



CRS Coordinator's Manual

4 Series of Activities

- 300 Public Information
- 400 Mapping and Regulatory
- 500 Flood Damage Reduction
- 600 Flood Preparedness



501 Repetitive Loss Areas

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501 Repetitive Loss Areas

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Repetitive Losses

- ✓ Insured buildings
- ✓ NFIP paid \geq \$1,000
- ✓ \geq 2 times
- ✓ Over 10 year period
- ✓ Since 1978



501 Repetitive Loss Areas

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501 Repetitive Loss List

- ✓ Find out how many repetitive loss properties are in your community
- ✓ If \geq 1, ask FEMA or ISO for the worksheets
- ✓ Review each property for:
 - ✓ Correct address
 - ✓ In your community
 - ✓ Actually 2 floods
 - ✓ Removed or otherwise mitigated



501 Repetitive Loss Areas

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- NFIP Repetitive Loss (RL) Update Worksheets (CD)
- Sent annually to CRS Communities
- Keep up to date
- Maintain documentation



501 Repetitive Loss Areas

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502 Repetitive Loss Category

After correcting and updating:

- A: No repetitive loss properties
 - ✓ No requirements
- B: 1 – 9 repetitive loss properties
 - ✓ Outreach project
- C: 10+ repetitive loss properties
 - ✓ Outreach project and 510 plan



501 Repetitive Loss Areas

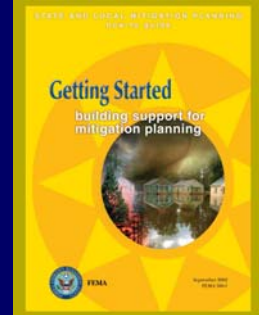
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503 Repetitive Loss Outreach Project

- Description of the cause(s) of repetitive flooding
- Map identifying repetitive loss area(s)
- A list of all repetitive loss properties in the area(s) with insurable buildings on them
- The number of buildings in the repetitive loss area(s)
- Send an outreach project to the areas each year



510 Floodplain Mgmt. Planning



510 Floodplain Mgmt. Planning

FEMA Planning Guidance			
Disaster Mitigation Act of 2000 (44 CFR 201.6)	CRS Steps	Max Pts	How-To Guides *
Organize resources			
201.6(c)(1)	1. Organize	10	Getting Organized
201.6(b)(1)	2. Involve the public	85	
201.6(b)(2) & (3)	3. Coordinate	25	
Assess risks			Understanding Your Risks
201.6(c)(2)(i)	4. Assess the hazard	20	
201.6(c)(2)(ii) & (iii)	5. Assess the problem	35	
Develop the mitigation plan			Developing a Mitigation Plan
201.6(c)(3)(i)	6. Set goals	2	
201.6(c)(3)(ii)	7. Review possible activities	30	
201.6(c)(3)(iii)	8. Draft an action plan	70	
Implement & monitor progress			Bringing the Plan to Life
201.6(c)(5)	9. Adopt the plan	2	
201.6(c)(4)	10. Implement, evaluate, revise	15	
	Total	294	



510 Floodplain Mgmt. Planning

FEMA Planning Guidance			
Disaster Mitigation Act of 2000 (44 CFR 201.6)	CRS Steps	Max Pts	How-To Guides *
Organize resources			
201.6(c)(1)	1. Organize	10	Getting Organized
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201.6(c)(2)(i)	4. Assess the hazard	20	
201.6(c)(2)(ii) & (iii)	5. Assess the problem	35	
Develop the mitigation plan			Developing a
201.6(c)(3)(i)	6. Set goals	2	

Percent of Colorado communities: 2%
 Max possible credit: 294
 Average Colorado credit: 143



520 Acquisition and Relocation



520 Acquisition and Relocation





520 Acquisition and Relocation

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Activity Description

- Credit according to the number of buildings relocated out of the regulatory floodplain.
- Doesn't matter how/why the building was removed
- Credit based on the number of buildings acquired or relocated
- Double credit for repetitive loss properties
- Triple credit for severe repetitive loss properties



520 Acquisition and Relocation



Percent of Colorado communities:	5%
Max possible credit:	3,200
Average Colorado credit:	118



530 Flood Protection

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530 Flood Protection

Technique used: Elevation



530 Flood Protection



530 Flood Protection

Technique used:
Dry Floodproofing





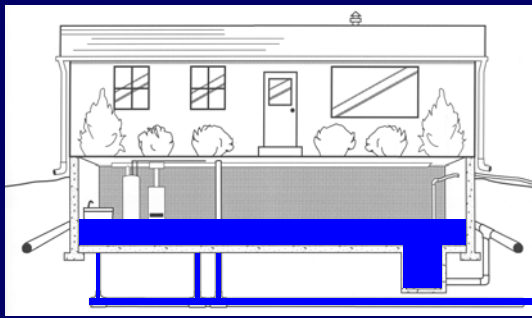
530 Flood Protection



Technique used:
Wet
Floodproofing

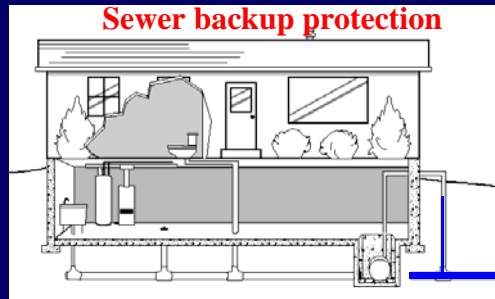


530 Flood Protection



530 Flood Protection

Technique used:
Sewer backup protection



530 Flood Protection



Technique used: Barrier

If > 1 property: 620



530 Flood Protection



Technique used:
Channel modifications



530 Flood Protection



Technique used:
Reservoir/detention basin



530 Flood Protection



Must meet minimum environmental criteria
Special attention to habitat protected by the Endangered Species Act
Can not adversely affect any buildings



530 Flood Protection



Percent of Colorado communities: 2%
Max possible credit: 2,800
Average Colorado credit: 25



540 Drainage System Maintenance



540 Drainage System Maintenance

Step 1: Does your program deserve credit?

1. Do you regularly inspect some or all of your drainage system?



Must have inspections at least annually



540 Drainage System Maintenance

2. Do you also conduct inspections after major storms?

In response to citizens' complaints?





540 Drainage System Maintenance

3. Do you remove debris and other obstructions to flow or storage when they are found?



540 Drainage System Maintenance

Debris:



540 Drainage System Maintenance

For the purposes of this credit, we do *not* count:

- Water quality inspections
- Dredging
- Channel reconstruction
- Rip rap
- Other permanent construction projects



540 Drainage System Maintenance

4. Does your program have written procedures?

Procedures must cover five items:

1. Who is responsible?
2. Map of the drainage system
3. Procedures for inspection



540 Drainage System Maintenance

4. Procedures for debris removal



540 Drainage System Maintenance

4. Procedures for debris removal





540 Drainage System Maintenance

4. Procedures for debris removal

- Trash: garbage, shopping carts, tires, lumber, furniture, appliances, animal carcasses, etc. – *Remove immediately*
- Minor problem: vegetation growth, tree limbs, and other “naturally” occurring debris – *Remove immediately from manmade ditches, OK to leave in natural channels*
- Obstruction: fallen tree, culvert damage, large appliance, etc., that, obstructs the flow – *Remove within 2 days*
- Structural project: bridge or culvert replacement, bank stabilization, dredging, or other major project – *Budget*



540 Drainage System Maintenance

5. Records

- Written procedures
- Records of inspections
- Records showing subsequent action



540 Drainage System Maintenance

Village of Orland Hills, Illinois
Drainage Inspection Report - Public Properties

Date: _____ Inspector: _____

Type of inspection: Semi-annual Monthly Choke Point Check Post-storm

I have inspected the following surface drainage facilities and found them as noted. The numbers and letters refer to locations on the Village's drainage system map. A Complaint Inquiry Form has been completed for all problems found on Village property. A notification letter has been sent to the owners of private property where problems were found.

Retention basin, 17001 94th Ave (#12)	<input type="checkbox"/> No problem	<input type="checkbox"/> Problem found
Tinley Creek from 169th Place to 167th Street	<input type="checkbox"/> No problem	<input type="checkbox"/> Problem found
Retention basin, 16901 92nd Ave (#1)	<input type="checkbox"/> No problem	<input type="checkbox"/> Problem found
Highview Ditch	<input type="checkbox"/> No problem	<input type="checkbox"/> Problem found
Tinley Creek from 167th Street to Lake Lorin	<input type="checkbox"/> No problem	<input type="checkbox"/> Problem found
Lake Lorin and dam	<input type="checkbox"/> No problem	<input type="checkbox"/> Problem found
Retention area, 8901 Elm Place (#14)	<input type="checkbox"/> No problem	<input type="checkbox"/> Problem found
Ashbourne Lake and drain to Tinley Creek	<input type="checkbox"/> No problem	<input type="checkbox"/> Problem found



540 Drainage System Maintenance

DRAINAGE PROBLEM REPORT

Date: _____ Inspector: _____

Date: _____ Right of entry needed? _____

Work order description: _____

State permit needed? _____ Work order number: _____

Date: _____ Crew chief: _____

Maintenance performed: _____

Inspected by: _____

Use other side for additional recommendations for this site.



540 Drainage System Maintenance

Step 4: Additional credit

1. Inspect and maintain problem sites more frequently

50 points



540 Drainage System Maintenance

2. Capital improvements program

- List of projects
- Annual budget
- Tie to drainage system

50 points





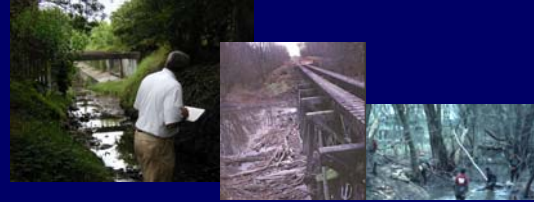
540 Drainage System Maintenance

3. Stream dumping regulations

15 or 30 points



540 Drainage System Maintenance



Percent of Colorado communities:	68%
Max possible credit:	330
Average Colorado credit:	207



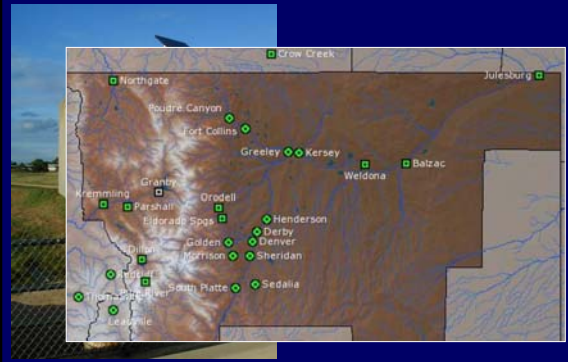
CRS Coordinator's Manual

4 Series of Activities

- 300 Public Information
- 400 Mapping and Regulatory
- 500 Flood Damage Reduction
- 600 Flood Preparedness



610 Flood Warning



610 Flood Warning



www.weather.gov/ahps/



610 Flood Warning



610 Flood Warning

Get the warning out

610 Flood Warning

610 Flood Warning

20.8 --	-- 595.8	11/27/90	← 596.0 – Blue level
20.2 --	-- 595.2	6/14/81	
20.1 --	-- 595.1	7/14/57	
20.0 --	-- 595.0	7/20/96	← 595.0 – Orange level
19.6 --	-- 594.6	12/3/82	
19.4 --	-- 594.4	10-year flood	
19.2 --	-- 594.2	4/6/47	
19.1 --	-- 594.1	2/21/97	
19.0 --	-- 594.0	Water reaches buildings on Detroit	K. 594.0 – Green level
18.6 --	-- 593.6	6/2/89	
18.2 --	-- 593.3	10/10/54	
18.0 --	-- 593.0	Thorn Creek begins to cover 170th Street	
17.9 --	-- 592.9	2/24/85. Water covers Riverview and Detroit	
17.7 --	-- 592.7	12/27/65	
17.0 --	-- 592.0	Flood warning issued	
16.0 --	-- 591.0	Flood watch starts	

610 Flood Warning

610 Flood Warning

Public Works

Primary areas of responsibility: closing off flooded streets, protecting critical facilities, clean up, non-building damage assessment

Stage	Flood Threat	Action	Staff	Equipment	Supplies
Elevation Frequency (2000 FIS) *	Green	Check in to the ICC	Director Deputy Director Water Foreman	Computer telephone	
Number of homes affected	Green	Check flap valves on the riverbank for operability	1 employee	1 truck binoculars	
Other structures affected	Green	Set out barricades at designated locations (see Attachment E.7)	3 two-person crews	3 trucks and trailers	Barricades for 32 streets
Critical facilities affected *	Orange	Do all lower level activities			
Streets to be closed **	Orange	Set out barricades at designated locations (see Attachment E.7)	4 two-person crews	4 trucks and trailers	Barricades for 57 streets
	Orange	Contact Eisenhower School to determine if help is needed	Deputy Director	Cell phone	
	Orange	Set out sand and sandbags on public property at (in order) -- Pioneer Park -- Covans Park -- Veterans Park	1 operator 2 drivers	Wheel loader 2 dump trucks	8 parts of sand, 100 bags per truck
	Blue	Do all lower level activities			
	Blue	Set out barricades at designated locations (see Attachment E.7)	4 two-person crews	4 trucks and trailers	Barricades for 84 streets
	Blue	Contact Gibson Chevrolet and Truck O-Matic to determine if help is needed	Deputy Director	Cell phone	

* The flood response levels do not
** Summary data taken from Alta

610 Flood Warning



610 Flood Warning

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1. Prerequisites: Designated as a StormReady (or TsunamiReady) community by the National Weather Service
FTR credit
2. Credit points:
25 points for StormReady
30 points for TsunamiReady



610 Flood Warning



Percent of Colorado communities:	18%
Max possible credit:	255
Average Colorado credit:	89



620 Levee Safety



620 Levee Safety

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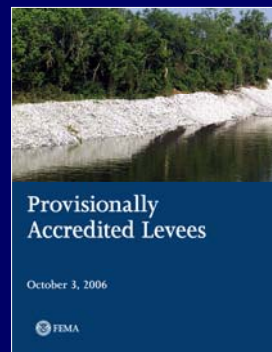


620 Levee Safety

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620 Levee Safety





620 Levee Safety



Percent of Colorado communities:	0%
Max possible credit:	900
Average Colorado credit:	0



630 Dam Safety



630 Dam Safety

Page 630-2

Activity Description

- SDS – State Dam Safety program credit
- No application needed
- No credit if the community is in violation of the state's program



630 Dam Safety

Page 630-4

DFP - Dam Failure emergency Plan

1. DFP1 – dam failure threat recognition system (25 points)
2. DFP2 – having three ways to notify affected residents of a dam failure (25 points)
3. DFP3 – detailed action plan with evacuation routes, notifications to critical facilities, annual notices to residents (50 points)



630 Dam Safety



Percent of Colorado communities:	100%
Max possible credit:	175
Average Colorado credit:	75