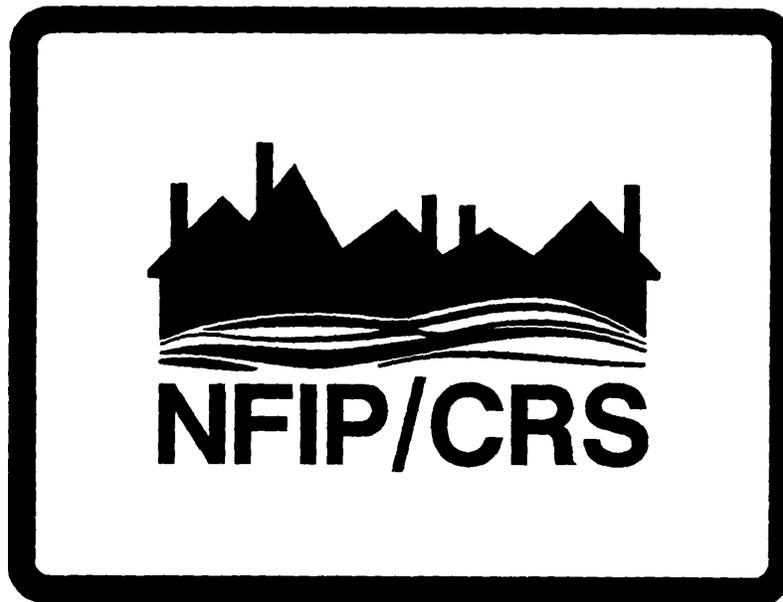


**National Flood Insurance Program  
Community Rating System**

**Biennial Report to Congress**



**Federal Emergency Management Agency**

**October 2000**



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## Executive Summary

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a part of 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 over 900 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 900-plus 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 10 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 the 1998 Report to Congress.

The major highlights of this report are:

- The 926 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 Project Impact 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 third 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).

Both previous Reports (in 1996 and 1998) 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, and the 18 floodplain management activities that the CRS recognizes. The 1998 report was devoted to the just-completed evaluation of the CRS and the resulting revisions in crediting and scoring activities. This report will touch on these topics, but will not repeat the details.

This biennial report will, instead, review the main activities of the past two years 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 that were presented at the end of the 1998 Report to Congress:

- Support FEMA's Project Impact and similar mitigation programs.
- Encourage CRS communities to improve their classes.
- Encourage the communities not in the CRS to join.
- Encourage an all-hazards planning approach.

Where appropriate, information is provided in charts and graphs, rather than text.

More details on the topics covered here are available from FEMA. Most of the publications referenced can be found on FEMA's website, [www.fema.gov](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 19,000 communities are in the NFIP and there are over 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%	5%**
2	40%	5%**
3	35%	5%**
4	30%	5%**
5	25%	5%**
6	20%	5%**
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.  
\*\* Effective May 1, 2001, this discount will go up to 10%.

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*.

<b>Credit Points Awarded for CRS Activities</b>				
ACTIVITY	MAXIMUM POSSIBLE POINTS	AVERAGE POINTS EARNED	MAXIMUM POINTS EARNED	% OF COMMUNITIES CREDITED
<b>300 Public Information Activities</b>				
310 Elevation Certificates	142	72	142	100%
320 Map Information	140	138	140	97%
330 Outreach Projects	290	81	260	77%
340 Hazard Disclosure	81	24	81	53%
350 Flood Protection Library	30	22	30	86%
360 Flood Protection Assistance	71	57	71	41%
<b>400 Mapping &amp; Regulatory Activities</b>				
410 Additional Flood Data	1,230	148	538	24%
420 Open Space Preservation	900	206	743	85%
430 Higher Regulatory Standards	1,750	159	658	76%
440 Flood Data Maintenance	226	78	170	66%
450 Stormwater Management	670	132	430	79%
<b>500 Flood Damage Reduction Activities</b>				
510 Floodplain Management Plan	235	34	178	12%
520 Acquisition and Relocation	3,200	177	1,700	9%
530 Retrofitting	2,800	66	352	5%
540 Drainage System Maintenance	330	236	305	77%
<b>600 Flood Preparedness Activities</b>				
610 Flood Warning Program	200	99	200	28%
620 Levee Safety	900	153	520	1%
630 Dam Safety	120	66	98	91%

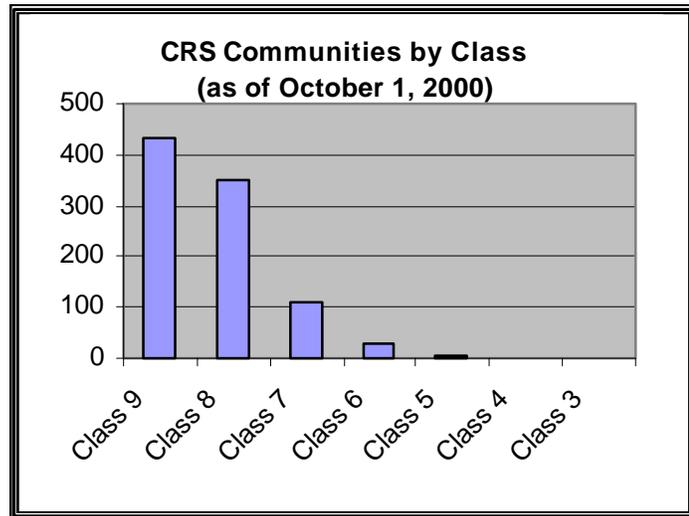
## Community Rating System Timeline

Year	Major Activity
1987	<ul style="list-style-type: none"> <li>➔ First Community Rating Task Force appointed by Federal Insurance Administrator.</li> </ul>
1988	<ul style="list-style-type: none"> <li>➔ Insurance Services Office tasked with a major role in developing the CRS.</li> <li>➔ First <i>Schedule</i> drafted, modeled on ISO's community fire insurance rating system.</li> </ul>
1989	<ul style="list-style-type: none"> <li>➔ <i>CRS Commentary</i> expands on the <i>Schedule</i>. Field tests conducted.</li> <li>➔ "Weighting Forum" sets basis for points and scoring system.</li> </ul>
1990	<ul style="list-style-type: none"> <li>➔ <i>CRS Coordinator's Manual</i> published, combining the <i>Schedule</i> and the <i>Commentary</i> in one guidebook for the local official.</li> <li>➔ 75 workshops held around the country. Week-long CRS courses begin at FEMA's Emergency Management Institute.</li> <li>➔ <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.</li> <li>➔ <i>NFIP/CRS Update</i> initiated to provide periodic news, helpful hints to local officials.</li> <li>➔ 324 communities apply by December 15 deadline.</li> </ul>
1991	<ul style="list-style-type: none"> <li>➔ First verification visits conducted.</li> <li>➔ 293 cities and counties become Class 9 CRS communities on October 1.</li> <li>➔ Nearly 300 more communities apply.</li> </ul>
1992	<ul style="list-style-type: none"> <li>➔ 1990 applicant communities' verified classes take effect on October 1; 56 improve to Class 8 or better. Tulsa, Oklahoma, becomes nation's first Class 5.</li> <li>➔ 280 of the 1991 applicants become Class 9.</li> <li>➔ 172 more communities apply.</li> </ul>
1993	<ul style="list-style-type: none"> <li>➔ The 3- and 5-year cycle verification system is formalized.</li> </ul>
1994	<ul style="list-style-type: none"> <li>➔ The <i>Short Form Application</i> is published, providing an alternative simpler, streamlined way for communities to apply. This later becomes the <i>CRS Application</i>, the only way for communities to apply.</li> <li>➔ The <i>Schedule</i> includes new credits for protecting natural and beneficial functions and for coastal erosion programs.</li> <li>➔ The National Flood Insurance Reform Act codifies the CRS.</li> </ul>
1995	<ul style="list-style-type: none"> <li>➔ FEMA begins three-year evaluation of the CRS with a Call for Issues and a survey of local CRS Coordinators.</li> </ul>
1996	<ul style="list-style-type: none"> <li>➔ More detailed system for annual recertifications begins to help communities keep their activities going from year to year.</li> <li>➔ Application procedures revised. The single annual deadline and initial Class 9 approach are dropped. Communities may apply at any time. Verified classifications take effect on April 1 and October 1.</li> </ul>
1997	<ul style="list-style-type: none"> <li>➔ First year with no published changes to the program.</li> </ul>
1998	<ul style="list-style-type: none"> <li>➔ Evaluation continues with focus groups and surveys.</li> <li>➔ "Weighting Review Forum" held to tie the evaluation's conclusions to credit criteria and the scoring system.</li> </ul>
1999	<ul style="list-style-type: none"> <li>➔ 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.</li> </ul>
2000	<ul style="list-style-type: none"> <li>➔ Task Force considers changes for 2002 <i>CRS Coordinator's Manual</i>.</li> </ul>

## Participating Communities

As of October 1, 2000, there are 926 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; Thurston County, Washington; Juno Beach, Florida; Kemah, Texas; Sanibel, Florida; and Pierce County, Washington, are now the six best-rated CRS communities in the nation. On October 1, 2000, Tulsa became the first Class 3 (35% premium discount) while the other five communities are Class 5 (25% premium discount).

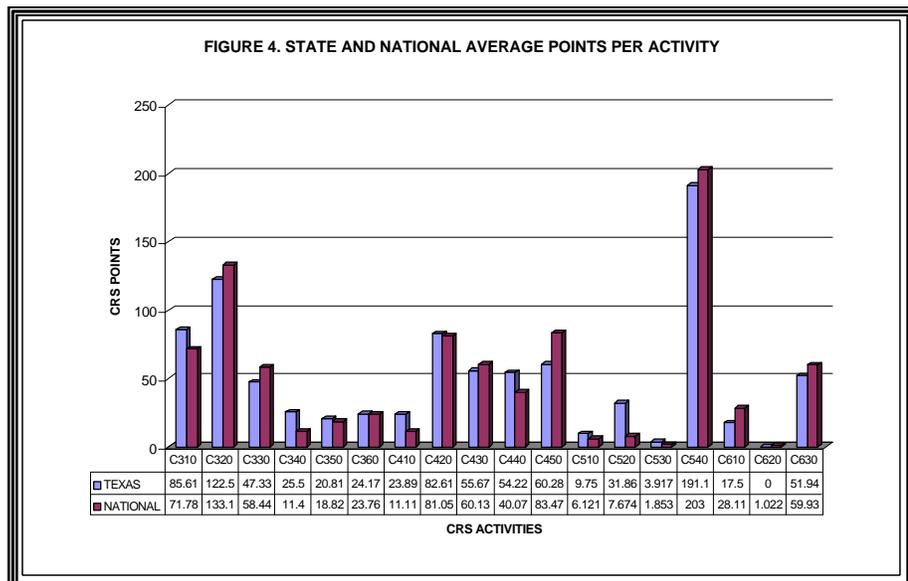


There are over 19,000 communities in the NFIP. The 926 CRS participating communities represent 5% of all NFIP communities. However, these cities and counties account for over 66% of all flood insurance policyholders. CRS communities have the bulk of the nation's flood challenges.

**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 by 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><b><u>Region I</u></b></p> <p>CT     7</p> <p>ME    17</p> <p>MA    12</p> <p>NH     1</p> <p>RI     3</p> <p>VT     3</p> <p style="text-align: right;">43</p>	<p><b><u>Region IV</u></b></p> <p>AL     10</p> <p>FL    203</p> <p>GA    22</p> <p>KY    15</p> <p>MS    17</p> <p>NC    73</p> <p>SC    28</p> <p>TN     6</p> <p style="text-align: right;">374</p>	<p><b><u>Region VI</u></b></p> <p>AR     12</p> <p>LA     34</p> <p>NM     9</p> <p>OK    11</p> <p>TX    37</p> <p style="text-align: right;">103</p>	<p><b><u>Region IX</u></b></p> <p>AZ     24</p> <p>CA     50</p> <p>HI     1</p> <p>NV     7</p> <p style="text-align: right;">82</p>
<p><b><u>Region II</u></b></p> <p>NJ    42</p> <p>NY    26</p> <p style="text-align: right;">68</p>	<p><b><u>Region V</u></b></p> <p>IL     27</p> <p>IN     14</p> <p>MI     8</p> <p>MN     3</p> <p>OH    12</p> <p>WI    10</p> <p style="text-align: right;">74</p>	<p><b><u>Region VII</u></b></p> <p>IA     2</p> <p>KS     5</p> <p>MO     3</p> <p>NE     2</p> <p style="text-align: right;">12</p>	<p><b><u>Region X</u></b></p> <p>AK     3</p> <p>ID    19</p> <p>OR    16</p> <p>WA    23</p> <p style="text-align: right;">61</p>
<p><b><u>Region III</u></b></p> <p>DE     7</p> <p>MD     6</p> <p>PA    14</p> <p>VA    17</p> <p>WV     3</p> <p style="text-align: right;">44</p>	<p><b><u>Region VIII</u></b></p> <p>CO     41</p> <p>MT     11</p> <p>ND     1</p> <p>SD     1</p> <p>UT     8</p> <p>WY     3</p> <p style="text-align: right;">65</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 \$576,000, for 11.4 FTEs.

The operating costs include the office and field review of all community applications, program oversight and quality control, preparing and printing all CRS publications, and other miscellaneous program costs. Other operating expenses, which are approximately \$505,000 annually, include program travel, subsidizing community and state participation at three annual CRS classes at FEMA's Emergency Management Institute, and other miscellaneous costs.

The total staffing and operating costs for the CRS are currently estimated to be about \$3.7 million for calendar year 2000, and have been about \$3.4 million annually for the last seven years.

**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 of the sophisticated flood loss reduction activities are being undertaken. There has been a steady increase from the year 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 about \$70 million annually in what policyholders pay for purchasing coverage in the 926 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 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.

#### **What's a CRS Classification Worth?**

Lee Feldman, the City Manager of North Miami, Florida, tells his community that the annual premium savings from its CRS Class 8 is more than the amount residents pay for the stormwater utility fees that pay for the activities that are credited.

The utility fee is \$2.10 per single-family home per month, or roughly \$25 per year. The Class 8 brings an average of over \$28 in annual premium reduction to flood insurance policyholders. The City will be a CRS Class 7 on October 1, 1999, when the savings will be over \$42 per policyholder. How can residents complain about the utility fee when most of them make money on it?

—*NFIP/CRS Update*, Summer 1999

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 Administration, supported by staff from FEMA's Mitigation Directorate. 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 Task Force. Its members bring together the fields of actuarial, 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
- 3 – FEMA, Federal Insurance Administration
- 3 – FEMA, Mitigation Directorate
- 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 policy holders. 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 & 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 1999. This list demonstrates the number and breadth of projects implemented pursuant to administering the CRS.

#### Community Review

- Reviewed 32 new community applications and conducted verification visits.
- Reviewed 25 modifications to existing community programs, including verification visits.
- Conducted 109 cycle verification visits.

### Publications and Software

- Published the 1999 *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*.

### Community Training

- Conducted or made presentations at 34 state or local 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 web site.

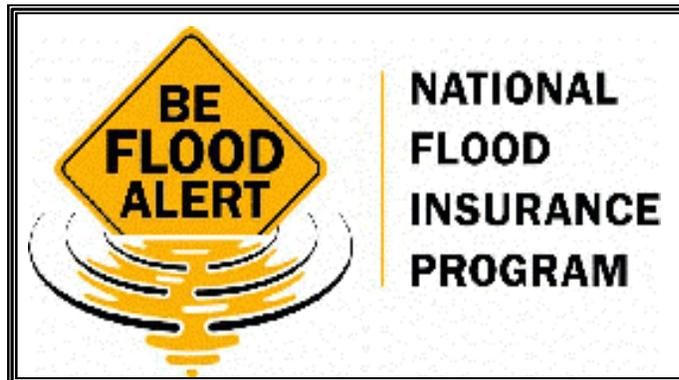
### Technical Assistance Publications

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.



### 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;

- Recommendations from field 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 is derived from these sources. Staff prepare memos, issue papers, and draft responses, which are sent to the Task Force for consideration at one of its three meetings held 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.

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 (page 4) were developed through this process.

**The Results.** Many changes have been implemented or are being considered since the 1999 *CRS Coordinator’s Manual* and the last Report to Congress were published. These include:

#### **Procedures**

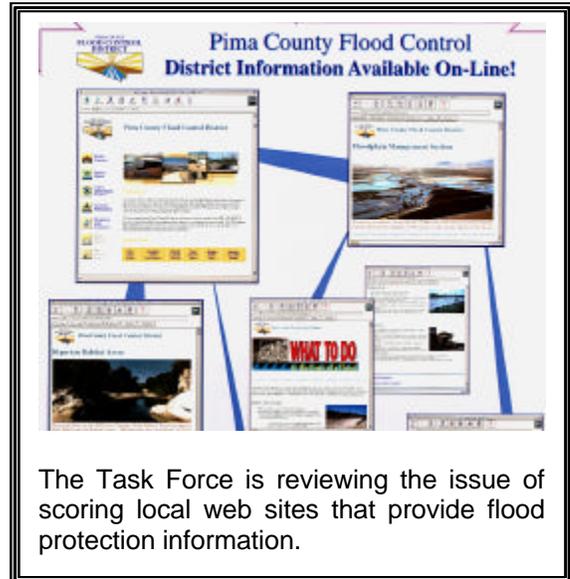
- Simplification of the documentation that communities must provide;
- Initiation and presentation of plaques to recognize CRS communities;
- Special procedures to assist Project Impact communities;
- Pilot testing a simpler application procedure where state programs assure local credits;
- Increasing the credit for non-SFHA policies in Class 6 or better communities;
- Implementation of the *State Profile* to replace the unused Notice of Application; and
- Establishing an e-mail database to foster communication with local CRS Coordinators.



#### **Activity credit criteria and scoring**

- Revising verification procedures for Activity 310 (Elevation Certificates) to reflect the new certificate form published by FEMA in August 1999;
- Crediting the new floodplain manager certification program;

- Credits for community web sites;
- Increasing the credit points for staff training;
- Identifying CRS credits in the new International Building Codes;
- Clarifying credit for drainage system capital improvement programs;
- Clarifying coastal erosion program credit;
- Linking credit for elevation reference marks to the National Geodetic Reference System;
- Revising the scoring to encourage better local dam safety programs; and
- Evaluating whether and how structural flood control projects could be credited.



### **Outreach and technical assistance**

- Development and printing a new brochure that explains the CRS to residents;
- Encouraging program growth by sending letters to the 500 non-CRS communities with the most policies;
- Pilot testing a field-deployed version of the week-long EMI course;
- Conducting a needs assessment to determine if home study courses on CRS activities are needed; and
- Development of a handout for local officials on how the new Elevation Certificate can be used to verify compliance with the NFIP regulations.

### **Improvements to other floodplain management and mitigation programs**

- Published in a new national hazards research newsletter a description of how to prepare a floodplain management or flood hazard mitigation plan;
- Investigation of the feasibility of putting FEMA Elevation Certificates on a web site;
- Helping the National Weather Service develop its new “StormReady” program;
- Helping the State of Oklahoma recognize the new Building Code Effectiveness Grading Schedule; and
- Evaluation of CRS-credited mitigation activities in North Carolina after Hurricane Floyd.

## Part 3. Progress Toward Goals

In the close of the 1998 Report to Congress, four “overall and strategic issues” were identified. The Report recommended that the following be “pursued in future years.”

1. Supporting FEMA’s Project Impact and similar mitigation programs.
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 1998 Report to Congress.

### Support for Mitigation Programs

**Project Impact.** With Project Impact—Building Disaster Resistant Communities, FEMA is changing the way America deals with disasters. Project Impact helps communities protect themselves from the devastating effects of natural disasters by taking actions that dramatically reduce disruption and loss. Project Impact operates on three simple principles:



- Preventive actions must be decided at the local level;
- Private sector participation is vital; and
- Long-term efforts and investments in prevention measures must be made.

To implement this approach, FEMA and the states have designated over 250 communities nationwide as Project Impact communities. Others are welcome to participate by following the program’s principles and taking steps to make their homes, schools, and businesses disaster resistant.

The Project Impact communities are the nation’s models for good mitigation practice. They are both the leaders and the laboratories for new ideas, approaches, and partnerships. Over one-third of them are in the CRS.

The CRS has supported Project Impact from the start. Field staff have participated on local Project Impact committees and helped Project Impact communities get into the CRS. In 2000, a special outreach effort has been started to assist the remaining non-CRS Project Impact communities submit applications.

CRS programs also provide models for Project Impact activities. Several local officials have reported that the CRS was their blueprint for organizing their program to build a disaster resistant community.

**Encouraging Mitigation.** In addition to providing staff support to Project Impact communities, the Community Rating System 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—Retrofitting floodprone buildings; and
- 540—Maintaining drainage systems to prevent flooding from debris jams and obstructions.

**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.

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 the stories on this and the next page.

**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 were 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 Activity 430 (Higher Regulatory Standards) section 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 Repetitive Loss Corrections Clearinghouse is a CRS-managed office that works with communities to help refine the database by providing 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. These are listed at the top of the previous page. The box to the right provides another success story on how well these measures work.

**Building Codes.** Emphasis has recently been placed on a community's having and enforcing a state or nationally recognized building code. Supporting strong building codes is an integral part of FEMA's Project Impact and is a major mitigation measure for other types of hazards, especially earthquakes and wind.

With the 1999 *CRS Coordinator's Manual*, the CRS tied credits to having and enforcing a building code. The CRS relies on ISO to provide community classifications under the insurance industry's new Building Code Effectiveness Grading Schedule (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 nor 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.

## 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

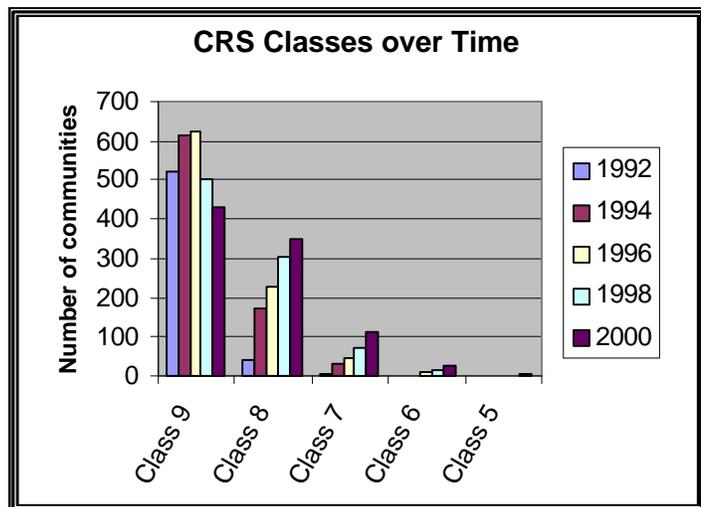
Not only have flood losses been greatly reduced, but the 1995 flood did not even warrant a disaster declaration. According to FEMA's records, these three communities have 250 repetitive loss properties, the third-largest concentration in Illinois. However, 150 of those properties had been removed by the time of 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 web site where they are readily accessible;
- Conducting training programs at EMI and field-deployed locations;
- Increasing the CRS credit for those activities found to be more effective during the recent 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 try 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 six 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 got its first Class 3 community in 2000.

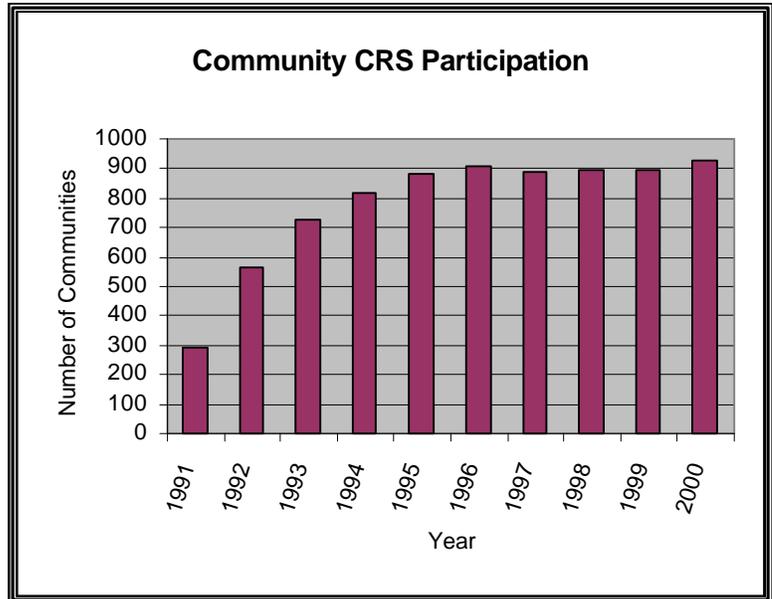


## Encouraging Participation

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. 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 nonparticipants;
- Sending letters to the 500 non-CRS communities with the most policies;
- Putting CRS information and publications on FEMA's web site;
- Conducting training programs on applying to the CRS;
- Making presentations on 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 CRS is particularly helpful in doing this, because it encourages communities to tackle their flood problems in a variety of ways, including developing comprehensive floodplain manage-

ment or 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 witnessed in many Project Impact communities. Local officials report that the CRS planning guidance and the program in general gave them guidance on 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%.

The CRS is also promoting the “all-hazards” part of “all-hazards planning.” In addition to the previously discussed support of Project Impact, the program is doing the following to encourage communities to look at their non-flood hazards.

- Under the 1999 *CRS Coordinator’s Manual*, 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.
- A study of how the CRS can better recognize communities that adopt the new multi-hazard international building codes is underway.
- A new effort to increase CRS attention and credit points for local dam safety programs started in 2000.
- There are now more credits for programs that deal with flood-related hazards, such as coastal erosion.
- There will be a new publication in 2001 on how the CRS can help communities address their tsunami hazard.

## Conclusions

The CRS has made significant progress towards 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.

FEMA's Project Impact leads recent national efforts to encourage mitigation and to recognize those types of activities with regard to natural hazards in insurance rating systems. Project Impact promotes a multi-hazard approach at the local level that leads to reduced losses by building disaster-resistant "sustainable" communities. FEMA utilizes the CRS activity criteria both when evaluating communities for participation in Project Impact and for evaluating the effectiveness of a designated Project Impact community. 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 towards its goals. The main findings can be summarized as follows:

- The 926 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 and areas 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 Project Impact 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.

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 Project Impact and other multi-hazard mitigation programs.
2. Efforts to promote the benefits of joining the CRS will be increased.
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 the January 2002 *CRS Coordinator's Manual* (CRS policy) will be considered to reflect recent FEMA initiatives addressing issues as raised through the Floodplain Management Forum, the NFIP Call for Issues, the Heinz Center's *Evaluation of Erosion Hazards*, and other internal FEMA policy forums