of actuarial science, engineering, floodplain management, insurance underwriting, and property insurance inspection and rating services.

The Task Force is the focal point for all discussions about the CRS and the primary advisor to FEMA on the program. Key FEMA staff are also Task Force members (see Table 3).

Table 3. CRS Task Force Membership.

1 – Chair: retired insurance executive
6 – FEMA, Mitigation Division
3 – FEMA, Regional Offices
2 – Insurance industry
1 – Association of State Floodplain Managers
1 – National Emergency Management Association
1 – National Association of Flood and Stormwater Management Agencies
2 – Local community CRS Coordinators
1 – National Oceanic and Atmospheric Administration

Insurance Companies. The companies that write flood insurance policies are responsible for explaining the CRS and its benefits to its policyholders. Their representatives on the Task Force ensure that the program's insurance aspects are manageable and provide a business perspective to operational issues.

Insurance Services Office, Inc.. ISO has an arrangement with FEMA and insurance companies to process applications and provide technical assistance to FEMA, states, and communities.

States and Communities. These players 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. It is estimated that 10%–20% of the credited activities are implemented by a state or regional agency or because of a state or regional mandate. State and regional agencies also provide technical assistance to communities.

Program Activities

Here is a list of the activities undertaken during 2007. This list demonstrates the number and breadth of projects implemented pursuant to administering the CRS.

Community Review.

- Reviewed 28 new community applications and conducted verification visits.
- Reviewed 15 modifications to existing community programs, including verification visits.

- Conducted 219 cycle verification visits (each community is reviewed every 3 to 5 years).
- Reviewed 850 community recertifications each year.

Publications and Software.

- Published the 2007 *CRS Coordinator's Manual* and *CRS Application*.
- Developed or updated and printed technical assistance publications (see Table 4).
- Published the *NFIP/CRS Update* newsletter.

Community Training.

- Conducted or made presentations at 22 local, state, or national workshops.
- Conducted three week-long training courses at the Emergency Management Institute.

Community Outreach.

- Distributed thousands of color brochures, *The National Flood Insurance Program's Community Rating System.*
- Displayed a CRS booth at four national conferences of professional associations.
- Made presentations at five conferences of professional associations.

Table 4. Technical Assistance Publications of the CRS.

CRS technical assistance publications, known as "model programs," cover the following topics:

Floodplain management planning

Higher regulatory standards

Dam failure response planning

Drainage system maintenance

Flood warning programs

Outreach projects

Stormwater management

Examples of local plans.

Other technical publications cover the mapping and management of areas subject to special hazards:

- *CRS Credit for Mitigation of Tsunami Hazards*
- *CRS Credit for Management of Coastal Erosion Hazards*
- *Special Hazards Supplement to the CRS Coordinator's Manual.*

Program Improvement

FEMA and the CRS Task Force are committed to improving the CRS continually. Table 5 summarizes the progression of efforts that have been taken over the years to enhance the CRS, its operations, and its effectiveness.

The Process. The CRS has a system to continually analyze, clarify, and improve its credit criteria, scoring, and operations. Valuable feedback on needed changes and improvements is obtained through

- Feedback from communities at workshops, meetings, and verification visits;
- Feedback from states and FEMA regional staff;
- Draft policy papers that are circulated for comment;
- Special investigations, such as the research and interviews conducted in CRS communities affected by the 2004 and 2005 hurricanes; and
- "Calls for Issues" periodically sent out by FEMA.

Table 5. Community Rating System Timeline.

Year	Major Activity
1987	➡ First Community Rating System Task Force appointed by Federal Insurance Administrator.
1988	➡ Insurance Services Office tasked with a major role in developing the CRS. ➡ First *Schedule* drafted, modeled on ISO's community fire insurance rating system.
1989	➡ *CRS Commentary* expands on the *Schedule*. Field tests conducted. ➡ "Weighting Forum" sets basis for points and scoring system.
1990	➡ *CRS Coordinator's Manual* published, combining the *Schedule* and the *Commentary* in one guidebook for the local official. ➡ 75 workshops held around the country. Week-long CRS courses begin at FEMA's Emergency Management Institute. ➡ *Example Plans*, first of the "model programs" series, is published to provide more guidance on how communities can implement and score their activities. ➡ *NFIP/CRS Update* initiated to provide periodic news, helpful hints to local officials. ➡ 324 communities apply by December 15 deadline.
1991	➡ First verification visits conducted. ➡ 293 cities and counties become Class 9 CRS communities on October 1.
1992	➡ 1990 initial applicant communities' verified classes take effect on October 1. ➡ 280 of the 1991 applicants become Class 9.
1993	➡ The 3- and 5-year cycle verification system is formalized.
1994	➡ The *Short Form Application* is published, providing a streamlined way for communities to apply, evolving into the *CRS Application* – a single application procedure. ➡ The *Schedule* includes new credits for protecting natural and beneficial functions and for coastal erosion programs. ➡ The National Flood Insurance Reform Act codifies the CRS.
1995	➡ FEMA begins three-year evaluation of the CRS with a Call for Issues and a survey of local CRS Coordinators.
1996	➡ Revised annual recertification format provides more information to help communities implement their activities. ➡ Single annual deadline and self-certified Class 9 approach dropped. Communities may apply at any time. Verified classifications take effect on May 1 and October 1.
1998	➡ Evaluation continues with focus groups and surveys. ➡ "Weighting Review Forum" held to tie the evaluation's conclusions to credit criteria and the scoring system.
1999	➡ New *CRS Coordinator's Manual* reflects the conclusions of the evaluation.
2002	➡ FEMA publishes revised *CRS Coordinator's Manual.*
2003	➡ FEMA introduces new CRS Resource Center website.
2004	➡ New CRS video developed to better explain and market the CRS.
2006	➡ Revised *CRS Coordinator's Manual* includes increased credit points for new and/or higher-standard maps, new credit for analyses of repetitive flood loss areas, and bonus points for acquiring or otherwise mitigating repetitive loss buildings. ➡ First Class 1 community is verified. ➡ Policy developed for applying CRS policies and requirements to communities catastrophically affected by disasters.
2007	➡ FEMA publishes revisions to the *CRS Coordinator's Manual* to incorporate lessons learned from Hurricane Katrina.
2008	➡ CRS Task Force prepares *A Strategic Plan for the CRS, 2008-2013*

A variety of concerns and suggestions are derived from these sources. CRS staff prepare memos, issue papers, and draft responses, which are sent to the Task Force for consideration at one of the three meetings it holds each year. The Task Force members, especially those who represent local, state, and FEMA Regional Offices, have their own direct sources of information.

The Task Force meetings are rotated among the ten FEMA regions in order to obtain input from experienced field personnel from different parts of the country. Each Task Force meeting is attended by representatives of the host FEMA Regional Office. State officials and local CRS Coordinators from communities in the area are invited to provide their comments on the program.

The in-stream changes that result from this ongoing process have varied from adjusting the points of an individual element in the grading schedule to major changes in the *CRS Coordinator's Manual*. All of the landmark changes listed in the CRS Timeline (see Table 5) were developed through this process.

Hurricanes Katrina and Rita in 2005 affected CRS communities more deeply than any hurricane to date. In the past, CRS policy has been to be flexible with disaster-stricken communities with regard to their annual recertification requirement and their cyclical verification visit. Although their CRS-credited activities are important and contribute to reduced flood losses over the long term, it is recognized that, in the post-disaster period, communities have unique opportunities to implement mitigation activities that benefit the NFIP and also that local officials are focused on repair and recovery after disasters so that they can take advantage of those opportunities. This was especially true after Katrina and Rita. Accordingly, in 2006 the CRS instituted a draft policy for such situations. It allowed for adjustments to the scheduled requirements for CRS community participation, stated which ongoing activities could be temporarily interrupted because of the disaster without loss of CRS credit, and which activities could not be waived. The draft policy also called for additional consultation between the affected community and the ISO/CRS staff and for the provision of more technical assistance as needed.

This draft policy was pilot tested during the summer of 2006, through field visits and interviews with staff in CRS communities affected by the hurricane. The test revealed that most communities were able to continue implementing most of their CRS activities in spite of the disruption. Two notable obstacles were the loss of experienced local staff to more lucrative opportunities presented by the recovery process and the inability of some communities to implement outreach activities that involved direct mailings (because addressees—and sometimes the building itself—were no longer at the listed site). However, communities tended to adapt their ongoing outreach activities to compensate for this problem and also to meet the more pressing need for disseminating information about repair, rebuilding, recovery, and mitigation rather than simply about flood hazard awareness.

At its October 2006 meeting, the CRS Task Force adopted the draft policy and the recommendations from the pilot test. This resulted in the application of a consistent approach to handling the CRS requirements among communities affected by disasters.

After Hurricane Ike, which caused devastation to Galveston, Texas, and the surrounding areas in September 2008, this policy was implemented for a number of Texas coastal communities.

The Results. Pursuant to this ongoing improvement process, in 2007 the CRS Task Force made the following changes when it adopted the 2007 *CRS Coordinator's Manual:*

- Provided credit for maintaining records off-site under Activity 310–Elevation Certificates;
- Revised credit under Activity 410–Additional Flood Data for adopting advisory base flood elevations;
- Revised credit under Activity 440 for ERM (elevation reference marks) by renaming the element BMM (benchmark maintenance) to more accurately reflect the current technology; and
- Increased credit for protection of critical facilities in Activity 530–Flood Protection.

The Task Force has also initiated several research projects to evaluate selected activities and prepare possible revisions for the next manual. These include

- The post-hurricane evaluation described above;
- An independent evaluation of CRS credits for public information activities;
- A review of credits for flood warning, to be conducted in conjunction with the National Emergency Management Association; and
- A new process for evaluating and verifying state dam safety programs, to be conducted in cooperation with the U.S. Army Corps of Engineers and the Association of State Dam Safety Officials.

CRS Community Accountability. Over time, circumstances within states and communities change, making it necessary to ensure that communities receiving the benefits of the CRS are continuing to meet its requirements. In 2006, the American Institutes for Research (AIR) found shortcomings in the level of compliance with NFIP rules among CRS communities. In general, CRS communities examined in AIR's study had a much lower rate of serious building violations than did non-CRS communities, and the CRS communities also had much better recordkeeping than the other NFIP communities. However, the proportion of buildings that were fully compliant with NFIP minimum criteria was about the same in both CRS and non-CRS communities. FEMA is looking at ways to improve compliance levels in all communities, but especially in those receiving CRS benefits.

In 2003 the State of North Carolina adopted state amendments that diminished the wind protection standards of the International Building and Residential Codes. Some CRS communities had been receiving CRS credit for their high rating under the Building Code Effectiveness Grading Schedule, which relies in part on enforcement of strict codes. Because the communities must comply with state law, they were no longer able to enforce the stricter provisions and thus no longer met CRS standards for that credit. In consequence, FEMA retrograded seven North Carolina communities from their higher CRS class to class 8, the highest that can be achieved without the high building code rating.

A Strategic Plan. During 2007 and 2008, the CRS Task Force conducted a series of meetings to develop a six-year strategic plan for the CRS (fiscal years 2008 through 2013). *A Strategic Plan for the Community Rating System, 2008–2013* was developed for three main reasons.

First, all programs need to be reviewed periodically. As a mature program, the CRS warrants a careful assessment of its performance, with full consideration of developing innovations so that its

public contribution can be improved continuously. As with other FEMA programs, the CRS needs both to evaluate the effectiveness of its credit criteria and procedures and also to keep up with developments in and outside of FEMA.

Second, the FEMA staff administering the CRS desires to respond to the need for self-examination as emphasized by recommendations from two recent independent reports. In 2002, the FEMA Inspector General recommended seven specific actions to "further enhance the effectiveness of the CRS" (Office of Inspector General, 2002, p. 1). As part of its overall evaluation of the NFIP, in 2006 the American Institutes for Research identified a variety of ways in which the CRS could be improved and could assist other FEMA programs (American Institutes for Research, 2006).

Third, the CRS Task Force needs to ensure that a review of the CRS's goals, activities, credits, and performance measures is closely tied to FEMA's goals and objectives.

The CRS Strategic Plan presents and discusses an array of objectives, strategies, steps for implementation (summarized in Table 6), and a year-by-year schedule for the next six years to guide the CRS in achieving its goals. The details set out in the CRS Strategic Plan reflect the needs perceived by the CRS Task Force and FEMA staff to

- Ensure that communities are "earning" the appropriate credits they are awarded through participation in the program;
- Identify a process to increase the number of communities participating in the CRS and/or increase the ratings of those communities already in the program;
- Better integrate with other programs, coordinate with recent initiatives, and build new partnerships;
- Incorporate new technologies and respond to new local demographics and societal trends;
- Become a more performance-based program, with measurements that illustrate the costs and benefits of program implementation;
- Create a succession and knowledge management plan to assure the continued high performance of the CRS Task Force and its supporting personnel.

While working to implement the CRS Strategic Plan, the Task Force is deliberately seeking input and feedback from subject-matter experts and professionals for each of the objectives and strategies identified in the Strategic Plan, as well as ensuring a schedule for managing progress on each particular strategy. This is being accomplished through the designation of several working committees. The committees are responsible for assessing how to improve certain areas of the CRS and then developing a case for recommendations for Task Force consideration. The 2010 Biennial Report to Congress will provide an update on the progress of the CRS Strategic Plan.

Table 6. Summary of
A STRATEGIC PLAN for the COMMUNITY RATING SYSTEM, 2008–2013.

Objectives	Strategies
1. Ensure that all CRS credits are appropriate and fully earned.	1.1. Ensure that all credited activities properly reflect the CRS goals. 1.2. Ensure that all CRS communities are fully compliant with NFIP criteria. 1.3. Improve the CRS verification process.
2. Support FEMA's initiatives to reduce repetitive flood losses.	2.1 Improve CRS incentives and opportunities to encourage communities to reduce repetitive flood losses. 2.2 Use the CRS to support other efforts to reduce repetitive flood losses.
3. Encourage communities to improve their floodplain management programs continually.	3.1. Develop a set of incentives for implementing each CRS-credited activity. 3.2. Review the CRS incentives in light of the CRS goals. 3.3. Help communities manage their CRS programs more effectively.
4. Support the CRS Strategic Plan with appropriate procedures and adequate resources.	4.1. Develop a CRS marketing plan. 4.2. Develop a method to evaluate the flood losses avoided through the CRS. 4.3. Improve partnerships with CRS stakeholders. 4.4. Improve the operations of the CRS Task Force. 4.5. Provide the tools and resources needed to implement the strategies set out in the CRS Strategic Plan.
5. Implement a knowledge management plan for the CRS.	5.1. Develop a strategy for succession planning. 5.2. Ensure that there are sufficient qualified and motivated staff members in both FEMA and Insurance Services Office.

IV. Progress toward Goals

Past CRS Reports to Congress identified "overall and strategic issues." The 2006 report recommended that the following be "pursued in future years."

1. Continue to coordinate closely with and support FEMA's all-hazards risk management strategy.
2. Continue efforts to promote the benefits of joining the CRS.
3. Continue to assist and encourage officials of communities already in the CRS to improve their floodplain management programs and thereby receive better CRS classifications.
4. Consider revisions to CRS policy as published in future editions of the *CRS Coordinator's Manual*, as FEMA and the CRS Task Force continue to refine the CRS and meet the first three strategies and any new ones on the horizon.

This part reviews the progress made toward these goals since the 2006 Report to Congress.

All-Hazards Risk Management

The first strategic goal was to coordinate with and be supportive of FEMA's all-hazards approach to managing risk.

The primary purpose of all-hazards risk management is to identify and bring to bear all community policies, actions, and tools that will, over the long term, result in a reduction in both the level of risk and the potential for future losses community-wide. All-hazards risk management is most successful when it increases public and political support for planning and mitigation programs, results in actions that also support other important community goals and objectives, and influences the community's or state's decision making to include hazard reduction considerations.

The CRS is particularly helpful in doing this because it encourages communities to tackle their problems in a variety of ways. Once local officials have their flood mitigation activities in operation, it becomes easier to begin to address other hazards with the same people and programs. This approach has been followed in many communities, CRS and non-CRS alike. Local officials report that the CRS program, its activities, and planning guidance gave them ideas about where to start and how to organize other risk management programs.

Mitigation. It is noted continually that many communities initiate all-hazards mitigation plans because of the FEMA requirements. During their planning processes, they discover the true extent of their flooding problems, learn about the CRS, and begin reducing their repetitive flood losses. In addition, the CRS provides a financial and political incentive to undertake mitigation activities. CRS mitigation activity numbers and their measures include

Activities 320, 340, 410, 440—Developing and/or providing and maintaining accurate hazard information;

Activities 330, 350, 360—Advising people on mitigation measures they can take to protect their properties;

Activity 420—Preserving hazardous areas as open space;

Activities 430, 450—Enacting and enforcing higher regulatory standards for new development;

Activity 510—Preparing and adopting comprehensive mitigation/floodplain management plans;

Activity 520—Acquiring and relocating floodprone buildings;

Activity 530—Protecting existing floodprone buildings; and

Activity 540—Maintaining drainage systems to prevent flooding from debris jams and obstructions.

Often communities initiate such mitigation activities either because the CRS provides an incentive or because the CRS provides information and guidance on how to do them (or both). There are many examples of such success.

The CRS has taken the following specific actions to promote all-hazards mitigation:

- Communities cannot become better than a CRS Class 8 unless they have an up-to-date, all-hazards building code and an enforcement program recognized by the Building Code Effectiveness Grading Schedule (BCEGS).
- There are additional credits and prerequisites for higher CRS classes based on the community's BCEGS class.
- The Land Development Regulations component of the CRS encourages communities to treat flooding as one of several hazards that they must mitigate to safely guide wise development decisions.
- There are now more credits for programs that deal with flood-related hazards, such as coastal erosion and tsunamis.
- CRS staff have worked closely with FEMA all-hazards planning staff to ensure that the CRS credit criteria support all-hazards planning and to make both programs' requirements consistent. As a result, one plan document can meet the prerequisites of the CRS and all five FEMA mitigation grant programs, including the multi-hazard pre-disaster mitigation grant program.
- The credit points awarded for Outreach Project Strategies (Activity 330) that address multi-hazards have been increased.

Building Codes. Building codes ensure the health and safety of citizens in the built environment. It has been FEMA's experience, in responding to disasters of all types in all parts of the country, that communities with adequate codes and adequate code enforcement have survived far better and recovered far more quickly than communities without adequate building codes. With the rise of disaster costs in the United States, communities cannot afford to continue business as usual when it is within their power to be more disaster resistant. The cornerstone of mitigation is community adoption and enforcement of strong building codes.

For these reasons, FEMA fully supports building codes such as the model International Code Series (I-Codes) that address most natural hazards on a consistent, rational basis that allows mitigation of the effects of those natural hazards that are found within each jurisdiction's boundaries. Because of these advantages, the CRS program encourages community adoption of the I-Codes (or like codes) through provision of increased credit points (Activity 430).

However, adoption of building codes is not enough. The CRS has also tied credits to updating and enforcing a building code. The CRS relies on ISO to provide community classifications under the insurance industry's BCEGS program. The better the BCEGS class, the more CRS points the community receives (Activity 430).

Further, a community cannot progress beyond a CRS Class 8 without a good BCEGS class or beyond a CRS Class 5 without a better one. This has encouraged several communities to adopt their first building codes and other communities to improve their building codes and administration so they can improve their CRS classes.

Mitigation Research. The CRS provides a wealth of information on the communities with flood problems and the floodplain management activities they are implementing to reduce those problems. The data and local materials collected have helped many research projects.

The series of hurricanes that struck the Gulf Coast and Florida during 2004 and 2005 tested local hazard mapping, regulatory, mitigation, response, and public information activities. FEMA conducted a series of analyses of the effectiveness of floodplain management programs that were intended to prepare for and respond to the hurricanes. Because about one-fourth of all CRS communities were affected by the hurricanes, a special evaluation was conducted of activities credited under the CRS. Ways are being sought by which the CRS could support and encourage the adoption of those mitigation, preparedness, and public safety measures that FEMA found had been effective in minimizing the impacts of the hurricanes.

For example, FEMA's investigation resulted in several recommendations that local communities adopt stronger coastal construction standards. The CRS currently provides credit to communities who do so, and now is exploring ways to further encourage adoption of higher standards, either through additional credit points or through a completely new element. As another example, it was found that communities that lost building elevation certificates and other records in the hurricanes had a more difficult time implementing the repair and rebuilding process. In 2007 the CRS provided credit to communities that store original or backup elevation certificates, building permit files, and other records at an off-site location.

Repetitive Flood Losses. Repetitively flooded properties make up 1% of the NFIP policies but account for over 30% of the claims payments. Addressing these repetitive losses has been a FEMA priority for years, but the programs did not have the ability to mitigate enough properties to reverse the trend. However, the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 created expanded program authority and grants to make significant inroads toward reducing repetitive loss structures through individual and community projects that acquire, relocate, elevate, or floodproof these repeatedly flooded properties.

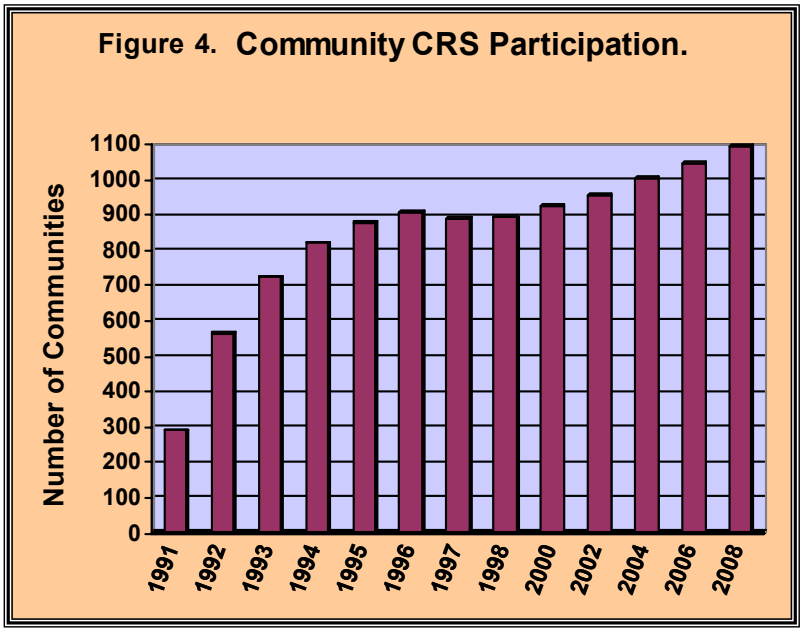
The CRS helps these efforts in two ways. First, every CRS community must research its repetitive losses, identify the causes of the problem(s), and distribute flood protection information to property owners in repetitive loss areas. The CRS-managed Repetitive Loss Update Center refines the database by working with communities who provide additional mitigation information on each property, thereby helping FEMA get a better handle on the extent of the problem. In the 2006 *CRS Coordina-*

tor's Manual a new element was added to give a community credit points for conducting detailed analyses of its repetitive loss areas.

The second way the CRS supports FEMA's efforts to reduce repetitive losses is through the mitigation measures that communities undertake for CRS credit. For instance, repetitive loss properties acquired, retrofitted, or relocated outside the special flood hazard areas now receive credit, and those within the floodplain receive double credit. In the 2006 *CRS Coordinator's Manual* provisions were added to award more "bonus" points to communities that acquire, relocate, or otherwise remove one or more of their Severe Repetitive Loss Properties* from floodprone sites. Similar bonus points also are now provided for certain flood protection projects that affect one or more Severe Repetitive Loss Properties.

Encouraging Participation

The second strategic goal set forth in the last Report to Congress is to get more communities into the CRS. This goal is not just to increase the numbers. As noted in the previous section, once they are in, there is a propensity for communities to work toward improving their floodplain management programs, which may lead toward an improved CRS classification.



CRS participation increased greatly during the first five years of the program when the most active communities applied. Then, growth leveled off from 1996 to 1999, when communities received their first "cycle" visit leading to a number of communities' dropping out voluntarily or being removed because they no longer met the program requirements. However, various marketing and technical assistance efforts have resulted in moderate growth in the CRS since 1999, as shown in Figure 4.

Participation Activities. As with class improvement, FEMA and its partners are doing many things to encourage and assist communities to both join and remain in the CRS. Because of these efforts, total participation increased by 46 communities since 2006. Annual increases have doubled from 10 per year to more than 20. Over the last two years, activities to encourage more participation have included

- Simplifying the documentation needed and removing other impediments to applying;

* Defined pursuant to the 2004 National Flood Insurance Reform Act as properties that have had four or more claims of more than $5,000 or two to three claims that cumulatively exceed the building's value.

- Providing color brochures that explain the CRS to non-participants;
- Putting CRS information and publications on FEMA's website;
- Conducting training programs on applying to the CRS;
- Making presentations about the CRS at local officials' workshops;
- Experimenting with new approaches for state officials and others to complete the applications for smaller communities;
- Promoting uniform minimum credit and master applications in states and counties that administer their own programs with higher standards;
- Including articles on the benefits of the CRS in newsletters of professional organizations and local officials' associations; and
- Showing the CRS video that showcases community success stories.

Improvement in CRS Classifications

The third strategic issue posed in the last Report to Congress dealt with "encouraging officials of communities already in the CRS to engage in activities that will improve their CRS class." As noted in the issue statement ("thereby increasing protection for the lives and property of their citizens"), the better the class, the more the community is doing to reduce flood losses and accomplish the other goals of the CRS.

Class Improvement Activities. Many things are being done to encourage and assist communities to improve their programs and apply for the additional CRS credit. Over the last two years, these have included

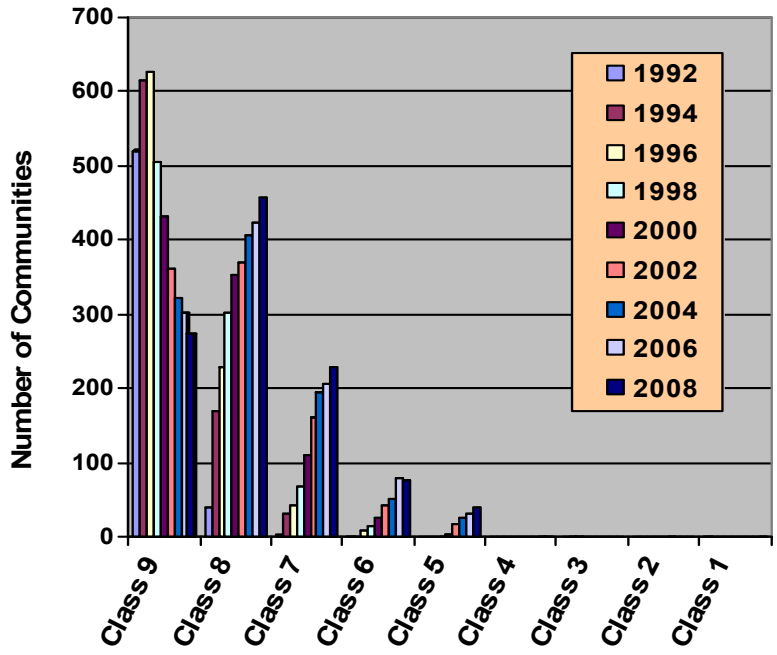
- Continuing to simplify the documentation needed and removing other impediments to applying for additional credits;
- Preparing new and updating existing publications on various floodplain management activities;
- Putting many publications on FEMA's website where they are readily accessible;
- Conducting training programs at the Emergency Management Institute and field-deployed locations;
- Providing more assistance to local officials during community verification visits;
- Publicizing CRS communities' success stories in a periodic newsletter to communities;
- Encouraging communities to improve their staff capabilities and breadth of interest through the floodplain manager certification program; and
- Linking CRS credit to initiation of other new mitigation programs, including StormReady, TsunamiReady, the BCEGS, and the I-Codes.

Results. As a result of this work (and the basic desire by communities to do better), there has been a steady improvement in community classifications. A pattern has been seen—first a community does just enough to join as a Class 9. Then during verification visits, help is provided to local officials to show them how they could start new activities or improve existing ones. The local officials

receive newsletters, publications, and other information or attend workshops on CRS activities and they become motivated to do more.

This pattern is shown in Figure 5. Over the last 12 years, the number of "entry-level" (Class 9) CRS communities has decreased and more and more communities have moved up to the better classifications. Although they are too small to show up on the graph, the CRS awarded its first Class 1 to Roseville, California, in 2006, and since has added another Class 2, Class 3, and Class 4. The CRS now has one community in Class 1, two communities in Class 2, one in Class 3, and two in Class 4.

Figure 5. CRS Classes over Time.



V. Conclusions

The CRS has made significant progress toward meeting the four strategic goals set out in the 2006 Report to Congress. Communities that have applied for classification under the CRS are achieving higher classes, indicating that more of the sophisticated flood loss reduction activities are being undertaken. Over the long term, this will increase the benefits of the CRS and justify the added expense of these classifications in the flood insurance rating system. The CRS has become an important tool for mitigation as well as a mechanism for integrating mitigation with insurance. This is consistent not only with grading systems that have been successfully employed for many years in the insurance industry, but also with new industry initiatives for relating insurance premiums to local community efforts to reduce losses due to natural hazards.

A key component of the FEMA Mitigation Division's mission is to lead national efforts to encourage all-hazards risk management and to recognize those types of activities with regard to natural hazards in insurance rating systems. A multi-hazard approach is promoted at the local level that leads to reduced losses by building disaster-resistant communities. Adoption and enforcement of strong building codes as measured by the insurance industry's BCEGS integrates local community building code enforcement into the industry's premium rates. The CRS of the NFIP is an important component of this trend in mitigation.

This report has provided an overview of how the CRS operates, where it stands now, and how well it is progressing toward its goals. The main findings can be summarized as follows:

- The 1095 participating CRS communities represent over two-thirds of all flood insurance policies.
- Participation in the CRS is well distributed across the country. It is higher in Florida, North Carolina, California, and other states where policy counts are greater and in those states that are more active leaders in floodplain management.
- 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 in a wide variety of ways, such as acting as a model for FEMA's all-hazards risk approach for communities, supporting research into mitigation activities, emphasizing stronger multi-hazard building codes, and encouraging all-hazards planning.
- The program has been steadily growing over the past 10 years and CRS communities are improving their floodplain management programs and receiving better CRS classifications in return.
- The costs borne by communities in implementing activities credited under the CRS are justified by the benefits that ensue: enhanced public safety, a reduction in damage to property and public infrastructure, the avoidance of economic disruption and losses, reduced human suffering, and protection of the environment. These benefits accrue to all the residents, whether they have flood insurance or not. Implementing some CRS activities, such as floodplain management planning, can help a community qualify for certain federal assistance programs. Further, the CRS provides national recognition for a community's flood mitigation efforts.

The following strategies will be implemented by FEMA to guide the CRS until the next Biennial Report to Congress:

1. Implementation of *A Strategic Plan for the Community Rating System, 2008–2013*, will commence. Early activities will include intensive evaluation of the credit points awarded for certain CRS activities (according to the schedule set out in the Strategic Plan) and a review of the scoring system used to assign relative values to each floodplain management and flood insurance technique credited under the CRS.
2. The CRS will continue to be closely coordinated with and be mutually supportive of FEMA's all-hazards risk management strategy and with FEMA's efforts to address repetitive flood losses. Activities in support of this strategy that are detailed in the CRS Strategic Plan will be implemented.
3. CRS communities will continue to be provided with assistance and encouraged to improve their floodplain management programs and thereby receive better CRS classifications. The benefits of joining the CRS will continue to be promoted. Activities in support of this dual strategy that are detailed in the CRS Strategic Plan will be implemented.
4. Revisions to CRS policy as published in the *CRS Coordinator's Manual* will be considered for future editions, as FEMA and the CRS Task Force continue to refine the CRS and carry out the above-mentioned strategies and address any new ones that arise.

VI. References

American Institutes for Research, 2003. *Evaluation of the National Flood Insurance Program: Recommendations from the Individual Reports.* Washington, D.C.: AIR. http://www.fema.gov/business/nfip/nfipeval.shtm.

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