



# Sacramento County

Local Hazard Mitigation Planning Project  
Kickoff Meeting – September 15, 2020

# Four Phases of Emergency Management



# Four Phases of Emergency Management

## Preparedness

- Increases a community's ability to respond when a disaster occurs
- NIMS: “a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response.”

## Response

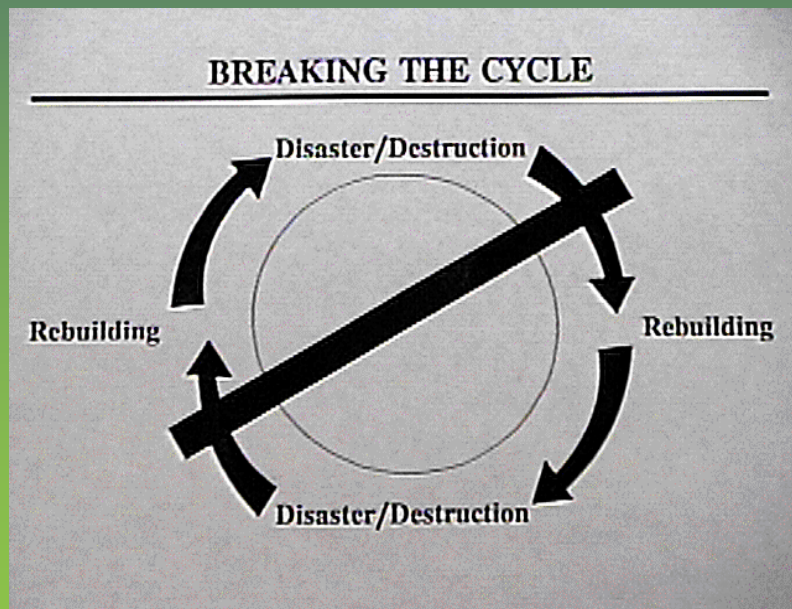
- Response actions carried out immediately before, during, and after a hazard impact are aimed at saving lives, reducing economic losses, alleviating suffering, and limiting unfavorable outcomes

## Recovery

- Actions taken to return a community's systems and activities to normal
- Restoration of services/repair of physical, social and economic damages

# Hazard Mitigation

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



Effective mitigation efforts can break the cycle of disaster damage, reconstruction, and repeated damage

# Hazard Mitigation

- Measures that reduce the chance of an disaster happening, or reduce the damaging effects of unavoidable disasters
- Reduces loss of life, property damage, and economic hardship
- Increases communication and cooperation within the community through the planning process
- Allows communities to minimize post-disaster disruptions and recover more rapidly
- Long-term fix



# Why Hazard Mitigation?

- More hazards
- More people living in hazard-prone areas
- More disaster declarations
- Increasing costs of disaster response and recovery is unmanageable



# Hazard Mitigation Planning

## Disaster Mitigation Act of 2000

- Continued eligibility for mitigation funds, pre- and post- disaster
- 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



# Hazard Mitigation Planning

## Local Hazard Mitigation Plan

- a single or multi-jurisdictional planning document that identifies and profiles specific hazard risks & vulnerabilities and then addresses & prioritizes potential mitigation projects that can reduce those specific risks and vulnerabilities.



# FEMA's 4-Phase-10 Step DMA/CRS Planning Process

## 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: Mitigation Strategy

- 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

# Phase I: Organize Resources

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



# 1) Get Organized – To Prepare the Plan

- Obtain communities' commitment to mitigation
- Determine and assign staff
- Establish your mitigation planning team
  - County Departments
  - Other stakeholders: local, city, state, and federal agencies, public, neighboring jurisdictions
- County Departments
  - Planning and Building
  - Public Works
  - GIS Mapping
  - Parks and Recreation
  - Fire
  - Economic and Community Development
  - Floodplain Management
  - Emergency Services
  - Facilities
  - Engineering
  - Police

## 2) Plan for Public Involvement – Options

- Include on planning team
- Post data on websites
- Develop press releases
- Host public input meetings
- Hold “neighborhood” meetings
  - On their “turf”
  - Facilitates public involvement
  - Review ideas, get feedback
- Use surveys/questionnaires

**Public Meeting**



**Take our survey online now!**

MITIGATION ACTIVITIES FREQUENTLY  
TAKEN BY THE PUBLIC



Raised furnace or  
water heater  
**48%**



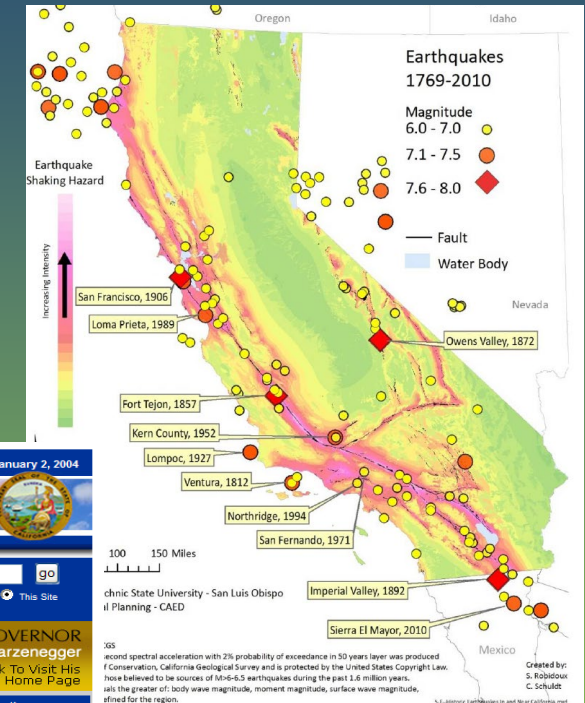
Bought flood  
insurance  
**23%**



Sealed basement  
walls  
**26%**

# 3) Coordinate with Other Departments & Agencies

- Cal OES State Hazard Mitigation Officer
- FEMA Region IX
- State Flood Insurance Coordinator
- US Army Corps of Engineers
- US Geological Survey
- Caltrans
- Cal Fire
- DWR
- National Weather Service
- Red Cross
- Neighboring Jurisdictions



The screenshot shows the homepage of the California GIS Council as of Friday, January 2, 2004. The page features a "Welcome to California" banner with a scenic image. On the left, there are navigation links for "GIS Council Home", "Council Members", "Meetings & Events", "Documents", and "Regional GIS Councils". Below these are "Related Links" including "California Spatial Information Library", "CERES", "USGS", "FGDC", and "Environmental Information Catalog". The main content area includes a "CALIFORNIA GIS COUNCIL" header, a "GOVERNOR Schwarzenegger" section with a "Click to Visit His Home Page" button, and an "Information" section with the council's address (900 N St., Sacramento, Ca. 95814, (916) 653-1369). A "Sponsors" section lists CGIA, NSDI, KESC, Flex Your Power, and W3C HTML 4.0. A footer note says "Please see 'Meetings and Events' for information from past meetings, including the Council Charter."

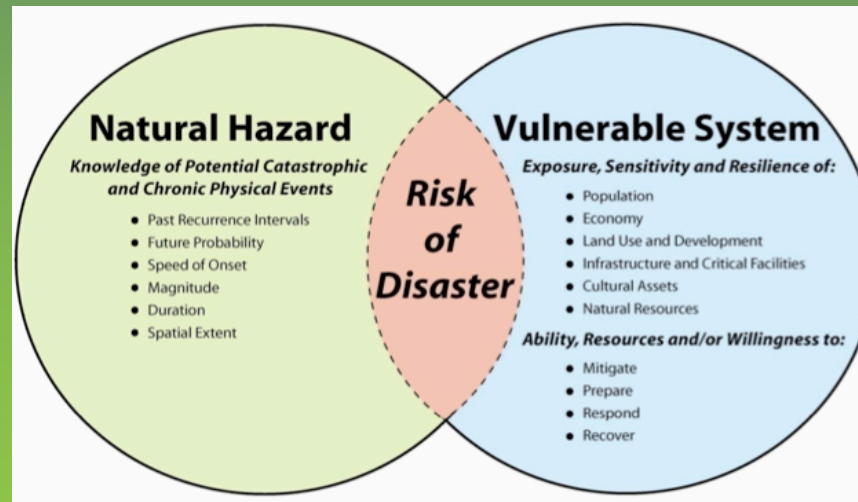
# Phase II: Risk Assessment

## Three Components

4) Hazard Identification (what can happen here?)

5) Vulnerability Assessment (what will be affected?)

Capability Assessment (how prepared are we?)



# 4) Hazard Identification & Profiles – What Can Happen Here?

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



## 5) Vulnerability Assessment – What will be affected?

- Inventory residential and commercial structures
- Inventory critical facilities
- Determine value of structures
- Determine the number of people in the area
- Identify vulnerable infrastructure
- Identify development trends / constraints
- Identify historic, cultural, and natural resource areas
- Estimate losses



# Capability Assessment

- 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.

# Phase III: Develop a Mitigation Plan

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



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

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

# 7) Review Mitigation Action Alternatives

- Prevention
- Property protection
- Natural resource protection
- Emergency services
- Structural projects
- Public information
- Multi-hazard measures and considerations
- No action



# Hazard Mitigation Strategies

## Three Ways to Promote Change

- Reduce the hazard – take an action to affect the hazard itself
- Reduce the impact (physical or economic) – take an action to mitigate structural loss or financial loss
- Change behavior/people



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# Hazard Mitigation: Flood

## Reduce the hazard

- Divert or detain floodwaters (dams, levees, detention ponds, diversion structures)

## Reduce the impact (physical or economic)

- Floodproof/Elevate structures; Elevate utilities

## Change behavior/people

- Designate high risk properties as open space
- Develop, adopt, and enforce floodplain regulations
- Train people to respond to flood watches and warnings
- Flood Insurance

# Hazard Mitigation: Wildfire

## Reduce the hazard

- Create fuel breaks
- Vegetation management

## Reduce the impact (physical or economic)

- Build using fire resistant materials
- Create defensible space

## Change behavior/people

- Use zoning restrictions to prevent building in highest risk or limited access areas
- Conduct evacuation planning activities
- Homeowner's insurance

# Hazard Mitigation: Earthquake

Reduce the hazard – Few options

Reduce the impact (physical or economic)

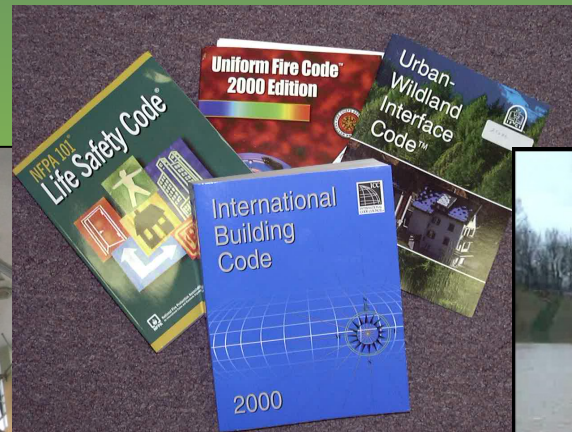
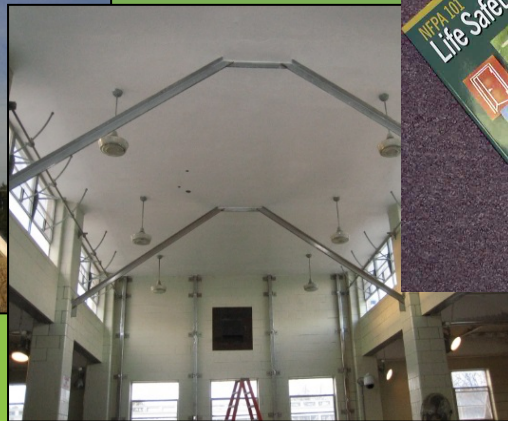
- Conduct seismic retrofitting for critical facilities and infrastructure
- Strengthen and retrofit non-reinforced masonry buildings
- Retrofit building veneers to prevent failure
- Build a safe room to provide protection
- Install window film to prevent injuries from shattered glass
- Anchor rooftop-mounted equipment

Change behavior/people

- Increase public awareness about earthquake risk and safety measures
- Train builders, architects, engineers to enhance code use and enforcement
- Insurance



# Hazard Mitigation Strategies



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# 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?

# Phase IV: Adopt and Implement the Plan

## 9) Adopt the Plan

- Official Adoption by Council or Board
- 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 DMA)

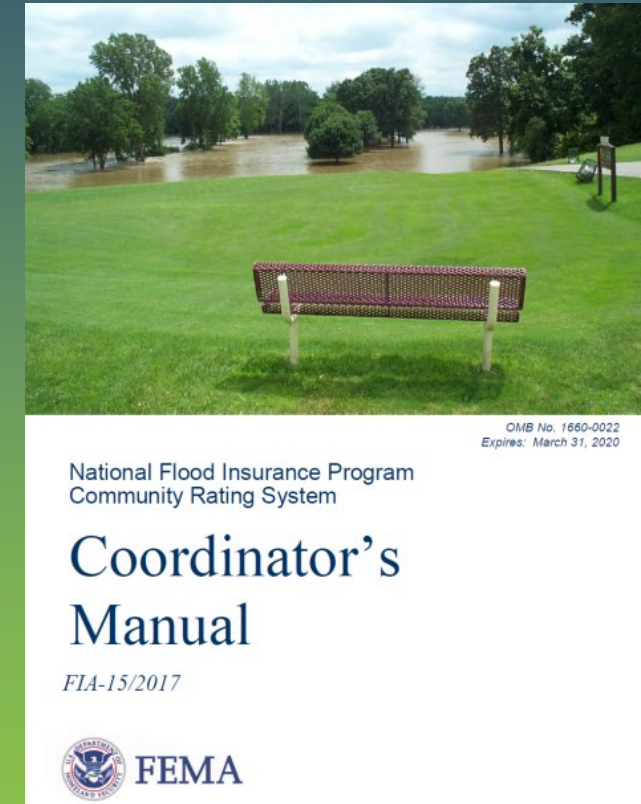
# NFIP Community Rating System - Basics

- Voluntary program
- Recognizes activities that go above and beyond the minimum requirements of the NFIP
- Modeled on the fire insurance rating system
- Insurance Services Office (ISO)

# 2017 Coordinator's Manual

## Goals of the CRS

- Reduce and avoid damage to insurable structures
- Strengthen and support the insurance aspects of the NFIP
- Foster comprehensive floodplain management



# Premium Discount by CRS Class

**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

← Unincorporated Sacramento County and City of Sacramento are CRS Class 2s

# Over 1,500 Participating Communities

- CRS communities represent only 7% of the over 22,000 NFIP communities; over 70% (3.6 M) of all flood insurance policies written in CRS communities
- Notable CRS (California) communities:
  - Class 1 (1 total): Roseville, California
  - Class 2 (8 total): Sacramento County; City of Sacramento, Colorado, Illinois, Oklahoma, Washington
  - Class 3 (3 total): Kentucky, Florida, New Jersey
  - Class 4 (6 total): Arizona, Florida, North Carolina, South Carolina

# Sacramento County Flood Insurance Policies - CRS

**Sacramento County:** As of March 24, 2020, unincorporated Sacramento County had 7,497 flood insurance policies totaling \$2,169,765,000 of insurance in force. There have been 1,747 paid losses amounting to \$24,741,814. Unincorporated Sacramento County saves \$1,389,358 annually on the costs of flood insurance premiums; \$536 saved on policies in the SFHA and \$93 on policies outside the SFHA.

**City of Sacramento:** As of March 24, 2020, City of Sacramento had 43,303 flood insurance policies totaling \$14,714,226,400 of insurance in force. There have been 1,855 paid losses amounting to \$9,852,038. City of Sacramento County \$1,449,457 annually on the costs of flood insurance premiums; \$422 saved on policies in the SFHA and \$47 on policies outside the SFHA.



# CRS Program 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



# Community Responsibilities

- ✓ Pass a CAV (Community Assistance Visit)
- ✓ Designate CRS Coordinator
- ✓ Implement activities
- ✓ Annual recertification
- ✓ Maintain Elevation Certificates, FIRMs, forever
- ✓ Maintain other records until cycle

# CRS Activities and Credits

Table 110-2. Credit points awarded for CRS activities.\*

Activity	Maximum Possible Points	Maximum Points Earned	Average Points Earned	Percentage of Communities Credited
<b>300 Public Information Activities</b>				
310 Elevation Certificates	116	116	38	96%
320 Map Information Service	90	90	73	85%
330 Outreach Projects	350	350	87	93%
340 Hazard Disclosure	80	62	14	84%
350 Flood Protection Information	125	125	38	87%
360 Flood Protection Assistance	110	100	55	41%
370 Flood Insurance Promotion <sup>5</sup>	110	110	39	4%
<b>400 Mapping and Regulations</b>				
410 Flood Hazard Mapping	802	576	60	55%
420 Open Space Preservation	2,020	1,603	509	89%
430 Higher Regulatory Standards	2,042	1,335	270	100%
440 Flood Data Maintenance	222	249	115	95%
450 Stormwater Management	755	605	132	87%
<b>500 Flood Damage Reduction Activities</b>				
510 Floodplain Mgmt. Planning	622	514	175	64%
520 Acquisition and Relocation	2,250	1,999	195	28%
530 Flood Protection	1,600	541	73	13%
540 Drainage System Maintenance	570	454	218	43%
<b>600 Warning and Response</b>				
610 Flood Warning and Response	395	365	254	20%
620 Levees	235	207	157	0.5%
630 Dams	160	99	35	35%

# Activity 510 Floodplain Management Planning

Table 510-1. Mitigation and CRS planning steps.		
Multi-Hazard Mitigation Planning Regulations (44 CFR 201.6)	CRS Planning Steps	Maximum Points
Phase I – Planning process		
201.6(c)(1)	1. Organize	15
201.6(b)(1)	2. Involve the public	120
201.6(b)(2) & (3)	3. Coordinate	35
Phase II – Risk assessment		
201.6(c)(2)(i)	4. Assess the hazard	35
201.6(c)(2)(ii) & (iii)	5. Assess the problem	52
Phase III – Mitigation strategy		
201.6(c)(3)(i)	6. Set goals	2
201.6(c)(3)(ii)	7. Review possible activities	35
201.6(c)(3)(iii)	8. Draft an action plan	60
Phase IV – Plan maintenance		
201.6(c)(5)	9. Adopt the plan	2
201.6(c)(4)	10. Implement, evaluate, revise	26
	Total	382

# Benefits of Integrating CRS into Mitigation Planning

- An integrated mitigation planning process with more specific flood mitigation actions and projects
- Eligibility for FEMA mitigation grants to help fund actions and projects recommended in the plan
- Credits toward a reduction in flood insurance premiums in CRS-participating communities
- Familiarizing more communities with the CRS program and flood insurance benefits

# The Sacramento County LHMP Update 2021



# The Role of the Hazard Mitigation Planning Committee/Steering Committee

## Why you are here!

- Attend meetings and participate in the planning process
- Provide requested data
- Review drafts and provide comments
- Identify projects to be eligible for funding
- Coordinate and participate in the public input process
- Coordinate the formal adoption

# Participating Jurisdictions

- Sacramento County
- City of Citrus Heights
- City of Elk Grove
- City of Folsom
- City of Galt
- City of Isleton
- City of Rancho Cordova
- City of Sacramento
- Brannan Andrus Levee Maintenance District (Reclamation Districts 317, 407, 2067)
- Cosumnes Community Services District Fire Department
- Citrus Heights Water District
- Los Rios Community College
- Reclamation District 3
- Reclamation District 341
- Reclamation District 369
- Reclamation District 551
- Reclamation District 554
- Reclamation District 556
- Reclamation District 563
- Reclamation District 800
- Reclamation District 1000
- Reclamation District 1002
- Reclamation District 1601
- Reclamation District 2111
- Sacramento Area Sewer District
- Sacramento Metro Fire District
- Sacramento Regional County Sanitation District
- Southgate Recreation and Park District
- Twin Rivers School District



# Project Schedule

August 2020 – Project Kickoff

September 2020 – Kickoff Meetings (HMPC and Public)

February 2020 – Risk Assessment Meetings

March 2021 – Mitigation Strategy Meetings

May 2021 – HMPC Review Draft

July 2021 – Public Review Draft

August 2021 – Final Meetings (HMPC and Public)

September 2021 – Plan Submittal to Cal OES/FEMA

??? – FEMA APA Letter

??? – Jurisdictional Adoptions

??? – Final FEMA Approval - 2021 LHMP Update

# Hazard Identification

## Agricultural Hazards

### Bird Strike

- Climate Change
- Dam Failure
- Drought and Water Shortage
- Earthquake
- Earthquake Liquefaction
- Flood 100/200/500 year
- Flood: Localized Flooding
- Landslides
- Levee Failure
- River/Stream/Creek Bank Erosion
- Severe Weather: Cold and Freeze
- Severe Weather: Extreme Heat
- Severe Weather: Fog
- Severe Weather: Heavy Rains and Storms
- Severe Weather: Wind and Tornadoes
- Subsidence
- Volcano
- Wildfire

Thank you!

# Sacramento County, California

## Local Hazard Mitigation Planning Project



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Local Hazard Mitigation Planning Process

