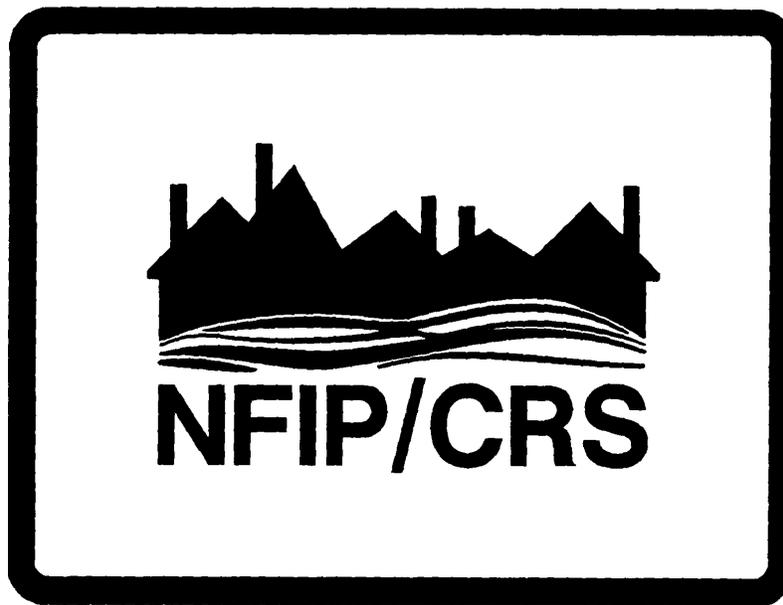


**National Flood Insurance Program
Community Rating System**

Biennial Report to Congress



Federal Emergency Management Agency

October 2002



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Executive Summary

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is administered by the 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 Community Rating System in the NFIP. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance.

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.

There are now 959 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 959 communities represent a significant portion of the nation's flood risk as evidenced by the fact that they account for over 66% 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 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 12 years.

Part 1 of this report provides summary statistics on community participation in the CRS and on the costs of administering the program. Part 2 reviews how the CRS operates and how the program activities have been implemented. Part 3 describes progress toward the four strategic goals that were posed in prior reports.

The major highlights of this report are:

- The 959 participating CRS communities represent 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 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 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 five 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 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 CRS provides two important benefits: national recognition of local flood mitigation efforts, and premium reductions for those prudent enough to purchase flood insurance.

Introduction

This is the fourth biennial Report to Congress on the Federal Emergency Management Agency's (FEMA's) Community Rating System. It is submitted pursuant to Section 541(4) of the National Flood Insurance Reform Act of 1994 (the Riegle Community Development & Regulatory Improvement Act of 1994).

The previous Reports (1996, 1998, and 2000) contained extensive sections on the history of the Community Rating System (CRS), the role of the Community Rating Task Force, how insurance premium credits are provided, the 18 floodplain management activities that the CRS recognizes, the evaluation of the CRS, and the resulting revisions in crediting and scoring activities.

This biennial report will review 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 1 provides a summary of the CRS, its history, current statistics on community participation, and the costs and benefits of the program.

Part 2 addresses management issues, including routine operational activities and how the scoring system is monitored and improved.

Part 3 looks at progress toward four strategic goals:

- Support FEMA's pre-disaster mitigation emphases.
- 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 on FEMA's website, <http://www.fema.gov>.

Part 1. CRS Facts and Figures

How the CRS Works

Communities that regulate new development in their floodplains are able to join the National Flood Insurance Program (NFIP). In return, the NFIP provides federally backed flood insurance for properties in participating communities. Today over 19,700 communities are in the NFIP and there are over 4.4 million policies in effect.

The Community Rating System (CRS) is a part of the NFIP. The CRS reduces flood insurance premiums to reflect what a community does above and beyond the NFIP's minimum standards for floodplain regulation. 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). 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 applies by sending completed application worksheets with appropriate documentation to its FEMA Regional Office.

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

Activities Credited. The CRS recognizes 18 creditable activities, organized under four categories numbered 300 through 600 (see table, next page). 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.

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.

Communities that are affected by one or more of eight 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 a separate publication, *CRS Commentary Supplement for Special Hazards Credit*.

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	72	142	100%
320 Map Information	140	138	140	96%
330 Outreach Projects	315	80	290	79%
340 Hazard Disclosure	81	21	81	54%
350 Flood Protection Information	66	22	30	85%
360 Flood Protection Assistance	71	57	71	42%
400 Mapping & Regulatory Activities				
410 Additional Flood Data	1,373	56	430	26%
420 Open Space Preservation	900	113	954	86%
430 Higher Regulatory Standards	2,720	100	766	78%
440 Flood Data Maintenance	231	66	218	68%
450 Stormwater Management	670	105	446	79%
500 Flood Damage Reduction Activities				
510 Floodplain Management Plan	309	79	220	14%
520 Acquisition and Relocation	3,200	140	2,084	9%
530 Flood Protection	2,800	43	384	5%
540 Drainage System Maintenance	330	261	330	77%
600 Flood Preparedness Activities				
610 Flood Warning Program	225	101	200	29%
620 Levee Safety	900	154	520	1%
630 Dam Safety	175	66	100	91%

Community Rating System Timeline

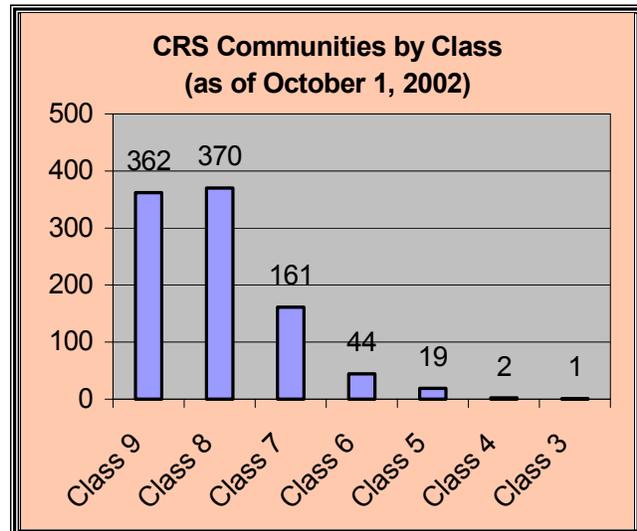
Year	Major Activity
1987	<ul style="list-style-type: none"> ➔ First Community Rating Task Force appointed by Federal Insurance Administrator.
1988	<ul style="list-style-type: none"> ➔ Insurance Services Office tasked with a major role in developing the CRS. ➔ First <i>Schedule</i> drafted, modeled on ISO's community fire insurance rating system.
1989	<ul style="list-style-type: none"> ➔ <i>CRS Commentary</i> expands on the <i>Schedule</i>. Field tests conducted. ➔ "Weighting Forum" sets basis for points and scoring system.
1990	<ul style="list-style-type: none"> ➔ <i>CRS Coordinator's Manual</i> published, combining the <i>Schedule</i> and the <i>Commentary</i> in one guidebook for the local official. ➔ 75 workshops held around the country. Week-long CRS courses begin at FEMA's Emergency Management Institute. ➔ <i>Example Plans</i>, first of the "model programs" series, is published to provide more guidance on how communities can implement and score their activities. ➔ <i>NFIP/CRS Update</i> initiated to provide periodic news, helpful hints to local officials. ➔ 324 communities apply by December 15 deadline.
1991	<ul style="list-style-type: none"> ➔ First verification visits conducted. ➔ 293 cities and counties become Class 9 CRS communities on October 1. ➔ Nearly 300 more communities apply.
1992	<ul style="list-style-type: none"> ➔ 1990 applicant communities' verified classes take effect on October 1; Tulsa, Oklahoma, becomes nation's first Class 5. ➔ 280 of the 1991 applicants become Class 9. ➔ 172 more communities apply.
1993	<ul style="list-style-type: none"> ➔ The 3- and 5-year cycle verification system is formalized.
1994	<ul style="list-style-type: none"> ➔ The <i>Short Form Application</i> is published, providing a streamlined way for communities to apply, evolving into the <i>CRS Application</i> – single application procedure. ➔ The <i>Schedule</i> includes new credits for protecting natural and beneficial functions and for coastal erosion programs. ➔ The National Flood Insurance Reform Act codifies the CRS.
1995	<ul style="list-style-type: none"> ➔ FEMA begins three-year evaluation of the CRS with a Call for Issues and a survey of local CRS Coordinators.
1996	<ul style="list-style-type: none"> ➔ 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 April 1 and October 1.
1998	<ul style="list-style-type: none"> ➔ 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	<ul style="list-style-type: none"> ➔ New <i>CRS Coordinator's Manual</i> reflects the conclusions of the evaluation. Major changes include increased credit points for several activities, classifications tied to the effectiveness of local building codes, and more recognition of locally designed activities that better meet local conditions.
2002	<ul style="list-style-type: none"> ➔ FEMA publishes revised <i>CRS Coordinator's Manual</i>. Major changes include new credit points for structural flood control protects protecting existing development, encouraging adoption of International Building Code series (IBC), promotion of websites for risk communication, prohibiting/limiting coastal enclosures, and recognizing officials who become Certified Floodplain Managers (CFMs).

Participating Communities

As of October 1, 2002, there are 959 communities in the CRS. Their class distribution is shown in the chart to the right. As shown on the chart, over half of all CRS communities are Class 8 or better.

Tulsa, Oklahoma; King County, Washington; and Fort Collins, Colorado, are the three best-rated CRS communities in the nation. On October 1, 2000, Tulsa became the first Class 3 (35% premium discount), while King County and Fort Collins became the only Class 4 communities (30% premium discount) on October 1, 2001.

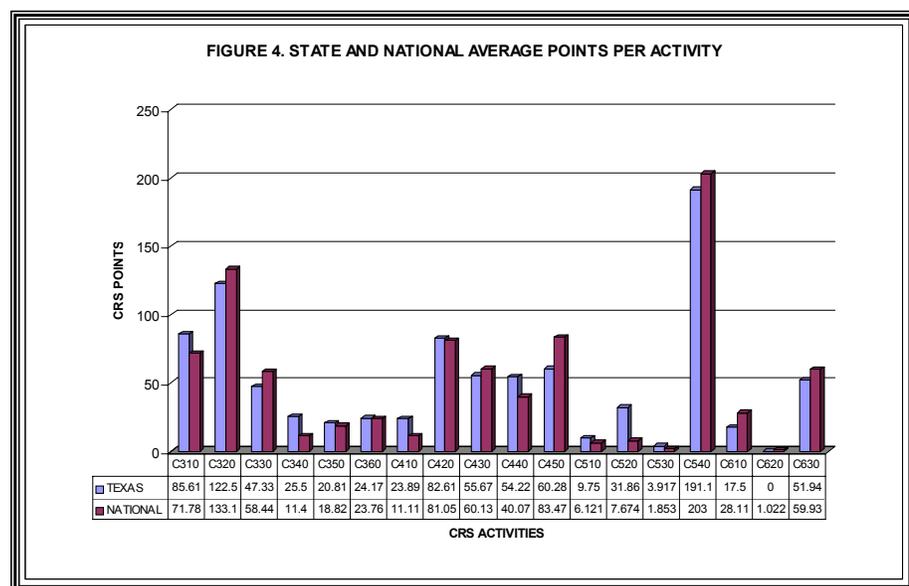
There are over 19,000 communities in the NFIP. The 959 CRS-participating communities represent 5% of all NFIP communities. However, these cities and counties account for over 66% of all flood insurance policyholders. CRS communities have the bulk of the nation's flood challenges.



Distribution by State. Distribution of participation is shown on the next page. 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.

State Profiles. The CRS State Profile is a new product that 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.

Readers can also see how the state's community scores compare to the national averages (see example graph at right). This helps identify state training needs, etc.



CRS Participation by FEMA Region and State



<p><u>Region I</u></p> <p>CT 7</p> <p>ME 19</p> <p>MA 12</p> <p>NH 3</p> <p>RI 4</p> <p>VT 3</p> <p style="text-align: right;">48</p>	<p><u>Region IV</u></p> <p>AL 13</p> <p>FL 207</p> <p>GA 22</p> <p>KY 15</p> <p>MS 17</p> <p>NC 73</p> <p>SC 28</p> <p>TN 7</p> <p style="text-align: right;">382</p>	<p><u>Region VI</u></p> <p>AR 12</p> <p>LA 35</p> <p>NM 9</p> <p>OK 11</p> <p>TX 40</p> <p style="text-align: right;">107</p>	<p><u>Region IX</u></p> <p>AZ 24</p> <p>CA 55</p> <p>HI 1</p> <p>NV 8</p> <p style="text-align: right;">88</p>
<p><u>Region II</u></p> <p>NJ 42</p> <p>NY 25</p> <p style="text-align: right;">67</p>	<p><u>Region V</u></p> <p>IL 28</p> <p>IN 15</p> <p>MI 10</p> <p>MN 3</p> <p>OH 13</p> <p>WI 11</p> <p style="text-align: right;">80</p>	<p><u>Region VII</u></p> <p>IA 2</p> <p>KS 4</p> <p>MO 3</p> <p>NE 2</p> <p style="text-align: right;">11</p>	<p><u>Region X</u></p> <p>AK 3</p> <p>ID 19</p> <p>OR 21</p> <p>WA 23</p> <p style="text-align: right;">66</p>
<p><u>Region III</u></p> <p>DE 7</p> <p>MD 6</p> <p>PA 13</p> <p>VA 17</p> <p>WV 3</p> <p style="text-align: right;">43</p>	<p><u>Region VIII</u></p> <p>CO 41</p> <p>MT 11</p> <p>ND 1</p> <p>SD 1</p> <p>UT 10</p> <p>WY 3</p> <p style="text-align: right;">67</p>		

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 is summarized into an average annual total cost of \$720,000, for 11.4 FTEs.

The total contracted operating costs are \$3.6 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, subsidizing community and state participation at three annual CRS classes at FEMA's Emergency Management Institute; printing the *CRS Application* and *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 2002 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 graph on page 16), indicating that more flood loss reduction activities are being undertaken. There has been a steady increase from 1996, when 32% of CRS communities were Class 8 or better, to the year 2000, when over 50% were so classified. 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. And, we have calculated that the loss reduction value of only 60 CRS points per community associated with new activities more than offsets the federal expenses of the CRS.

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 over \$90 million annually in what policyholders pay for purchasing coverage in the 959 participating CRS communities compared to what they would pay in 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:

- 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 can evaluate the effectiveness of its flood program against a nationally recognized benchmark.
- Residents save on flood insurance premiums.
- Technical assistance in designing and implementing some activities is available.
- A CRS community's flood program benefits from having an added incentive to maintain its flood mitigation programs 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 better 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.

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, lost tax revenue, etc.
- 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.

Part 2. Program Management

The Players

FEMA. The CRS is administered by FEMA's Federal Insurance and Mitigation Administration (FIMA). FEMA has ten Regional Offices that coordinate the field contacts with states and communities (see map, page 6).

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.

Task Force Membership

- 1 – Chair: retired insurance executive
- 6 – FEMA, Federal Insurance and Mitigation Administration
- 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 2001. This list demonstrates the number and breadth of projects implemented pursuant to administering the CRS.

Community Review.

- Reviewed 30 new community applications and conducted verification visits.
- Reviewed 9 modifications to existing community programs, including verification visits.
- Conducted 243 cycle verification visits.

Publications and Software.

- Published the 2002 *CRS Coordinator's Manual*, *CRS Application*, and *CRS Commentary Supplement for Special Hazards Credit*.
- Revised and reprinted all the technical assistance publications (see box).
- Released updated PC software, "Computerized Calculations for the Community Rating System" and "Elevation Certificates."
- Published *NFIP/CRS Update* newsletter.

Community Training.

- Conducted or made presentations at 32 local, state, or national workshops.
- Conducted three week-long training courses at the Emergency Management Institute.
- Conducted three all-day floodplain management planning workshops.

Community Outreach.

- Published and distributed thousands of color brochures, *The National Flood Insurance Program's Community Rating System*.
- Displayed a CRS booth at three national conferences of professional associations.
- Made presentations at five conferences of professional associations.
- Posted CRS materials and model programs on FEMA's website.

Program Improvement

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;
- Questionnaires and draft policy papers that are circulated for comment; and
- "Calls for Issues" periodically sent out by FEMA.

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. Local officials and CRS Coordinators from communities in the area are invited to provide their comments on the program.

Technical Assistance Publications

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

- Drainage system maintenance
- Flood warning programs
- Outreach projects
- Stormwater management
- Higher regulatory standards
- Floodplain management planning
- CRS record keeping.

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

- Uncertain flow paths (alluvial fans)
- Closed basin lakes
- Subsidence
- Ice jams
- Tsunamis.

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 page 4) were developed through this process.

The Results. The 2002 *CRS Coordinator's Manual* contains many changes that have been implemented since the 2000 Report to Congress was submitted. These include:

Procedures

- Simplification of the documentation that communities must provide;
- Increasing the credit for non-Special Flood Hazard Area (SFHA) policies in Class 6 or better communities;
- Development of additional pre-requisites for prospective Class 1 communities; and
- Maintenance of E-Mail database to foster communication with local CRS Coordinators.

Activity credit criteria and scoring

- Promoted all hazard risk management by promoting community adoption of the new International Building Code series (IBC);
- Encouraged communities to recognize unmapped coastal hazards by extending V-Zone requirements into coastal A Zones and for limiting or prohibiting enclosures below BFE in these areas;
- Began crediting the recently established floodplain manager certification program (CFM) and increased the credit points for staff training;
- Established credits for risk communication through community websites;
- Repetitive loss properties acquired, retrofitted or relocated outside the special flood hazard areas now receive credit, and those within the floodplain receive double credit;
- The new Cooperating Technical Partners (CTP) element recognizes community, state, and regional agency efforts to keep their flood risk mapping up to date;
- Low Density Zoning was renamed “Land Development Criteria” and revised to recognize newer planning concepts and their role in avoidance of floodplain development.
- CRS floodplain management planning criteria have been updated to meet the planning requirements of the Disaster Mitigation Act, *allowing communities to adopt one plan for multiple FEMA programs*;
- Revised the scoring to encourage better local dam safety programs;
- Credited local structural flood control projects that protect existing at-risk development; and
- StormReady Communities (SRC) as designated by the National Oceanic and Atmospheric Administration can now receive CRS credit for their flood warning programs.



Outreach and technical assistance

- Promoted a new brochure explaining the CRS to residents;
- Encouraged program growth by sending letters to non-participating CRS communities with at least 100 policies;
- Began development of a CRS Web Resource Center, resulting from community responses to a needs assessment asking what CRS communities desire for training; and
- Continued implementation of the previously mentioned State Profiles.

Part 3. Progress Toward Goals

Past CRS Reports to Congress identified four “overall and strategic issues.” The reports recommended that the following be “pursued in future years.”

1. Supporting FEMA’s all hazard pre-disaster mitigation emphases.
2. Encouraging officials of communities already in the CRS to engage in activities that will improve their CRS class, thereby increasing protection for the lives and property of their citizens.
3. Encouraging the local officials of communities not in the CRS to join.
4. Encouraging local officials to use an all-hazards planning approach.

This part reviews the progress made toward these four goals since the 2000 Report to Congress.

Support for Mitigation Programs through FEMA’s Pre-Disaster Emphases

FEMA helps communities protect themselves from the devastating effects of natural disasters by taking actions that dramatically reduce disruption and loss. The CRS has served as a model for all-hazards pre-disaster activities. Several local officials have reported that the CRS was their blueprint for organizing their program to build a more disaster-resistant community.

In addition, the CRS provides a financial and political incentive to undertake mitigation activities. CRS mitigation activity numbers and their measures include:

- 320, 410, 440—Developing and/or providing accurate hazard information;
- 330, 360—Advising people on mitigation measures they can take to protect their properties;
- 420, 450—Preserving hazardous areas as open space;
- 430—Enacting and enforcing higher regulatory standards for new development;
- 510—Preparing and adopting comprehensive mitigation/floodplain management plans;
- 520—Acquiring and relocating floodprone buildings;
- 530—Protecting existing floodprone buildings; and
- 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 more examples of success than those on this and the next page.

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).

CRS Mitigation Success Story

Arnold, Missouri, prepared a floodplain management plan in 1991 to receive CRS credit under Activity 510. When the Great Flood of 1993 hit, Arnold already had a plan for redevelopment of the destroyed areas. Not only was the City prepared to move, it was first in line for funding of its acquisition and redevelopment program.

- There are additional credits and prerequisites for higher CRS classes based on the community's BCEGS class.
- The Land Development Regulations component encourages communities to treat flooding as one of several hazards that they must mitigate to safely guide wise development decisions.
- Local dam safety programs are emphasized through increased points in the 2002 *CRS Coordinator's Manual*.
- There are now more credits for programs that deal with flood-related hazards, such as coastal erosion.
- There will be a new publication in 2003 on how the CRS can help communities address their tsunami hazard.
- The Additional Map Data component credits community Geographic Information System and the like to manage flood and other hazards within their community.

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, beginning in 2002, the CRS program encourages community adoption of the I-Codes through provision of new 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 relatively new BCEGS. The better the BCEGS class, the more CRS points (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 improve their building codes and enforcement 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. For example, staff provided copies of local plans and technical review for a recent University of North Carolina study on the impact of state and local mitigation plans.

After Hurricanes Bertha, Fran, and Floyd, the effectiveness of CRS-credited mitigation activities was evaluated in an effort to measure the dollar benefits of certain mitigation measures. One study demonstrated that a 1986 state building code change that required deeper pilings on the coast resulted in "an overall reduction in damage as a percent of the [building's] value from 37%

to 15%.” The higher code standard was credited under the section in Activity 430 (Higher Regulatory Standards) on special hazards.

Another report measured the benefit of preserving floodplains as parkland (Activity 420, Open Space Preservation). Damage to parks in two North Carolina cities was compared to the damage suffered in neighboring developed areas. “The average damage prevented by preserving 86.4 acres as open space in three City parks in the flood fringe areas of the Tar River in Rocky Mount is estimated at about \$4.1 million, or about \$47,500 per acre. . . . In Wilson, the open space preserved in 50.5 acres in two City parks prevented an estimated \$5.6 million in damage. This is an average savings of more than \$111,000 per acre.”

Repetitive Losses. Repetitively flooded properties make up 1% of the NFIP policies but account for over 30% of the claims payments. Repetitive losses have received a great deal of attention from FEMA and the media. FEMA has developed a Repetitive Loss Strategy to mitigate these losses. As part of this strategy, FEMA has redirected its mitigation programs to place priority on funding 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.

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. The box to the right provides another success story on how well these measures work.

Class Improvement

The second 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.

CRS Mitigation Success Story

After three floods in 1979, 1982, and 1985 resulted in Presidential Disaster Declarations, Peoria County and the cities of Peoria and Peoria Heights embarked on a major floodplain acquisition program. Peoria County has the bulk of the problem properties and received 258 points (1/2 of a CRS class) for its acquisition program.

The benefits of this work are clear when one looks at the impact of the 1995 flood, which was higher than the one in 1985:

Year	Flood Crest	NFIP Claims
1979	28.7 feet	\$2,071,988
1982	27.4 feet	\$2,114,970
1985	24.3 feet	\$1,271,219
1995	25.7 feet	\$158,076

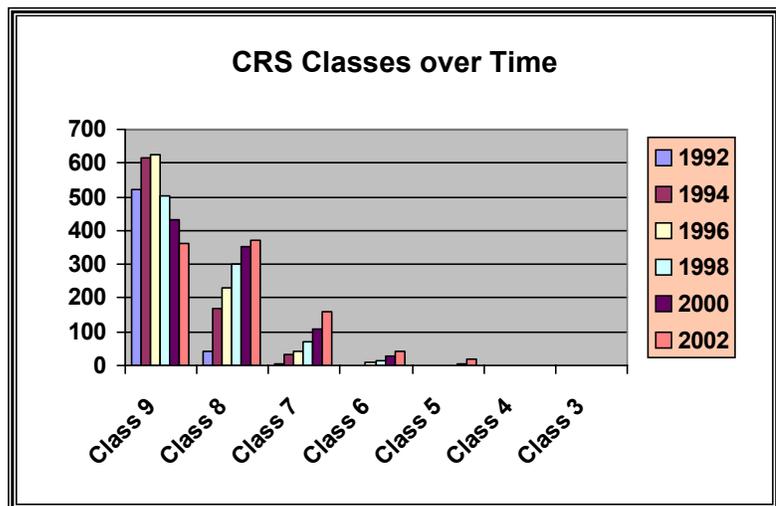
Not only have flood losses been greatly reduced, but the 1995 flood did not warrant a disaster declaration. According to FEMA’s records, these three communities have 250 repetitive loss properties, the third-largest concentration in Illinois. However, 150 of those properties had been removed by the 1995 flood.

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

- Simplifying the documentation needed and removing other impediments to applying for additional credits;
- Preparing new 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;
- Increasing the CRS credit for those activities found to be more effective after the CRS evaluation;
- Providing more guidance and assistance to local officials during community verification visits;
- Making revisions to the 1999 *CRS Coordinator’s Manual* that encourage communities to develop their own approaches to a CRS activity rather than trying to fit into a national model;
- Publicizing CRS communities’ success stories (e.g., the ones on Peoria and Arnold discussed in this report);
- 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 the BCEGS and the International Building 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 modify 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 the chart. Over the last eight 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 it is too small to show up on the graph, the CRS awarded its first Class 3 to Tulsa, Oklahoma, in 2002.



Encouraging Participation

The third 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.

CRS participation increased greatly during the first five years of the program when the most active communities applied. Then, from 1996 to 1999, applications averaged 10 per year. However, in spite of efforts to help them, a number of communities dropped out voluntarily or were removed because they no longer met the program requirements. As a result, total participation leveled off.

Participation Activities. As with class improvement, we are doing many things to encourage and assist communities to join the CRS and stay in. Because of these efforts, total

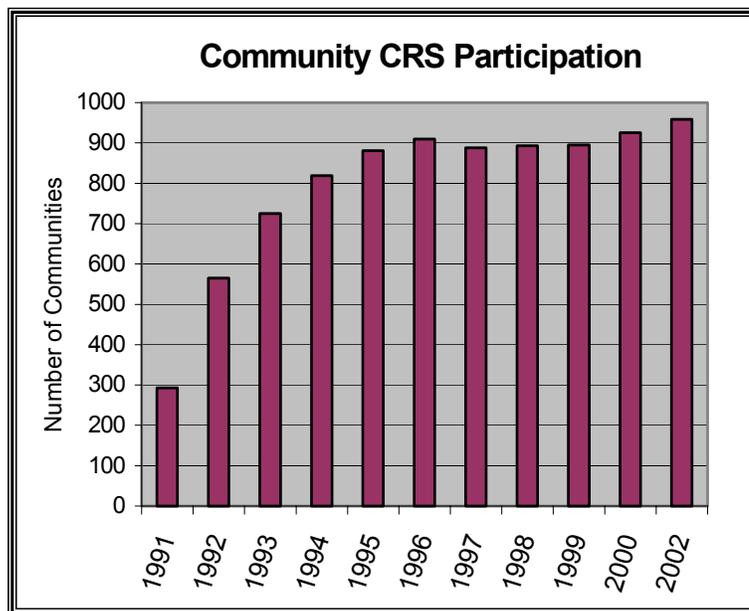
participation increased by 20 communities in 2000. Over the last two years, activities to encourage more participation have included:

- Simplifying the documentation needed and removing other impediments to applying;
- Publication of color brochures that explain the CRS to non-participants;
- Sending letters to nearly 2000 non-CRS participating communities with at least 100 policies;
- 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; and
- Including articles on the benefits of the CRS in newsletters of professional organizations and local officials' associations.

All-Hazards Planning

The fourth strategic goal for 1998–2000 was to encourage local officials to use an all-hazards approach to planning and mitigation.

The primary purpose of all-hazards mitigation planning is to identify community policies, actions, and tools for implementation over the long term that will result in a reduction in both the level of risk and the potential for future losses community-wide. All-hazard mitigation planning is most successful when it increases public and political support for 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 planning process can support a sustainable planning effort by assuring that land use planning and development regulations guide development in directions that facilitate many goals simultaneously. Sustainable development principles, therefore, can provide a framework within which state and local governments can link mitigation to other goals. For example, sustainable communities often emphasize open space planning by promoting greenways, parks, and landscaping. Effective use of open space can prevent development from encroaching into floodplains, active fault zones, landslide areas, and other disaster-prone areas.

The CRS is particularly helpful in doing this, because it encourages communities to tackle their problems in a variety of ways, including developing comprehensive flood hazard mitigation plans. Once local officials have their flood mitigation activities in operation, it is easy to start addressing 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 planning guidance and the program in general gave them ideas about where to start and how to organize their mitigation programs.

FEMA Regional Offices and several states have used the CRS planning guidance to help develop the mitigation plans required for disaster assistance funds, even for non-flood disasters. The U.S. Army Corps of Engineers now requires a floodplain management plan as a condition of flood control assistance and has noted that CRS-approved plans would qualify.

As a result of these efforts, more communities are undertaking mitigation planning. One measure of this heightened interest is the increase in the number of communities applying for CRS credit for planning. While the total number of CRS communities increased by 3.5% between 1997 and 2000, the number of communities receiving credit for Activity 510 (Floodplain Management Planning) increased by 20%.

Last, the CRS floodplain management planning criteria has been updated to meet the planning requirements of the Disaster Mitigation Act of 2000, allowing communities to adopt one plan for multiple FEMA (and other federal agency) programs.

Conclusions

The CRS has made significant progress toward meeting the four strategic goals set out in the 1998 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 FEMA's Federal Insurance and Mitigation Administration'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. We promote a multi-hazard approach 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 Building Code Effectiveness Grading Schedule 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 959 participating CRS communities represent 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 five 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 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 CRS provides two important benefits to communities: national recognition of their flood mitigation efforts, and premium reductions for those prudent enough to purchase flood insurance.

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

1. The CRS will continue to be closely coordinated with and be mutually supportive of FEMA's all-hazards risk management programs.
2. Efforts to promote the benefits of joining the CRS will be continued.
3. CRS communities will continue to be assisted and encouraged to improve their floodplain management programs and thereby receive better CRS classifications.
4. Revisions to CRS policy as published in the *CRS Coordinator's Manual* will be considered for a January 2005 edition, to continue to refine the CRS and meet the above-mentioned strategies, in addition to any new ones on the horizon.