



Community Rating System

2012 Changes



CRS Coordinator's Manual

CRS Task Force

- Chair
- FEMA Headquarters (5)
 - Floodplain management
 - Mapping
 - Actuary
 - Underwriting
- FEMA Regional Offices (3)
- Local governments (3)
- Insurance companies (2)
- Association of State Floodplain Managers
- National Assoc. of Flood and Stormwater Management Agencies
- National Oceanic and Atmospheric Administration
- US Army Corps of Engineers



National Flood Insurance Program
Community Rating System

A Strategic Plan for the
Community Rating System
Fiscal Years 2008–2013

2008





Goals of the CRS

Page 110-1

1. Reduce flood damage to insurable property,
2. Strengthen and support the insurance aspects of the NFIP, and
3. Encourage a comprehensive approach to floodplain management.



National Flood Insurance Program

Flood Insurance Manual

May 2008

Revised October 2008

Revised May 2009

Revised October 2009

Revised May 2010

Revised October 2010



FEMA

Benefits

- Money stays in the community
- Insurance savings offset costs
- Improved flood protection
- Better organized programs
- Evaluate vs. national benchmark
- Technical assistance
- Incentive to keep implementing
- Public information builds constituency





CRS Basics



- ✓ Voluntary program
- ✓ Recognizes things above and beyond the minimum requirements of the NFIP
- ✓ Modeled on the fire insurance rating system
- ✓ Insurance Services Office
 - ✓ ISO/CRS Specialist – Mandy Todd
- ✓ *CRS Coordinator's Manual*



OMB No. 1660-0022
Expires: August 31, 2010

National Flood Insurance Program
Community Rating System

Coordinator's Manual

FIA-15/2007

Has been extended
to Sept. 30, 2013



FEMA



Premium Discount

Appendix C

Class	Points	SFHA	Non-SFHA	PRP
1	4,500	45%	10%	0
2	4,000	40%	10%	0
3	3,500	35%	10%	0
4	3,000	30%	10%	0
5	2,500	25%	10%	0
6	2,000	20%	10%	0
7	1,500	15%	5%	0
8	1,000	10%	5%	0
9	500	5%	5%	0
10	< 500	0	0	0



CRS Coordinator's Manual

Page 110-7

4 Series of Activities

300 Public Information

400 Mapping and Regulatory

500 Flood Damage Reduction

600 Flood Preparedness

Because the City of Dallas
participates in the National
Flood Insurance Program,

All Dallas





Community Rating System Changes

2012 CRS Coordinator's Manual Changes are based on:

- research,
- activity evaluations,
- committee deliberations,
- weighting review,
- community feedback, and
- actuarial review



Community Rating System Changes

- Some activities will have more points.
- Some will have fewer points.
- More emphasis will be placed on keeping the floodplain open and free of development
- Protecting natural floodplain functions and incorporating low-impact development approaches into local regulatory standards likewise will be getting more attention



Community Rating System Changes

- Prohibiting or restricting filling in the floodplain will receive more attention in the new Manual.
- More attention will be paid to protection of human life and safety.
- Master planning for better programs is emphasized
- A new activity is devoted to promoting flood insurance



Community Rating System Changes

To balance the total discount and impact on the National Flood Insurance Fund, other activities will have their maximum points reduced.

Among those with lower total points available are

- Activity 520—Acquisition and Relocation,
- Activity 530—Flood Protection, and
- Activity 320—Map Information Service.



CRS Coordinator's Manual

The 2012 CRS Manual | What's new in 2012 the CRS Coordinator's Manual - Windows Internet Explorer

http://www.crs2012.org/

File Edit View Favorites Tools Help

The 2012 CRS Manual

www.CRS2012.org

*What's new in 2012 the CRS
Coordinator's Manual*



[Home](#) [Activity Information](#) [Outreach and Feedback](#) [Other Materials](#) [General CRS Documents](#) [Community Self Assessment](#)

Welcome to the 2012 CRS Coordinator's Manual website

On this site, you can learn about the proposed changes to the National Flood Insurance Program's [Community Rating System](#) that will be published in the 2012 edition of the *CRS Coordinator's Manual*.

[Webinar Info](#)

[Download Overview of
Proposed Changes](#)



You can [download a PDF summary of all proposed changes here](#) (see notes about this



Community Rating System Changes

No new requirements, including annual recertification requirements, will take effect until the ISO/CRS Specialist reviews them with the community, one-on-one, at its cycle visit.



Community Rating System Changes

For Class 9 CRS participation:

The community's CEO will certify that the community is aware of FEMA's disaster assistance rule:

that is, the amount of disaster assistance that will be available from FEMA after a flood will be reduced by the amount of insurance the community should have held on its buildings.



Community Rating System Changes

The current CRS Class 7 requirement is that a community have a BCEGS classification (rating) of 6/6 or better.

This will become a CRS Class 6 requirement for a BCEGS classification of 5/5 or better.

This will allow those communities that are “stuck” at CRS Class 8 because they have no BCEGS classification to advance to a CRS Class 7.



Community Rating System Changes

There will be more emphasis on developing a local “Program for Public Information,” with additional credit points for coordinating the following activities with the local program:

- Activity 330—Outreach Projects,
- Activity 340—Hazard Disclosure,
- Activity 350—Flood Protection Information,
- Activity 360—Flood Protection Assistance,
- Activity 420—the natural functions open space and
- Activity 540—stream dumping regulations
- Activity 610—Flood Warning and Response
- Activity 620—Levees
- Activity 630—Dams



Community Rating System Changes

The 600 series of activities (610—Flood Warning and Response, 620—Levees, and 630—Dams) will be aligned so that their creditable elements are similar:

- Recognition of a threat from a flood or levee failure or dam failure;
- Dissemination of warnings;
- Implementing an emergency response plan; and
- Coordinating emergency preparedness, warnings, response, and other safety-related activities with owners and operators of critical facilities.



Community Rating System Changes

Climate Change

Sea-level rise

Future Conditions



FEMA Elevation Certificates



FEMA

NATIONAL FLOOD INSURANCE PROGRAM

ELEVATION CERTIFICATE

AND

INSTRUCTIONS

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires March 31, 2012

Important: Read the instructions on pages 1-9.

SECTION A - PROPERTY INFORMATION		For Insurance Company Use:
A1. Building Owner's Name		Policy Number
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.		Company NAIC Number
City	State	ZIP Code
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)		
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)		
A5. Latitude/Longitude: Lat _____ Long _____		Horizontal Datum: <input type="checkbox"/> NAD 1927 <input type="checkbox"/> NAD 1983
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.		
A7. Building Diagram Number _____		
A8. For a building with a crawlspace or enclosure(s):		A9. For a building with an attached garage:
a) Square footage of crawlspace or enclosure(s) _____ sq ft		a) Square footage of attached garage _____ sq ft
b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade _____		b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade _____
c) Total net area of flood openings in A8.b _____ sq in		c) Total net area of flood openings in A9.b _____ sq in
d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No		d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number		B2. County Name		B3. State	
B4. Map/Panel Number	B5. Suffix	B6. FIRM Index Date	B7. FIRM Panel Effective/Revised Date	B8. Flood Zone(s)	B9. Base Flood Elevation(s) (Zone AO, use base flood depth)
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9. <input type="checkbox"/> FIS Profile <input type="checkbox"/> FIRM Community Determined <input type="checkbox"/> Other (Describe) _____					
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other (Describe) _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Designation Date _____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA <input type="checkbox"/> Yes <input type="checkbox"/> No					

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)	
C1. Building elevations are based on: <input type="checkbox"/> Construction Drawings* <input type="checkbox"/> Building Under Construction* <input type="checkbox"/> Finished Construction *A new Elevation Certificate will be required when construction of the building is complete.	
C2. Elevations - Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete items C2-a-h below according to the building diagram specified in Item A7. Use the same datum as the BFE. Benchmark Utilized _____ Vertical Datum _____ Conversion/Comments _____	
Check the measurement used.	
a) Top of bottom floor (including basement, crawlspace, or enclosure floor) _____	<input type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
b) Top of the next higher floor _____	<input type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
c) Bottom of the lowest horizontal structural member (V Zones only) _____	<input type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
d) Attached garage (top of slab) _____	<input type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments) _____	<input type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
f) Lowest adjacent (finished) grade next to building (LAG) _____	<input type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
g) Highest adjacent (finished) grade next to building (HAG) _____	<input type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support _____	<input type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION			
This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.			
<input type="checkbox"/> Check here if comments are provided on back of form.		Were latitude and longitude in Section A provided by a licensed land surveyor? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Certifier's Name	License Number		
Title	Company Name		
Address	City	State	ZIP Code
Signature	Date	Telephone	





320 Map Information Service

Page 320-2

- Credit is assigned for providing inquirers information from the community's Flood Insurance Rate Map.
- Additional credit for additional map information





320 Map Information Service

Page 320-2

2007 Manual	Max Points		2012 Manual	Max Points
Read the FIRM for inquirers	140		MI 1– Same service	30
			MI 2 – LiMWA/floodway info/CBRS area	18
		<i>new</i>	MI 3 – Other flood problems not shown on FIRM	18
		<i>new</i>	MI 4 – Flood depth data (formerly in Activity 360)	18
		<i>new</i>	MI 5 – Special flood-related hazards	18
		<i>new</i>	MI 6 – Historical flood information/repetitive flood losses	18
		<i>new</i>	MI 7 – Natural floodplain functions	18
Max	140			90



320 Map Information Service

To receive the credit the community must

- Be receiving credit for reading the FIRM for inquirers (MI 1 is required);
- Have a map (or GIS layer) that shows the information provided;
- Volunteer the information to the inquirer (i.e., if the property is in an X Zone, but also in a repetitive loss area, the community does not wait for the inquirer to ask about any other hazards);
- Keep a log or other record of the service (no change from 2007);
and



320 Map Information Service

To receive the credit the community must

- Publicize the service (no change from 2007). There are three possible ways to do this:
 - An outreach project to the entire community, such as an article in a newsletter or a notice in a utility bill,
 - Notices sent to all local insurance agents, real estate agents, and lenders, or
 - Another approach as determined by a Program for Public Information (see Activity 330 – Outreach Projects)



320 Map Information Service

To receive the credit the community must:

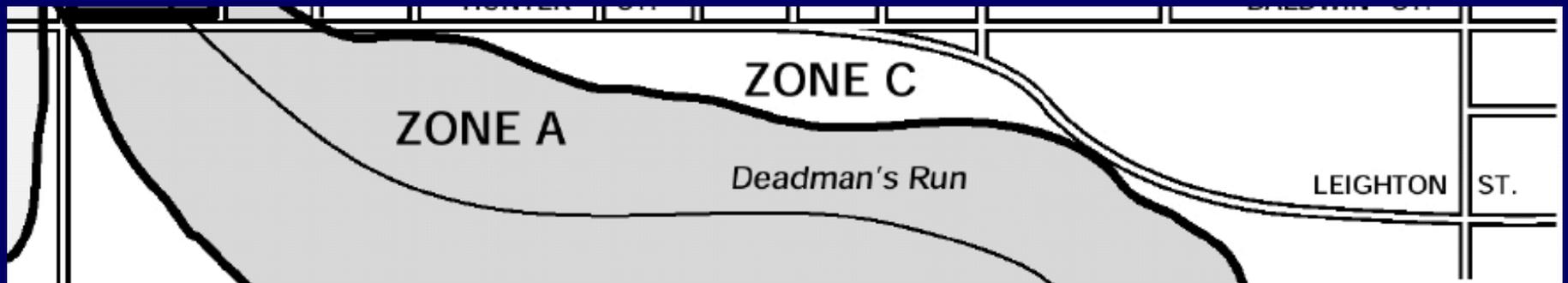
- The map used for the service must be kept updated
(Maintain copies of all FIRMs in effect since 1999 or date of CRS application)
- The service must provide an opportunity for the inquirer to talk to community staff about map and floodplain management questions.



320 Map Information Service

MI 1: prerequisite

1. If requested, community must provide information from the FIRM
2. If the property is in the SFHA → inform the inquirer of the flood insurance purchase requirement



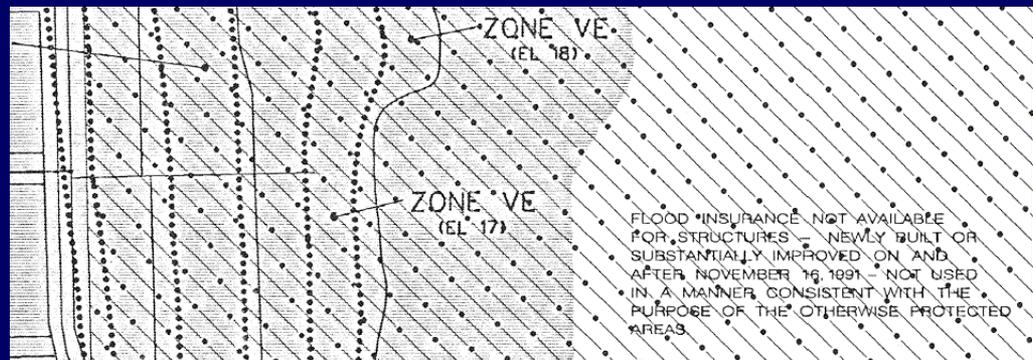
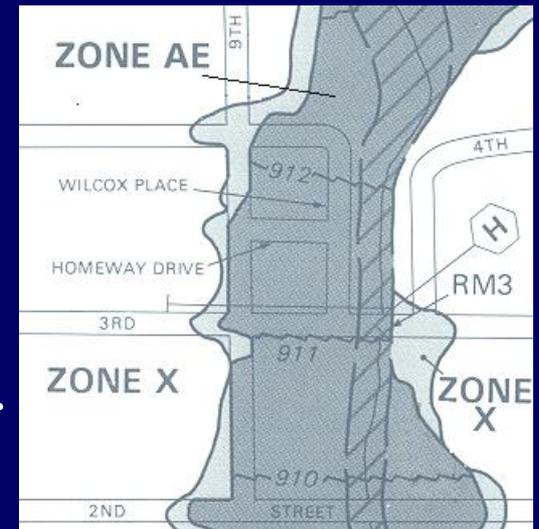


320 Map Information Service

Additional credit

MI 2. Other FIRM information:

- Floodway
- LiMWA
- Coastal A Zone or Coastal Barrier Resource System



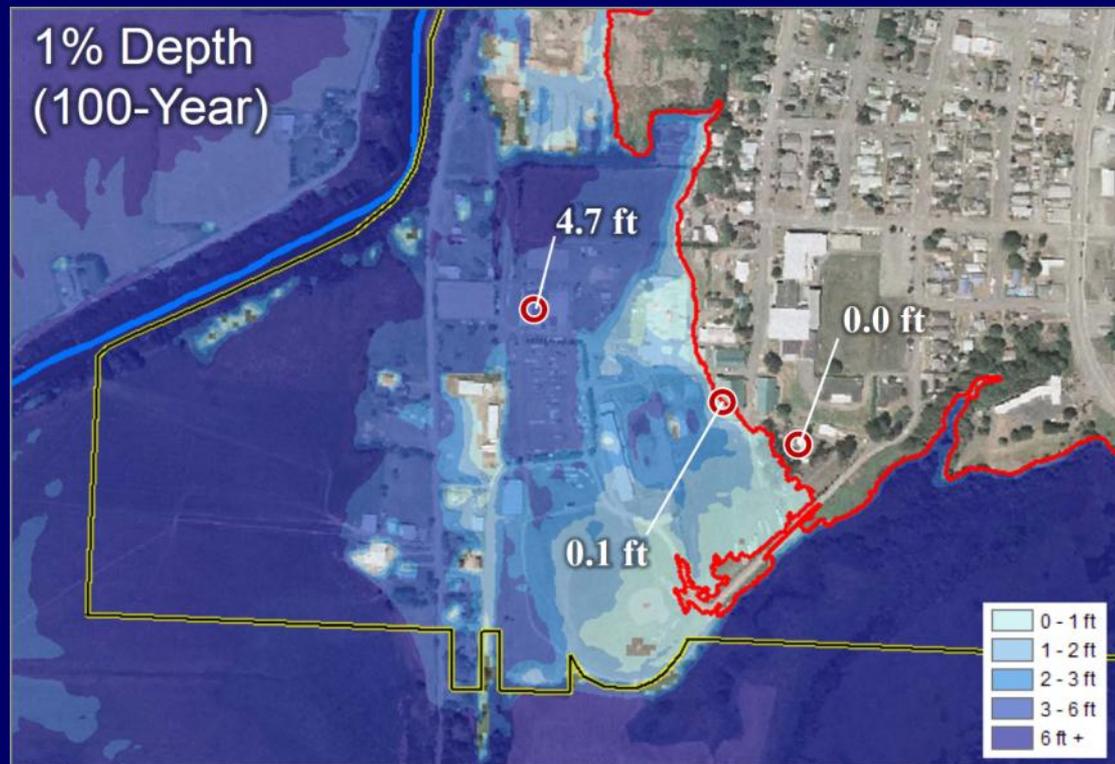


320 Map Information Service

Additional Credit

MI 3 – Other flood problems not shown on FIRM

MI 4 – Flood depth data (formerly in Activity 360)





320 Map Information Service

Additional Credit

MI 5 – Special flood-related hazards

MI 6 – Historical flood information/
Repetitive flood losses

MI 7 – Natural floodplain functions

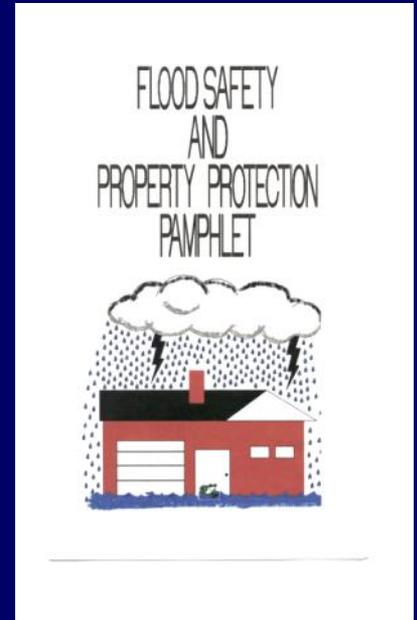




330 - Outreach Projects

Objective

- Provide information needed to
- ✓ Increase awareness and motivate actions to reduce flood damage
 - ✓ Encourage flood insurance coverage
 - ✓ Protect natural floodplain functions





330 - Outreach Projects

Strategic Plan Research

Research reports

Interviews of subject matter experts

Interviews of local officials

Findings

- ✓ No scare tactics
- ✓ Locally tailored
preach
- ✓ Multiple media
- ✓ Try new media: Facebook, Twitter, etc.
- ✓ Be positive
- ✓ Engage, don't
- ✓ Reach out



330 - Outreach Projects

Ogilvy Recommendations

- ✓ Increase flexibility
- ✓ Do not require same projects every year
- ✓ Encourage local plans
- ✓ Credit stakeholder projects
- ✓ Respond to opportunities
- ✓ Credit outcomes, not outputs
- ✓ Get one national reviewer
- ✓ Provide technical support
- ✓ Provide training and examples

Rethinking Outreach in the Community Rating System (CRS): Activity 330 Pilot Program

Final Report



FEMA

January 29, 2010

Submitted by

The Ogilvy logo, which is a stylized, handwritten-style signature of the word 'Ogilvy'.

Ogilvy Public Relations Worldwide



330 - Outreach Projects

Messages

Table 2. Topics and Example Messages	
Topic	Example Messages
1. Know your flood hazard	Your property is subject to flooding You are in a repetitively flooded area Five people have died in floods in our area in the last 5 years
2. Insure your property for your flood hazard <i>Note: at least one project must include a message from this topic</i>	All residents in the SFHA should have flood insurance See if you have contents insurance Take advantage of a low-cost Preferred Risk Policy
3. Protect people from the hazard	Turn around, don't drown Know the flood warning signals Designate a place where your family can rendezvous after an evacuation order is issued
4. Protect your property from the hazard	Replace your flooded furnace with one elevated above the flood level Keep debris and trash out of the streams and ditches We can help you get a grant to elevate your home
5. Build responsibly	Get a permit before you build Know the substantial damage rules (and the ICC benefits) All projects should be at least 10 feet from the property line so you don't alter the drainage between homes
6. Protect natural floodplain functions	Don't dump in the storm drains, they drain to the bay Protect our turtle nesting areas Preserve our wetlands – they clean the water and protect us from flooding

Additional LRR training (examples)



330 - Outreach Projects

<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points
OPA – Additional Outreach Projects OPC – Outreach Projects to Community OPF – Projects to Floodplain properties	250	↳	OP – Outreach Projects	175
OPS – Public information Program Strategy	125	↳	PPI (OP) – Program for Public Information	55
		<i>new</i>	STK – Stakeholder delivery	40
		<i>new</i>	ACT – Action resulting from outreach	60
		<i>new</i>	FRP – Flood response preparations	50
		<i>new</i>	PPI (FRP) – Program for Public Information	20
PFI promotion of flood insurance	65		Moved to new Activity 370	
	Max 380			350
Note that the community's points could add up to more than 350, but the credit for OP is capped at 175 points and the total credit is capped at 350 points.				



330 - Outreach Projects

Outreach Projects

Informational materials: 1 point/message

General outreach: 2 points/message

Targeted outreach: 7 points/message

330

Because the City of Dallas participates in the National Flood Insurance Program,

All Dallas residents can buy flood insurance!

OPC

#4 CREDIT Flood SAFETY 6
#5 Flood INS 6

This graphic features a stylized house with a blue roof and a white body, set against a blue background representing water. Two green trees are on either side of the house. Above the house, the text reads 'All Dallas residents can buy flood insurance!'. To the left, there is a handwritten note 'OPC'. Below the house, there are two lines of handwritten text: '#4 CREDIT Flood SAFETY 6' and '#5 Flood INS 6'. At the top right of the graphic, the number '330' is written.



Flood-prone areas of Santa Clara County Coyote Watershed

Rain happens

Your property is located in a flood-prone area

has been participating in FEMA's national program to increase awareness of the possibility of flooding in areas designated as Special Flood Hazard Areas. This notice is sent every year to residents and property owners in the flood-prone areas of the county as part of a national flood awareness program and contains guidelines on what to do in the event of a flood and tips on how to protect your property.

Your flood zone information

Check your flood zone designation. You can find this printed above and to the left of your name on the address label.

If the designation is FEMA:
Your property is in a FEMA-designated Special Flood Hazard Area (SFHA). The properties in this flood zone have the greatest risk of flooding and sustaining damage in the event of a significant flood. Flood insurance is required if you live in a SFHA and if you have a federally-backed mortgage or a home equity loan. If you do not already have flood insurance, you should contact your insurance provider for more information.

If the designation is SCVWD:
Your property is in a flood-prone area as designated by the water district. These properties are generally at a lower risk and may not be required to have flood insurance. However, flood insurance is available through the National Flood Insurance Program.

Flood insurance

You don't need to live near water to be flooded. Nearly everyone is exposed to some flooding hazard caused by storms or water backup from storm drains or other systems. Flood damage is not covered by homeowners' policies. You can protect your home, business and belongings with flood insurance from the National Flood Insurance Program (NFIP). Contents coverage is separate, so renters can insure their belongings. Since it takes 30 days for a flood policy to take effect, it is important to purchase flood insurance before flooding occurs. Contact your insurance agent or the NFIP at www.fema.gov/nfipinfoaction.htm or call 1-888-CALL-FLOOD, ext. 100.

Notice:
Flood-prone properties are determined through map interpretation. However, errors may occur, especially when properties are near the edge of flood zones or if the flood zone is small or narrow. If you want to verify the flood-zone information, please call the water district's Community Project Review Unit at (408) 265-2007, ext. 2508.
Owners of multiple properties can determine which property this notice refers to by checking the Assessor's Parcel Number (APN) on the address label. The APN is the eight-digit number printed above and to the right of your name on the mailing panel of this brochure. Compare this number to the APN on your property tax record to identify the property.
You can view a map of flood zones in your neighborhood by visiting the water district's web site at www.sccvalleywater.org. Click on "Look up your address," and enter your ZIP code and the street name. If you do not have access to the Web, call the Community Projects Review Unit at the Santa Clara Valley Water District at (408) 265-2007, ext. 2580.

The map shows the Coyote Watershed in Santa Clara County, California. It highlights flood-prone areas in blue and green. Key locations like San Francisco Bay, Gilroy, and various cities in the valley are marked. A legend indicates different types of flood zones.



330 - Outreach Projects

Basic Scoring

Table 3. Basic Scoring Example Projects (no PPI)				
Example Outreach Projects (OP)	A Points per Message	B # of Flood- related Topics	C Times Delivered	Score (A x B x C)
OP 1. Brochure on flood insurance produced by FEMA, which is set out in various public places (informational material—1 point per message)	1	1	1	1
OP 2. Local insurance agents have agreed to advise their clients that flood insurance is a good idea and give them the OP 1 brochure (general outreach—2 points per message)	2	1	1	2
OP 3. Presentations to five neighborhood associations with messages under CRS topics 1, 2, 4 and 5 (general outreach—2 points per message). The OP 1 brochure is handed out to everyone present.	2	4	5	40
OP 4. The neighborhood association presentation is taped and repeated twice a month on the public service cable TV channel (general outreach—2 points per message). This does not involve two-way communication, so it is counted as being delivered once a year.	2	4	1	8
OP 5. A mailing is sent each year to all residents of the SFHA (targeted outreach). It has messages under the first five CRS topics. (targeted outreach—7 points per message)	7	5	1	35
OP 6. “Do not dump” stencils are sprayed next to storm drain inlets (general outreach—2 points per message)	2	1	1	2
OP 7. The floodplain manager meets twice a year with the home builders association to discuss construction regulations and ways to incorporate flood mitigation into home improvement projects (general outreach—2 points per message, CRS topics 4 and 5).	2	2	2	8
Total				96 *

* There is a maximum credit of 200 points for projects without a PPI (see Table 1).



330 - Outreach Projects

Bonus Credits

2007 Manual	Max Points		2012 Manual	Max Points
OPA – Additional Outreach Projects OPC – Outreach Projects to Community OPF – Projects to Floodplain properties	250	⇒	OP – Outreach Projects	175
OPS – Public information Program Strategy	125	⇒	PPI (OP) – Program for Public Information	55
		<i>new</i>	STK – Stakeholder delivery	40
		<i>new</i>	ACT – Action resulting from outreach	60
		<i>new</i>	FRP – Flood response preparations	50
		<i>new</i>	PPI (FRP) – Program for Public Information	20
PFI promotion of flood insurance	65		Moved to new Activity 370	
	Max 380			350

Note that the community's points could add up to more than 350, but the credit for OP is capped at 175 points and the total credit is capped at 350 points.

330 - Outreach Projects

PPI – Program for Public Information

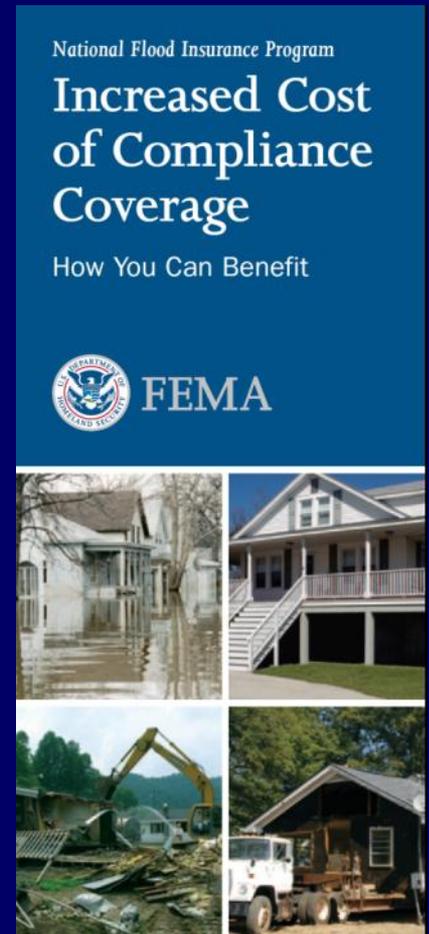
1. Committee
2. Needs assessment
 - ✓ Target areas
 - ✓ Audiences
3. Messages
 - ✓ Outcomes
4. Projects
5. Coordination
6. Document
7. Monitoring and evaluation





330 - Outreach Projects

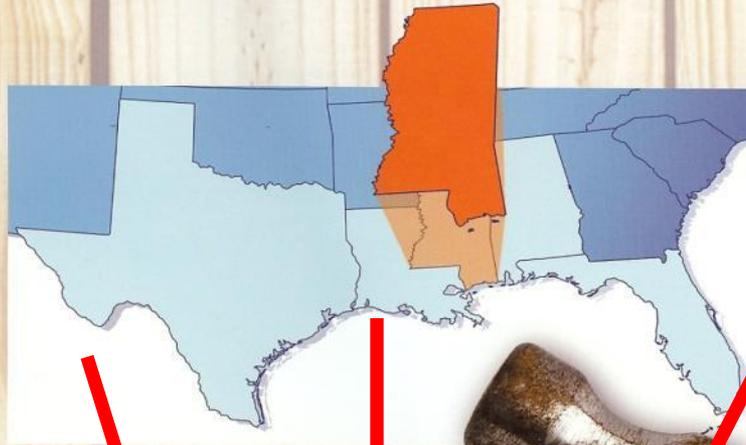
STK – Stakeholder delivery



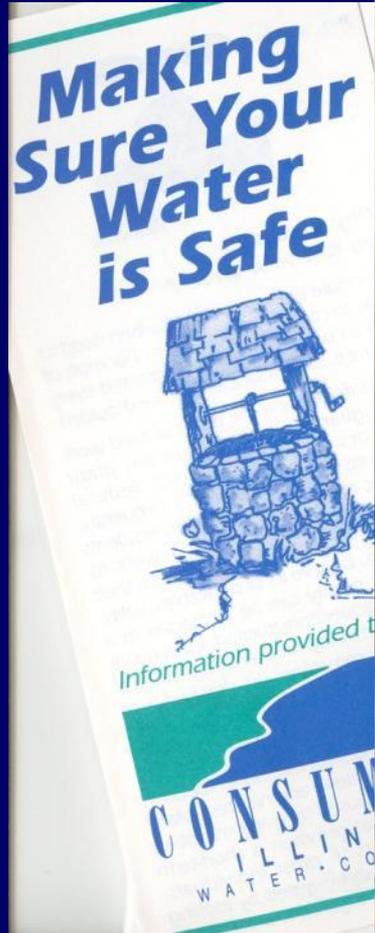


M I S S I S S I P P I

HOMEOWNERS HANDBOOK TO PREPARE FOR NATURAL HAZARDS



Published by the
Mississippi-Alabama Sea Grant Consortium
July 2010
Version 1.1



National Flood Insurance Program
Increased Cost
Compliance
Coverage
How You Can Benefit





330 - Outreach Projects

Bonus Credits

Table 6. PPI and STK Scoring Examples

Project	A Value	B Topics	C Freq.	OP Score (A x B x C)	PPI 42%	STK 32%	Total
OP 1. Brochure on flood insurance	1	1	1	1	0.42		1.42
OP 2. Local insurance agents advise their clients	2	1	1	2	0.84	0.64	3.48
OP 3. Presentations to five neighborhood associations	2	5 *	5	50	21.00	16.00	87.00
OP 4. The neighborhood association presentation on cable TV	2	5 *	1	10	4.20	3.20	17.40
OP 5. Mailing sent each year to residents of the SFHA	7	7 *	1	49	20.58		69.58
OP 6. Annual mailing to rep loss areas	7	2	1	14	5.88		19.88
OP 7. Stencils on storm drains	2	1	1	2	0.84		2.84
Total				128 *			201.60

* Note that when the PPI added a 7th message, projects 3, 4, and 5 receive more points than shown in Table 3.



330 - Outreach Projects

ACT – Action results

PPI Worksheet						
Target Audience	Message	Outcome	Project(s)	Assignment	Schedule	Stakeholder
Floodplain residents	Msg 1. Is your house in the floodplain?	Increase in the number of map information inquiries	OP 3. Presentations to five neighborhood associations	Floodplain manager	Set up the five presentations by January 31	Neighborhood associations
			OP 4. Presentation on cable TV	Floodplain manager and public information officer	Tape the first two presentations and use the best scenes	Cable TV company
			OP 5. Mailing sent each year to residents of the SFHA	Floodplain manager and public information officer	Disseminate in May, before hurricane season	
	Msg 2. All residents in floodprone areas should have flood insurance	The total number of SFHA policies increases	OP 1. Brochure on flood insurance	Floodplain manager	Printed and displayed by Feb. 28	
			OP 2. Local insurance agents advise their clients	Insurance agency representative on the PPI committee	Explain at the March insurance association meeting	Insurance agencies
			OP 3. Presentations to five neighborhood associations	See OP 3 above	See OP 3 above	See OP 3 above
			OP 4. Presentation on cable TV	See OP 4 above	See OP 4 above	See OP 4 above
			OP 5. Mailing sent each year to residents of the SFHA	See OP 5 above	See OP 5 above	
	Msg 3. Turn around, don't drown	Fewer reports of water rescues and police ticketing drivers who ignore barricades	OP 5. Mailing sent each year to residents of the SFHA	See OP 5 above	See OP 5 above	
	Msg 4.	OP 3. Presentations to			



330 - Outreach Projects

Table 7. ACT Scoring Examples

Outreach Project Worksheet																	
	Outreach Projects	Project Points	Number of times message is repeated										OP	Multipliers			
			Msg 1	Msg 2	Msg 3	M 4.a	M 4.b	Msg 5	Msg 6	Msg 7	Msg 8	Msg 9		PPI?	PPI	STK?	STK
OP 1	Insurance brochure	1		1									1	y	0.42		0.00
OP 2	Insurance agents	2		1									2	y	0.84	y	0.64
OP 3	Presentations	2	5	5		5		5		5			50	y	21.00	y	16.00
OP 4	Cable TV	2	1	1		1		1		1			10	y	4.20	y	3.20
OP 5	Mailing to SFHA	7	1	1	1	1		1	1	1			49	y	20.58		0.00
OP 6	Rep loss mailing	7		1			1						14	y	5.88		0.00
OP 7	Storm drain stencils	2							1				2	y	0.84		0.00
OP 8													0		0.00		0.00
OP 9													0		0.00		0.00
OP 10													0		0.00		0.00
													0		0.00		0.00
	Messages												0		0.00		0.00
Msg 1	Is your house in the floodplain?												0		0.00		0.00
Msg 2	All residents in the SFHA should have flood insurance												0		0.00		0.00
Msg 3	Turn around, don't drown												0		0.00		0.00
M 4.a	Don't dump in our streams and ditches												0		0.00		0.00
M 4.b	Protect from repetitive flooding												0		0.00		0.00
Msg 5	Floodplain filling needs a permit												0		0.00		0.00
Msg 6	Don't dump in the storm drains, they drain to the bay												0		0.00		0.00
Msg 7	Know your evacuation route and have a family rendezvous point												0		0.00		0.00
													OP =	128			
	ACT?			y		y							FRP =	0	PPI =	53.76	STK = 19.84
	ACT message points		0	29	0	26	0	0	0	0	0	0					
	ACT bonus		0.00	13.92	0.00	12.48	0.00	0.00	0.00	0.00	0.00	0.00	ACT =	26.40			
	c330 =	OP	128	+ PPI	53.76	+ STK	19.84	+ ACT	26.40	+ FRP	0	=	228.00				



330 - Outreach Projects

FRP – Flood Response Preparations

- ✓ Messages
 - ✓ Get inspected
 - ✓ Get a permit
 - ✓ Mitigate
 - ✓ Mitigation \$
- ✓ Projects
 - ✓ Scored as OP



340 Hazard Disclosure

Page 340-2



- DFH = ~~46~~ 25 points if real estate agents advise prospective floodplain occupants about the flood hazard and the flood insurance purchase requirement
- Extra credit for PPI 35



340 Hazard Disclosure

Page 340-4

Other Disclosure Requirements

- ODR = 5 points for each disclosure method required by law (Maximum credit 15 25 points)
- Example: requiring final subdivision plats to display the flood hazard area.



340 Hazard Disclosure

Page 340-6

Real Estate Brochure

- REB = 10 8 points, if real estate agents are providing brochures or handouts that advise potential buyers to investigate the flood hazard for a property
- Extra credit for PPI 12



340 Hazard Disclosure

Page 340-6

Disclosure of Other Hazards

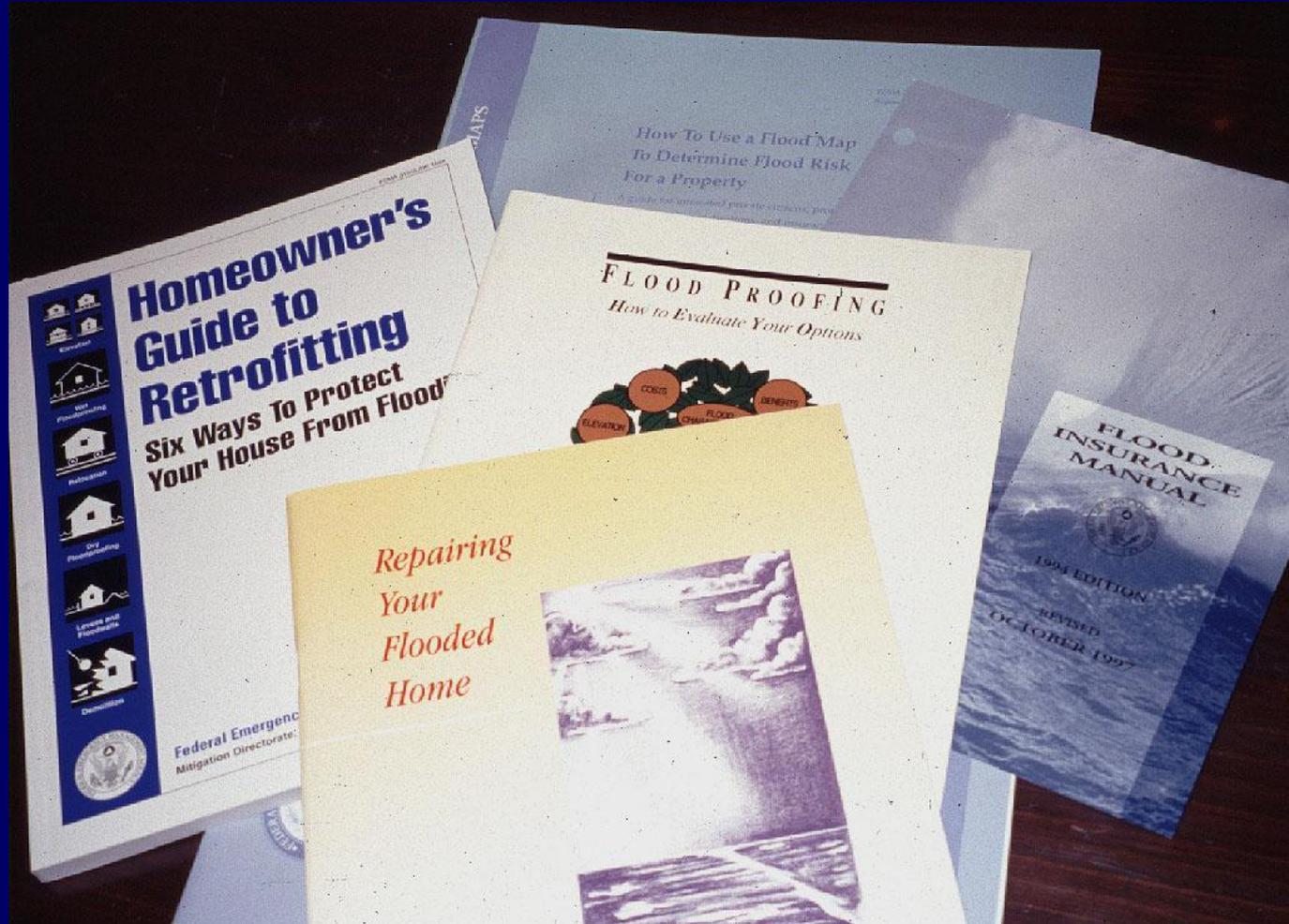
- DOH = 10 8 points, if the notification provided to prospective buyers by the real estate agent (DFH) includes disclosure of other hazards such as erosion, subsidence, or wetlands



340 Hazard Disclosure

<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points	Max W/PPI
DFH: Real estate agents' disclosure	46	P	Same	25	35
or State disclosure law	20	P	Dropped		
ODR: Other disclosure requirements	15	P	Same	25	25
REB: Real estate brochure	10	P	Same	8	12
DOH: Disclosing other hazards	10	P	Same	8	8
Max	81			66	80

350 Flood Protection Information



350 Flood Protection Information



<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points	Max W/PPI
LIB – Flood protection library	25	þ	Specific list of documents in library	16	16
LPD – Locally pertinent documents	5	þ	Specific local documents	6	6
WEB – Website		þ	Prerequisites revised		
WEB: 10 topics from 330	40	þ	WEB 1 – 6 points per topic	36	60
WEB: Posting warning information	20	þ	WEB 2 – Same	10	15
WEB: Posting real time gage links	10	þ	WEB 3 – Same	10	10
WEB: noting where ECs are available	2	þ	Part of WEB 4		
310 ECWS – Posting Elevation Certificates	20	þ	WEB 4 – Posting ECs on the site	20	20
	Max 102			98	127

350 Flood Protection Information



351 Credit points

a. LIB – References in the library

– Must be in the public library

- Above the Flood: Elevating Your Floodprone House, FEMA-347
- Coastal Construction *Manual*, FEMA-55
- Elevated Residential Structures, FEMA-54
- Engineering Principles and Practices for Retrofitting Flood Prone Residential Buildings, FEMA-259
- Floodproofing Nonresidential Structures, FEMA-102
- Homeowner's Guide to Retrofitting: Six Ways to Protect Your House from Flooding. FEMA-312
- Mandatory Purchase of Flood Insurance Guidelines, FEMA-186
- Manufactured Home Installation in Flood Hazard Areas, FEMA-85
- Mitigation of Flood and Erosion Damage to Residential Buildings in Coastal Areas, FEMA-257,
- Protecting Building Utilities From Flood Damage, FEMA-348
- Protecting Floodplain Resources, FEMA-268.
- Repairing Your Flooded Home, FEMA-234

350 Flood Protection Information



351 Credit points

b. LPD – Locally pertinent documents

1 point for each publication keyed to state or local conditions (e.g., FIS, ordinance, plans)

Ready for the Flood

an awareness &
preparation manual
for
Solano County residents

compiled by the Solano Resource Conservation District



Funded by the Solano County Water Agency

350 Flood Protection Information



c. Community Web Site (WEB)

Flood Awareness - Windows Internet Explorer

http://www.pbcgov.com/publicsafety/emergencymanagement/floodawareness/

File Edit View Favorites Tools Help

Favorites Flood Awareness

Palm Beach County: Home | Jobs | Links | Publications | FAQs | Site Index | Site Info | Contact PBC

 **Palm Beach County**
The Best of Everything.

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You are here: Palm Beach County » Publicsafety » Emergencymanagement » **Flood Awareness**

Flood Awareness Directory

- Home
- Flood Facts
- County Flood Information
- Assessing Your Personal Risk
- Do I Need Flood Insurance?
- Hurricane Shelters 
- What Can I Do?
- Safety and Recovery Tips
- Flood Programs
- Floodplain Regulations
- Important Contacts
- Flood Zone Contacts
- Glossary of Flood Terms
- Expos and News

Flood Information



Contact Us

20 S. Military Tr.
West Palm Beach, 33415
(561) 712-6400
[Driving Directions](#) | [Mapquest](#)

Related Links

- National Weather Service [External Link]
- National Flood Insurance Program [External Link]
- FEMA [External Link]
- Fl. Dept. Community Affairs [External Link]
- South Fl. Water Mgmt. District [External Link]
- Palm Beach Post [External Link]

350 Flood Protection Information



Prerequisites

1. Must have flood information home page
2. Home page must cover community services
3. More info than an outreach project
4. Link to FloodSmart or FEMA NFIP
5. Monthly check of links, annual check of content

360 Flood Protection Assistance



<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points	Max W/PPI
Site-specific flood data	10	Ⓟ	Moved to 320		
Names of qualified contractors	4	Ⓟ	Dropped (can be in 330)		
Handouts on contractors	3	Ⓟ	Dropped (can be in 330)		
Retrofitting advice	14	Ⓟ	PPA – Property protection advice	25	40
Site visits	35	Ⓟ	PPV – Advice after a site visit	30	47
		<i>new</i>	FAA – Financial assistance advice	10	15
School trained advisor	5	Ⓟ	TNG – New credit for grants training	10	10
	Max 71			75	112

360 Flood Protection Assistance



Page 360-4

PPV – Advice after a site visit

- Making site visits to review flooding, drainage, and sewer problems

- More credit if PPI



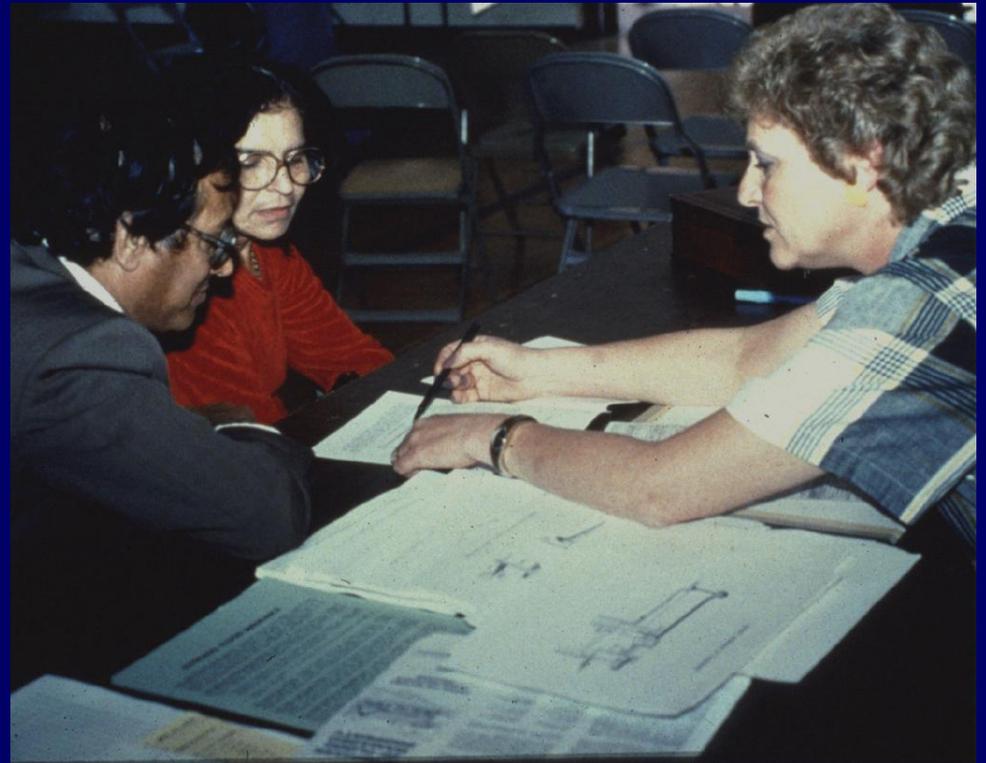
360 Flood Protection Assistance



Page 360-4

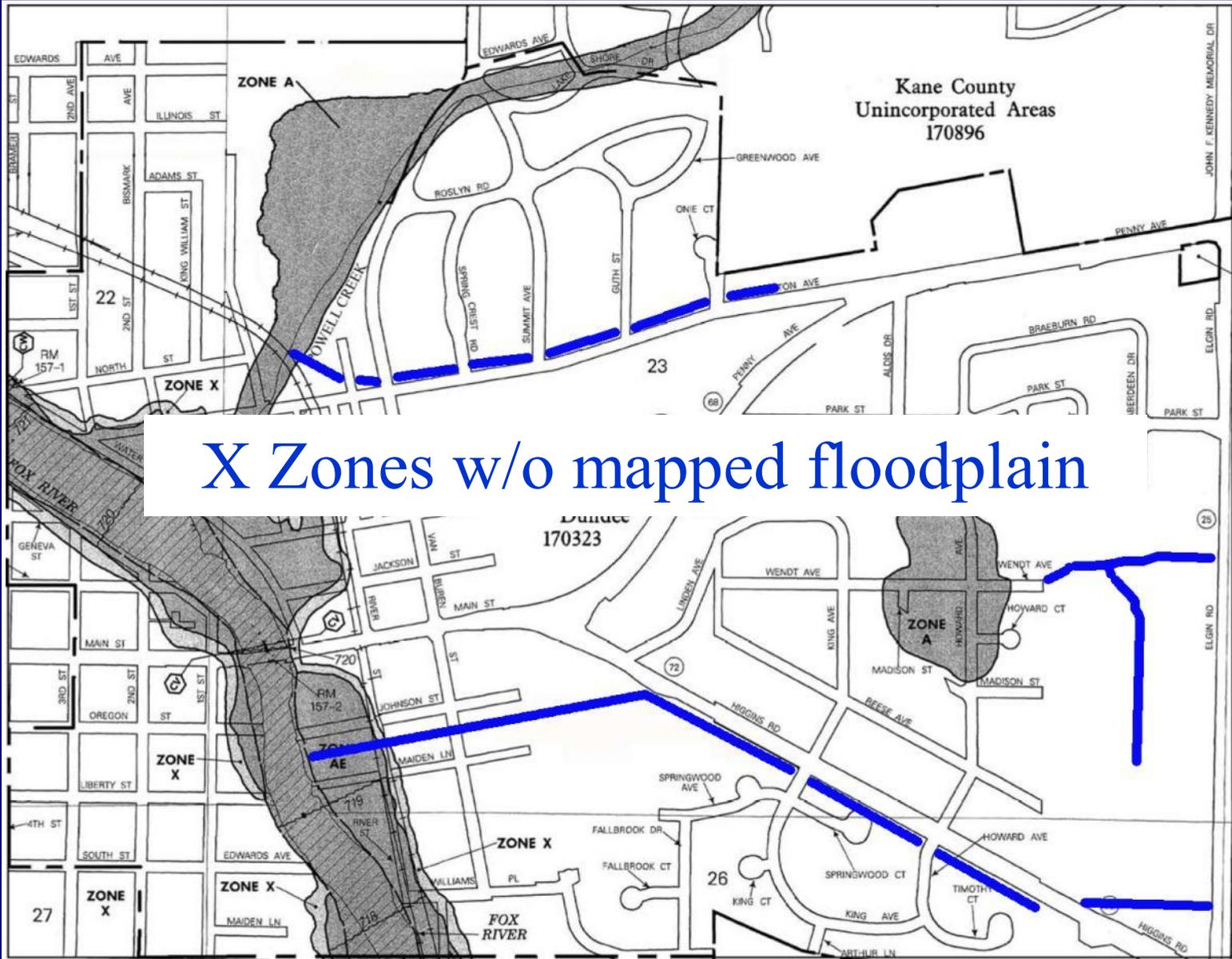
FAA – Financial assistance advice

- Providing advice on
 - Grants
 - ICC
 - Local financial assistance
- More credit if PPI





410 Additional Flood Data



X Zones w/o mapped floodplain



410 Additional Flood Data

Page 410-4

Activity Description

Credit is for:

- Using data not provided by FEMA,
- Data prepared to a higher study standard, and/or
- Sharing in the cost of a Flood Insurance Study

*New in 2012: new name
“Floodplain Mapping”*



410 Additional Flood Data

Page 410-5

Prerequisites

1. FEMA approved study technique
2. Adopt study in development regulations
3. If the study affects a length of stream or shoreline, → submit for a FIRM revision
4. Assess mapping needs at each cycle



410 Additional Flood Data

<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points
NS – New Study	410	Ⓟ	Reduced credit for independent review	290
“with review”		Ⓟ	SR – State Review	60
LEV – Leverage	1.0	Ⓟ	Factor remains the same, 1.0	
HSS – Higher Study Standards	160	Ⓟ	Up to 3 higher standards can be credited	160
FWS – More restrictive floodway standard	200	Ⓟ	Same	110
CTP1 – Cooperating Technical Partners 1	20	Ⓟ	Same	20
CTP2 – Cooperating Technical Partners 2	1.1	Ⓟ	Multiplier increased to 1.18	112
AFDSH – Special Hazards credit	50	Ⓟ	MAPSH – same credit, new acronym	TBA
	Max 1386			* 752

* Higher points are possible if the impact adjustment is greater than 1.0



410 Additional Flood Data

a. New Study (NS)

a. New Study (NS) (Maximum credit: 410 points)

Study scope	Original FIRM Zone					
	B, C, D, or X		A or V		AE, VE, A#	
	Without review	With review	Without review	With review	Without review	With review
1. Delineation of an approximate A Zone	50	–	25	–	–	–
2. Flood elevations for a site at time of development	100	150	75	115	–	–
3. New profile or length of shoreline, base flood elevations/depths in AH and AO zones.	200	300	150	225	125	190
4. New profile with floodway, length of shoreline with coastal velocity zone delineation, or converting coastal A Zones to V Zones	240	360	180	270	150	225
5. If the study includes new data for repetitive loss area(s) (add to the score for 1–4)	50	50	25	25	25	25



410 Additional Flood Data

Page 410-7

a. New Study (NS)

Study scope	Original FIRM Zone					
	B, C, D, or X		A or V		AE, VE, A#	
	New Study	State review	New Study	State review	New Study	State review
1. Delineation of an approximate A Zone	70	–	60	–	–	–
2. Flood elevations for a site at time of development	100	20	80	20	45	10
3. New profile or length of shoreline, base flood elevations/depths in AH and AO zones.	225	45	175	35	110	20
4. New profile with floodway, length of shoreline with coastal velocity zone delineation, or converting coastal A Zones to V Zones or mapping the LiMWA.	290	60	230	45	140	25



410 Additional Flood Data

Page 410-7

a. New Study (NS) (Maximum credit: 410 points)

NS1: Profile and floodway Study scope	Original FIRM Zone					
	B, C, D, or X		A or V		AE, VE, A#	
	Without review	With review	Without review	With review	Without review	With review
1. Delineation of an approximate A Zone	50	–	25	–	–	–
2. Flood elevations for a site at time of development	100	150	75	115	–	–
3. New profile or length of shoreline, base flood elevations/depths in AH and AO zones.	200	300	150	225	125	190
4. New profile with floodway, length of shoreline with coastal velocity zone delineation, or converting coastal A Zones to V Zones	240	360	180	270	150	225
5. If the study includes new data for repetitive loss area(s) (add to the score for 1–4)	50	50	25	25	25	25



410 Additional Flood Data

Page 410-7

a. New Study (NS) (Maximum credit: 410 points)

NS1: Original zone: X
No review
 Study scope

	Original FIRM Zone					
	B, C, D, or X		A or V		AE, VE, A#	
	Without review	With review	Without review	With review	Without review	With review
1. Delineation of an approximate A Zone	50	-	25	-	-	-
2. Flood elevations for a site at time of development	100	150	75	115	-	-
3. New profile or length of shoreline, base flood elevations/depths in AH and AO zones.	200	300	150	225	125	190
4. New profile with floodway, length of shoreline with coastal velocity zone delineation, or converting coastal A Zones to V Zones	240	360	180	270	150	225
5. If the study includes new data for repetitive loss area(s) (add to the score for 1-4)	50	50	25	25	25	25



410 Additional Flood Data

a. New Study (NS) (Maximum credit: 410 points)

NS1: Original zone: X
No review
 Study scope

	Original FIRM Zone					
	B, C, D, or X		A or V		AE, VE, A#	
	Without review	With review	Without review	With review	Without review	With review
1. Delineation of an approximate A Zone	50	-	25	-	-	-
2. Flood elevations for a site at time of development	100	150	75	115	-	-
3. New profile or length of shoreline, base flood elevations/depths in AH and AO zones.	200	300	150	225	125	190
4. New profile with floodway, length of shoreline with coastal velocity zone delineation, or converting coastal A Zones to V Zones	240	240 Points		270	150	225
5. If the study includes new data for repetitive loss area(s) (add to the score for 1-4)	50	50	25	25	25	25



410 Additional Flood Data

a. New study (NS) (Maximum credit: 410 points)

New in 2012

Study scope

Original FIRM Zone

B, C, D or X		A or V		AE, VE, A#	
Without review	With review	Without review	With review	Without review	With review

1. Delineation of an approximate A Zone	50	-	25	-	-	-
2. Flood elevations for a site at time of development	100	150	75	115	-	-
3. New profile or length of shoreline, base flood elevations/depths in AH and AO zones.	200	300	150	225	125	190
4. New profile with floodway, length of shoreline with coastal velocity zone delineation, or converting coastal A Zones to V Zones			180	270	150	225
5. If the study includes new data for repetitive loss area(s) (add to the score for 1-4)	50	50	25	25	25	25

or LiMWA

410 Additional Flood Data





410 Additional Flood Data

Page 410-13

b. Leverage (LEV)

1. If the community has data on the study costs:

$$\text{LEV} = \frac{\text{Non-FEMA share of the study cost}}{\text{Total cost of the study}}$$

2. If the community does not have financial data, LEV = the total of the following:

(a) 0.25 if better topographic map

(b) 0.15 if other contributions were made



410 Additional Flood Data

c. Higher study standard (HSS) (Maximum credit: 160 points)
 HSS credit is provided for the following higher study standards:

- Using future conditions hydrology,
- Using a higher confidence limit when calculating the 100-year discharge,
- Using better topographic data, and
- Showing 500-year flood elevations and the boundaries of the 500-year floodplain.

Additional higher study standards may be submitted by the community. FEMA will determine if they warrant credit for HSS.

The credit points are cumulative for each study, not to exceed the maximum listed. **HSS1: Full watershed**

development Study scope	Original FIRM Zone			Max per Study
	B, C, D, or X	A or V	AE, VE, A#, V#	
1. Delineation of an approximate A Zone	20	10	-	40
2. Flood elevations for a site at time of development	40	30	-	80
3. New profile or length of shoreline	80	60	50	160



410 Additional Flood Data

c. Higher study standard (HSS) (Maximum credit: 160 points)
 HSS credit is provided for the following higher study standards:

- Using future conditions hydrology, *Climate change, sea level rise*
- Using a higher confidence limit when calculating the 100-year discharge,
- Using better topographic data, and
- Showing 500-year flood elevations and the boundaries of the 500-year floodplain.

Additional higher study standards may be submitted by the community. FEMA will determine if they warrant credit for HSS.

The credit points are cumulative for each study, not to exceed the maximum listed.

<i>New in 2012</i> Study scope	Original FIRM Zone			Max per Study
	B, C, D, or X	A or V	AE, VE, A#, V#	
1. Delineation of an approximate A Zone	20	10	-	40
2. Flood elevations for a site at time of development	40	30	-	80
3. New profile or length of shoreline	80	60	50	160



410 Additional Flood Data

d. Floodway Standard (FWS)

0.00' – 0.1' allowable surcharge	110
0.11' – 0.25' allowable surcharge	90
0.26' – 0.5' allowable surcharge	50
0.51' – 0.99' allowable surcharge	25



410 Additional Flood Data

Page 410-21

e. Additional Flood Data for Special Hazards (AFDSH)

Uncertain flow paths

Mudflow hazards

Ice jams

Land subsidence

Closed basin lakes

Coastal erosion

Tsunamis



410 Additional Flood Data

Page 410-21



f. Cooperating Technical Partners (CTP)

Partners are communities, regional agencies or states
that sign a cooperative agreement on mapping

Each agreement is different

www.fema.gov



410 Additional Flood Data

Page 410-21

f. Cooperating Technical Partners (CTP)

1. CTP1 =

10, if the community is a partner

10, if the regional agency or state is a partner *and*
there will be a study that benefits the community

Score the study under the other elements

2. CTP2 =

1.1, if the study or standard was prepared or
adopted pursuant to the agreement

1.0, if it wasn't ***New in 2012: CTP2 = 1.18***



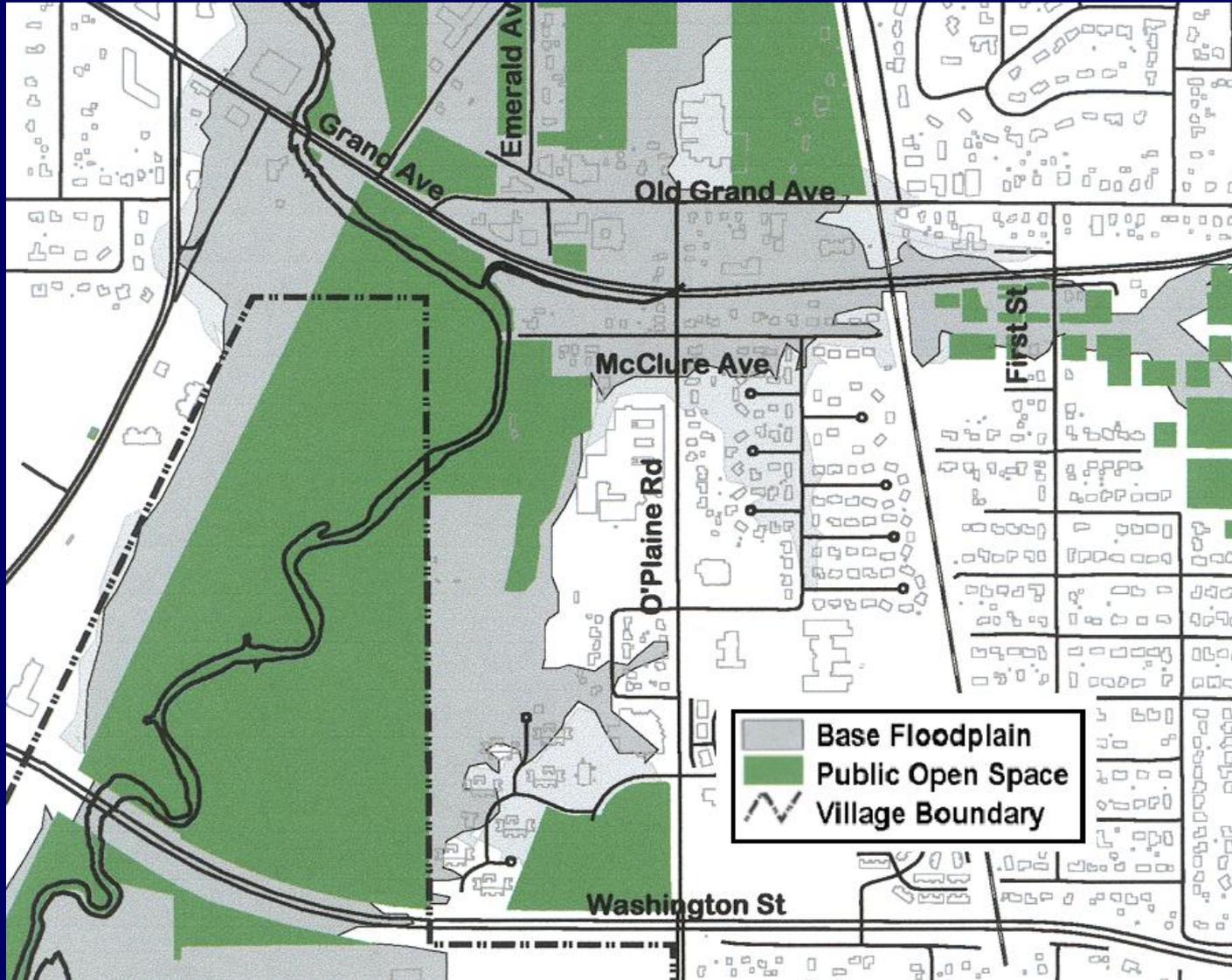
403 Impact Adjustment Map

Page 400-4

- 400 Series: based on area affected
- Same 3 options as with buildings
 - Option 1. Covers everywhere
 - Option 2. Covers a part (default)
 - Option 3. Covers a part (measure)
- If option 3 – impact adjustment map



403 Impact Adjustment Map





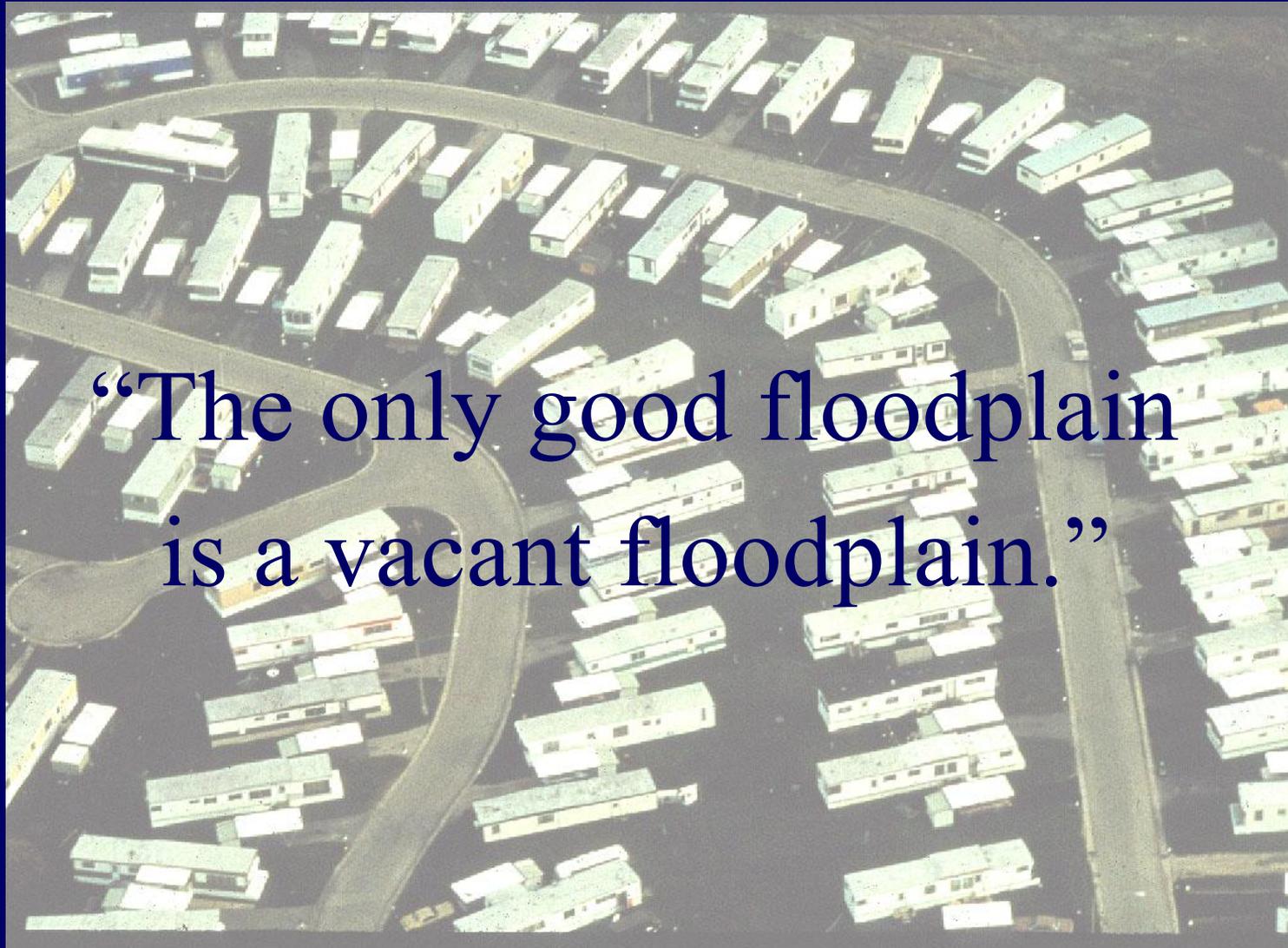
403 Impact Adjustment Map



No more exemption for
coastal wetlands and marshes



420 Open Space Preservation



“The only good floodplain
is a vacant floodplain.”



420 Open Space Preservation

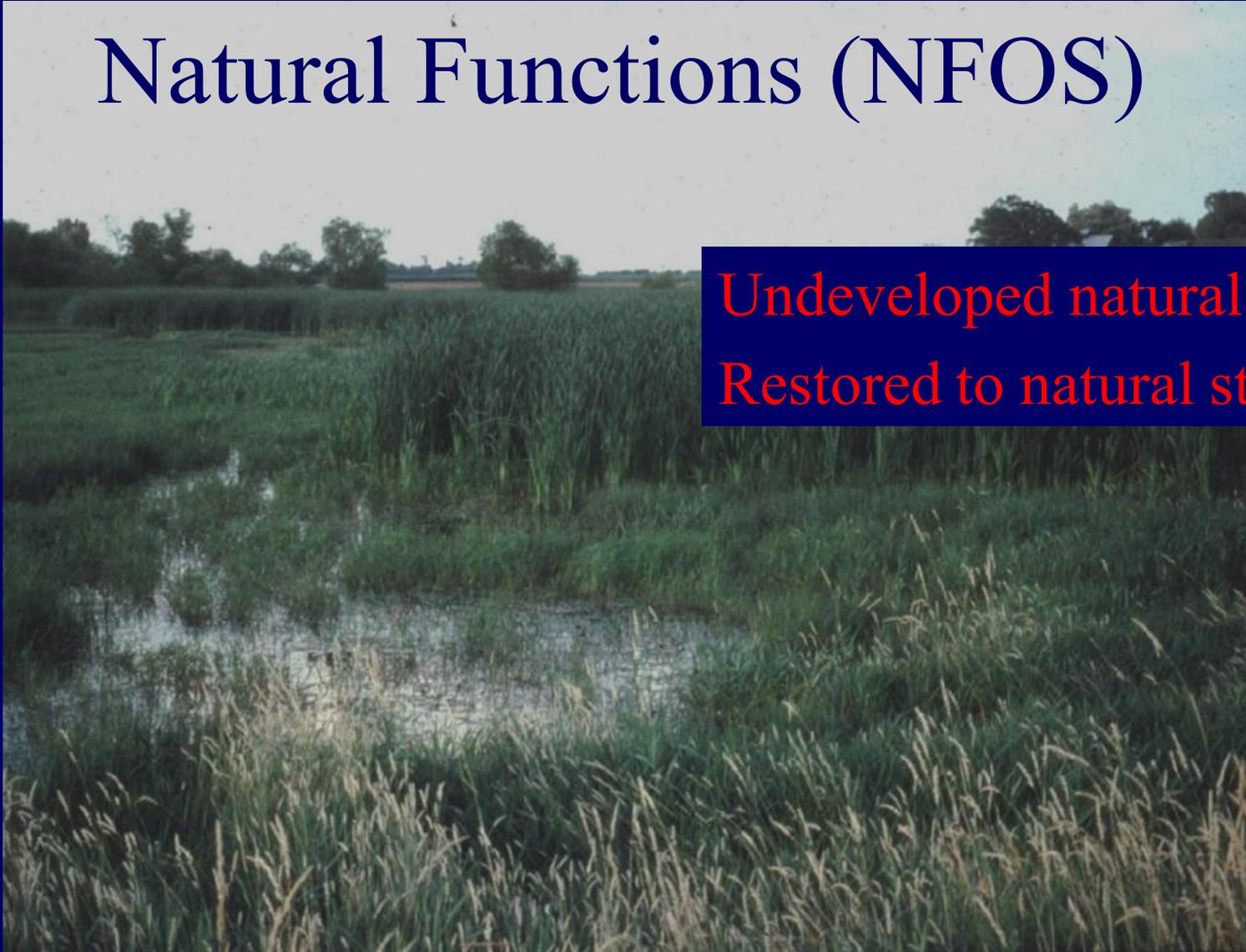
<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points
OS – Open Space Preservation	725	Ⓟ	Same (new acronym: OSP)	1,450
DR – Deed Restrictions	75	Ⓟ	Same	50
NB – Natural and Beneficial functions	100	Ⓟ	NFOS – Natural Functions Open Space	350
SHOS – Special Hazard Open Space	50	Ⓟ	Same	TBA
430LD–LDC – Land Development Criteria *	100	Ⓟ	OSI – Open Space Incentives *	250
430LD–LZ – Low density Zoning *	600	Ⓟ	Same *	600
430–NBR – Natural functions Regulations	30	Ⓟ	NSP – Natural Shoreline Protection	120
Max *	980			* 1,970

* These regulations are not credited in preserved open space areas that are credited under 420 – OSP. The impact adjustment accounts for this mutual exclusivity. Therefore, they are not included in the totals.



420 Open Space Preservation

Natural Functions (NFOS)

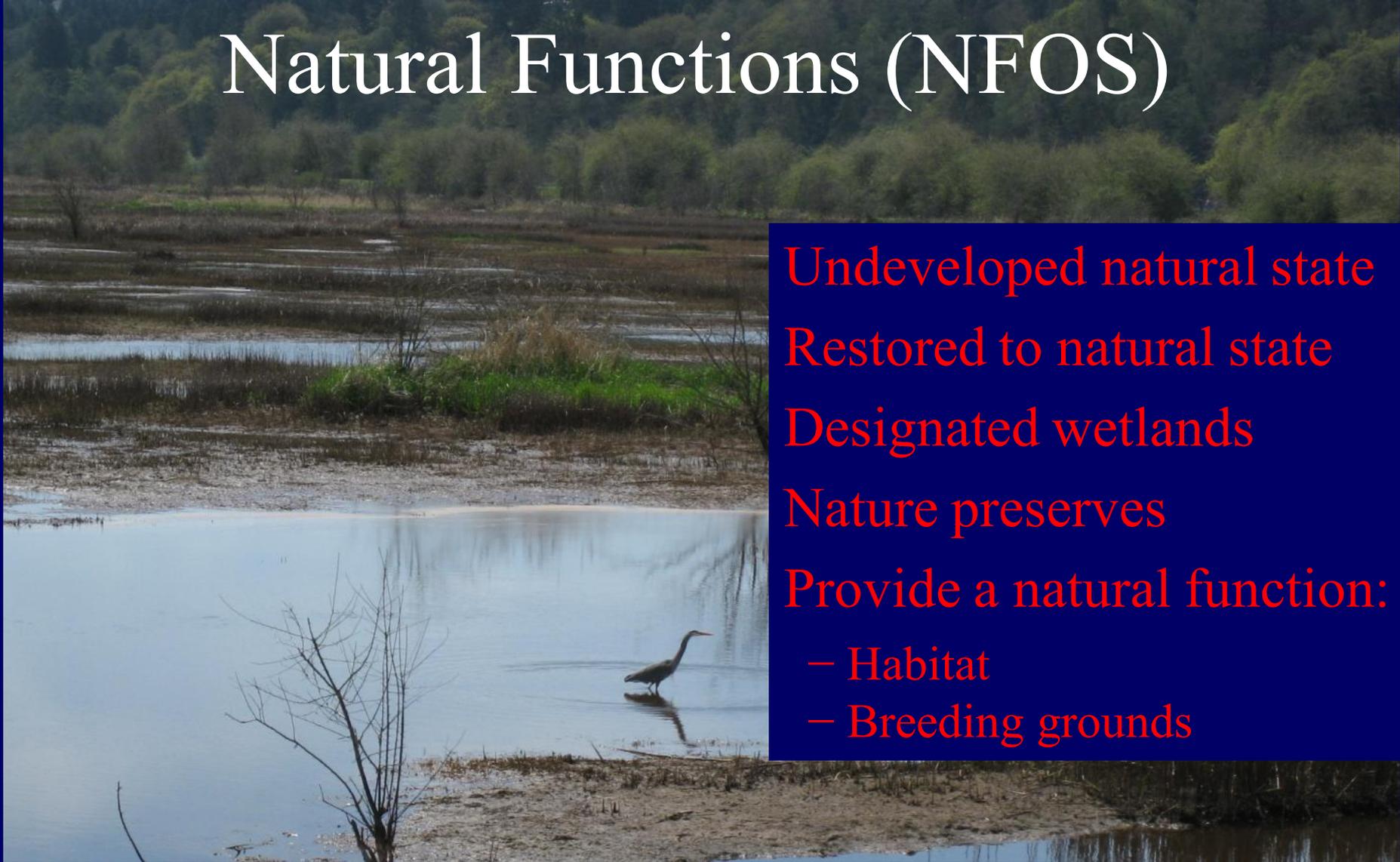


Undeveloped natural state
Restored to natural state



420 Open Space Preservation

Natural Functions (NFOS)



Undeveloped natural state

Restored to natural state

Designated wetlands

Nature preserves

Provide a natural function:

- Habitat

- Breeding grounds



420 Open Space Preservation

Natural Functions (NFOS)



Natural Functions Open Space Credit	Max Points
1. Parcel is credited as OSP and is preserved in its natural state (required for any NFOS credit).	170
2. Parcel is designated in a plan to protect natural functions, e.g., a habitat conservation plan	50
3. Parcel is designated as critical habitat for threatened or endangered species or the species is present	50
4. Parcel is in a designated open space corridor or connected network	60
5. There is educational material on the site's natural functions (10 points without a PPI)	20
Total	350



420 Open Space Preservation

Open Space Incentives Credit	Points
1. The regulations set aside all floodprone lands in a subdivision as open space, or otherwise keep them free from development. The credit can be prorated if smaller areas are set aside. *	250
2. Each lot in a new subdivision must provide a building site that is on natural high ground, out of the regulatory floodplain. *	150
3. <i>To the extent possible</i> , each lot in a new subdivision must provide a building site that is on natural high ground, out of the regulatory floodplain. If a lot does not have a buildable site out of the regulatory floodplain, all new structures, pavement, and other development must be sited on the highest land on the lot. *	65
4. The regulations include transfer of development rights language to encourage staying out of the floodplain. Fewer points are provided for a density bonus within the same development. *	70
5. The regulations allow cluster development or PUDs.	25
6. The community's land use plan recommends open space use or low density development of floodprone areas.	25



420 Open Space Preservation

Natural Shoreline Protection (NSP)





420 Open Space Preservation

Natural Shoreline Protection (NSP)

- Channels: no rip rap, dredging, filling, removal of vegetation
- Ocean shores: no dune alterations, beach nourishment, seawalls, jetties
- Ordinance or regulation
- Policy for public lands





430 Higher Regulatory Standards

<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points
		<i>new</i>	DL – Development Limitations *	1,330
FRB – Freeboard	300	P	More credit if fill prohibited * **	500
FDN – Foundation Protection	35	P	More credit if fill prohibited * **	80
CSI – Cumulative Substantial Improvement	110	P	Same *	90
LSI – Lower Subs. Improvement threshold	90	P	Same *	20
PCF – Protection of Critical Facilities	100	P	More flexible credit for partial protection *	80
PSC – Protection of Storage Capacity	80	P	Moved to new DL credit	
NBR – Natural/Beneficial Functions Regs	40	P	Moved to 420 Natural Shoreline Protection	
ENL – Enclosure Limits	300	P	Same * **	240
BC – Building Code	190	P	Same *	100

* These regulations are not credited in preserved open space areas that are credited under 420 – OSP. The impact adjustment accounts for this mutual exclusivity.

** FRB, FDN, ENL, and CAZ are mutually exclusive from DL, so they are not included in the total points



430 Higher Regulatory Standards

<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points
450-FRX – Freeboard in X Zones		↳	LDP – Local Drainage Protection	120
STF – Staffing	50	↳	Moved to new RA credit	
MHP – Manufactured Home Parks	50	↳	Same *	15
CAZ – Coastal A Zones	650	↳	Same * **	650
SHR – Special Hazards Regs		↳	Same *	TBA
OHS – Other Higher Standards	100	↳	Some credit incorporated in new DL credit *	20
SMS – State-Mandated Standards	45	↳	Insurance agent training moved to new 370	20
			<i>new</i> RA – Regulations Administration	67
430LD-LDC – Land Development Criteria	100	↳	Moved to 420 Open Space Incentives	
430LD-LZ – Low density Zoning	600	↳	Moved to 420 Low density Zoning	
	Max 2840			** 1,862

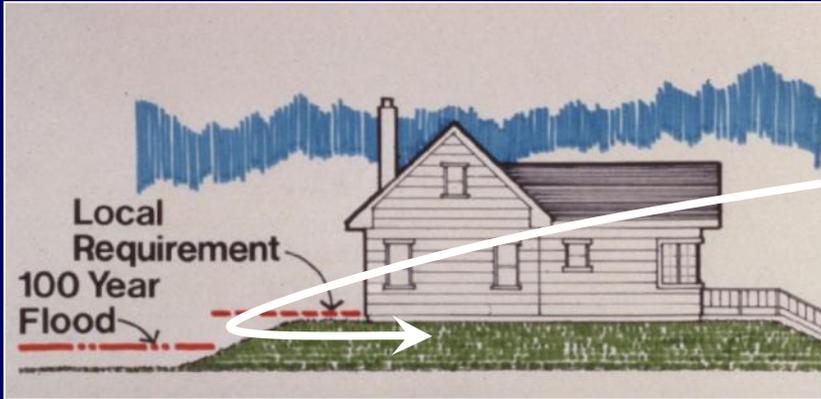
* These regulations are not credited in preserved open space areas that are credited under 420 – OSP. The impact adjustment accounts for this mutual exclusivity.

** FRB, FDN, ENL, and CAZ are mutually exclusive from DL, so they are not included in the total points



430 Higher Regulatory Standards

Freeboard



Freeboard Credit			
Freeboard	No filling restrictions	Riverine areas: Comp storage required Coastal areas: fill prohibited	Riverine areas: fill prohibited
1 Foot	100	110	120
2 Feet	225	250	280
3 Feet	375	440	500



430 Higher Regulatory Standards

Fill

- + Cheap way to elevate
- + Keeps water away from the building
- + Can get a LOMR-F
- + Easier for landscaping
- Reduces storage capacity (riverine floodplains)
- Kill native vegetation
- Redirects drainage onto others
- Adversely affects water quality



09/23/2004



430 Higher Regulatory Standards

Development Limitations (DL)

Development Limitations Credit	Points
1. Prohibit fill (including no CLOMR-Fs and LOMR-Fs) in riverine areas	280
1.a. Prohibit fill (including no CLOMR-Fs and LOMR-Fs) in coastal areas or require compensatory storage in riverine areas: 130	
2. Prohibit new buildings (pro-rated for prohibiting some types of buildings, e.g., residential)	1,000
3. Prohibit storage of materials	50
3.a. Prohibit storage of hazardous materials: 20 points	
3.b. Require hazardous materials to be stored above the base flood elevation: 10 points	
Total	1,330



430 Higher Regulatory Standards



Foundation protection – FDN

Foundation Protection Credit	Points
1. Engineered foundations, no buildings on fill	80
2. Buildings on compacted fill, protected from erosion. In riverine areas, compensatory storage must be required	60
3. Buildings on compacted fill, protected from erosion and scour	35



430 Higher Regulatory Standards



Nonconversion agreement must call for periodic inspections for full credit

h. Enclosure limits – ENL

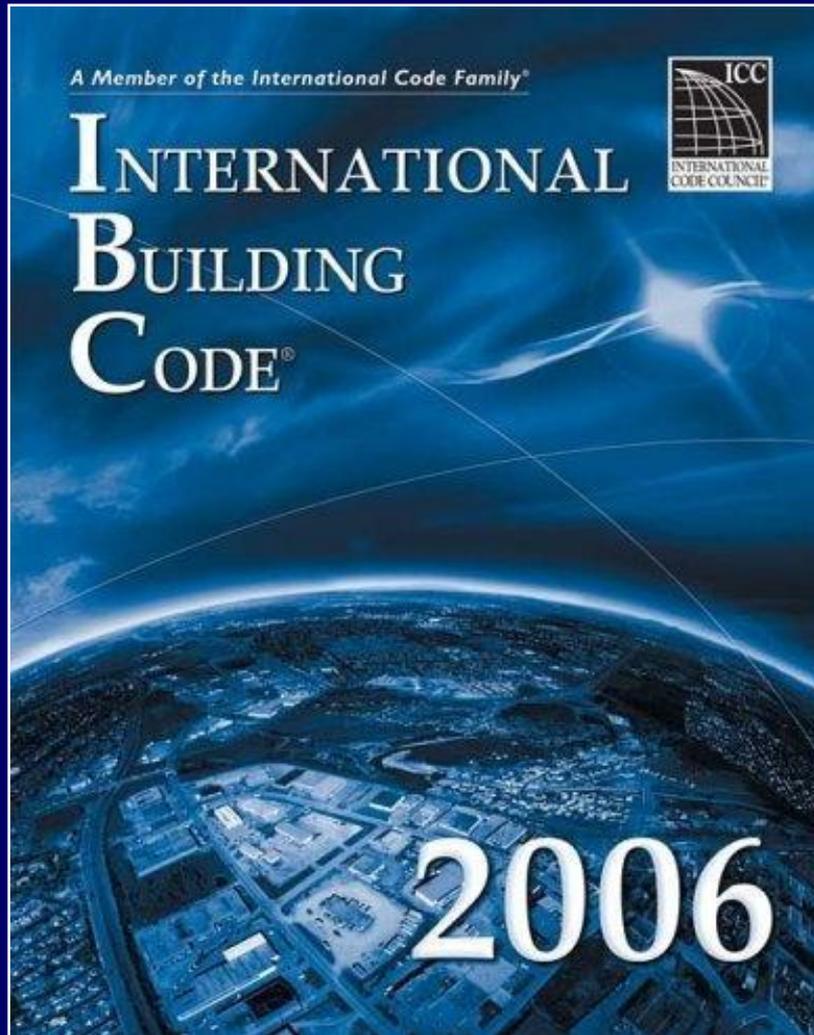


430 Higher Regulatory Standards

Enclosure Limits Credit	Points
1. Regulations prohibit any building enclosures, including breakaway walls, below the base flood elevation, OR	240
2. Regulations prohibit enclosures of areas of 300 square feet or greater, including breakaway walls, below the base flood elevation and a. There is a nonconversion agreement that meets the criteria of 3, below, OR	190
b. There is no nonconversion agreement – 95 points	
3. Regulations require that the owner of a building sign a nonconversion agreement, promising not to improve, finish, or otherwise convert the area below the lowest floor and a. The community will inspect the enclosed area at least once a year, OR	90
b. Granting the community the right to inspect the enclosed area at any time – 60 points. OR	
c. No mention is made of inspections – 30 points.	



430 Higher Regulatory Standards



Building Code Credit	Points	Points
Adoption of the International Building Code		
Residential Code	20	
Plumbing Code	3	
Mechanical Code	3	
Fuel Gas Code	2	
Private Sewage Disposal Code	2	
Total for code adoption		50
BCEGS classification of 5/5	10	
BCEGS classification of 4/4	20	
BCEGS classification of 3/3	30	
BCEGS classification of 2/2	40	
BCEGS classification of 1/1	50	
Max for BCEGS		50
Total		100

430 Higher Regulatory Standards



Outside the floodplain –
Local drainage problems



430 Higher Regulatory Standards

Local Drainage Protection Credit	Points
1. Credit is based on how high the lowest floor (including basement) must be above the crown of the nearest street or the highest grade adjacent to the building); <i>[maximum is for 3 feet] OR</i>	120
2. if the regulations require that as a condition for a building permit, the applicant must prepare a site plan that accounts for street flooding, local drainage from and onto adjoining properties and that protects the building from local drainage flows; OR	40
3. if the regulations require that the applicant provide positive drainage away from the building site to an approved point of collection that does not create a hazard or problem on neighboring properties. OR	20
4. if the regulations require that the increased volume of runoff due to the development is kept on site, such as via a low impact development measure.	20

430 Higher Regulatory Standards

Page 430-21 – 22

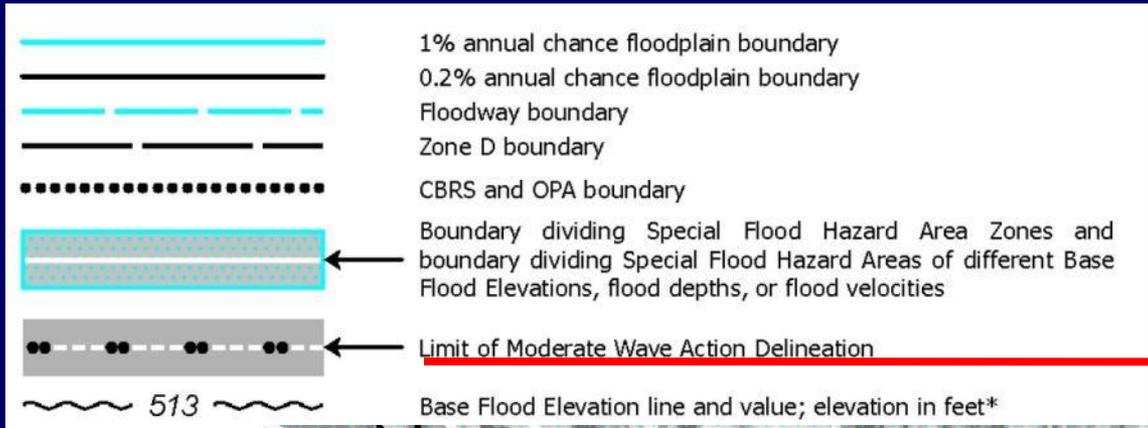


- o. Manufactured homes in manufactured home parks must be above flood protection elevation – MHP



430 Higher Regulatory Standards

Page 430-21 – 22



LiMWA



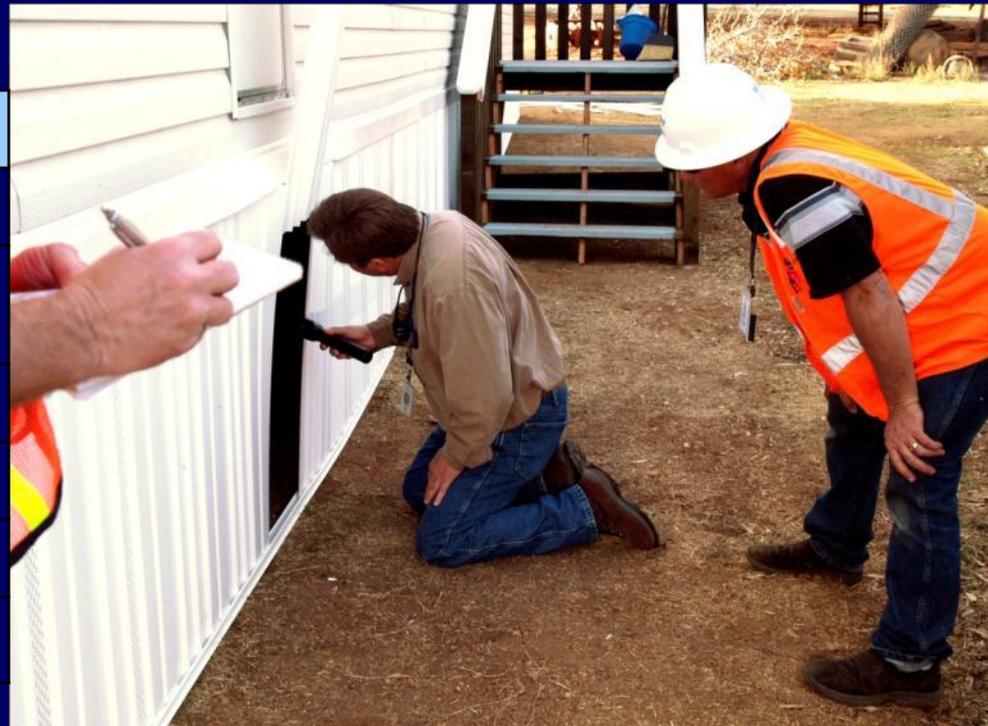


430 Higher Regulatory Standards

NEW

New credit: Regulation Administration (RA)

Regulations Administration Credit	Points
1. Staff training	25
2. Building department is IAS accredited	5
3. Conducting 3 detailed inspections	16
4. Conducting reinspections	16
5. Off-site record storage (old ORS)	5
	67





440 Flood Data Maintenance

<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points
AMD – Additional Map Data	129	P	Two new credited attributes	160
BMM – Benchmark Maintenance	90	P	Alternative approaches to be credited	27
EDM – Erosion Data Maintenance	–	P	Same	TBA
FM – FIRM Maintenance	20	P	Same	15
	Max 239			202



440 Flood Data Maintenance

Page 440-2

- Credit is provided for making the community's floodplain maps more current, useful, or accurate to improve local regulations, planning, disclosures, and property appraisals

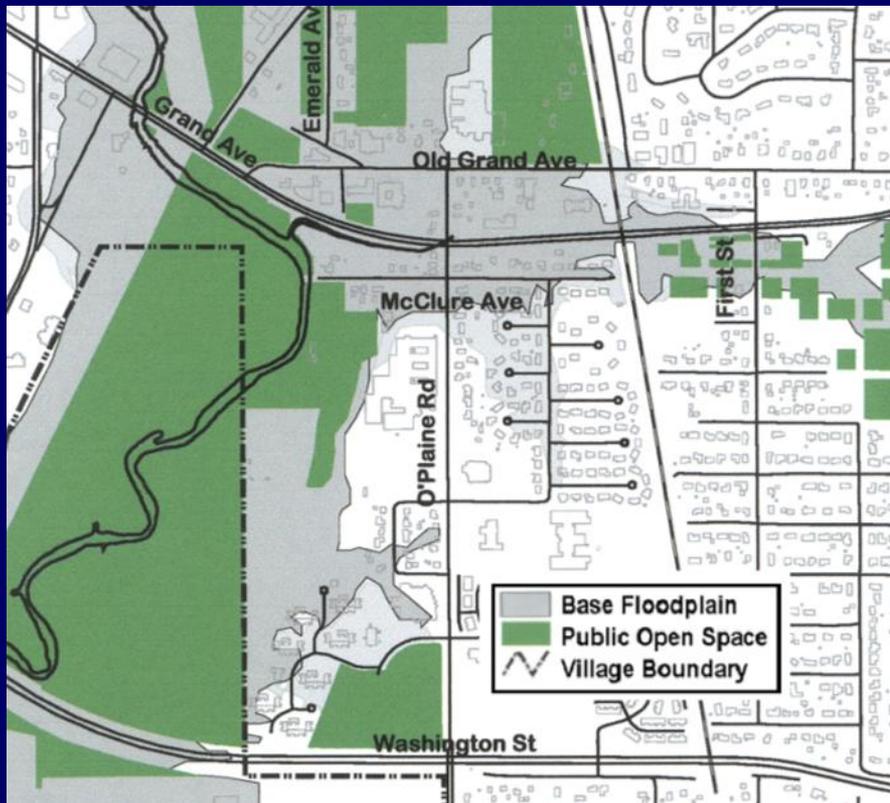




440 Flood Data Maintenance

Page 440-3

AMD - Additional Map Data



Credit for paper, digital or database systems that improve access, quality and/or ease of updating flood and FIRM data



440 Flood Data Maintenance

Page 440-3

AMD - Prerequisites

- (a) The system must be used regularly by the community regulatory staff
- (b) New flood data, LOMRs, subdivisions, etc. must be added to the system at least annually
- (c) Digitized data must be made available annually to FEMA at no cost

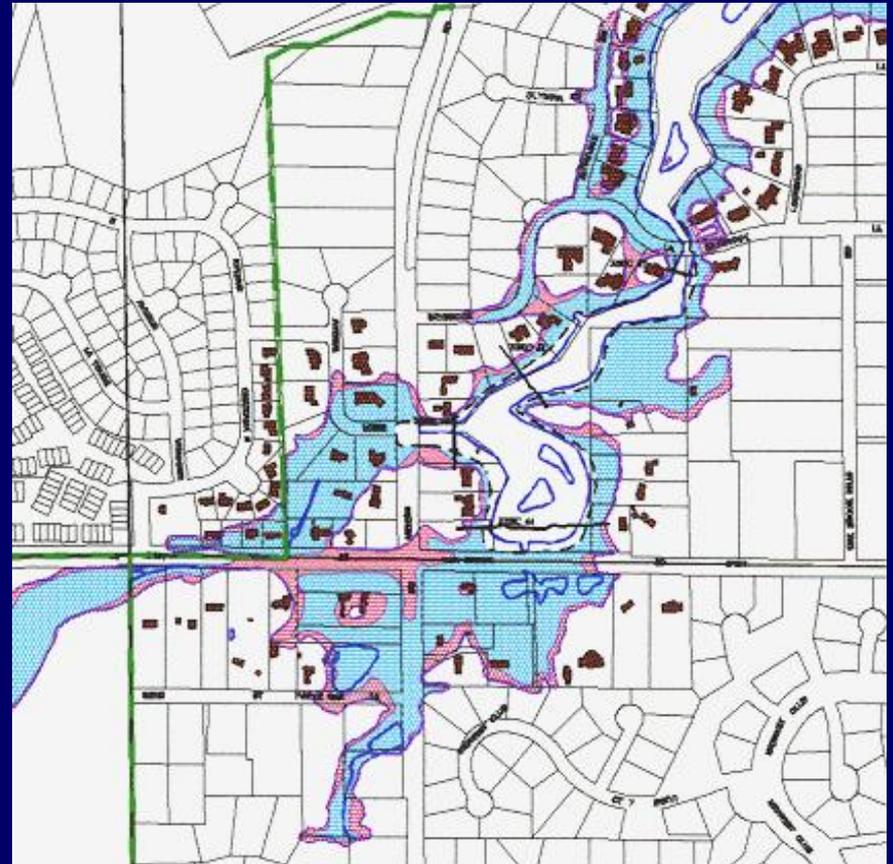


440 Flood Data Maintenance

Page 440-4

AMD - Additional Map Data

- AMD max: 129 points
- (a) (Prerequisite) 32, must show floodplain boundaries, streets, corporate limits and parcel or lot boundaries





440 Flood Data Maintenance

Page 440-4

Additional Map Data	Points
a. Floodplain boundaries, corporate limits, streets, and parcel or lot boundaries	20
b. Buildings, building outlines, or building footprints	26
c. Floodways or coastal high hazard areas	12
d. Showing base flood elevations	12
e. FIRM zone attributes (e.g., A3, VE, etc.)	10
f. 500-year floodplain elevations or boundaries	10
g. Areas subject to other natural hazards	10
h. (2) Including contour lines at a smaller contour interval than on USGS quads	8
i. Floodplain data in the tax assessment data base	10
j. All FIRMs in effect after the date of the community's application to the CRS	6
k. Other data used for regulation or mitigation programs	8
l. Areas with natural floodplain functions (e.g., wetlands, designated riparian habitat)	14
m. Building elevation data <i>New in 2012</i>	14
	160



440 Flood Data Maintenance

Page 440-6

b. Benchmark Maintenance

ERM

BMM





440 Flood Data Maintenance

Page 440-6

BMM - Benchmark Maintenance

Prerequisites for each creditable benchmark:

- (a) Data available to the public
- (b) Recovered in last 5 years
- (c) 1st or 2nd order vertical control
- (d) Stability rating of A or B, *and*
- (e) Within 1 mile of regulatory floodplain



440 Flood Data Maintenance

BMM - Benchmark Maintenance

New in 2012 Manual:

Credit for GPS surveying
support





450 Stormwater Management

<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points
SMR– Stormwater Mgmt. Regulations	225	þ		380
SZ – Size of development regulated	25	þ	Same	110
DS – Design Storm	110	þ	New credit for managing volume	225
PUB – Public maintenance	90	þ	Credit only for the requirement	20
		<i>new</i>	LID – Low Impact Development	25
WMP – Watershed Master Plan	225	þ	Same	315
FRX – Freeboard in X Zones	150	þ	Moved to activity 430, LDP	
ESC – Erosion and Sedimentation Control	45	þ	Less credit for NPDES criteria	40
WQ – Water Quality regulations	25	þ	Same	20
Max	520			755



450 Stormwater Management

Stormwater management regulations credits requiring all new developments to manage their excess stormwater runoff on site.

SZ – Size of development regulated

DS – Design storm

PUB – Public maintenance

LID – Low impact development





450 Stormwater Management

Stormwater management regulations credits requiring all new developments to manage their excess stormwater runoff on site.

SZ – Size of development regulated



Minimum credit is for regulating developments of five acres or smaller,

Maximum credit is for regulating all development



450 Stormwater Management

Stormwater management regulations credits requiring all new developments to manage their excess stormwater runoff on site.

DS – Design storm

Minimum credit is for managing the 10-year storm,
Maximum credit is for managing all storms up to the 100-year.

This credit has previously been limited to managing peak flows, but there will be more points for also limiting increases in the volume of stormwater runoff leaving the site.





450 Stormwater Management

Stormwater management regulations credits requiring all new developments to manage their excess stormwater runoff on site.

PUB – Public maintenance

Requiring new stormwater management facilities to be maintained and subject to inspection. 20 points

The credit in 450 will be limited to the regulatory requirement. Inspections and maintenance credit moved to 540.





450 Stormwater Management

Stormwater management regulations credits requiring all new developments to manage their excess stormwater runoff on site.

LID – Low impact development



This is a new element for requiring developers to use low impact development or similar “soft” techniques to minimize the size of on-site detention and to replicate natural stormwater characteristics.



450 Stormwater Management

Page 450-8

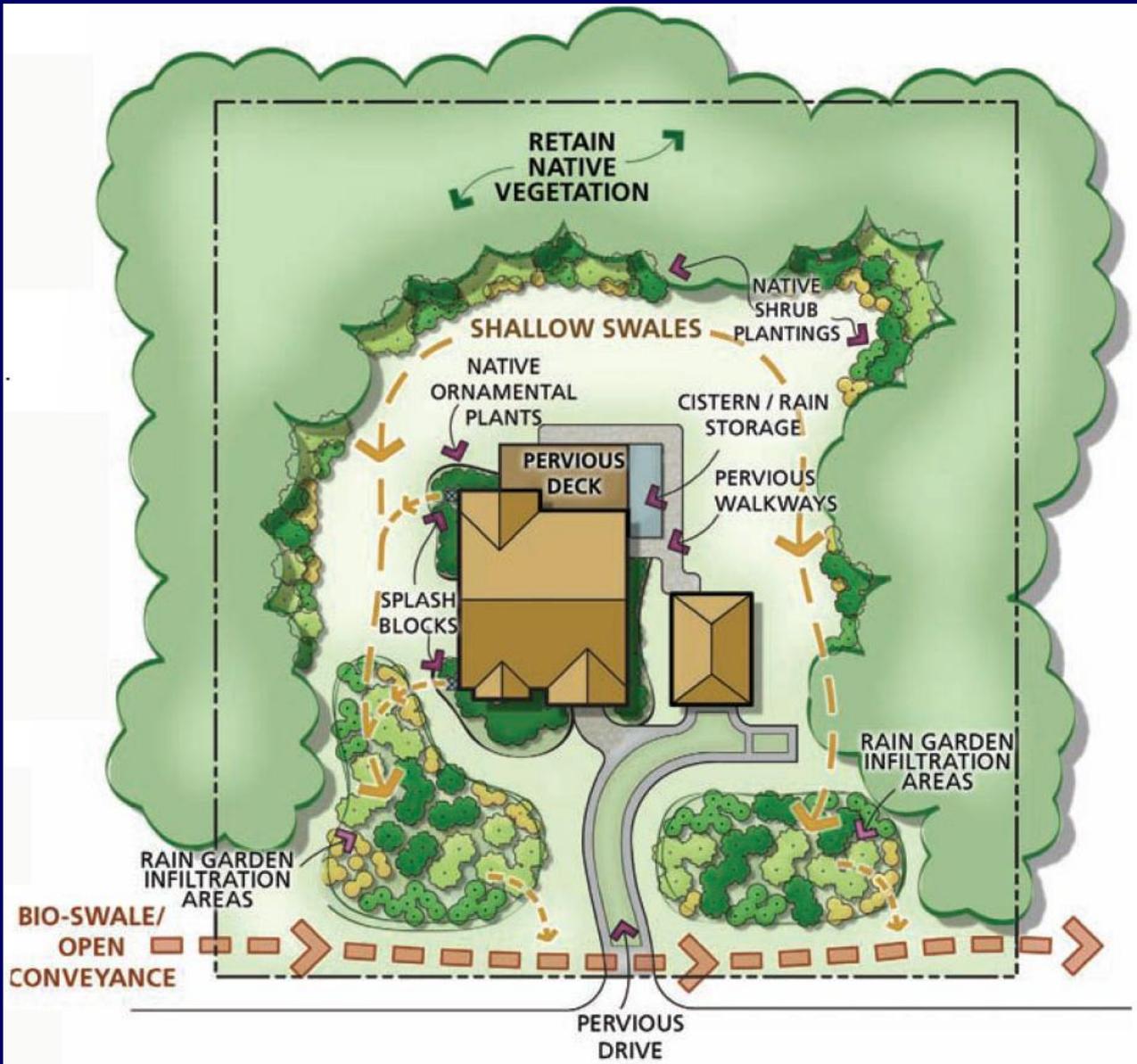


PUB = facility will be publicly maintained

New for 2012: PUB split:
Regs in 450 (fewer points), inspections in 540

- 
1. Community inspects facility and orders maintenance
 2. Owner's engineer certifies maintenance
 3. New facilities become community property

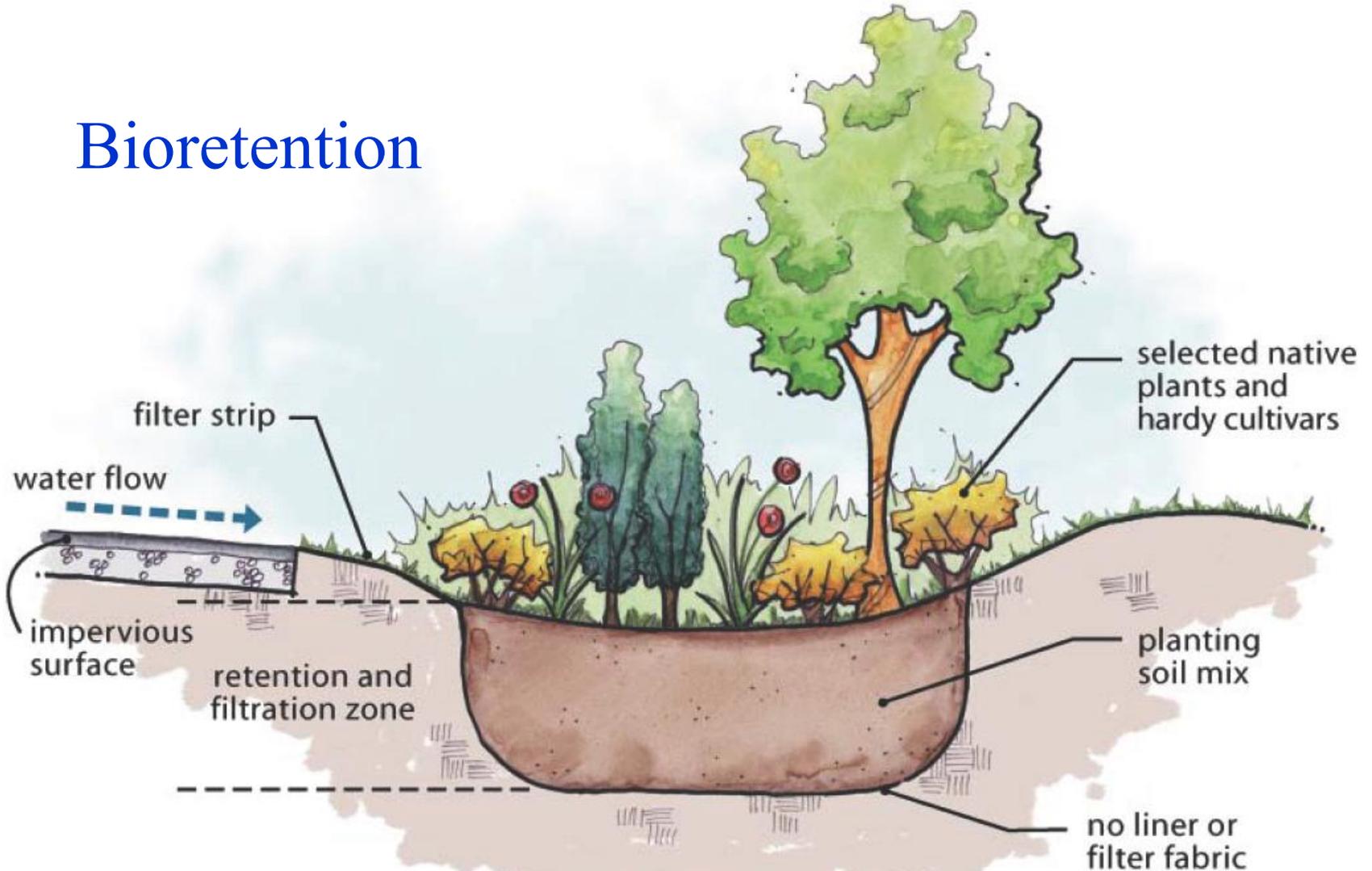
450 Stormwater Management



Low Impact
Development

450 Stormwater Management

Bioretention





450 Stormwater Management

Watershed Master Plan

<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points
WMP – Watershed Master Plan	225	P	Same	315
FRX – Freeboard in X Zones	150	P	Moved to activity 430, LDP	
ESC – Erosion and Sedimentation Control	45	P	Less credit for NPDES criteria	40
WQ – Water Quality regulations	25	P	Same	20

Watershed master plan credit is for having a master plan to best determine how to manage stormwater, using open space, man-made, and natural approaches.

There will be a new credit for having a dedicated source of funding for implementation, such as a stormwater utility.



450 Stormwater Management

Page 450-14



Water quality regulations: Stormwater facilities must incorporate best management practices (BMPs)



501 Repetitive Loss Areas

Page 500-3

Repetitive Loss Properties

- Repetitive loss: 2 claims $>$ \$1,000 in 10 years
- Severe RL: Rep loss with 4 claims $>$ \$5,000
or ≥ 2 claims $>$ building's value



501 Repetitive Loss Areas

Page 500-3

501 Repetitive Loss List

- ✓ Ask your ISO/CRS Specialist how many repetitive loss properties are in your community
- ✓ If ≥ 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

Page 500-5

Federal Emergency Management Agency
National Flood Insurance Program
NFIP REPETITIVE LOSS UPDATE WORKSHEET (AW-501)

OMB #1660-0022 EXPIRES February 28, 2005

THE INFORMATION ON THIS FORM IS BASED ON CLAIMS ON OR BEFORE: mm/dd/yy

REPETITIVE LOSS NUMBER: XXXXXXX \$

Internal Use Only A N/A FRR

NFIP COMMUNITY NAME:		CID#:
LOCAL PROPERTY IDENTIFIER:		
CURRENT PROPERTY ADDRESS	PREVIOUS PROPERTY ADDRESS/COMMUNITY ID #	
LAST CLAIMANT:		
INSURED:	NAMED INSURED:	
DATES OF LOSSES:	TOTAL NUMBER OF LOSSES FOR PROPERTY:	

REQUESTED UPDATES

MARK ALL UPDATES BELOW THAT APPLY (IMPORTANT - SEE INSTRUCTIONS)

- INFORMATION PROVIDED NOT SUFFICIENT TO IDENTIFY PROPERTY.**
Choose this update if all attempts to locate the property fail. Please describe the steps you took to locate the property in the comments section below.
- COSMETIC CHANGES REQUIRED TO THE ADDRESS:**
Update the address shown above and/or add your local alternative property identifier such as a Tax Assessor #.
- PROPERTY NOT IN OUR COMMUNITY OR JURISDICTION:**
Choose this update if you have positively determined that the property shown is not located in your community. Please provide the correct community name and if known the NFIP Community ID Number. If available, please attach a map showing the property location.
ASSIGN TO COMMUNITY NAME: _____ NFIP COMMUNITY ID # _____
- FLOOD PROTECTION PROVIDED.**
Choose this update only if some type of structural intervention has occurred to the building, property or the source of flooding that protects the building from future events similar to those that occurred in the past. The correction must be supported by documentation such as an Elevation Certificate and the Mitigation information below must be provided.
Mitigation Action 1.) _____ Source of Primary Mitigation Funding 3.) _____ Secondary Source of Funding 3.) _____
- NO BUILDING ON PROPERTY.**
Choose this update only if the property in question can be positively identified as the site of the previously flooded building and documentation is available to support that an insurable building no longer exists at this site. The correction must be supported by documentation such as a Demolition or Relocation Permit and the Mitigation information below must be provided.
Mitigation Action 2.) _____ Source of Primary Mitigation Funding 3.) _____ Secondary Source of Funding 3.) _____
See Appropriate Mitigation Action and Funding Codes
- DUPLICATE LISTING WITH RL NUMBER:** _____ **COMBINE AS ONE LISTING.**
Choose this update to identify two or more separate listings that are for the same building. List all other RL numbers that are duplicates to this property. Please indicate which address shown is the correct address to use.
- HISTORIC BUILDING:**
Choose this update if you know the building is listed on a State or National Historic Registry.

COMMENTS SECTION: _____

A SIGNED RL TRANSMITTAL SHEET MUST ACCOMPANY THIS FORM FOR APPROVAL OF THE UPDATE!

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



MITIGATION ACTION CODES

- 1.) If you selected "FLOOD PROTECTION PROVIDED," please enter the letter below (a –f) that best describes the situation:
- a. The building was elevated to or above the Base Flood Elevation (BFE).
 - b. The building was elevated but not to the BFE.
 - c. The building (non-residential) was floodproofed to the BFE.
 - d. The building was partially floodproofed (but, not to the BFE).
 - e. The building was protected by a flood control/stormwater management project.
 - f. The building was replaced by a new elevated/floodproofed building.
- 2.) If you selected "NO BUILDING ON PROPERTY," please enter the letter below (g – i) that best describes the situation.
- g. The building was demolished, but not acquired through any program.
 - h. The building was acquired and demolished as part of a program.
 - i. The building was relocated out of the floodplain.

MITIGATION FUNDING CODES

- 3.) Please choose from the following (j – w) to identify the primary and secondary funding sources for the mitigation action described by a – i above.

FEMA PROGRAM FUNDING SOURCES	NON-FEMA FUNDING SOURCES
<ul style="list-style-type: none">j. Hazard Mitigation Grant Program (HMGP).k. Flood Mitigation Assistance Program (FMA).l. Pre-Disaster Mitigation Grant Program (PDM).m. Section 1362 Acquisition Program.n. Other FEMA Programs	<ul style="list-style-type: none">o. Increased Cost of Compliance (ICC) coverage.p. U.S. Housing & Urban Development (HUD) Community Development Block Grant (CDBG).q. U.S. Army Corps of Engineers or Natural Resources Conservation Service (NRCS) Project.r. Other Federal Program.s. State Program.t. Local Program.u. Property Ownerv. Natural Disaster or Fire.w. Unknown

OMB Statement: The CRS Application worksheets, the CRS Coordinator's Manual, and this form have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork reduction Act of 1980 as amended, 44 U.S.C. 3501 et seq. And assigned OMB control number 3067-0195. Public reporting burden for the CRS is estimated to average 30 hours. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing all CRS forms. Send comments regarding the burden estimate or any aspect of the application, including suggestions for reducing the burden to: Information Collections Management, Federal Office of Management and Budget, Paperwork Reduction Project (3067-0195) WASHINGTON, DC 20503

Privacy Act: Under the Privacy Act (5 U.S.C.552a), personal identifiers, such as names, may be used only for limited purposes. One of the allowable uses of names and flood insurance policy numbers is to analyze the effectiveness of local flood loss reduction efforts. Communities may use personal identifiers for this purpose only and are prohibited from using them for solicitation, or other reasons.



COMMUNITY NAME: _____

COMMUNITY ID# _____



**TRANSMITTAL SHEET
NFIP REPETITIVE LOSS (RL) UPDATE WORKSHEETS**

PLEASE NOTE: WE CANNOT APPROVE YOUR AW-501 RL UPDATE WORKSHEETS, UNLESS YOU RETURN THIS SIGNED DOCUMENT.

Contact Information: Please provide the following information should we should need to contact your community for more information to approve your updates.

Name: _____

Address: _____

Phone: _____ **Fax:** _____

E-mail: _____

**IF YOU HAVE ANY QUESTIONS ON
HOW TO UPDATE THE WORKSHEETS OR
WHERE TO SEND THEM CALL:
MR. GABE GAMBRILL AT (904) 280-1268
OR E-mail: hgamb Brill@iso.com**

Please, indicate the number of RL Update Worksheets you are submitting for this update! _____

Please check all that apply

- We have returned new updated worksheets OR ones that previously did not have the necessary Mitigation Action/Funding Source codes.
- We have attached documentation to support our updates for Building Removal and Flood Protection Provided.
- Mitigation Action/Funding Source codes have been provided, as appropriate.
- We have described the steps taken to locate any properties that we were unable to identify from the Information provided.

We have retained copies of all the worksheets we submitted.

UPDATES AUTHORIZED BY: *(THIS FORM MUST BE SIGNED BY A COMMUNITY OFFICIAL)*

PRINT NAME AND TITLE

SIGNATURE

DATE

MAIL YOUR UPDATED RL WORKSHEETS AND THIS RL TRANSMITTAL SHEET TO:

NFIP REPETITIVE LOSS UPDATES
c/o Mr. Gabe Gambrell, AIS, CFM
ISO, Inc.
Post Office Box 3085
Ponte Vedra Beach, FL 32004-3085
Phone: 904-280-1268 Fax: 904-285-9350



501 Repetitive Loss Areas

Page 500-5

502 Repetitive Loss Category

After correcting and updating:

A: No repetitive loss properties

✓ No requirements

B: 1 – 9 repetitive loss properties

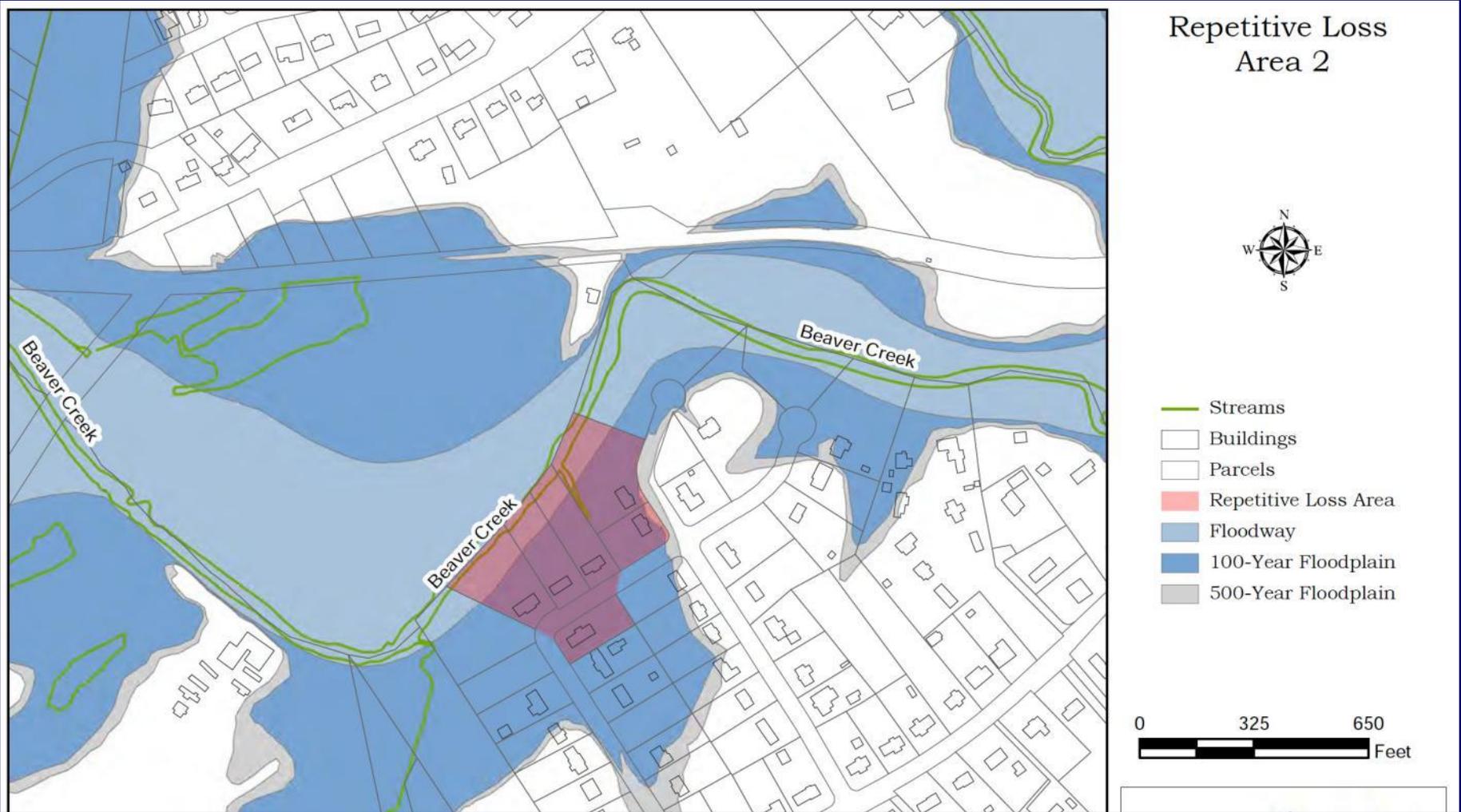
✓ Outreach project

C: 10+ repetitive loss properties

✓ Outreach project and 510 plan



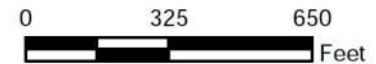
501 Repetitive Loss Areas



Repetitive Loss Area 2



- Streams
- Buildings
- Parcels
- Repetitive Loss Area
- Floodway
- 100-Year Floodplain
- 500-Year Floodplain





501 Repetitive Loss Areas

Page 500-7

503 Repetitive Loss Outreach Project

- a. Description of the cause(s) of repetitive flooding
- b. Map identifying repetitive loss AREA(S)
- c. A list of all repetitive loss properties in the area(s) with insurable buildings on them
- d. The number of buildings in the repetitive loss area(s)



501 Repetitive Loss Areas

Page 500-10

503 Repetitive Loss Outreach Project

- e. Annual outreach project that
 - (a) Tells recipient of the flood hazard
 - (b) Explains property protection measures
 - (c) Covers sources of financial assistance
 - (d) Includes basic facts about flood insurance

Send to all properties in the rep loss AREAS



To participate in the Community Rating System of the National Flood Insurance Program, a community with one or more properties subject to repetitive flooding must take certain actions to address the risk to those properties. This handout provides information and examples to help communities delineate and map areas subject to repetitive flood losses. Additional copies of this handout are available from your ISO/CRS Specialist or by e-mailing NFIPCRS@ISO.com.

Mapping Repetitive Loss Areas

Requirements: To participate in the Community Rating System, a community with one or more repetitive flood loss properties must take certain actions that address those properties. When a community applies to join the CRS, FEMA will send a CD with relevant repetitive loss files. Communities already in the CRS will get an updated CD every year. There are three basic requirements:

1. The community must review FEMA's list of repetitive loss properties for accuracy and other items as explained in Section 501 of the *CRS Coordinator's Manual*. One of the files on the CD is labeled "instructions," and it explains how to do this. The result is an "updated" list of repetitive loss properties.
2. A community with 1–9 properties on its UPDATED list is referred to as a Category B repetitive loss community, as noted in Section 502 of the *Coordinator's Manual*. A community with 10 or more properties on the UPDATED list is a Category C community. Category B and C communities must distribute an outreach project each year to the properties in their repetitive loss AREAS (Section 503).
3. A Category C community must also prepare a floodplain management plan or area analyses that cover all of its repetitive loss AREAS (Section 503).

A **repetitive loss property** is a property for which two or more flood insurance claims of more than \$1,000 have been paid by the NFIP within any 10-year period since 1978.

A **severe repetitive loss property**, as defined by Congress in the Flood Insurance Reform Act of 2004, is a 1–4 family property that has had four or more claims of more than \$5,000 or two to three claims that cumulatively exceed the building's value. For the CRS, non-residential buildings that meet those same criteria are also considered severe repetitive loss properties.

A **repetitive loss area** is a portion (or portions) of a community that includes buildings on FEMA's list of repetitive losses and also any nearby properties that are subject to the same or similar flooding conditions

Areas: Both the second and third requirements, above, deal with repetitive loss AREAS. Many communities want to address only the individual properties on the updated list. It is important to note that the only reason a property appears on FEMA's list is because the structure had flood insurance and received two or more claims of at least \$1,000 during any given 10-year period. These properties are merely representative of the community's overall repetitive flooding problem.

Other structures near the ones listed by FEMA may have been uninsured during the floods, may have had single flood insurance claims, or may have had multiple claims under different policies that the system did not recognize as being the same repetitively flooded address. From a community perspective, it is not fair to



501 Repetitive Loss Areas

Documentation

- | Repetitive Loss Correction Sheets (Reviewed Transmittal Sheet)

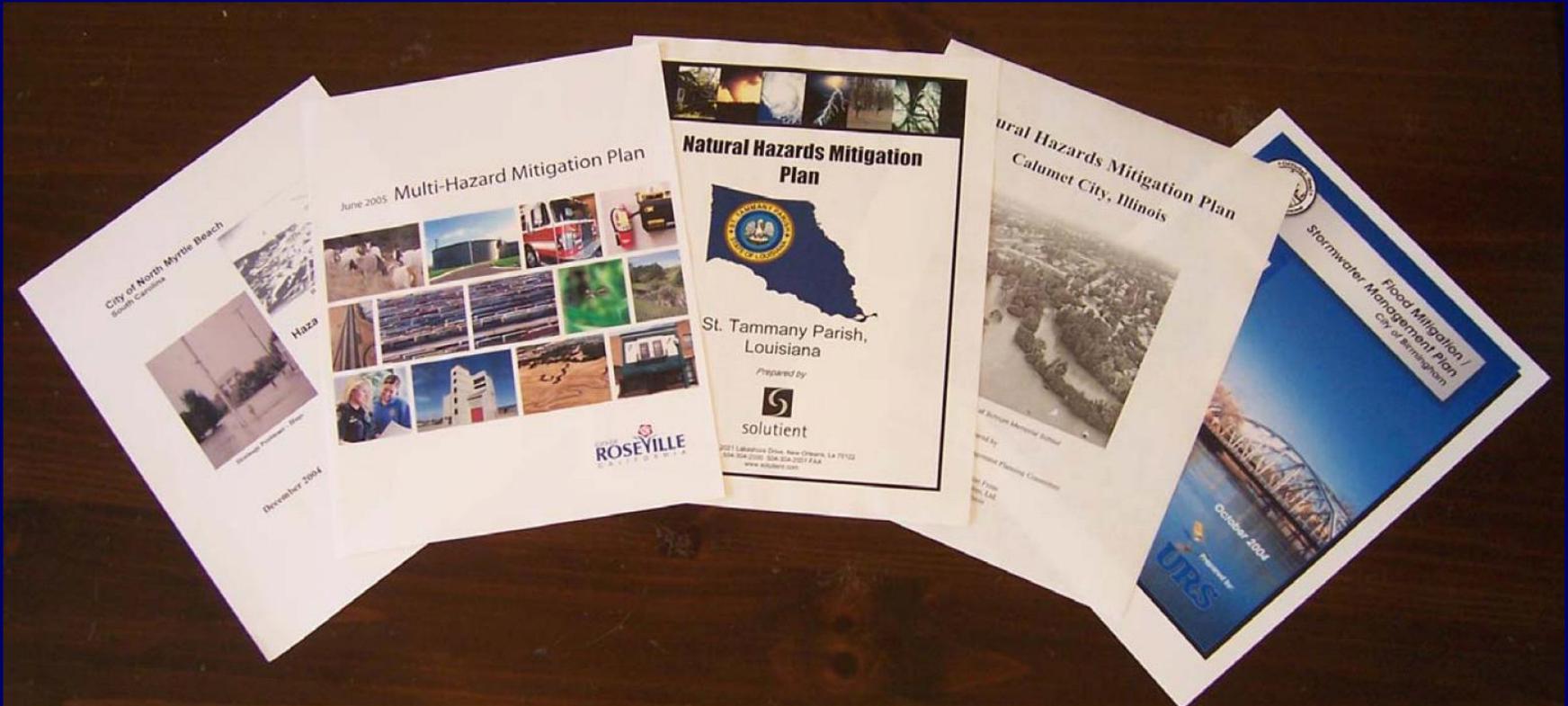
At Cycle

- | Signed AW-502
- | A map with the repetitive loss AREAS identified
- | Repetitive loss area property addresses
- | Number of properties in the repetitive loss areas.
- | A description of the cause(s) of repetitive flooding
- | Copy of outreach project





510 Floodplain Mgmt. Planning





510 Floodplain Mgmt. Planning

<i>2007 Manual</i>	Max Points		<i>2012 Manual</i>	Max Points
FMP – Floodplain Management Planning	294	▷	Refinements in the steps expected	417
RLAA – Repetitive Loss Area Analyses	50	▷	Wider distribution of the analyses	140
HCP – Habitat Conservation Plan	15	▷	NFP – Natural floodplain functions plan	100
	Max 359			657



510 Floodplain Mgmt. Planning

A well-prepared plan will:

- Ensure a comprehensive review
- Look at *all* possible activities and measures
- Meet other community goals and objectives
- Educate residents
- Build public and political support
- Meet the planning requirement for Category C repetitive loss communities



510 Floodplain Mgmt. Planning

Page 510-3

FEMA Planning Guidance			
Disaster Mitigation Act of 2000 (44 CFR 201.6)	CRS Steps	Max Pts	How-To Guides *
Organize resources			<i>Getting Organized</i>
201.6(c)(1)	1. Organize	10	
201.6(b)(1)	2. Involve the public	85	
201.6(b)(2) & (3)	3. Coordinate	25	
Assess risks			<i>Understanding Your Risks</i>
201.6(c)(2)(i)	4. Assess the hazard	20	
201.6(c)(2)			
Develop the			<i>Developing a Mitigation Plan</i>
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			<i>Bringing the Plan to Life</i>
201.6(c)(5)	9. Adopt the plan	2	
201.6(c)(4)	10. Implement, evaluate, revise	15	
	Total	294	

Must receive points under each step



510 Floodplain Mgmt. Planning

Page 510-5

Step 1. Organize

- Professional planner
- Committee of affected departments
- Formal creation by governing body



Step 2. Involve the Public



- Planning committee
- Public meetings
- Questionnaires
- Outreach to organizations
- Website, other outreach

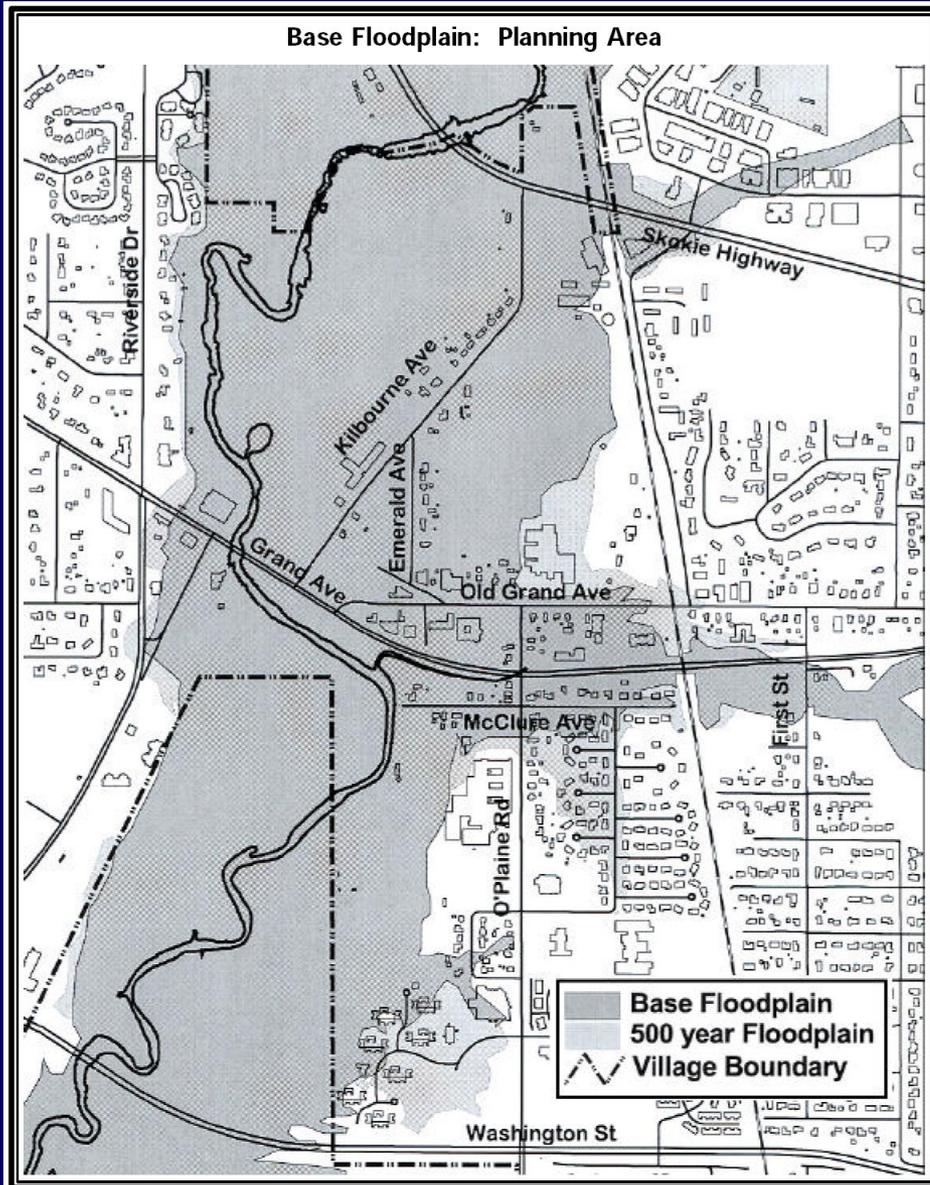
Step 3. Coordinate



- Existing studies, plans
- Neighboring communities
- Other agencies/organizations
- Face to face meetings
- Circulate the draft plan

510 Floodplain Mgmt. Planning

Page 510-10

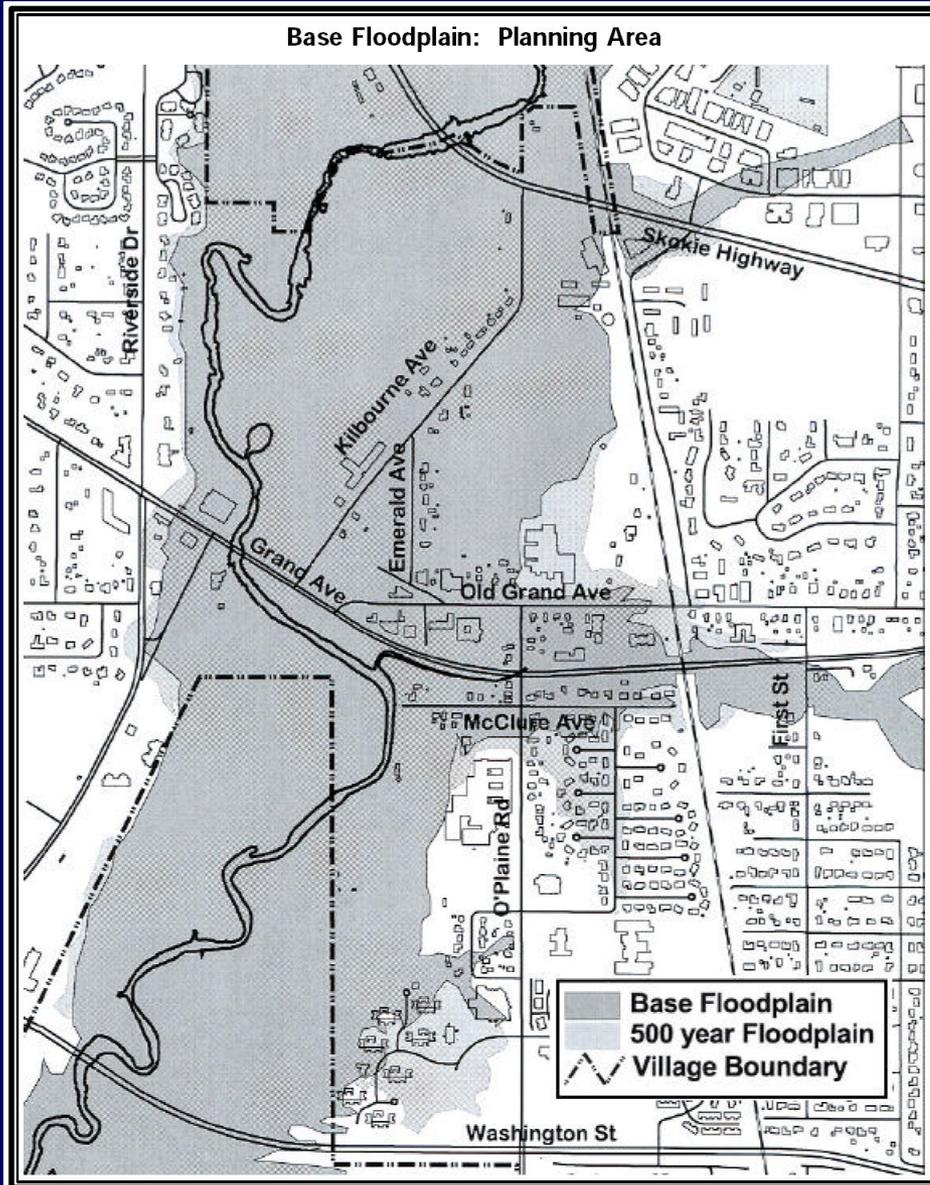


Step 4. Assess the Hazard

- Include rep losses
- Map
- Description
- Past floods
- Future conditions
- Other hazards

510 Floodplain Mgmt. Planning

Page 510-12



Step 5. Assess the Problem

- Number of buildings
- Impact on safety, health, economy, etc.
- Natural functions
- Future conditions
- Summary



510 Floodplain Mgmt. Planning

Page 510-15

Step 6. Set Goals

by similar topics. After discussion, five overall goals of the flood mitigation planning effort were agreed to. They are listed in order of importance.

1. Protect critical facilities and utilities
2. Protect lives and health
3. Protect homes, businesses, and schools
4. Minimize the costs to the City and property owners
5. Ensure that new construction supports these goals

New: Must address all problems described in Step 5



510 Floodplain Mgmt. Planning

Page 510-17

Step 7. Review Possible Activities

Preventive Activities





510 Floodplain Mgmt. Planning

Page 510-17

Step 7. Review Possible Activities

Preventive Activities

Property Protection





510 Floodplain Mgmt. Planning

Page 510-17

Step 7. Review Possible Activities

Preventive Activities

Property Protection

Natural Resource Prot





510 Floodplain Mgmt. Planning

Page 510-17

Step 7. Review Possible Activities

Preventive Activities

Property Protection

Natural Resource Prot

Emergency Services





510 Floodplain Mgmt. Planning

Page 510-17

Step 7. Review Possible Activities

Preventive Activities

Property Protection

Natural Resource Prot

Emergency Services

Flood Control





510 Floodplain Mgmt. Planning

Page 510-17

Step 7. Review Possible Activities

Preventive Activities

Property Protection

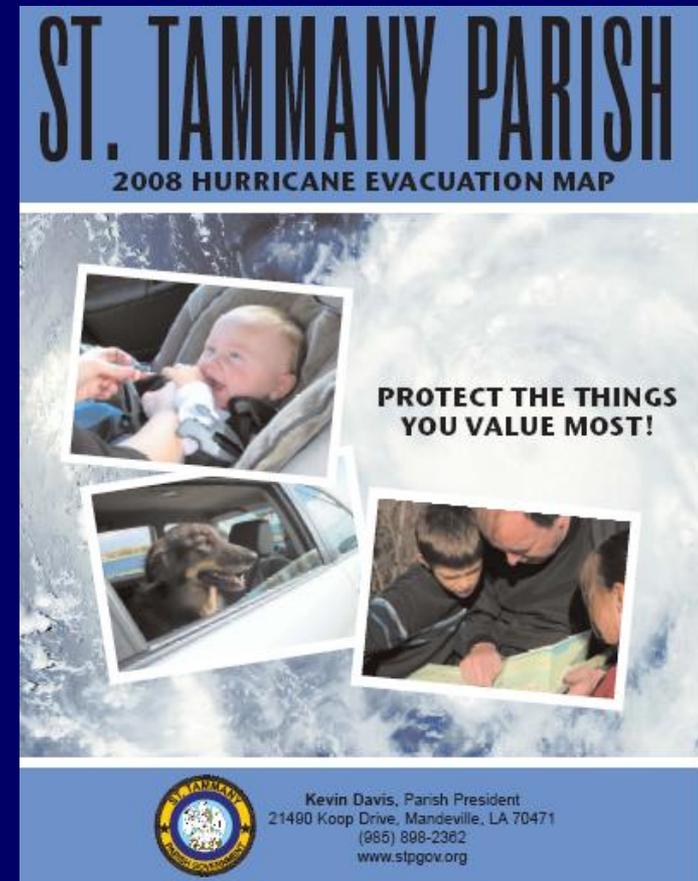
Natural Resource Prot

Emergency Services

Flood Control

Public Information

New: must assess capability to implement





510 Floodplain Mgmt. Planning

Page 510-18

Step 8. Draft an Action Plan

- Up to 45 points: actions from 5 categories
- 10 points: post-disaster mitigation procedures
- 10 points: habitat conservation plan actions
- 5 points: actions for other natural hazards

New: Must address all problems described in Step 5



510 Floodplain Mgmt. Planning

Page 510-21

Step 9. Adopt the Plan

Floodplain Management Planning

Step 10. Implement/Evaluate/Revise

- Establish procedures
- Keep the same planning committee





510 Floodplain Mgmt. Planning

Page 510-22

Repetitive Loss Area Analysis

- More in depth plan for small area(s)
- Five step planning process
 1. Advise all property owners
 2. Collect data on each building
 3. Review alternative approaches
 4. Contact other agencies
 5. Document the findings

510 Floodplain Mgmt. Planning

Page 510-25

Natural Floodplain Functions Plan

- Protects one or more natural functions of the community's floodplain. Examples:
 - A habitat conservation plan
 - A green infrastructure plan
 - A section of a community plan that includes an inventory of ecological attributes and/or the floodplain and recommends appropriate actions for protecting them.

SALMON HABITAT PROTECTION AND RESTORATION STRATEGY



WRIA-10
Puyallup Watershed

WRIA-12
Chambers/Clover Creek Watershed



520 Acquisition and Relocation

Fewer points: 520: 3,200 → 1,866

New environmental review criteria





530 Flood Protection

Page 530-2

Fewer points: 530: 2,800 → 1,540

Protection level based on ASCE 24

New environmental review criteria





530 Flood Protection

Page 530-2

Activity Description

- Credit based on:
 - number of protected buildings
 - the technique used
 - flood protection level
 - extra credit for repetitive loss buildings
- Techniques
 - Retrofitting (max 2,800 points)
 - Sewer backup protection (max 200 points)
 - Structural flood control projects (max 1,000)



530 Flood Protection

Page 530-2

Techniques not credited

1. Less than 25-year flood protection
2. Coastal structural projects
3. Levees protecting more than one property (620)
4. Unsafe dams
5. Federally-owned structural projects
6. Buildings outside regulatory floodplain (except repetitive loss buildings)
7. Projects mandated by the NFIP

610 Flood Warning



2007 Manual	Max Points		2012 Manual	Max Points
FTR - Flood threat recognition system	40	⇒	More credit for predicting areas affected	75
EWD - Emergency warning dissemination	60	⇒	More attention to prepared messages	75
ORE - Other response efforts	50	⇒	FRO - flood response operations	120
CFP - Critical facilities planning	50	⇒	Same	75
SRC - StormReady community	25	⇒	Same	20
TsunamiReady community	30	⇒	TRC - TsunamiReady Community	30
Max				395



610 Flood Warning

New 2012 Prerequisite:
Outreach to residents
and businesses on safety
measures people should
take before, during, and
after a flood.



**Don't get
swept away.**

Flash Floods Kill!

Important information on flooding, flood insurance and flood control projects from the Clark County Regional Flood Control District.

CLARK COUNTY
REGIONAL FLOOD CONTROL DISTRICT



Flash Flood Safety Facts

Flash floods in Clark County most often result from high intensity, short duration storms, typically in middle to late summer. Although flooding has been experienced in every month of the year, May through September is considered flash flood season throughout Southern Nevada.

Localized storm activity can cause severe flooding in very limited areas. The desert's unique weather and soil conditions increase the chances for flooding, and unseen rainfall in the mountains may take hours or even days to reach our valley's washes or floodways.

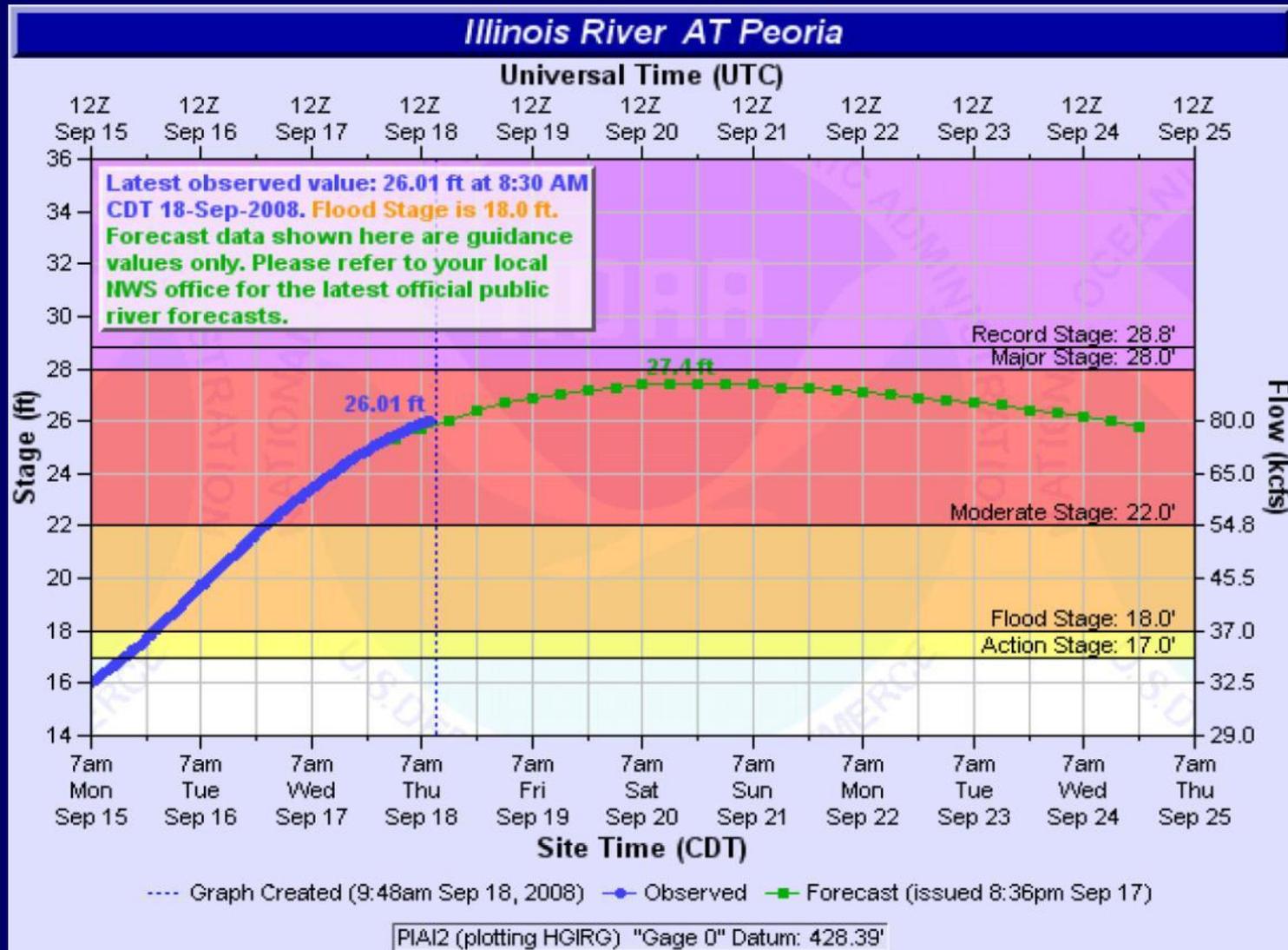
The majority of flood-related deaths in Clark County have resulted from attempts to cross flooded wash areas or streets. Children have died in dry washes from collapsing dirt. Even walking through shallow fast-moving flood water can prove fatal. Flood waters are always dangerous and should always be avoided.

Flash Floods Kill!

Flash floods can occur anywhere.
Avoid flood-prone areas.
Check your policy - flood insurance is available to everyone.
Turn around - NEVER drive through flooded areas!
Stay away from dry washes, low areas, and moving water.



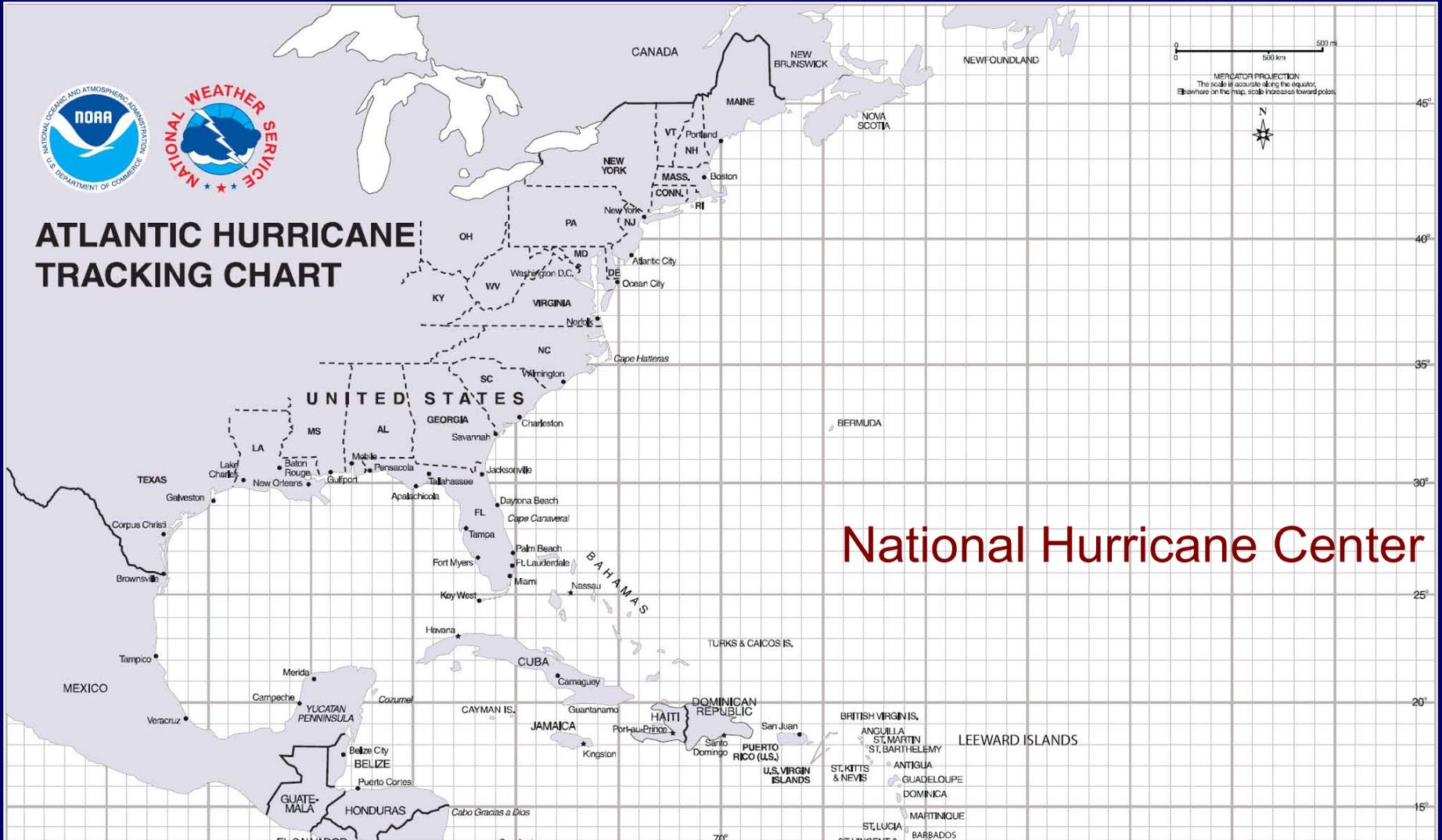
Recognize that a flood is coming



www.weather.gov/ahps/



Recognize that a flood is coming



National Hurricane Center



610 Flood Warning

Get
the
warning
out





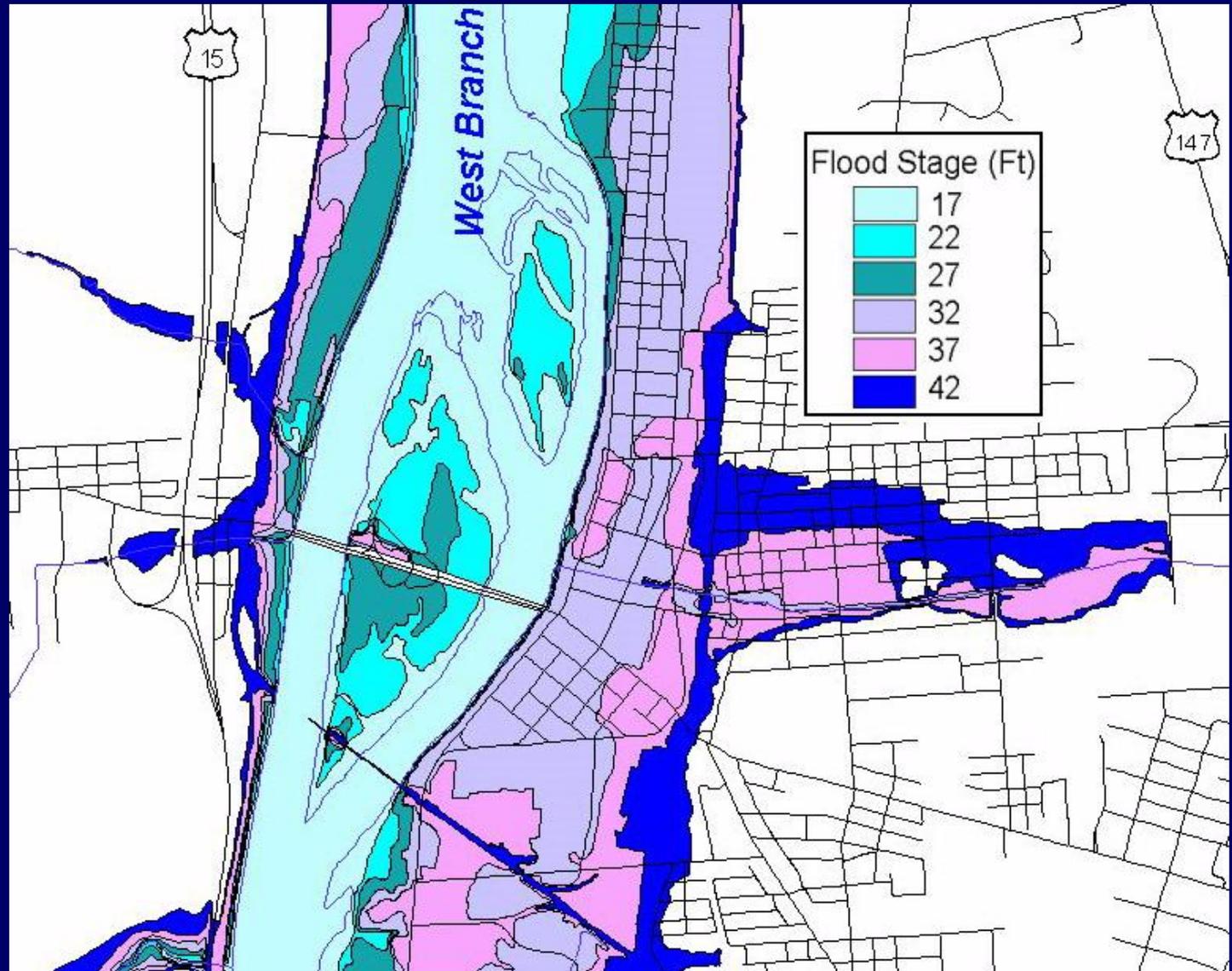
ORE – Other Response Efforts





ORE – Other Response Efforts

Flood Stage Forecast Map



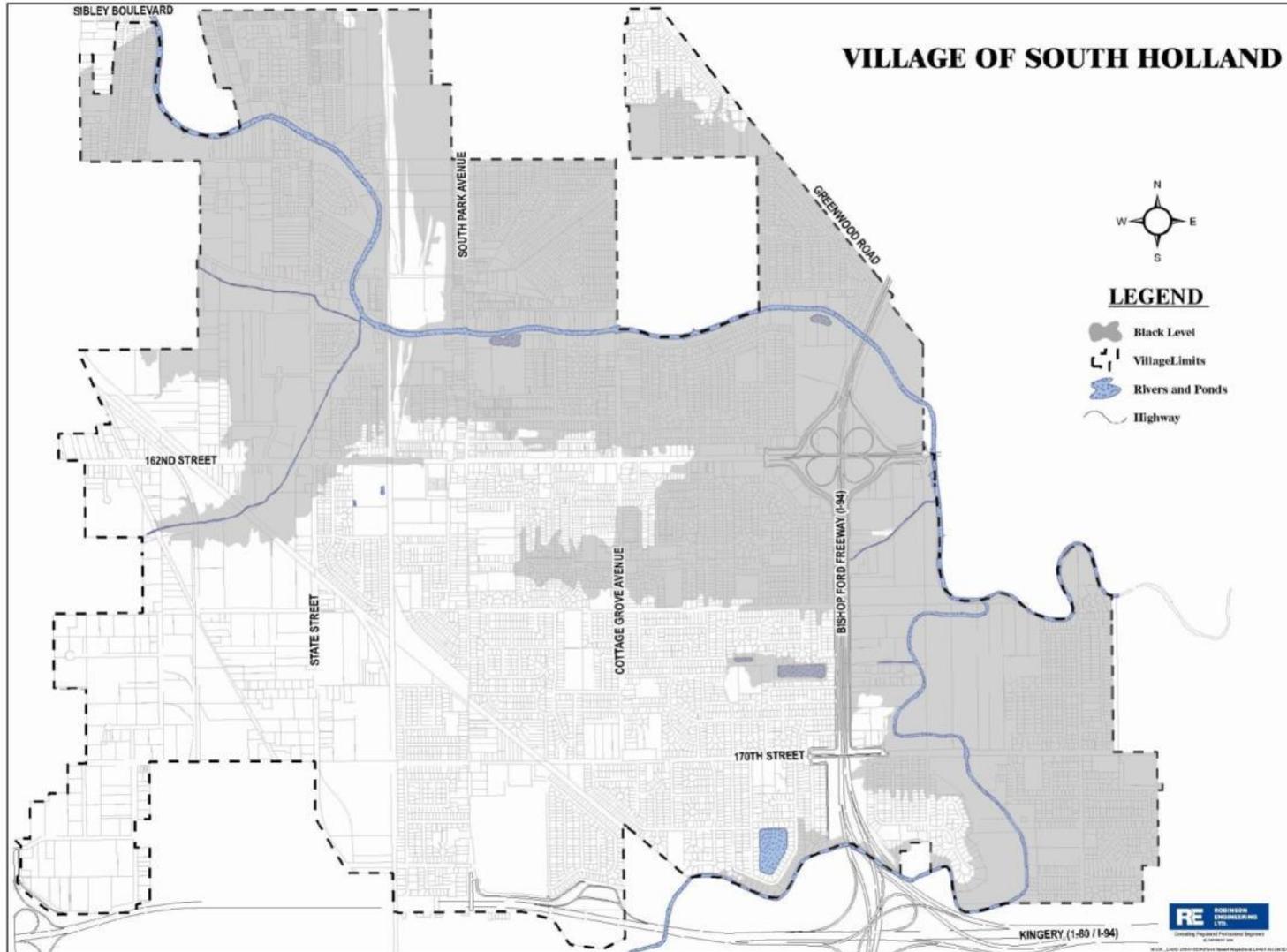


ORE – Other Response Efforts

			← 596.0 – Blue level
20.8 --	-- 595.8	11/27/90	
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 Drexel	↖ 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 Drexel	
17.7 --	-- 592.7	12/27/65	
17.0 --	-- 592.0	Flood warning issued	
16.0 --	-- 591.0	Flood watch starts	



ORE – Other Response Efforts





ORE – Other Response Efforts

			← 596.0 – Blue level
20.8 --	-- 595.8	11/27/90	
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
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19.0 --	-- 594.0	Water reaches buildings on Drexel	↖ 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	
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17.7 --	-- 592.7	12/27/65	
17.0 --	-- 592.0	Flood warning issued	
16.0 --	-- 591.0	Flood watch starts	



ORE – Other Response Efforts

← 596.0 – Blue level

Flood Response Levels

	Green	Orange	Blue	Red	Black
Stage	19.0	20.0	21.0	23.0	25.0
Elevation	594.0	595.0	596.0	598.0	600.0
Frequency (2000 FIS) *	10-year	1996	1990	100-year	
Number of homes affected **	21	83	284	1,925	4,514
Other structures affected **	11	21	30	120	239
Critical facilities affected **	0	1	3	14	38
Streets to be closed **	32	57	84	170	193

* The flood response levels do not change when new studies produce new 100-year flood levels.

** Summary data taken from Attachment D.

17.7 --	-- 592.7	12/21/05
17.0 --	-- 592.0	Flood warning issued
16.0 --	-- 591.0	Flood watch starts



ORE – Other Response Efforts

Public Works

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

Stage
Elevation
Frequency (2000 FIS) *
Number of homes affected
Other structures affected *
Critical facilities affected *
Streets to be closed **
* The flood response levels do not
** Summary data taken from Attachment E

17.7 --	-- 592.7	12/21/05
17.0 --	-- 592.0	Flood warning
16.0 --	-- 591.0	Flood watch stage

Flood Response Duties				
Flood Threat	Action	Staff	Equipment	Supplies
Green	Check in to the ICC	Director, Deputy Director, Water Foreman	Computer, telephone	
	Check flap valves on the riverbank for operability	1 employee	1 truck, binoculars	
	Set out barricades at designated locations (see Attachment E *)	3 two-person crews	3 trucks and trailers	Barricades for 32 streets
Orange	Do all lower level activities			
	Set out barricades at designated locations (see Attachment E *)	4 two-person crews	4 trucks and trailers	Barricades for 57 streets
	Contact Eisenhower School to determine if help is needed	Deputy Director	Cell phone	
Blue	Set out sand and sandbags on public property at (in order): – Pacesetter Park – Gowans Park – Veterans Park	1 operator 2 drivers	Wheel loader 2 dump trucks	8 yards of sand, 100 bags per truck
	Do all lower level activities			
	Set out barricades at designated locations (see Attachment E *)	4 two-person crews	4 trucks and trailers	Barricades for 84 streets
	Contact Gibson Chevrolet and Truck O Matic to determine if help is needed	Deputy Director	Cell phone	



CFP - Critical Facilities Planning





SRC – StormReady Community

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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



620 Levee Safety



2007 Manual	Max Points		2012 Manual	Max Points
LPL – Level Protection Level	900	⇒	Dropped as the basis for credit	
Prerequisite: Levee built before 1991 and protects to the 25 – 100-year flood		⇒	Removed, but the structure must meet FEMA’s criteria for a “levee”	
Levee maintenance		⇒	LM – Levee maintenance	97
Emergency plan		<i>new</i>	LFR – Levee failure recognition system	30
		<i>new</i>	LFW – Levee failure warning	30
		<i>new</i>	LFO – Levee failure operations plan	50
		<i>new</i>	LCF – Levee failure critical facilities planning	30
Max	900			237

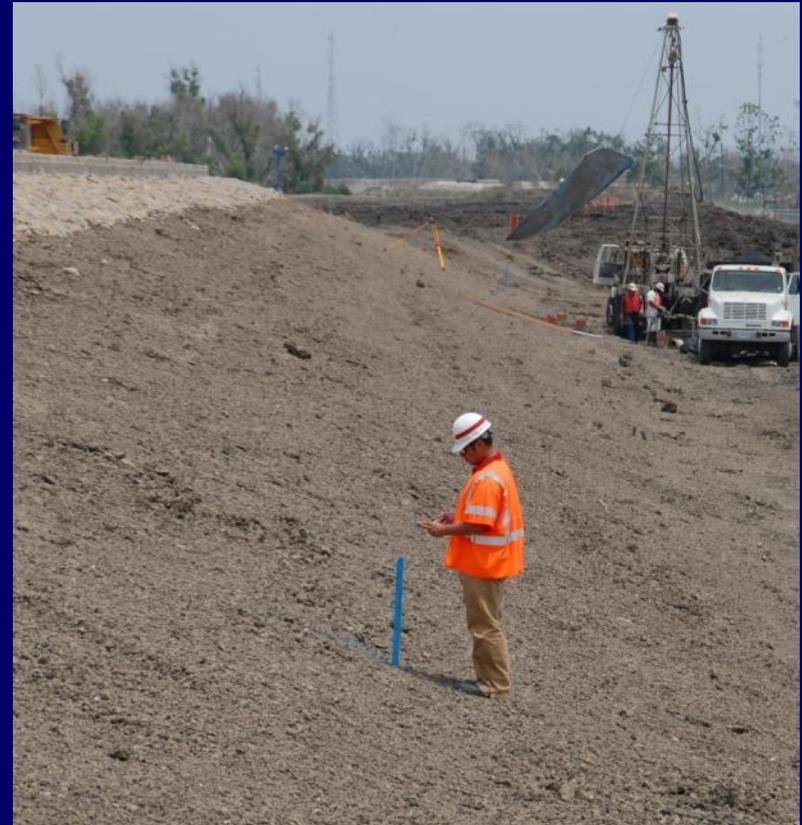
620 Levee Safety



620 Levee Safety

LM – Levee Maintenance

- Operations and maintenance plan
- Annual inspections
(report via recertification)
- Required for all other
620 credit
- No points for
accredited levees



620 Levee Safety

LOP – Levee Outreach Project

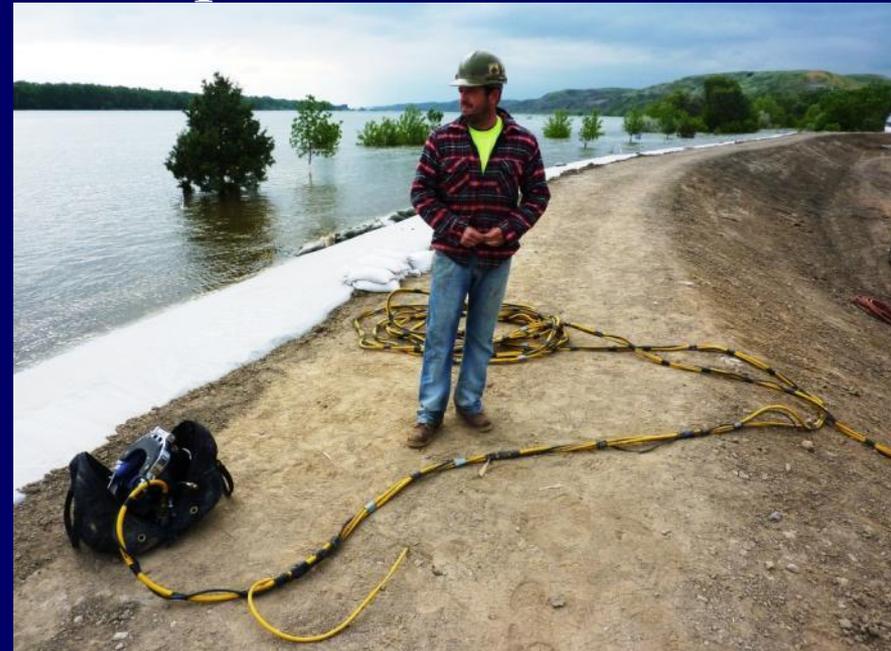
- Sent out at least once each year
- To all properties protected by the levee
Their property is subject to flooding
 - from levee overtopping or
 - from a levee failure
- Scored the same as
330 outreach projects



620 Levee Safety

Levee Failure Response Plan

- LFR – Levee failure recognition system
- LFW – Levee failure warning
- LFO – Levee failure operations plan



630 Dam Safety



Total SDS	75			45
DFP – Dam Failure Response Plan				
Dam failure recognition	25	⇒	DFR – Dam failure recognition system	26
Dam failure warning dissemination	25	⇒	DFW – Dam failure warning	26
Evacuation/critical facilities coord/notification	50	⇒	DFO – Dam failure operations plan	35
		<i>new</i>	DCF – Dam failure critical facilities planning	26
Total DFP	100			113
Max	175			158

630 Dam Safety

