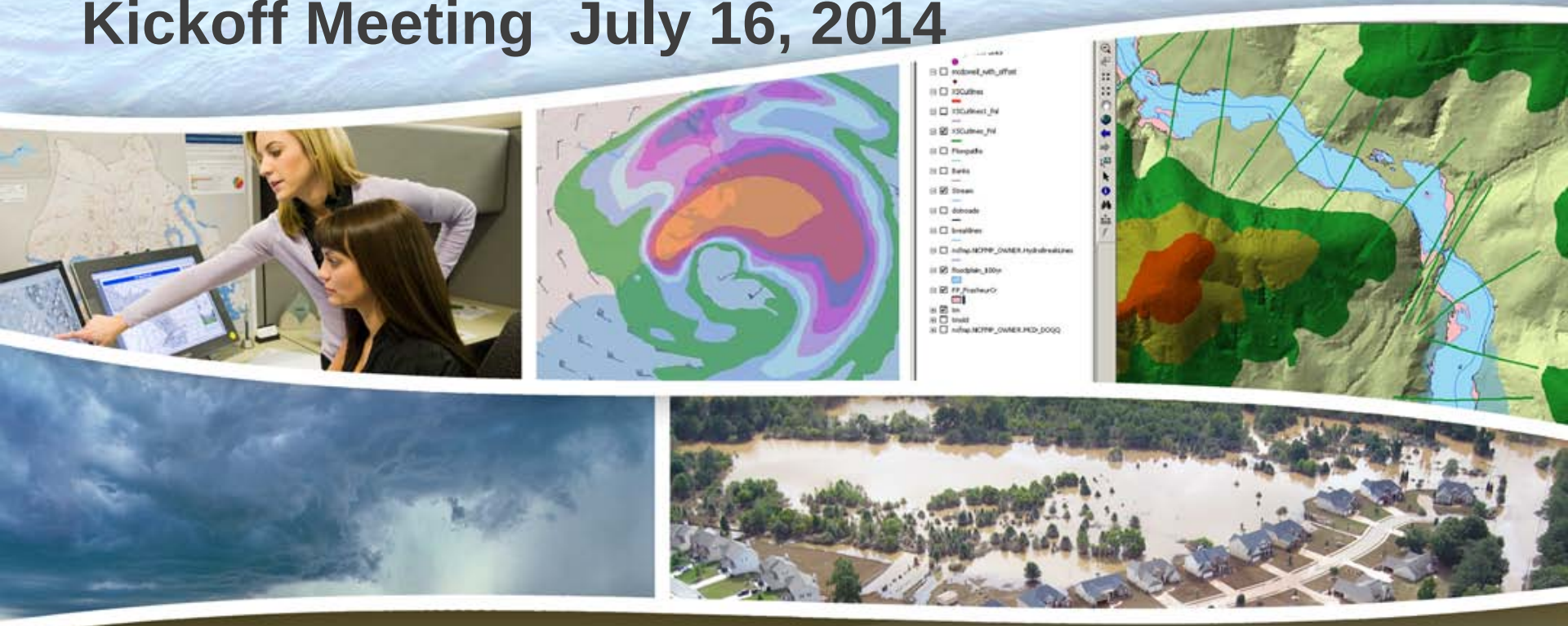
Collier County, FL

Floodplain Management Plan

Kickoff Meeting July 16, 2014



Floodplain Management Plan

- **Objectives**
  - Trends in Disasters
    - Why plan?
  - Disaster Mitigation Act (DMA) Planning Requirements
    - Collier County Local Mitigation Strategy
  - Community Rating System (CRS) Program
    - Basics of the CRS Program

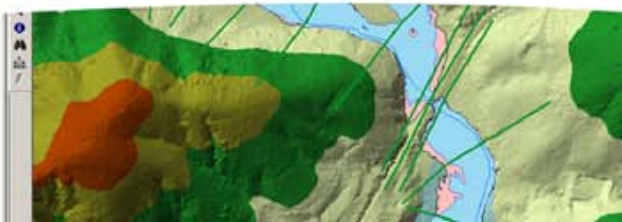
Floodplain Management Plan

- **Objectives Continued**
  - Community Rating System (CRS) Program
    - NFIP Flood Insurance Discounts
      - Policy base
    - Benefits of the CRS Program
    - 10 Step CRS Activity 510 Floodplain Management Planning Process

Floodplain Management Plan

Trends Resulting in Increased Costs for Disaster Response and Recovery

- **Population and community growth**
  - More people living in hazardous areas
  - Greater exposure to risk
    - People, infrastructure, buildings
- **More hazards**
  - Technological, civil, terrorist hazards
- **Continual increase in expenses**
- **More disaster declarations**



Floodplain Management Plan

Top 10 Natural Disasters by FEMA Relief Costs

Hurricanes Katrina / Rita (TX, LA, MS, 2005)	$20 billion +
Super Storm Sandy (NJ & NY, 2012)	$10 billion +*
Northridge Earthquake (CA, 1994)	$6.981 billion
Florida Hurricanes (4 in 2004)	$4.001 billion
Hurricane Georges (4 states + PR/VI, 1998)	$2.246 billion
Hurricane Andrew (FL, LA, 1992)	$1.813 billion
Hurricane Hugo (NC, SC, PR, VI, 1989)	$1.320 billion
Midwest Floods (9 states, 3 regions, 1993)	$1.141 billion
Tropical Storm Allison (TX + 4 others)	$1.180 billion
Hurricane Floyd (NC + 11 others, 1999)	$1.066 billion

*Estimated figures

Not including costs to OFA's, insurance co., state and local governments and individuals

Floodplain Management Plan

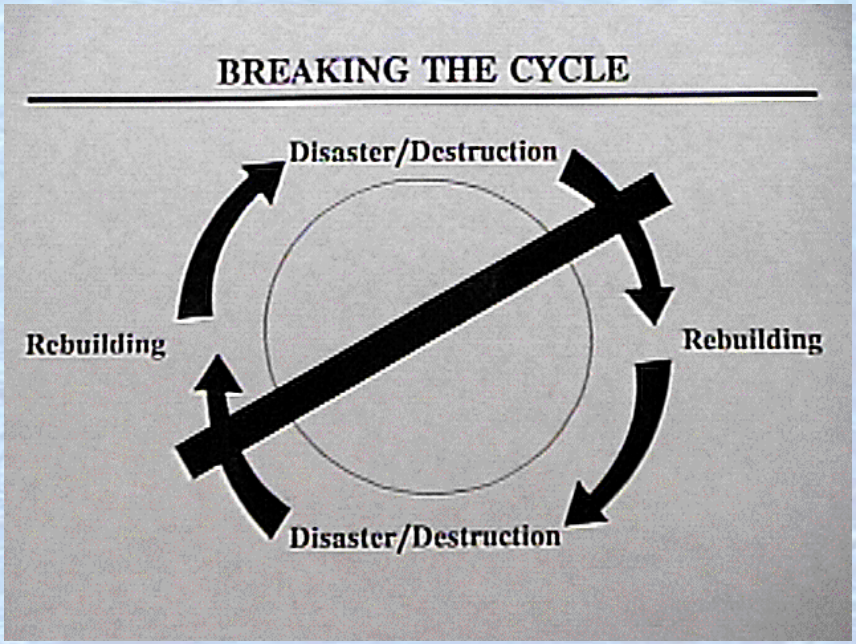
Why Addressing These Trends is a Priority

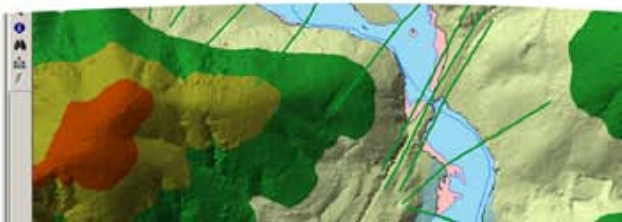
- **The spiraling costs of response and recovery**
  - The cost of “doing nothing” is too much
- **Many events are predictable and repetitive**
- **Loss reduction activities can be undertaken**
  - They work
  - They’re cost effective and environmentally sound
  - There are funds available to help
- **There are legal and moral responsibilities**

Floodplain Management Plan

Hazard Mitigation!

- **Mitigation defined: Any SUSTAINED action taken to reduce or eliminate long-term risk to human life and property from hazards**





Floodplain Management Plan

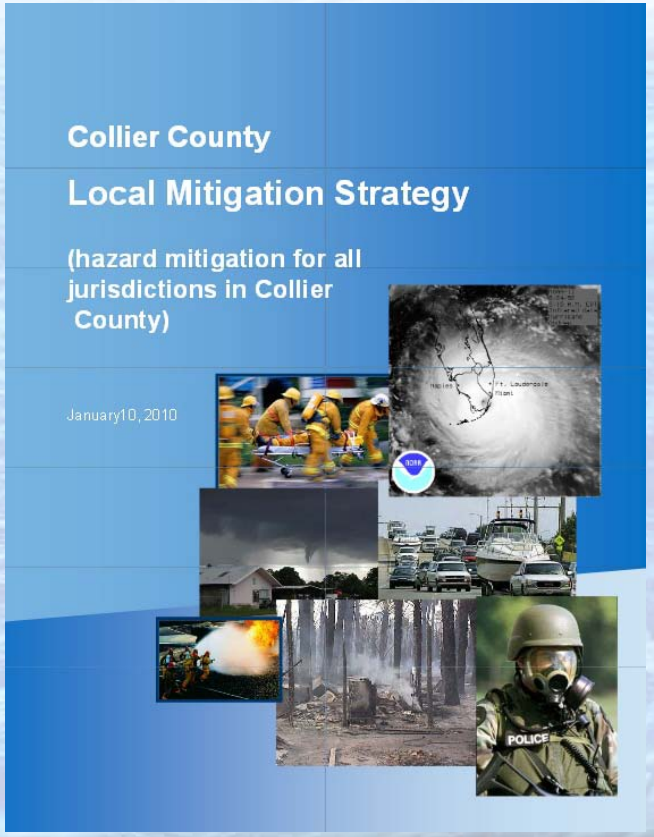
Disaster Mitigation Act of 2000 Requirements

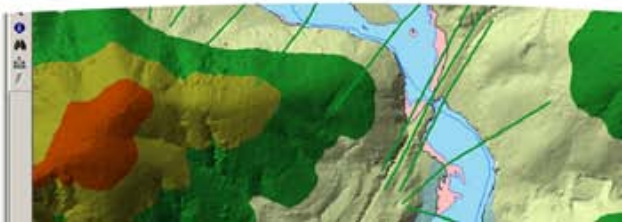
DMA Planning – What it is, and Why its Important

- Continued eligibility for mitigation funds, pre- and post- disaster funding
- Guide mitigation activities in a coordinated & economic manner
- Incorporate into other existing planning mechanisms
- Future Development: plan and build wisely
- Reduce losses
- Make community more disaster resistant

Floodplain Management Plan

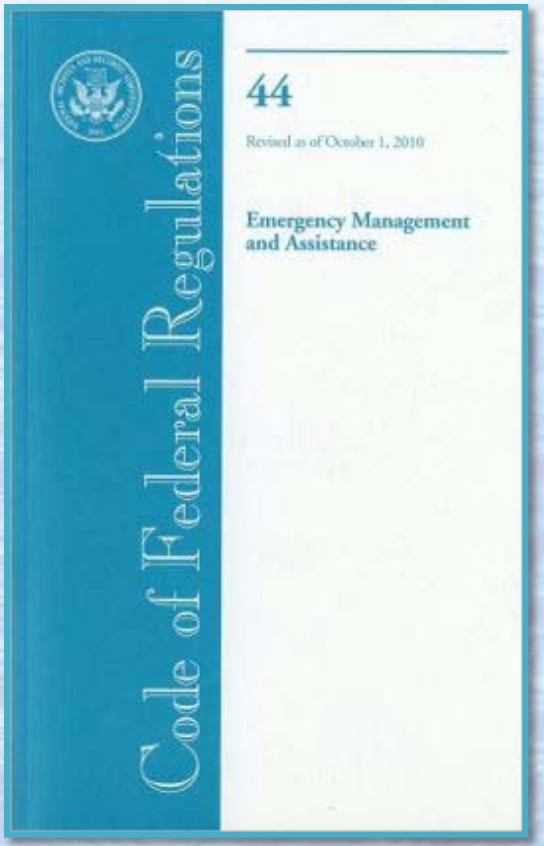
- **Collier County LMS**
  - Approved 2010
  - All hazards
  - Emergency Management focused
  - Multi-Jurisdictional
  - Flooding is primary critical hazard

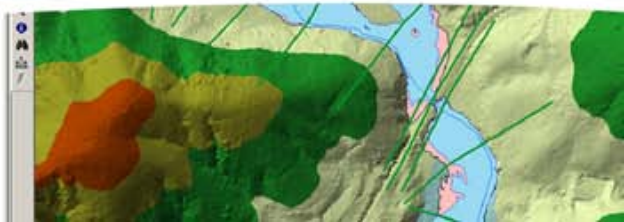




Floodplain Management Plan

- **Local Mitigation Strategy**
  - 44CFR 201.6
    - Outlines the planning requirements that local governments must follow
    - 4 phases in the planning process





Floodplain Management Plan

FEMA's DMA 4 Planning Phases

Phase 1: Organize Resources

Phase 2: Risk Assessment

Phase 3: Develop a Mitigation Plan

Phase 4: Adoption and Implementation

Floodplain Management Plan

Flood Mitigation Assistance (FMA)Program

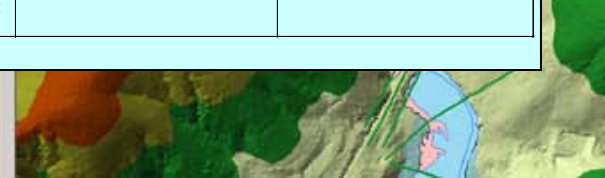
- **FEMA Federal Grant Program (administered by states)**
  - Funds Projects
    - NFIP flood related (elevation, acquisition or relocation)
  - Funds Planning
    - Flood mitigation plan or flood portion of a multi-hazard Disaster Mitigation Act (DMA: 44 CFR 201.6) plan
  - 44 CFR 78.5 (FMA Planning Criteria)

Flood Mitigation Plan

- **Planning Process**
  - Blending of the:
    - DMA
    - FMA
    - CRS
      - Completed plan will meet the requirements of all 3 FEMA Programs
      - Objective is to achieve a high number of CRS credit points under Activity 510

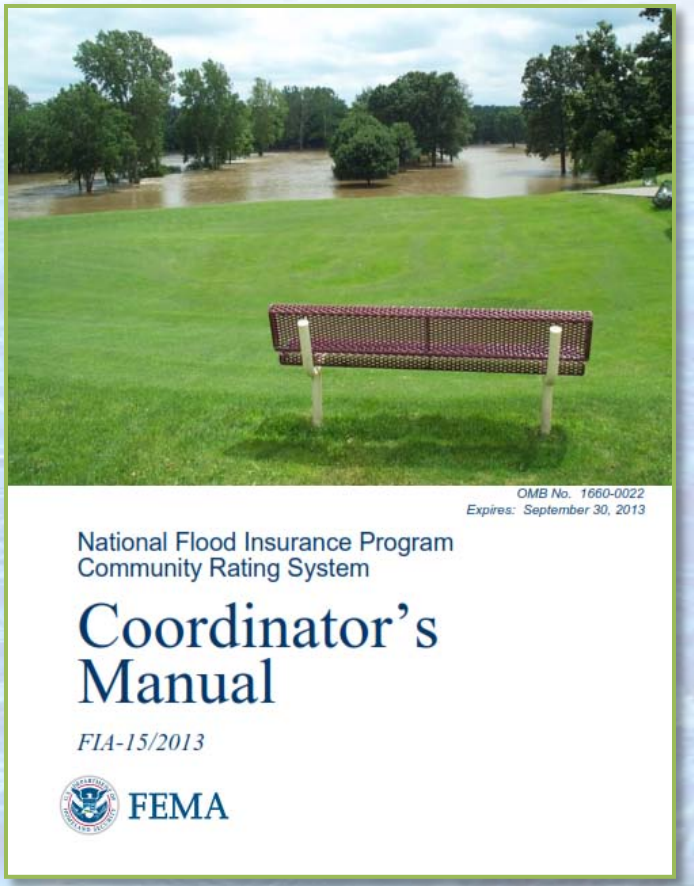
FEMA Phases	Hazard Mitigation Grant and Pre-Disaster Mitigation Grant Programs (DMA, 44 CFR 201)	Flood Mitigation Assistance Program (44 CFR 78.5)	Community Rating System Floodplain Management Planning (10-Step Process)
Phase I Organize Resources	Coordination among agencies	Coordinate with other agencies or organizations	Organize to prepare the plan
	Integration with other planning efforts	Involve the public, including a description of the planning process. Public involvement may include workshops, public meetings, or hearings	Coordinate with other agencies
	Involve public throughout the planning process		Involve the public
Phase II Assess Risks	Identify all hazards	Flood hazard area inventory that identifies the flood risk, including estimates of the number and types of structures at risk and repetitive-loss properties	Assess the (flooding) hazard
	Profile hazard events		
	Assess vulnerability	Problem identification, including a description of the existing flood hazard, the extent of flood depth and damage potential, and the applicant's floodplain management goals	Assess the problem
	Estimate potential losses		
Phase III Develop the Mitigation Plan	Documentation of planning process	Review of possible mitigation actions, including the identification and evaluation of cost-effective and technically feasible mitigation actions	Set goals
	Capability assessment		Review possible activities
	Develop hazard mitigation goals		Draft an action plan
	Identification and analysis of mitigation measures		
	Funding sources		
Phase IV Implement and Monitor Progress and Project Management/ Project Tracking	Adoption	Documentation of the formal plan adoption by the legal entity submitting the plan (e.g., governor, mayor, county executive)	Adopt the plan
	Implementation of mitigation measures		Implement, evaluate, and revise the plan
	Monitoring, evaluating, and updating the plan		
	Continued public involvement		

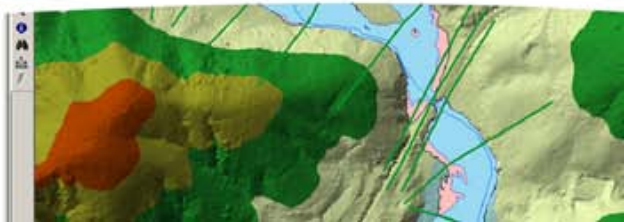


Community Rating System

- **FEMA NFIP Voluntary Program**
  - Based on ISO Fire Insurance Rating Program
  - 10 Classes
  - Point based
  - Higher standards
  - 5 % premium discount for every 500 points





Community Rating System

Table 110-1. CRS classes, credit points, and premium discounts.			
CRS Class	Credit Points (cT)	Premium Reduction	
		In SFHA	Outside SFHA
1	4,500+	45%	10%
2	4,000–4,499	40%	10%
3	3,500–3,999	35%	10%
4	3,000–3,499	30%	10%
5	2,500–2,999	25%	10%
6	2,000–2,499	20%	10%
7	1,500–1,999	15%	5%
8	1,000–1,499	10%	5%
9	500–999	5%	5%
10	0–499	0	0

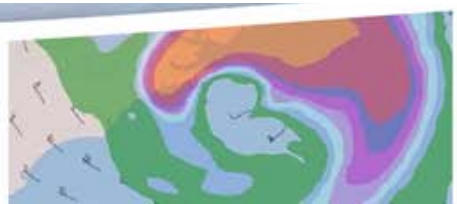
SFHA: Zones A, AE, A1–A30, V, V1–V30, AO, and AH

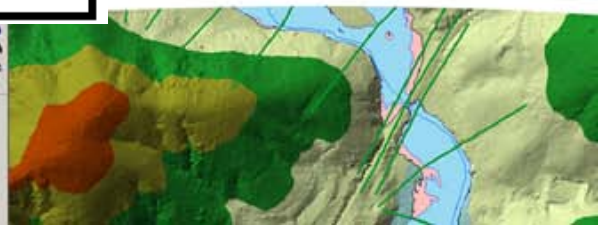
Outside the SFHA: Zones X, B, C, A99, AR, and D

Preferred Risk Policies are not eligible for CRS premium discounts because they already have premiums lower than other policies. Preferred Risk Policies are available only in B, C, and X Zones for properties that are shown to have a minimal risk of flood damage.

Some minus-rated policies may not be eligible for CRS premium discounts.

Premium discounts are subject to change.



Community Rating System

- **Classification 6**
  - 2,176 points
  - 20 % in SFHA
  - 10% in X and C-Zones

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

Community Rating System

FEMA

Community Information System

Release 4.06.02.00, 10/25/2013 -- Build 001, Skip Na

CRS What-If

Application | CRS Coord. | 2ndPOC | Activity Points | Chronology | Comments | What If | GTA

Community: COLLIER COUNTY * **State:** FLORIDA
County: COLLIER COUNTY **CID:** 120067

Current CRS Class = 6 *[Printable Version]*

CRS Class		TOTAL	SFHA *	X-STD/AR/A99 **	PRP ***
	PIF	71,818	51,008	1,019	19,791
	PREMIUM	$33,847,538	$24,719,870	$883,967	$8,243,701
	AVERAGE PREMIUM	$471	$485	$867	$417
09	Per Policy	$22	$30	$48	$0
	Per Community	$1,594,090	$1,544,981	$49,109	$0
08	Per Policy	$44	$61	$48	$0
	Per Community	$3,139,122	$3,090,014	$49,109	$0
07	Per Policy	$65	$91	$48	$0
	Per Community	$4,684,104	$4,634,995	$49,109	$0
06	Per Policy	$87	$121	$96	$0
	Per Community	$6,278,246	$6,180,027	$98,218	$0
05	Per Policy	$109	$151	$96	$0
	Per Community	$7,823,227	$7,725,009	$98,218	$0
04	Per Policy	$130	$182	$96	$0
	Per Community	$9,368,208	$9,269,990	$98,218	$0
03	Per Policy	$152	$212	$96	$0
	Per Community	$10,913,241	$10,815,022	$98,218	$0
02	Per Policy	$173	$242	$96	$0
	Per Community	$12,458,222	$12,360,004	$98,218	$0
01	Per Policy	$195	$273	$96	$0
	Per Community	$14,003,203	$13,904,985	$98,218	$0

* SHFA (Zones A, AE, A1-A30, V, V1-V30, AO, and AH): Discount varies depending on class.

** SFHA (Zones A99, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, and AR/AO): 10% discount for Classes 1-6; 5% discount for Classes 7-9.

*** Preferred Risk Policies are not eligible for CRS Premium Discounts.





Community Rating System

Collier County

<u>$485 Average Annual Premium – 51,008 Polices</u>

– Within the SFHA: 20% $121 Savings

<u>$867 Average Annual Premium – 1,018 Policies</u>

– Outside the SFHA: 10% $96 Savings

Community Rating System

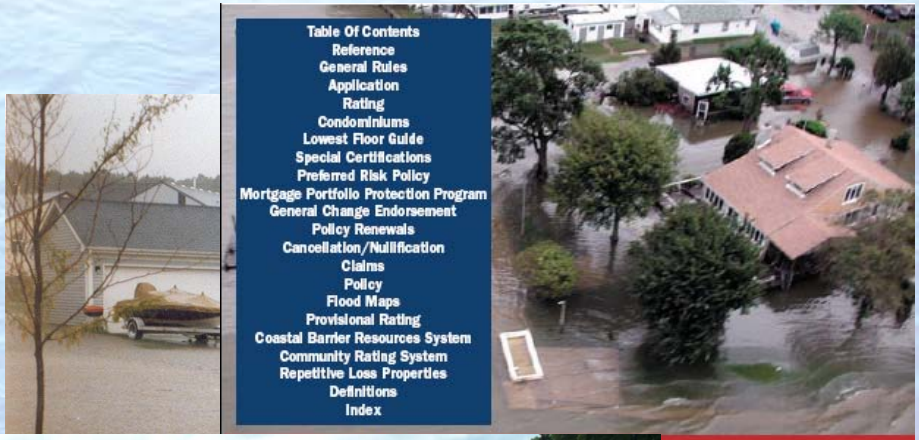
- **Basics**

- ✓ **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
  - ✓ Lori Lehr

Community Rating System

2013 Goals of the CRS Program

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.



Community Rating System

- **2013 Schedule**
  - New credit points
  - New documentation criteria
  - 19 floodplain management activities
  - 4 Series of Activities
    - 300 - Public Information
    - 400 – Mapping and Regulations
    - 500 - Flood Damage Reduction
    - 600 – Warning and Response

Community Rating System

Table 110-2. Credit points awarded for CRS activities.				
Activity	Maximum Possible Points [1]	Maximum Points Earned [2]	Average Points Earned [3]	Percentage of Communities Credited [4]
300 Public Information Activities				
310 Elevation Certificates	116	116	46	100%
320 Map Information Service	90	70	63	93%
330 Outreach Projects	350	175	63	90%
340 Hazard Disclosure	80	57	14	68%
350 Flood Protection Information	125	98	33	92%
360 Flood Protection Assistance	110	65	49	41%
370 Flood Insurance Promotion [5]	110	0	0	0%
400 Mapping and Regulations				
410 Floodplain Mapping	802	585	65	50%
420 Open Space Preservation	2,020	1,548	474	68%
430 Higher Regulatory Standards	2,042	784	214	98%
440 Flood Data Maintenance	222	171	54	87%
450 Stormwater Management	755	540	119	83%
500 Flood Damage Reduction Activities				
510 Floodplain Mgmt. Planning	622	273	123	43%
520 Acquisition and Relocation	1,900	1,701	136	23%
530 Flood Protection	1,600	632	52	11%
540 Drainage System Maintenance	570	449	214	78%
600 Warning and Response				
610 Flood Warning and Response	395	353	144	37%
620 Levees [6]	235	0	0	0%
630 Dams [6]	160	0	0	0%

1 The maximum possible points are based on the 2013 Coordinator's Manual.

2 The maximum points earned are converted to the 2013 Coordinator's Manual from the highest credits attained by a community as of October 1, 2011. Growth adjustments and new credits for 2013 are not included.

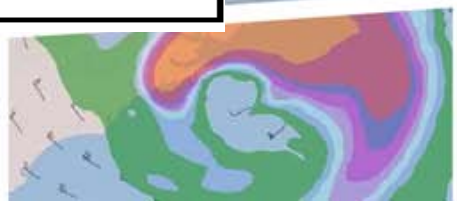
3 The average points earned are converted to the 2013 Coordinator's Manual, based on communities' credits as of October 1, 2011. Growth adjustments and new credits for 2013 are not included.

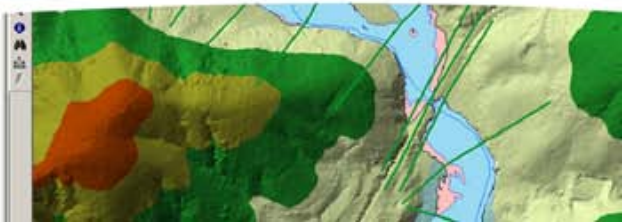
4 The percentage of communities credited is as of October 1, 2011.

5 Activity 370 (Flood Insurance Promotion) is a new activity in 2013. No community has earned these points.

6 Activities 620 and 630 were so extensively revised that the old credits cannot be converted to the 2013 Coordinator's Manual.

- **Floodplain Management Planning Activity 510**
  - Current Plan Credit in FEMA's CIS
    - 127 points
  - Maximum credit in 2013 CRS Manual
    - 382 points

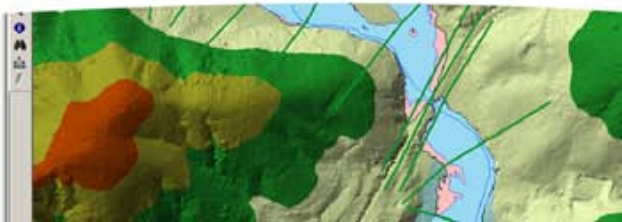




Community Rating System

- **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



Floodplain Management Plan

- **The purpose of a flood mitigation plan is to reduce potential losses from future disasters**

Floodplain Management Plan

CRS and DMA Planning Processes

Phase I: Organize Resources

1) Get organized
2) Plan for public involvement
3) Coordinate with other departments and agencies

Phase II: Risk Assessment

4) Identify the hazard(s)
5) Assess the risks

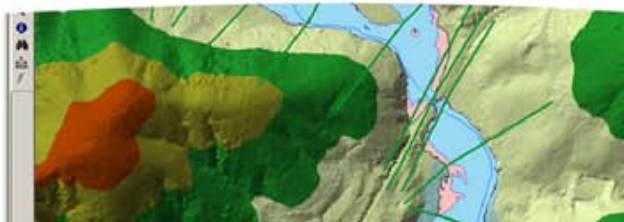
Phase III: Develop a Mitigation Plan

6) Set planning goals
7) Review mitigation alternatives
8) Draft and action plan

Phase IV: Adoption and Implementation

9) Adopt the plan
10) Implement the plan, evaluate its worth, and revise as needed



Floodplain Management Plan

Phase I: Organize Resources

1) Get organized
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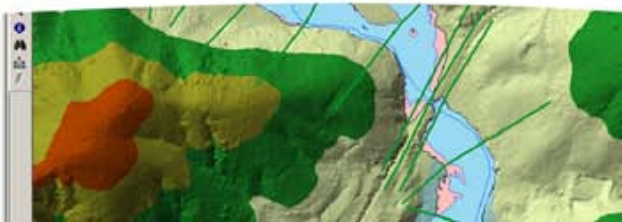
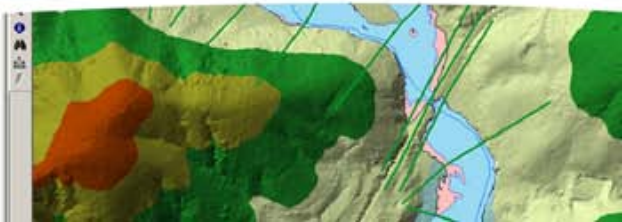


Floodplain Management Plan

Get Organized – Establishing the Flood Mitigation Planning Committee (FMPC)

- **Local Government**
  - Emergency Services
  - Community Development
  - Public Works
  - Facilities
  - GIS
  - Engineering
  - Parks & Recreation
  - Floodplain Management
  - Police
  - Fire

Other stakeholders: local, state, and federal agencies, public, neighboring jurisdictions



Floodplain Management Plan

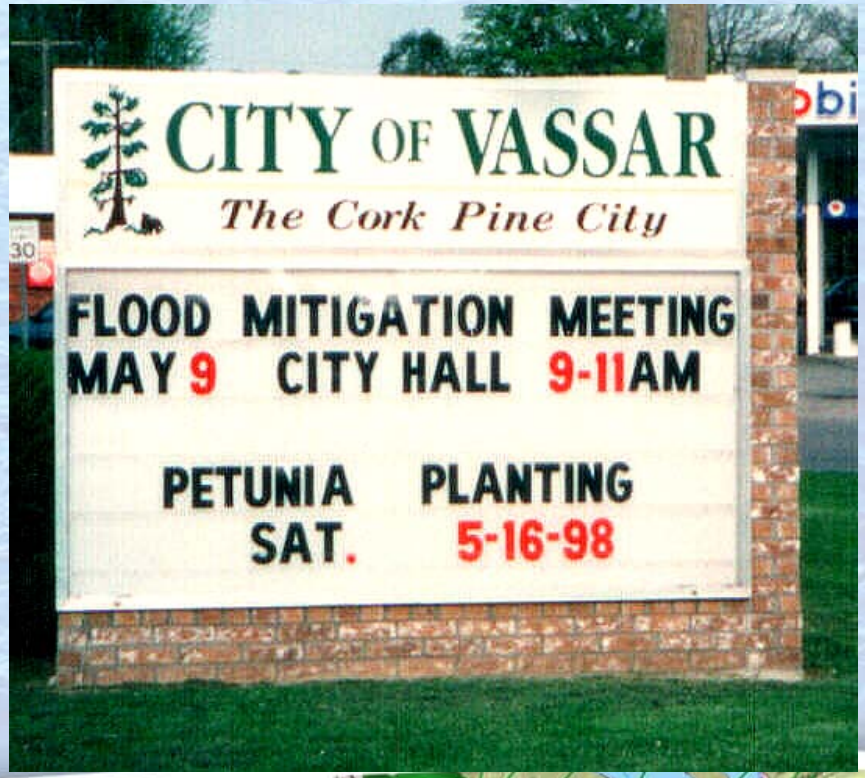
2) Plan for Public Involvement – *Advantages*

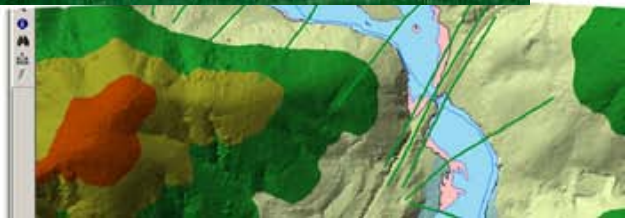
- Solutions fit local needs better
- Strengthens local support for the plan
- More realistic plan
- Avoiding misunderstandings
- Sharing the workload
- All special interests are considered, avoids being “blind-sided”
- It is a fair process
- Generates new ideas
- Planning and public involvement are DMA requirements

Floodplain Management Plan

2) Plan for Public Involvement – *Options*

- Include on planning team
- Post data on websites
- Develop press releases
- Host public input meetings
  - Facilitated meetings
- Hold “neighborhood” meetings
  - On their “turf”
  - Facilitates public involvement
- Review ideas, get feedback
- Use questionnaires
  - Straw policies, mark in private or at public meetings

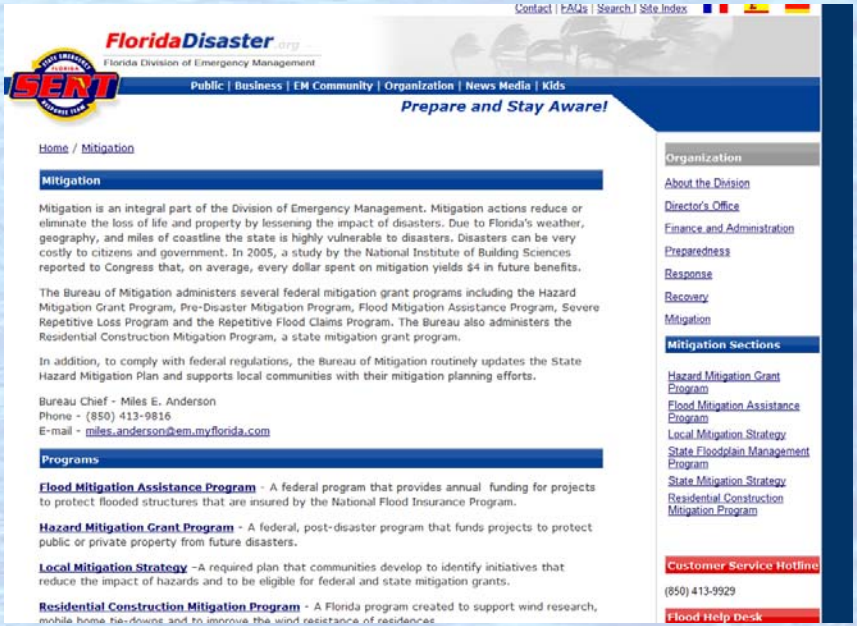




Floodplain Management Plan

3) Coordinate with Other Departments & Agencies

- FDEMA State Hazard Mitigation Officer
- FEMA Hazard Mitigation Officer
- FL NFIP Coordinator
- US Army Corps of Engineers
- Department of Marine Resources
- Local Civil Defense
- NOAA
- National Weather Service
- Red Cross
- Neighboring Jurisdictions



Phase II: Risk Assessment

Phase II: Risk Assessment

Three Components

4) **Hazard Identification (what can happen here?)**
5) **Vulnerability Assessment (what will be affected?)**
   – Capability Assessment (how prepared are we?)

Floodplain Management Plan

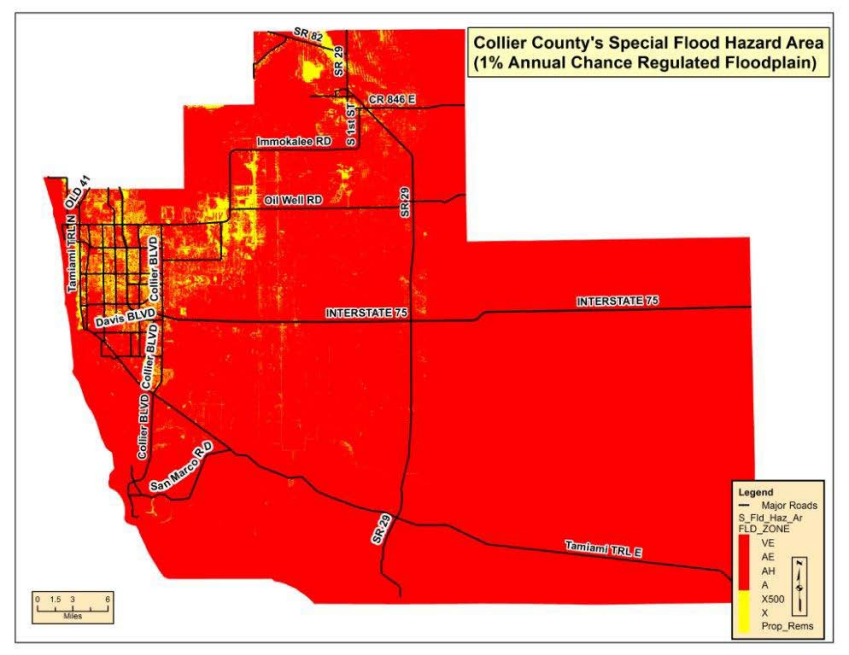
4) Hazard Identification – *Has it Happened Here Before?*

- Identify all possible hazards affecting the planning area
- Profile the hazards
- Information sources:
  - Past disaster declarations
  - Planning team / community members
  - Existing plans and reports
  - GIS-based maps and data
  - Internet websites and databases
  - Newspaper / historical records
  - Local, state, and federal experts
  - Insurance data

Floodplain Management Plan

4) Hazard Identification – *Profile the Hazards*

- Hazard / Problem description
- Hazard extent (maps)
- Past occurrences
- Seasonal patterns
- Speed of onset / duration
- Magnitude / secondary effects
- Significance
- Frequency / likelihood of future occurrences



Floodplain Management Plan

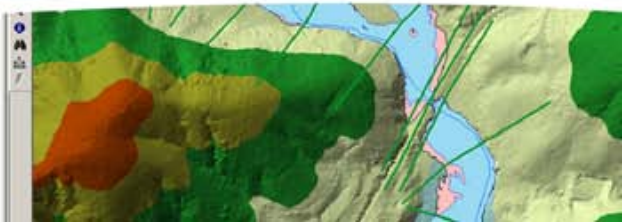
- **Flood Hazard Profile**

- Climate Change and Sea Level Rise
- Coastal/Canal Bank Erosion
- Dam/Levee Failure
- Flood: 100/500 year
- Flood: Stormwater/ Localized Flooding
- Hurricane and Tropical Storms (including Storm Surge)

Floodplain Management Plan

4) Hazard Identification – *Profile the Hazards*

- What
- Where
- When
- How
- How Often



Floodplain Management Plan

Capability Assessment – *How prepared are we?*

- Conduct an inventory of communities existing and proposed policies, programs, and ordinances that may affect its vulnerability to hazards.
- Evaluate the effectiveness of each for mitigation purposes. Note any gaps, shortfalls or conflicts associated with their design, enforcement of implementation. Identify any special opportunities.
- Determine the communities' technical and fiscal abilities to implement mitigation initiatives. Include ability to attract and leverage funding.

Defining Gaps

Floodplain Management Plan

Phase III: Develop a Mitigation Plan

6) Set planning goals

7) Review mitigation alternatives

8) Draft an action plan

3.0 LOCAL MITIGATION STRATEGY
GOALS AND OBJECTIVES

The Local Mitigation Strategy Working Group (LMSWG) developed these goals and objectives based on their communities' comprehensive plans and codes. The Working Group adopted these as the Local Mitigation Strategy goals. They are up for review annually and can be modified based on a quorum vote of LMSWG members. (NOTE: See also Annex J of this LMS, for the 2008 Collier County Floodplain Management Plan. In that plan see paragraph 7.8 (Setting Goals) for a more detailed listing of goals adopted by the Floodplain Management Planning Committee specific to reducing the County's flood hazards exposure.)

GOAL 1

Collier County shall make every reasonable effort to reduce the vulnerability and exposure of its residents and guests by protecting lives and property from the effects of natural, man made and technological disasters.

Objective 1.1: Maximize the protection of the public's health, safety and welfare from natural, manmade and technological disasters.

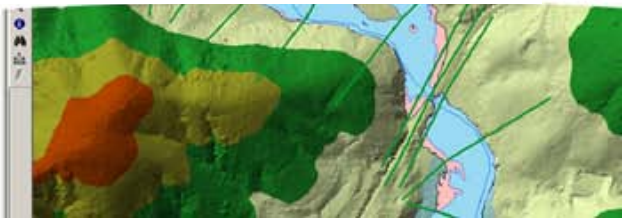
- Hazard Mitigated: All Hazards

Objective 1.2: Reduce the potential loss of personal and public property caused by natural, manmade and technological disasters.

- Hazard Mitigated: All Hazards

Objective 1.2.1: Collier County shall make every effort to reduce the number of repetitive loss properties within its boundary.

- Hazard Mitigated: Flood, Tropical Cyclone



Floodplain Management Plan

6) Set Planning Goals – *Using the risk assessment*

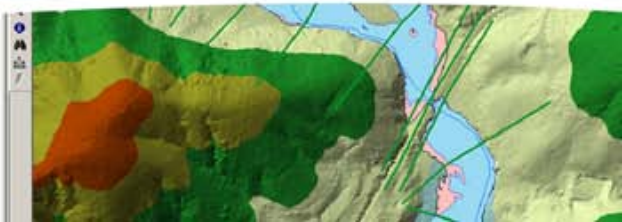
- **Areas of extreme vulnerability**
  - Estimated losses
  - At-risk existing facilities
  - At-risk critical facilities
  - At-risk cultural and natural resources
- **Goals from other existing plans**
- **Other opportunities**
  - At-risk areas slated for future development
  - At-risk facilities slated for future development
  - Repetitive losses
  - Public education
  - Increased insurance coverage

Floodplain Management Plan

7) Review Mitigation Alternatives

- **Hazard Strategies**
  - Alter the hazard
  - Avert the hazard
  - Adapt to the hazard
  - Avoid the hazard
- **Mitigation Categories**
  - Prevention
  - Property Protection
  - Emergency Services
  - Structural Projects
  - Natural floodplain Functions
  - Outreach Projects



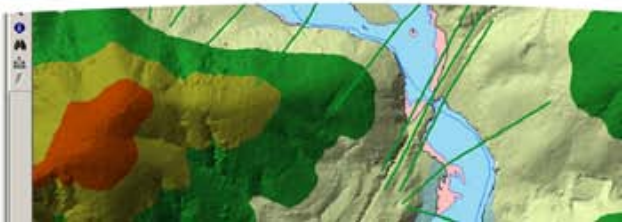



Floodplain Management Plan

Hazard Mitigation Strategies

Alter the Hazard

- “Seeding” clouds to increase rain or snow
- “Prescribed Burns” to manage forests
- “Avalanche Guns” to trigger events in a controlled manner
- Draining lakes behind weakened dams

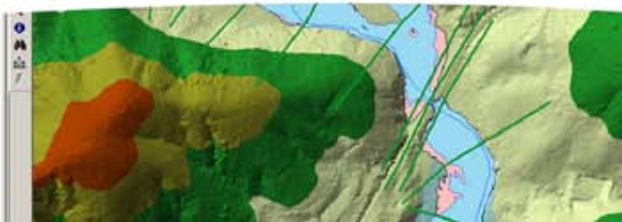


Floodplain Management Plan

Hazard Mitigation Strategies

Avert the Hazard

- Dams and levees
- Floodwalls
- Debris basins
- Channels and culverts
- Fire Breaks
- Seawalls and breakwaters

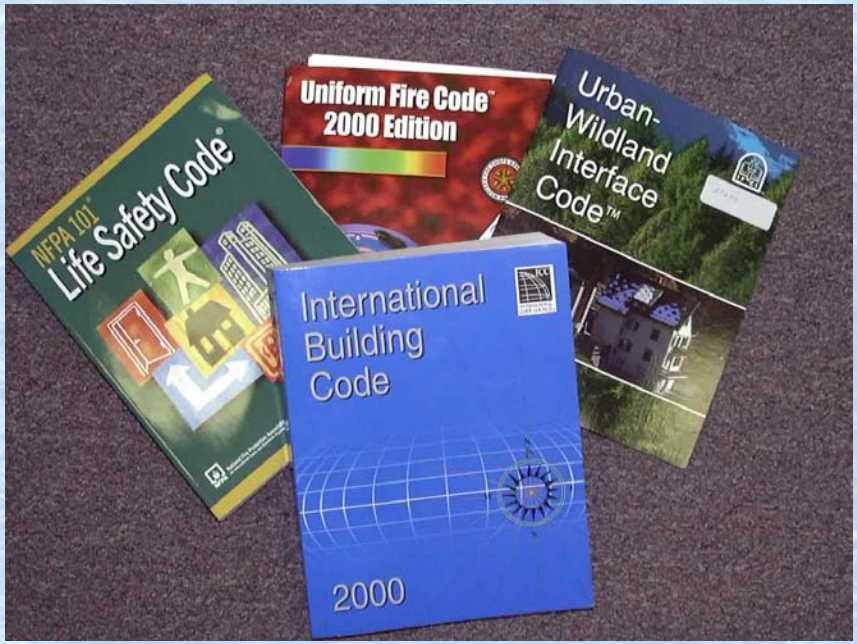


Floodplain Management Plan

Hazard Mitigation Strategies

Adapt to the Hazard

- Building codes
- Construction standards
- Zoning and land-use
- Design standards
- Warning systems
- Safe rooms



Floodplain Management Plan

Hazard Mitigation Strategies

Avoid the Hazard

- Acquisition
- Relocation
- Open-space
- Land-use
- Natural resource protection

Floodplain Management Plan

Review of Mitigation Alternatives – ***Criteria for selecting mitigation measures***

- **Will it work?**
- **Is it cost-beneficial?**
- **Is it affordable?**
- **Is it legal?**
- **Is it fair?**
- **Do people want it?**
- **Is funding available?**
- **Are there administrative burdens?**
- **Is it politically acceptable to community leaders?**
- **Is it environmentally sound?**

Floodplain Management Plan

8) Draft an Action plan

- Who is going to do it? (Responsible Department)
- When is it going to be completed?
- How is it going to be financed?

Floodplain Management Plan

Phase IV: Adopt and Implement the Plan

9) Adopt the Plan

- Official Adoption by Board of Commissioners
- Public input before adoption

10) Implement the Plan

- Assign an overall project manager
- Integrate actions into staff work plans
- Monitor changes in vulnerability
- Report on progress, publicize successes
- Revise the plan as necessary (every 5 years for CRS and DMA)




Floodplain Management Planning