APA SUSTAINABLE COMMUNITIES DIVISION

The APA Sustainable Communities Division supports planners who are committed to planning for sustainable communities by integrating all aspects of sustainability into our work through the combined economic, social, and ecological factors that shape our communities.

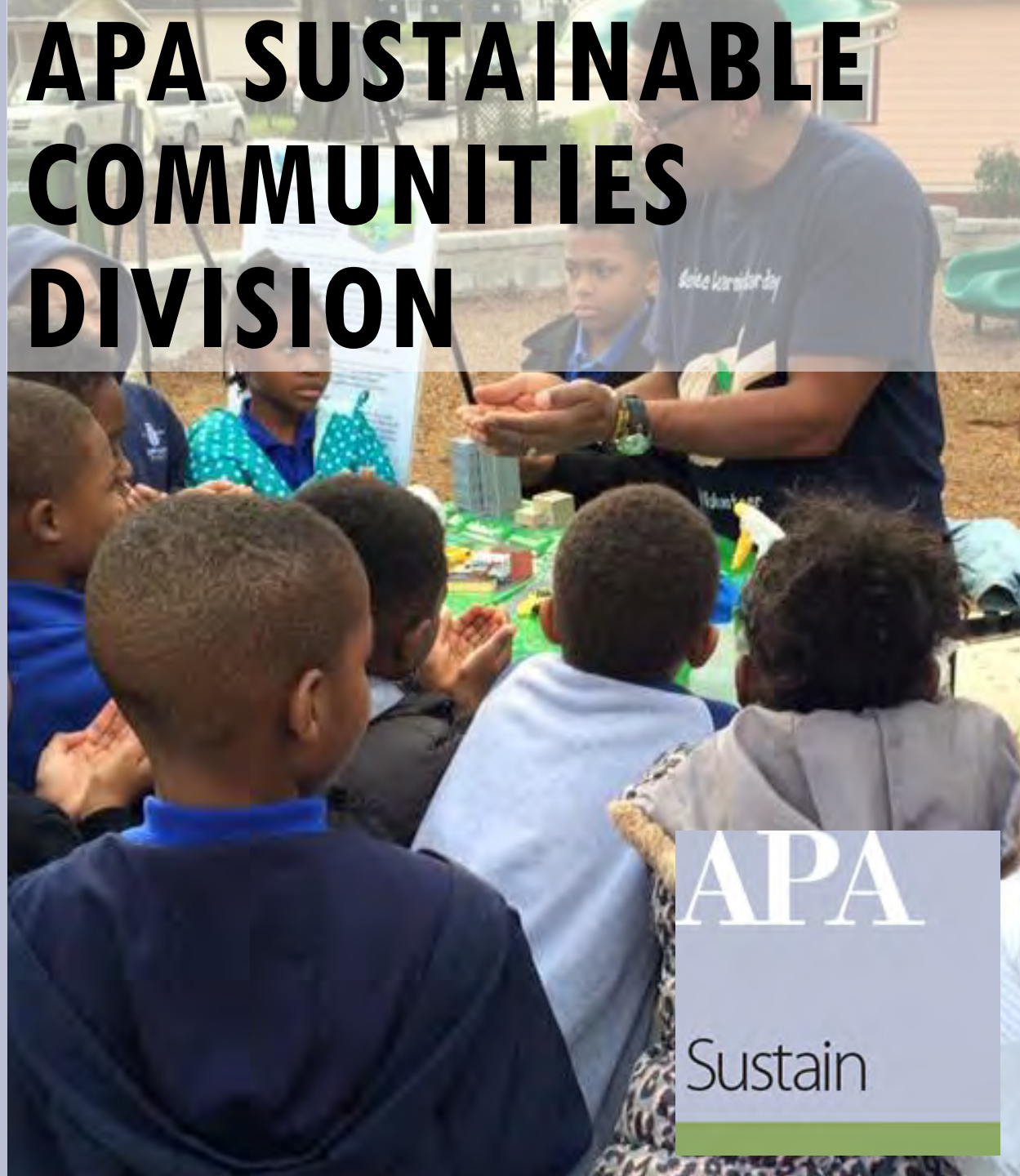

Photo: The Conservation Fund – Lindsay Street Park

APA Sustain

Thank you to the 2017-2018 Sustainable Communities Division Sponsors!

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Contact Merrill St Leger Demian
(Merrill.StLegerDemian@smithgroupjjr.com)

Upcoming Webinar

Measuring the Benefits of Trees: The Green Streets Lawrence Health Impact Assessment

Wednesday, August 23, 2017
1:00 PM – 2:15 PM (Eastern Time)
1.25 CM (Live viewing only)

To register: sustainableplanning.net

Photo: Neil Angus

Division Contact Information

Website:
planning.org/divisions/sustainable

Blog: www.sustainableplanning.net

LinkedIn: APA Sustainable Communities Division

Facebook/Twitter: APASCD

Scott Turner, Division Chair:
APASCD@gmail.com

Graphic: evolveEA – Millvale Ecodistrict Pivot Plan

Today

Making Communities More Resilient Through Local Mitigation Planning

- Shannon Burke, MSUS
- Lawrence Frank, MRP, CFM
- Allison Hardin, CFM

Graphic: City of Austin – South Central Waterfront Vision Framework Plan

Making Communities More Resilient Through Mitigation Planning

NHMA
Natural Hazard Mitigation Association

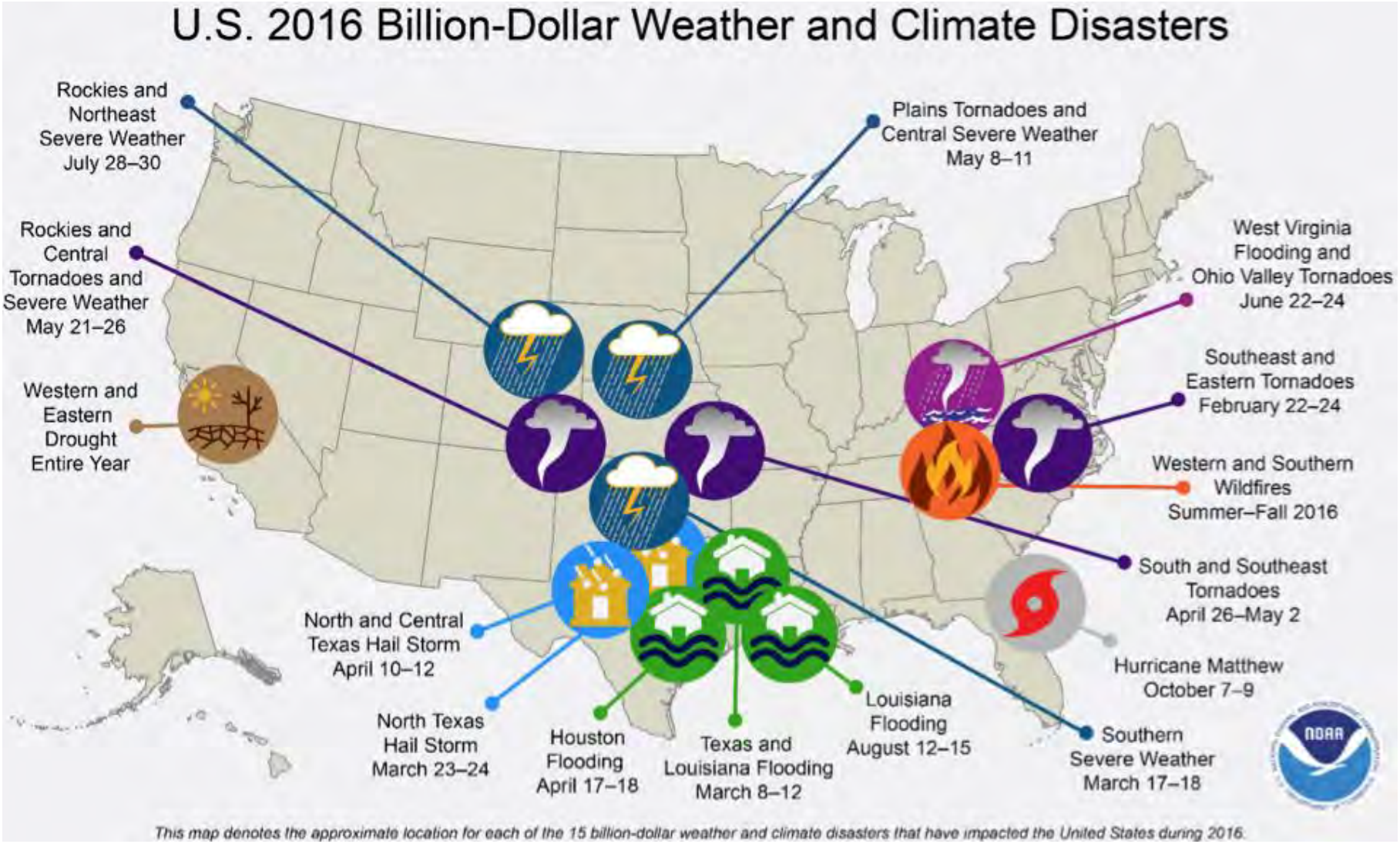
DISASTER
RISK REDUCTION
Ambassador Curriculum

What's covered today.

Discuss the benefits of hazard mitigation and hazard mitigation planning.

- Mitigation & Mitigation Planning
- Integrating Hazard Mitigation into Local Planning
- A Local Perspective on Integrating Hazard Mitigation into Local Planning

Something to think about…


U.S. 2016 Billion-Dollar Weather and Climate Disasters
Rockies and Northeast Severe Weather July 28–30
Plains Tornadoes and Central Severe Weather May 8–11
Rockies and Central Tornadoes and Severe Weather May 21–26
West Virginia Flooding and Ohio Valley Tornadoes June 22–24
Western and Eastern Drought Entire Year
Southeast and Eastern Tornadoes February 22–24
Western and Southern Wildfires Summer–Fall 2016
South and Southeast Tornadoes April 26–May 2
North and Central Texas Hail Storm April 10–12
Hurricane Matthew October 7–9
North Texas Hail Storm March 23–24
Houston Flooding April 17–18
Texas and Louisiana Flooding March 8–12
Louisiana Flooding August 12–15
Southern Severe Weather March 17–18
NOAA
This map denotes the approximate location for each of the 15 billion-dollar weather and climate disasters that have impacted the United States during 2016.

Definitions, I'm sorry…

Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from hazards

Hazard Mitigation Plan (HMP) is a community-driven, living document that communities use to reduce their vulnerability to hazards

Resilience is the ability to to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events.

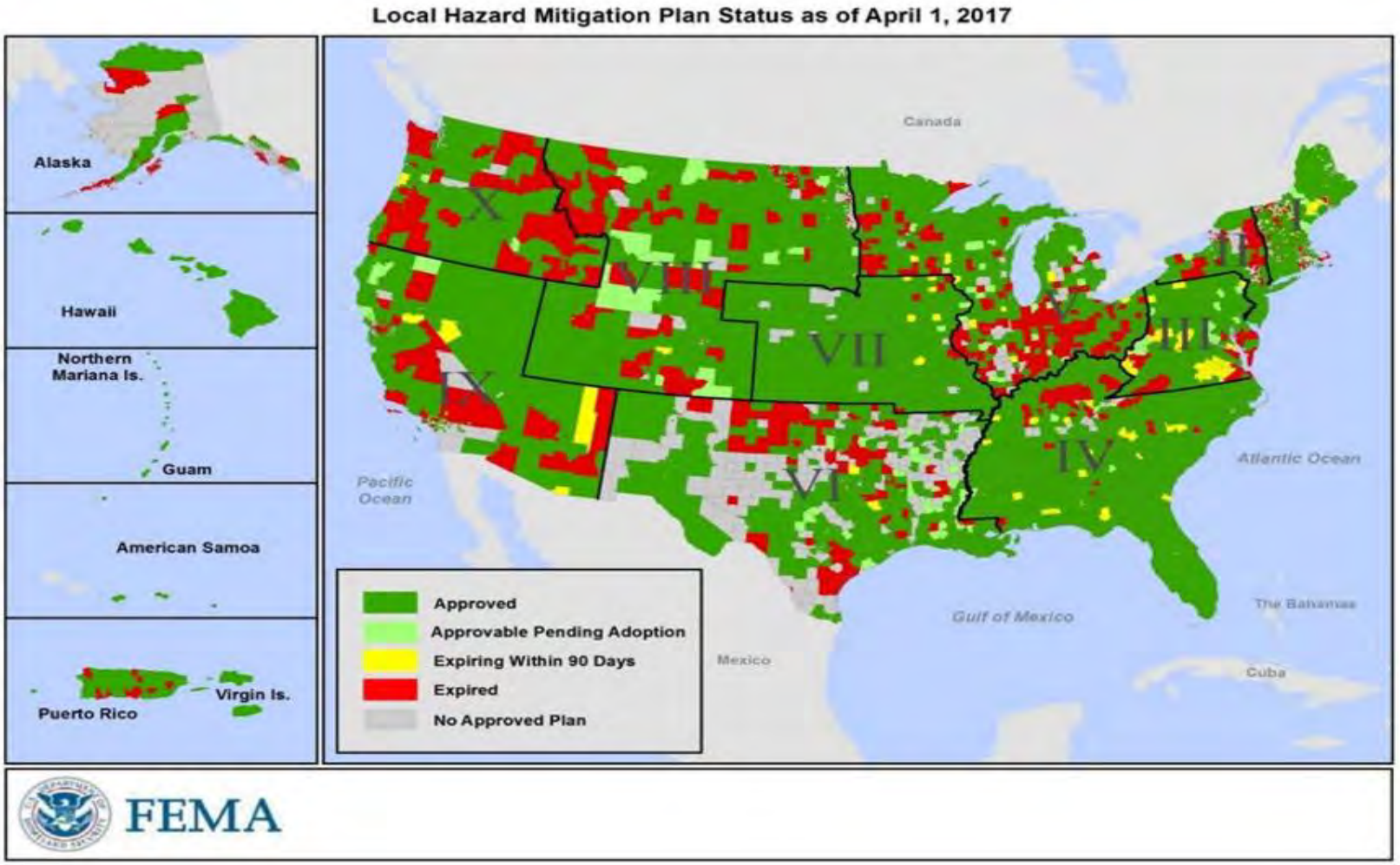
Sources: FEMA and the National Academy of Sciences

Did you know?

- WEATHER: short-term conditions of the atmosphere
- CLIMATE: The average daily weather for an extended period of time at a certain location.

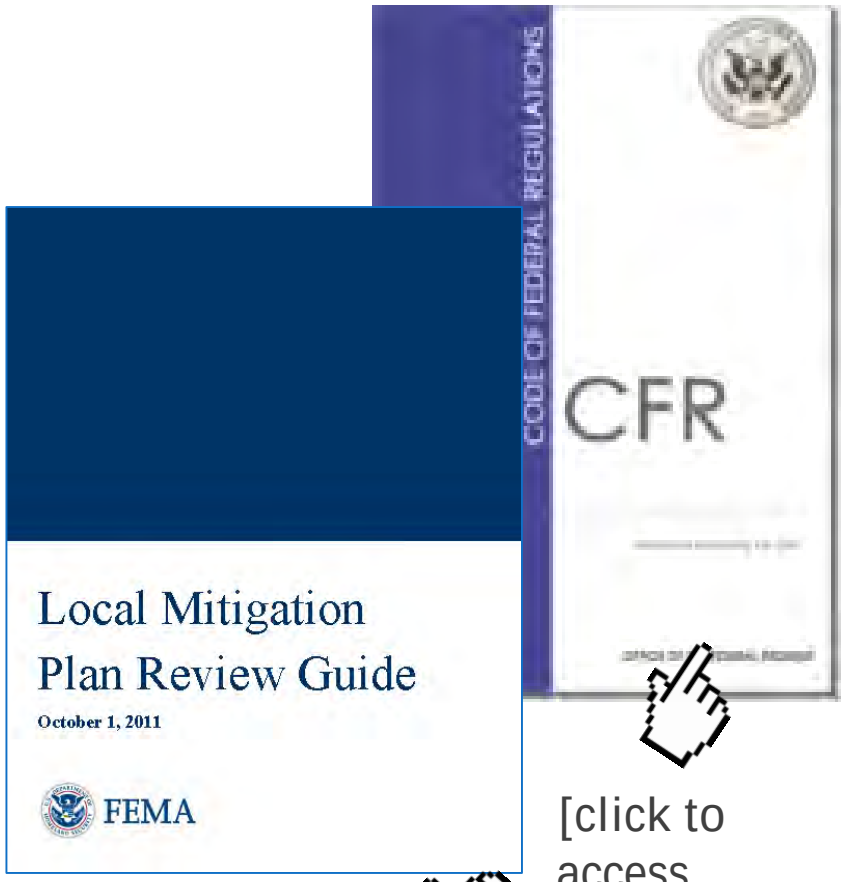
NOAA : https://oceanservice.noaa.gov/facts/weather_climate.html

Disaster Mitigation Act of 2000



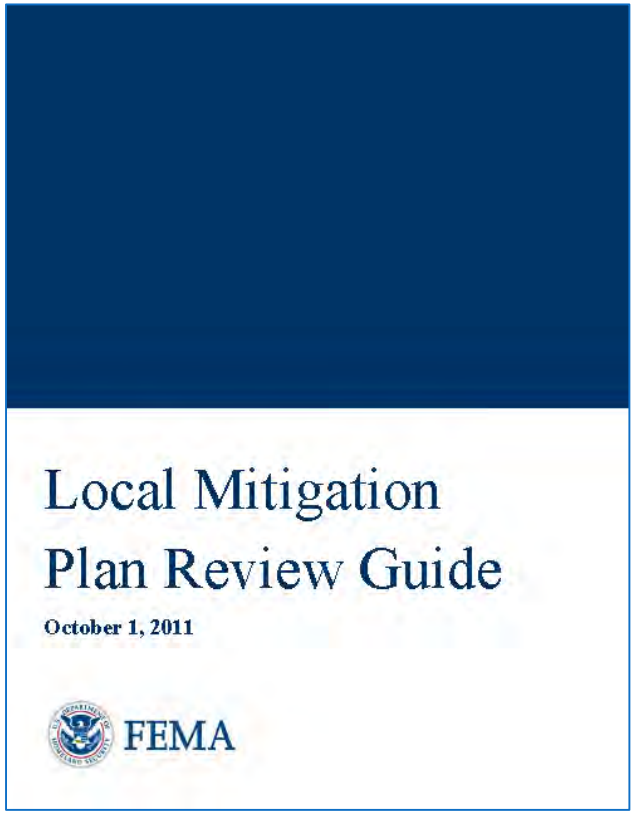
FEMA Local Hazard Mitigation Plan Requirements

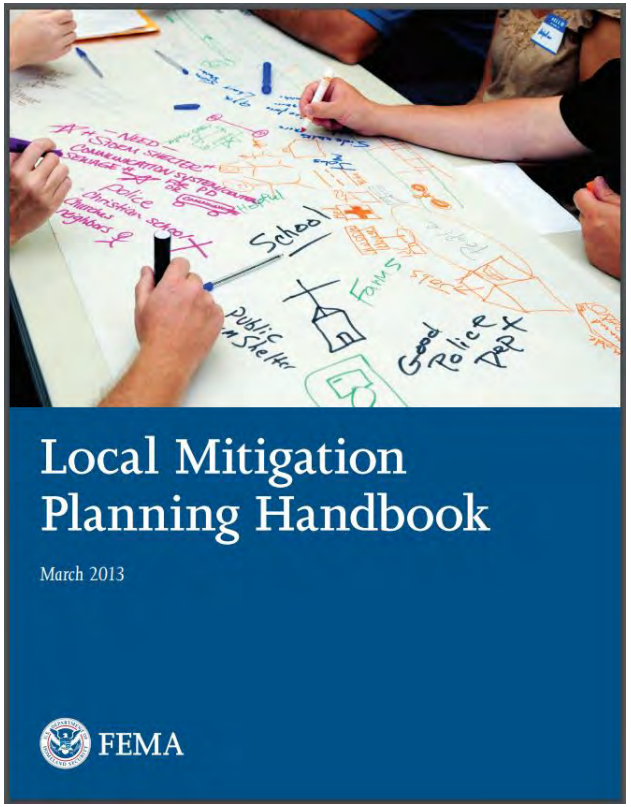
- Regulations for Local Hazard Mitigation Plans are found in 44 CFR 201.6
- The Local Mitigation Plan Review Guide serves as the official source for defining the requirements of original and updated Local Mitigation Plans



[click to access resource]

Hazard Mitigation Planning Resources





TASK 1 Determine the Planning Area and Resources

TASK 2 Build the Planning Team

TASK 3 Create an Outreach Strategy

TASK 4 Review Community Capabilities

TASK 5 Conduct a Risk Assessment

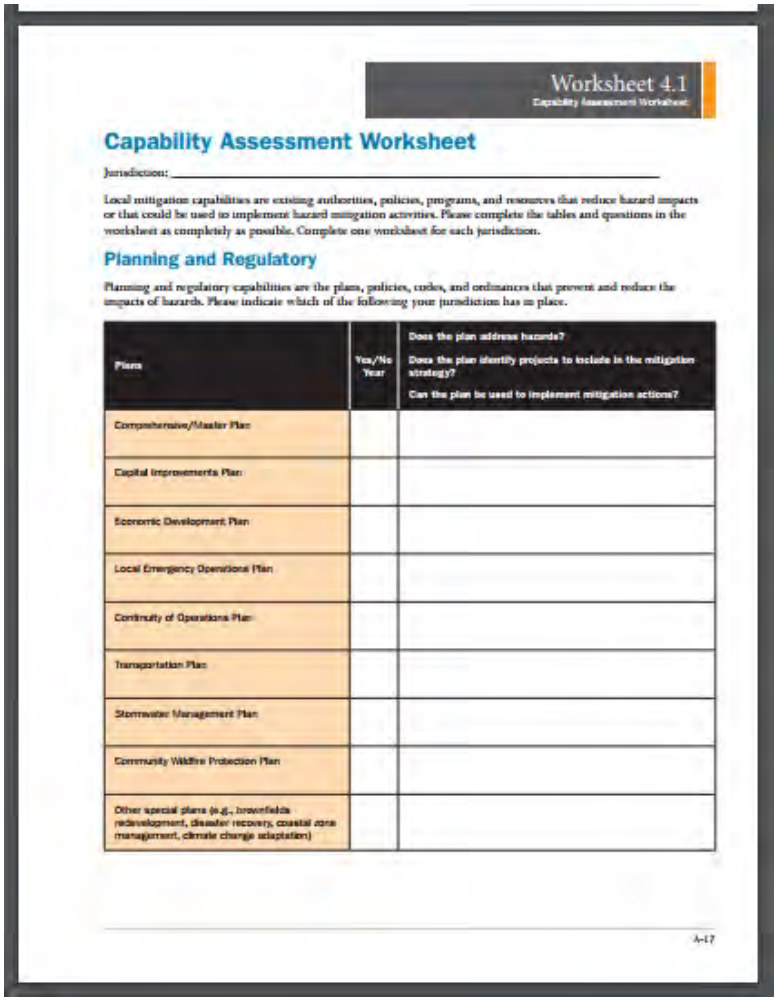
TASK 6 Develop a Mitigation Strategy

TASK 7 Keep the Plan Current

TASK 8 Review and Adopt the Plan

TASK 9 Create a Safe and Resilient Community

Figure I-1: *Local Mitigation Planning Handbook* Tasks.



Worksheet 4.1

Capability Assessment Worksheet

Jurisdiction: _____

Local mitigation capabilities are existing authorities, policies, programs, and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible. Complete one worksheet for each jurisdiction.

Planning and Regulatory

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. Please indicate which of the following your jurisdiction has in place.

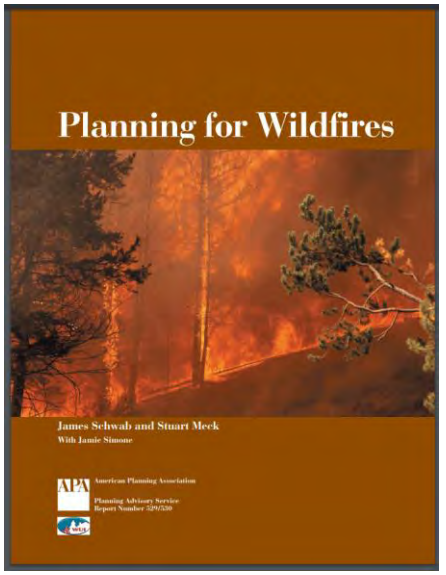
Plans	Yes/No Year	Does the plan address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan		
Capital Improvements Plan		
Economic Development Plan		
Local Emergency Operations Plan		
Continuity of Operations Plan		
Transportation Plan		
Stormwater Management Plan		
Community Wildfire Protection Plan		
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)		

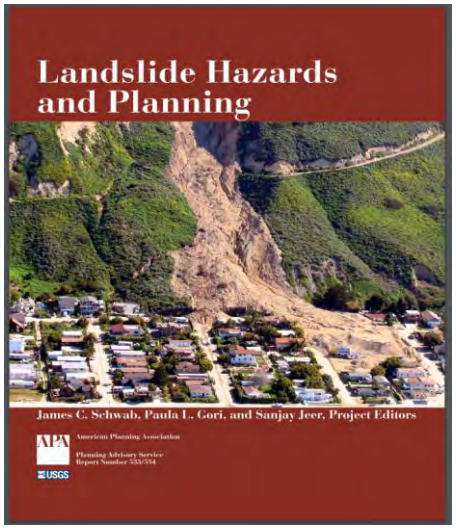
A-17

Regulations, the lifeblood of planning!

Requirements for local hazard mitigation plans per FEMA's Local Mitigation Plan Review Guide.

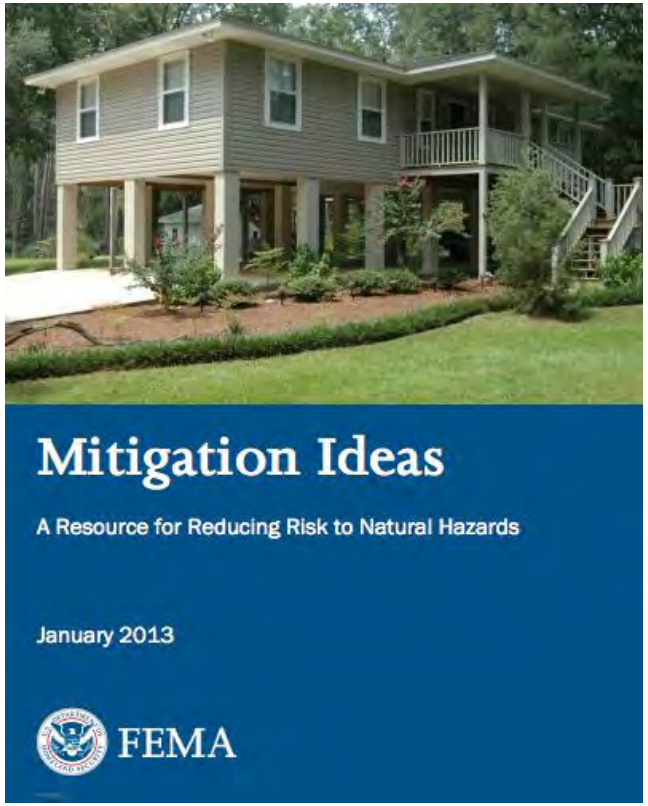
Elements	Sub-criteria
Element A: Planning Process	1. Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? 2. Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? 3. Does the plan document how the public was involved in the planning process during the drafting stage? 4. Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information? 5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? 6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)?
Element B: Hazard Identification and Risk Assessment	1. Does the plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction? 2. Does the plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? 3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? 4. Does the plan address National Flood Insurance Program (NFIP) insured structures within the jurisdiction that have been repetitively damaged by floods?
Element C: Mitigation Strategy	1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability o expand on and improve these existing policies and programs? 2. Does the plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? 3. Does the plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? 4. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? 5. Does the plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? 6. Does the plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate?
Element D: Plan Review, Evaluation, and Implementation	1. Was the plan revised to reflect changes in development? 2. Was the plan revised to reflect progress in local mitigation efforts? 3. Was the plan revised to reflect changes in priorities?
Element E: Plan Adoption	1. Does the plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? 2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption?
Element F: Additional State Requirements	1. Any additional requirements as mandated by each individual state. This section will only be completed by state reviewers and not by FEMA

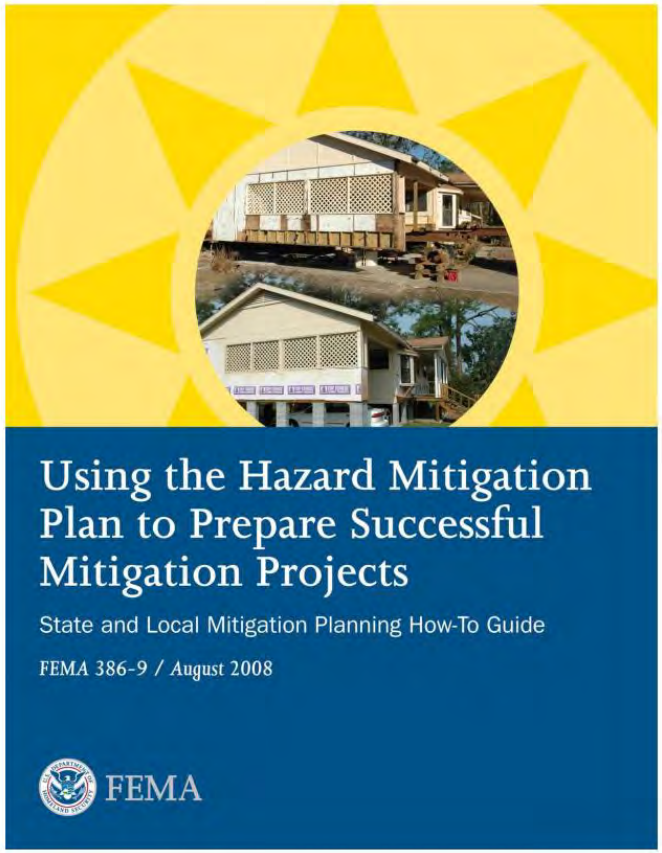




FEMA: https://www.fema.gov/what-mitigation

How Hazard Mitigation is Implemented





FEMA: https://www.fema.gov/what-mitigation

INTEGRATING HAZARD MITIGATION INTO LOCAL PLANNING

Lawrence Frank
Atkins

Key Terminology

Integration

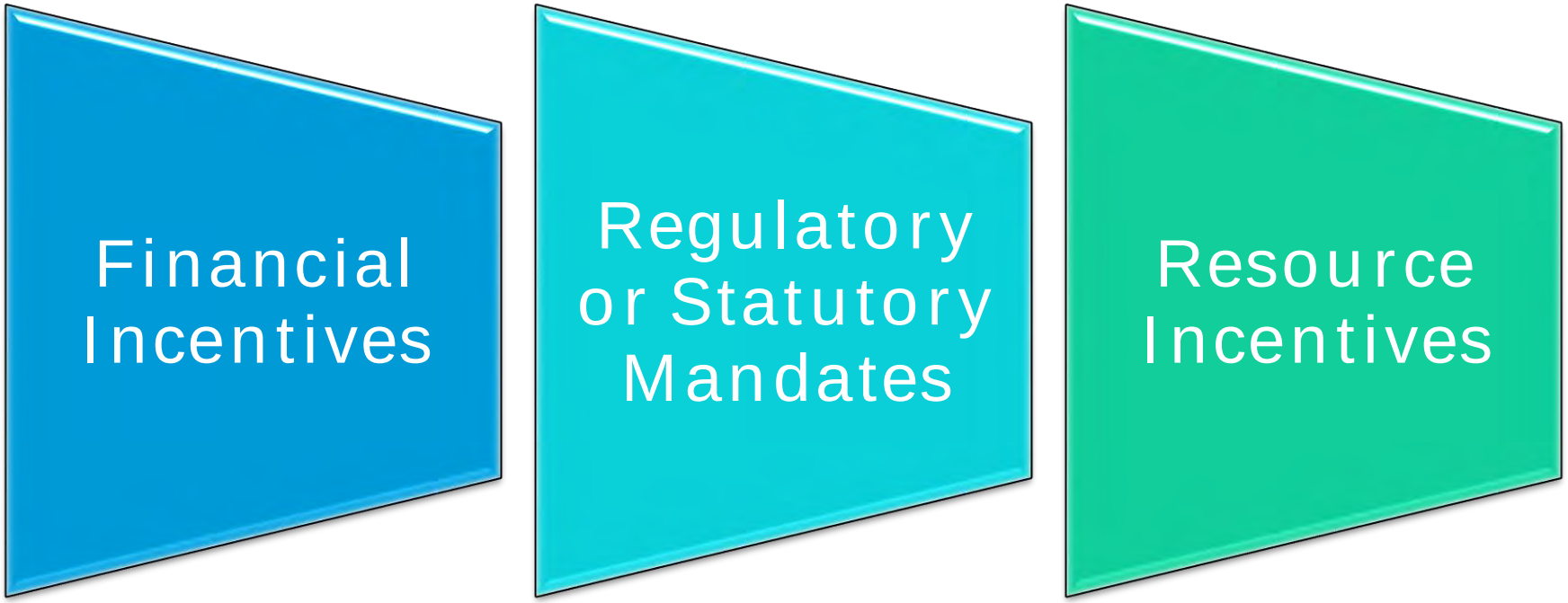
- Plan integration is the process by which communities look critically at their existing planning framework and align efforts with the goal of building a safer, smarter community
- Effective integration occurs when it leads to community development patterns that do not increase risks from known hazards, or leads to redevelopment that reduces risk from known hazards

Factors for Effective Integration

- Strong intergovernmental coordination
- Support and direction from elected and/or executive leaders
- Knowledge and understanding of community hazard risks
- An understanding of the benefits of hazard mitigation
- Incentives for the inclusion of hazards in community planning

A Closer Look at Incentives

Effective Incentives for Integrating Hazard Mitigation into Local Planning

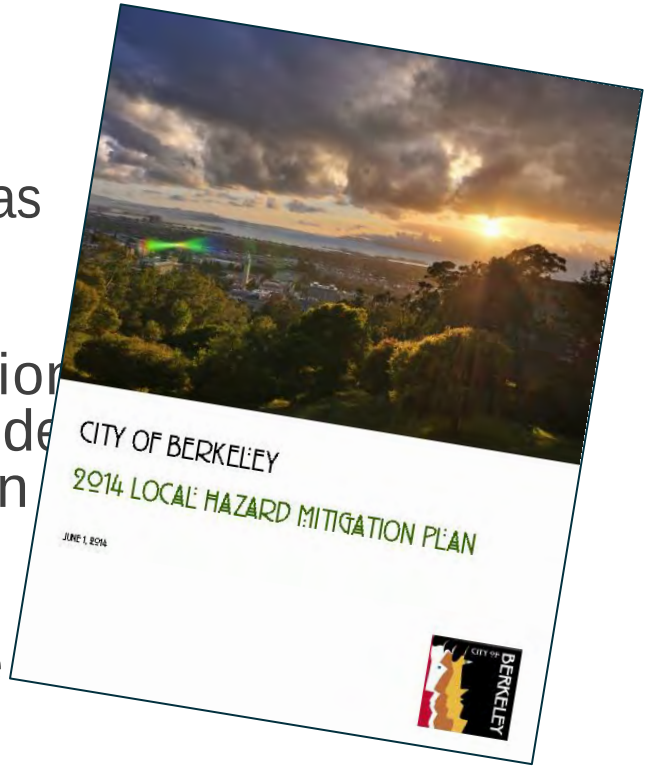


INTEGRATING HAZARD MITIGATION INTO LOCAL PLANNING

Case Studies

Most Effective Method for Integrating Hazard Mitigation into Local Planning

- Integrate hazard mitigation goals, objectives, and actions throughout every relevant element of a local comprehensive or general plan as well as building codes
- Develop and maintain a hazard mitigation plan as a distinct element to be included in a local comprehensive or general plan
- Mitigation to be considered in all community plans and investments, like fire safety



Berkeley, California is an example of a community that has done both of these measures.

Case Study: Long Beach, NY

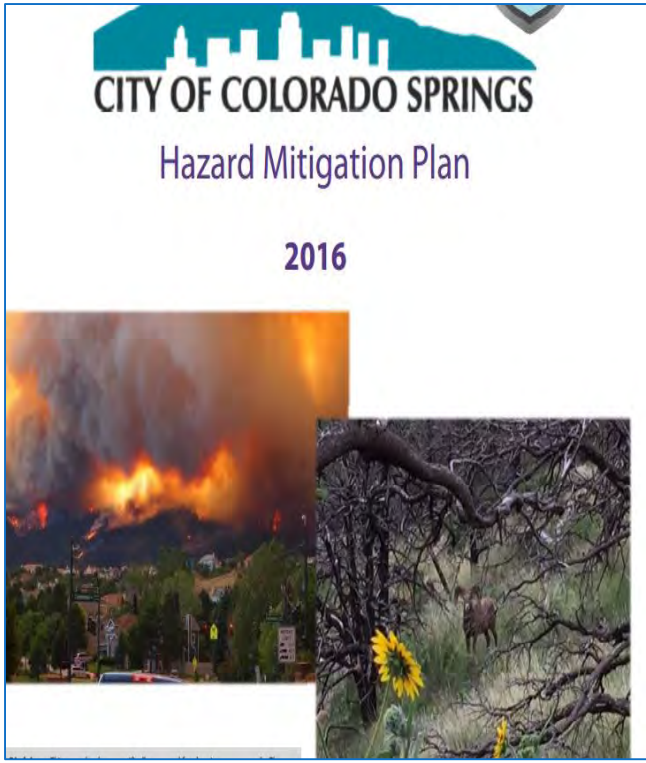
Points of Emphasis

- Prepared comprehensive Community Reconstruction Plan during Sandy recovery
- Incorporated elements of it and advanced it in the update of its Comprehensive Plan
- Extensive engagement and intertwined resilience into future redevelopment

Case Study: Colorado Springs, CO

Points of Emphasis

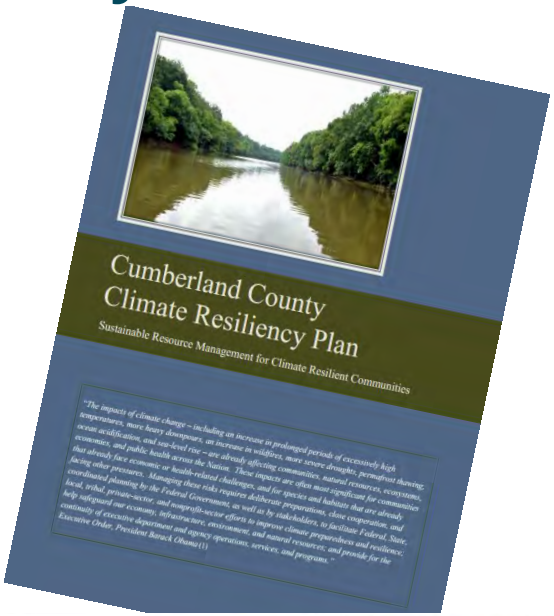
- Learned from large fire event to make changes to building code for wildfire (roofs to resist ignition from embers)
- Studied post-fire flows, installed projects to dissipate flood energy, and advised residents to buy flood insurance (large uptick in policy purchases post-fire)
- Created a more substantial on-going commitment to address hazards



Case Study: Cumberland County and Fayetteville, NC

Points of Emphasis

- Cumberland County prepared a Climate Resiliency Plan
- Fayetteville incorporated a Resilience Element to the city comprehensive plan
- Embrace concepts like Low Impact Development



Natural Hazards

CITY OF FAYETTEVILLE RESILIENCY ELEMENT

City of Fayetteville North Carolina

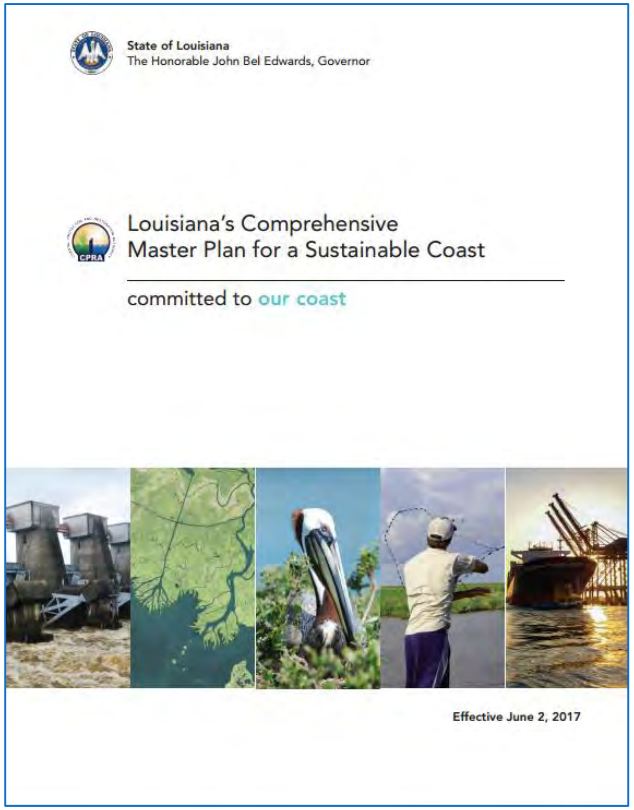
Economy

Social Equity

Case Study: Louisiana Coastal Master Plan

Points of Emphasis

- Looked at future risk including impacts of climate changes, subsidence, etc.
- Large-scale investment in marsh restoration, sediment diversion, structural and non-structural
- Encourage more widespread use of Comprehensive Plans to help build resiliency

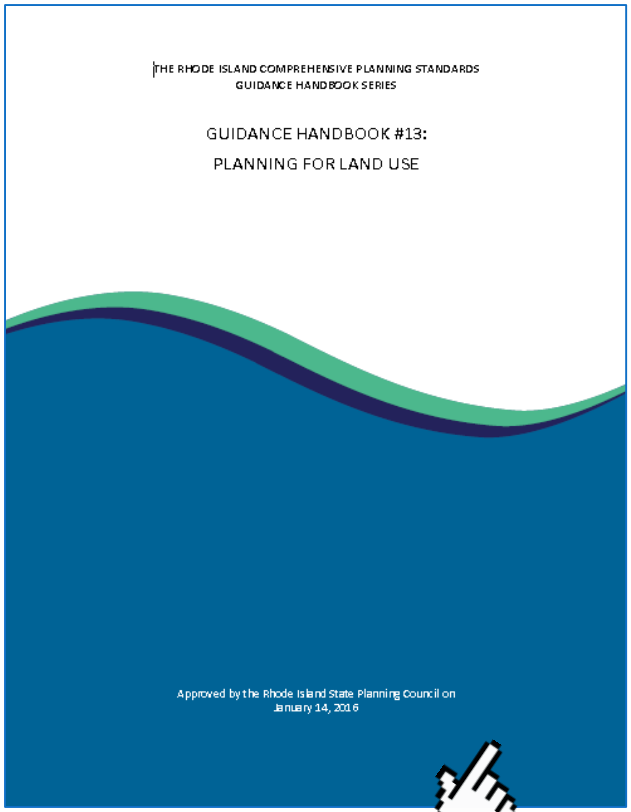


Case Study: Broward County, Florida

Points of Emphasis

- Hazard mitigation principles are most effectively and realistically integrated on a daily basis
- Use hazard mitigation planning meetings as a forum to share best practices
- Include a wide range of stakeholders

Case Study: Rhode Island Guidance Handbook #13: Planning for Land Use



[click to access handbook]

STANDARD 13.4
ASSESS FUTURE DEVELOPMENT CAPACITY, BASED ON THE REGULATIONS OF THE EXISTING ZONING DISTRICTS, BY INCLUDING ESTIMATES OF:

a. Total future population at anticipated build-out; and

b. The year by which residential build-out is anticipated, based on historic trends

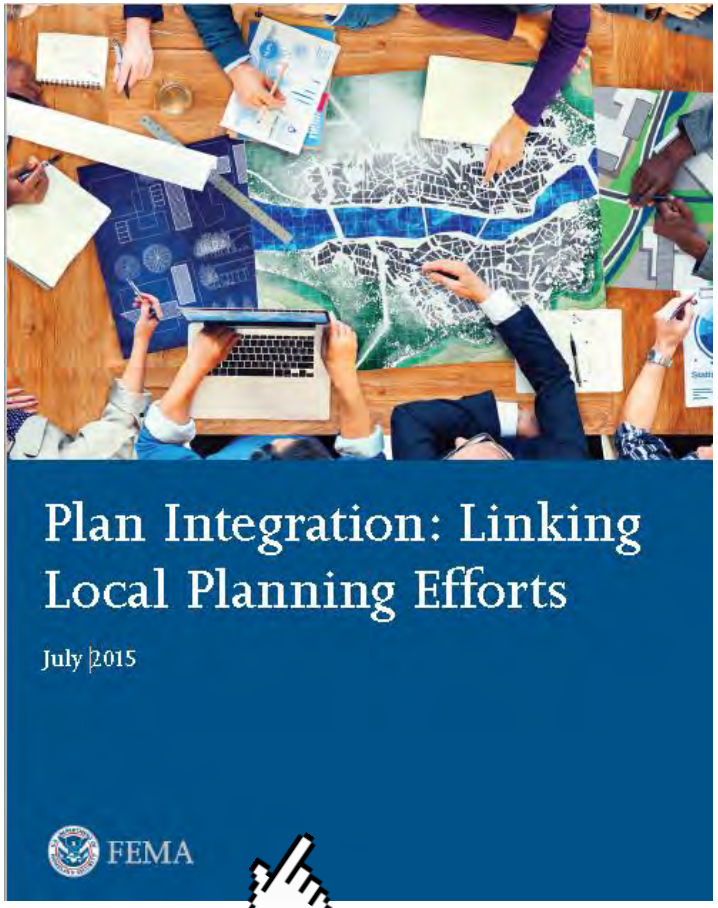
INTEGRATING HAZARD MITIGATION INTO LOCAL PLANNING

Resources

Plan Integration: Linking Local Planning Efforts

A tool developed to help a community:

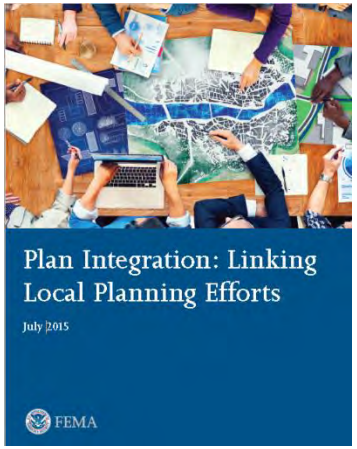
- Analyze local plans to document existing integration
- Further integrate hazard mitigation principles and local planning mechanisms



[click to access report]

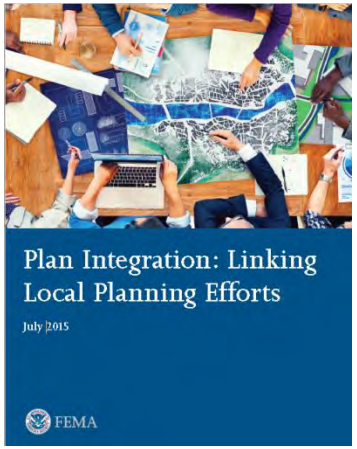
Two Primary Ways to Effectively Accomplish Plan Integration (cont.)

1. Integrate natural hazard information and mitigation policies and principles into local planning mechanisms and vice versa
   - Include information on natural hazards
   - Identify hazard-prone areas throughout the community
   - Develop appropriate goals, objectives, policies, and projects

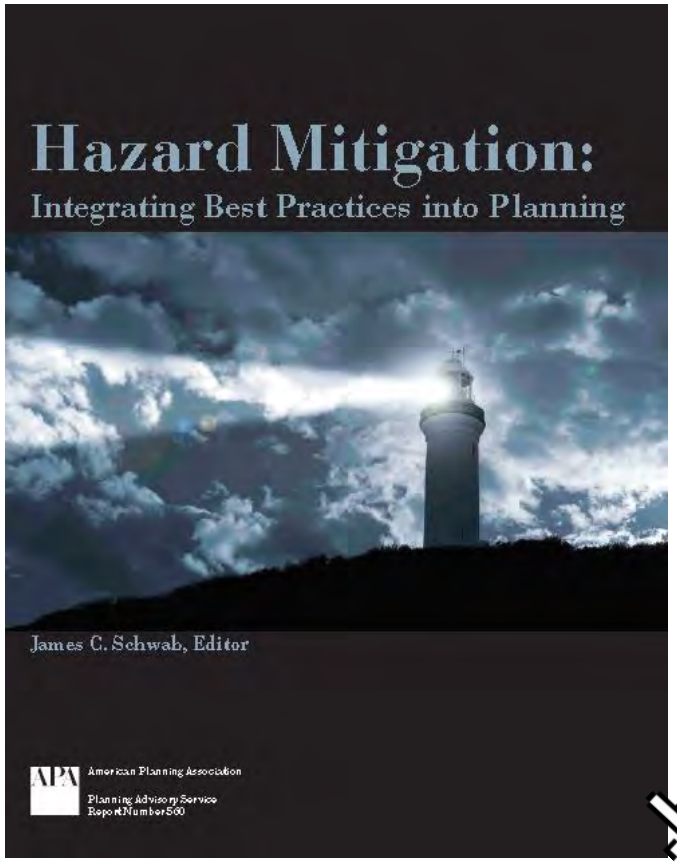


Two Primary Ways to Effectively Accomplish Plan Integration (cont.)

2. Encourage collaborative planning and implementation and inter-agency coordination
   - Involve key community officials with the authority to execute policies and programs to reduce risk
   - Collaborate across departments and agencies to help share knowledge and build relationships



Hazard Mitigation: Integrating Best Practices into Planning

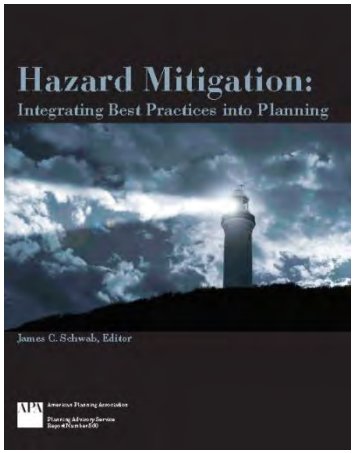


- Planning Advisory Service Report published by the American Planning Association in partnership with FEMA
- Chapter 5: Integrating Hazards into the Implementation Tools of Planning
  (by David R. Godschalk, FAICP)

[click to access report]

Goals of Integrating Hazards into Planning

- Making sure only appropriate development with its risk minimized is allowed in known hazard areas
- Keeping hazards from affecting existing developed areas
- Strengthening existing development to resist hazards



How to Plan Resilient Communities Through Integration

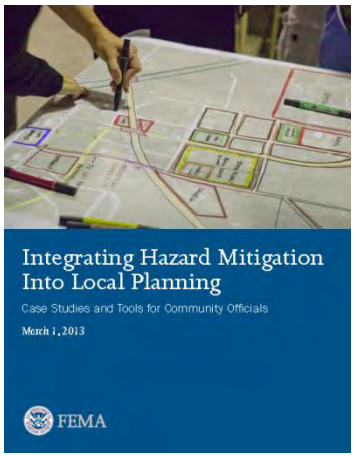
Step 1: Assess Your Community's Planning Framework with a Lens for Resilience

Step 2: Inform and Engage Local Leadership, Staff, and Stakeholders

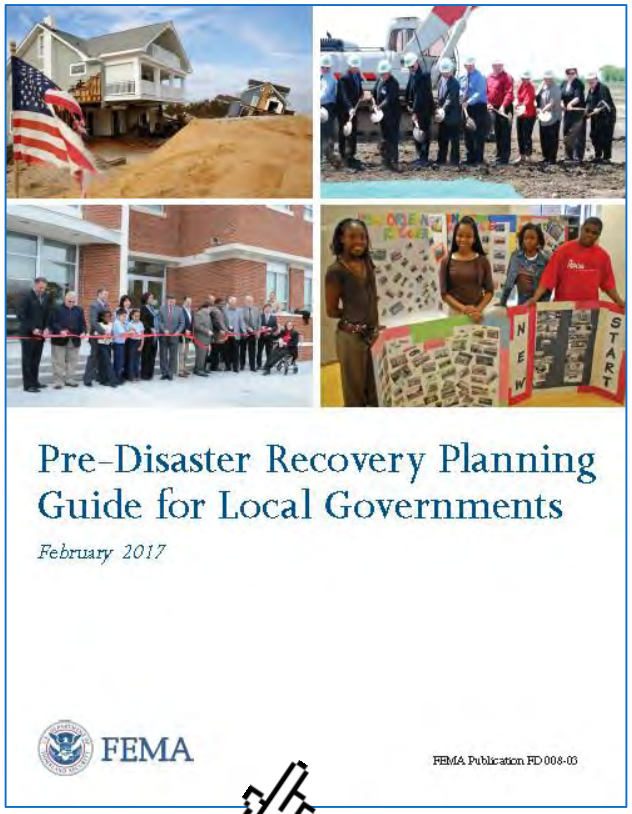
Step 3: Establish an Integration Agenda of Resilient Community Principles and Actions

Step 4: Be Opportunistic!

Step 5: Monitor, Measure, Report, Repeat



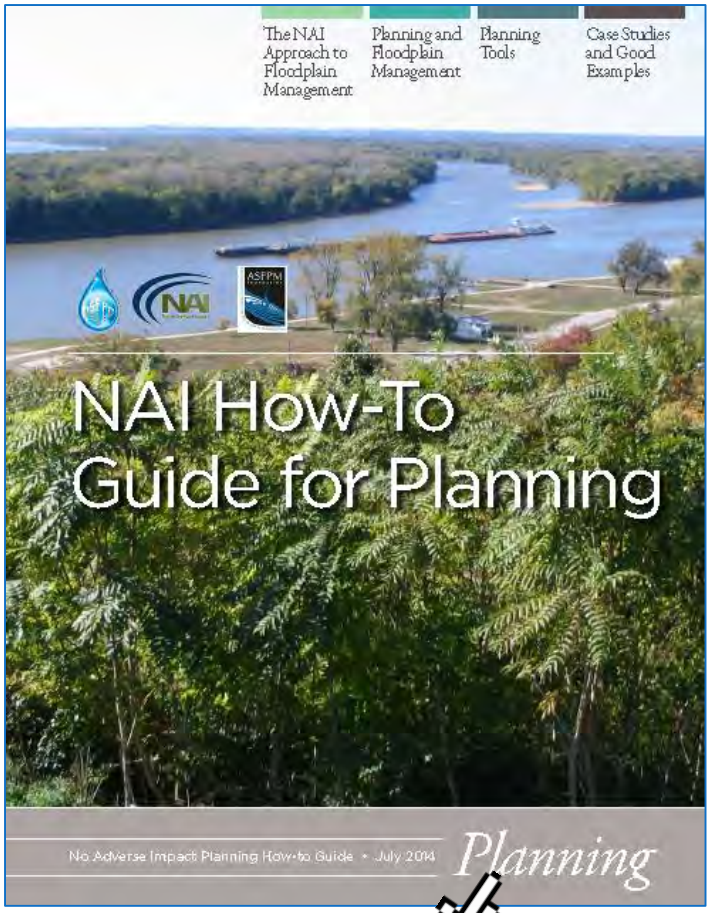
Pre-Disaster Recovery Planning Guide for Local Governments



"The best way to integrate mitigation activities is to link the recovery plan with the local hazard mitigation plan"

[click to access Guide]

NAI How-To Guide for Planning



- Identifies ways a community can incorporate the *No Adverse Impact* (NAI) concepts into its planning activities
- NAI floodplain management takes place when the actions of one property owner are not allowed to adversely affect the rights of other property owners

[click to access guide]

INTEGRATING HAZARD MITIGATION INTO LOCAL PLANNING

Common Barriers

Common and/or Perceived Barriers to Integrating Mitigation into Local Planning

1. Lack of awareness of hazard risks and mitigation solutions (limited actionable data)
2. Mitigation not seen as a community priority (see #1)
3. Lack of political will to implement solutions (see #1)
4. Lack of incentives for integrated planning
5. Lack of capacity or resources (scarcity or competing)
6. Insufficient framework for intergovernmental coordination
7. Lack of essential networking
8. Perceived threat to growth and/or property rights

FEMA, Integrating Hazard Mitigation into Local Planning (2013)

Recommendations for Local Planners

- Become conversant with natural hazards and existing community vulnerabilities
- Build support for mitigation with local leaders
- Make disaster prevention and multi-objective approach a core value of the community
- Consider future conditions – physical and natural

Continued

Photo: FEMA.gov

Recommendations for Local Planners (cont.)

- Implement a sustained, holistic approach
- Pre-plan for post-disaster redevelopment
- Take advantage of all the available resources

FEMA

NHMA
Natural Hazard Mitigation Association

APA
American Planning Association

The Nature Conservancy

Tips, Tricks, Trials and Tribulations of Integrating Hazard Mitigation into Local Planning

NHMA Disaster Risk Reduction

Friendly Reminders

- NFIP = National Flood Insurance Program
- NAI = No Adverse Impact
- CRS = Community Rating System
- NPDES = National Pollutant Discharge Elimination System

- NHMA = Natural Hazard Mitigation Association
- ASFPM = Association of State Floodplain Managers
- APA = American Planning Association
- HMDR = Hazard Mitigation/Disaster Recovery Division of APA
- NDPTC = National Disaster Preparedness Training Center

I Have No Idea Where to Begin

What If I Do Good Stuff and Nothing Happens?

Start With Basic Challenges

- Public Interest *…Feed It*
- Partnerships *…Foster Them*
- Opportunities *…Take Them*
- Political Will *…Build It*
- Resources *…Use Them*

Public Interest

"Why should I care? We've got 99 more years on this 100-year flood…"

Planning Commission

- Training Opportunities
- Discussion Items
- Workshops

General Public

- Social Media
- Outreach Programs

PUBLIC NOTICE

FEMA FLOOD MAP

UNITED STA ENVIRONMENTAL PROTECTION AGEN

Permits for Clean Water NPDES

NFIP/CRS

NATIONAL FLOOD INSURANCE PROGRAM

Partnerships

*"Where'd you get *your* civil engineering degree – Kmart?"*

Internal

- Public Works
- Emergency Services
- Finance

External

- Federal Agencies
- Developers
- Non-Governmental Agencies

NOAA
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

NHMA
Natural Hazard Mitigation Association

NSGIC
National States Geographic Information Council

United States Environmental Protection Agency

WETLANDS WATCH
WETLANDSWATCH.ORG

National Association of Counties
NACo

APA
American Planning Association
Making Great Communities Happen

NFPA
FIREWISE USA™
Residents reducing wildfire risks

Association of State Floodplain Managers
ASFPM

National Estuarine Research Reserve System

NASA Goddard

The Nature Conservancy

DISASTER RISK REDUCTION
Ambassador Curriculum

Opportunities

*"Well, *now* what do we do?"*

During Review

- Pre-development Meetings
- Rezonings and Policy Reviews
- Pre-Cons

After Events

- Impacts Still Felt
- Attention Is Focused
- Handle with Care

Before Climate Change Initiatives…

- 1989: Zoning Map Revisions
  - Placed lower-density zones on the oceanfront, saving the zones with most density for the higher ground directly behind
- 1991: Floodplain Regulations
  - Rewritten to accommodate 3 ft freeboard
- 1992: Beach Management Plan
  - Encouraged "retreat from the beach" to protect properties from beach erosion and flooding
- 1992: Coastal Protection Overlay Zone
  - To "control erosion, preserve and maintain a recreational beach, safeguard property and promote public safety."


We learned from experience – Hugo, 1989.


Extratropical
Low/Wave
Tropical Depression
Tropical Storm
Hurricane
Major Hurricane
Hugo 1989

Current Status

- Comprehensive Plan (2011)
  - "*The* Comprehensive Plan *recognizes that we live in an active tourism community and in a coastal area that will be heavily impacted by rising sea levels associated with global climate change.*"
- Hazard Mitigation and Floodplain Management Plan (2010, 2015)
  - *"It is likely that the impacts of coastal erosion will increase in severity due to future episodic storm events as well as the anticipated slow onset, long-term effects of climate change and sea level rise. … It should also be noted that anticipated sea level rise will increase the probability and intensity of future tidal flooding events in years to come."*

Comprehensive Plan Goals Include…

Reduce the city's carbon footprint.

- *Action: The Planning and other appropriate departments, working with appropriate Federal, State, and local agencies will develop a climate action plan including strategies such as solar power and wind energy that reduces electricity demand, since virtually all of the city's electricity comes from coal, and most experts believe coal must be phased out as a fuel source by 2030 or dangerous climatic events, like rising sea level, droughts, fires, etc. may become unstoppable.*

Develop a plan for the effects of sea level rise.

- *Action: The Planning and other appropriate departments, will work with Federal, State and local agencies addressing the issue of sea level rise and make plans for the impacts of rising sea levels.*

Who Wrote That?

Cities Mean Business

And
To Show Our Appreciation
For
Your Business

Business Owners and Business Managers
Are Invited to a Thank You Picnic
On April 28, 2008
4:00—7:00 p.m.
BB&T Coastal Field
1251 21st Avenue North

Please RSVP—918-1050 Before April 24
Food and Beverage Will Be Served

You will also have an opportunity
to give your suggestions for the
City's Comprehensive Plan Rewrite

1,136 hours in committee meetings

Political Will

"Climate change? Can we call it storm surge instead?"

Make Friends

- Talk Dollars to Make Sense
- Programs that Have Multiple Returns
- Champion the Good

Convert Challengers

- Stay Updated
- Follow Local News, Social Media
- Know When to Pull Back

Community Rating System

The Community Rating System

- The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements.

How Does It Work?

- 3.8 million policyholders in 1,391 communities participate in the CRS by implementing local mitigation, floodplain management, and outreach activities that exceed the minimum NFIP requirements.
- Although CRS communities represent only 5 percent of the over 22,000 communities participating in the NFIP, more than 69 percent of all flood insurance policies are written in CRS communities.

CRS Classes and Premium Discounts

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	< 500	0	0

Top CRS Communities include:

- Roseville, CA – Class 1
- Tulsa, OK – Class 2
- King County, WA – Class 2
- Fort Collins, CO – Class 2
- Thurston County, WA – Class 2
- Pierce County, WA – Class 3
- City of Ocala, FL – Class 3
- Louisville/Jefferson Co, KY – Class 3
- Charleston County, SC – Class 4
- Maricopa County, AZ – Class 4
- Palm Coast, FL – Class 4
- Charlotte, NC – Class 4

A recent study estimated that the savings associated with a one point increase in CRS Activity 420 Open Space Preservation is, on average, $3,532 per community per year (Highfield & Brody, 2013).

Other Benefits

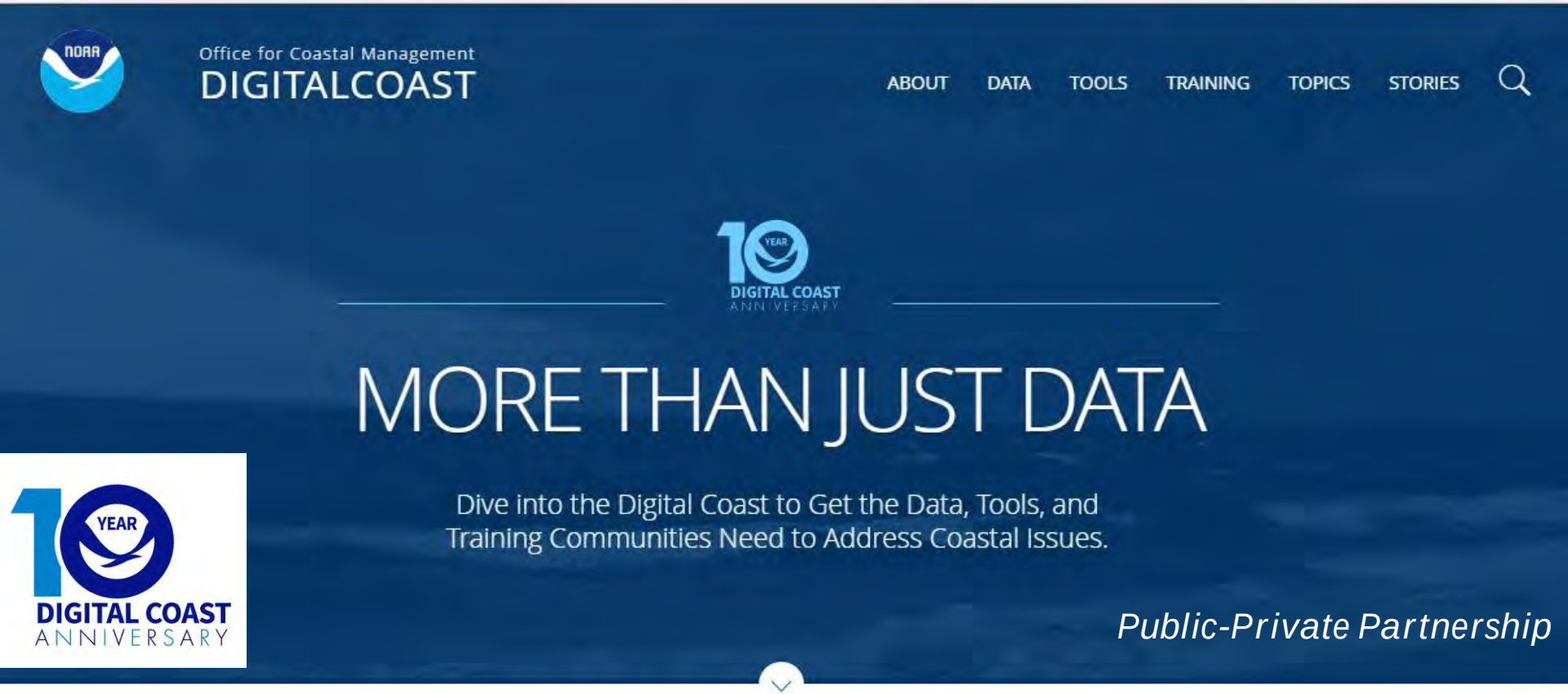
- Citizens and property owners in CRS communities have increased opportunities to learn about risk, evaluate their individual vulnerabilities, and take action to protect themselves, as well as their homes and businesses.
- CRS floodplain management activities provide enhanced public safety, reduced damage to property, and reduced response costs
- Technical assistance in designing and implementing some activities is available to community officials at no charge
- CRS communities have incentives to maintain and improve their flood programs over time.
- Communities can evaluate the effectiveness of their flood programs against a nationally recognized benchmark.

Resources

"You got any of them maps I can have?"

- http://crsresources.org/
- Sample ordinances
- Planning guide
- Planning checklist
- Grant guides

- Find the NAI Guidebooks at www.floods.org
- No membership needed to download the resources on site
- NAI Tools include:
  - Hazard Identification and Floodplain Mapping (2018)
  - Education and Outreach (2015)
  - Planning (2015)
  - Regulations and Development Standards (2017)
  - Mitigation (2016)
  - Infrastructure (2016)
  - Emergency Services (2017)



What is Digital Coast?

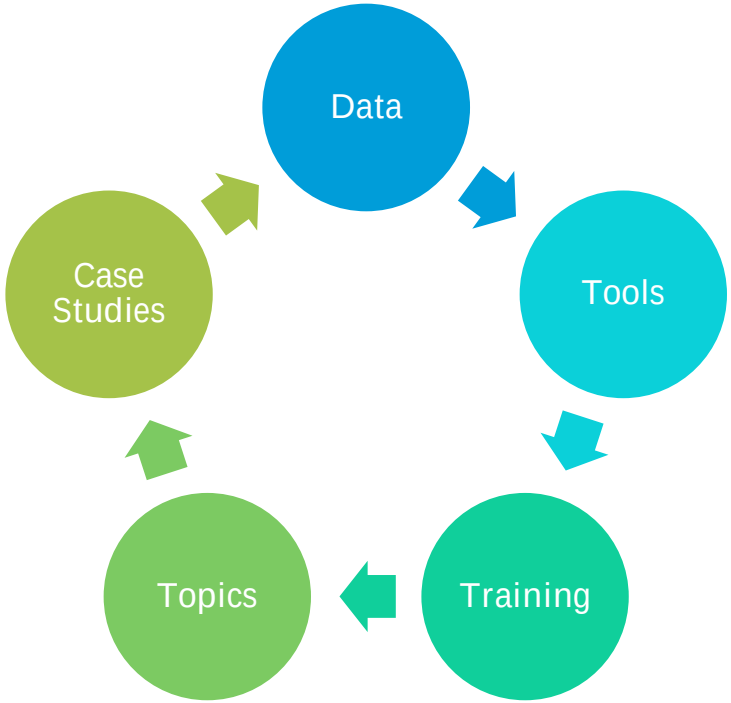
This NOAA-sponsored website is focused on helping communities address coastal issues and has become one of the most-used resources in the coastal management community. The dynamic Digital Coast Partnership, whose members represent the website's primary user groups, keeps the effort focused on customer needs.

Top 5 Popular Staff Picks New

1. Sea Level Rise Viewer
2. Data Access Viewer
3. Introduction to Lidar

Digital Coast - for Decision Makers

- Provides data for those comfortable with GIS
- Provides tools for those who don't work with GIS regularly
- Training programs available online and in person
- Topics are suites of related data and tools to accomplish a common goal (risk communication, coastal storms, water quality, etc)
- "Stories" (Case Studies) show how others are using Digital Coast



Links

- www.planning.org
- www.csc.noaa.gov/digitalcoast
- https://www.fema.gov/hazard-mitigation-planning-resources
- http://coastalresilience.org/
- http://stormsmartcoasts.org/
- Your local Riverkeeper
- http://nhma.info/
- http://www.firewise.org/
- http://www.tsunamiready.noaa.gov/
- http://www.weather.gov/stormready/
- http://www.weather.gov/wrn/
- https://ndptc.hawaii.edu/training/

Element Name	Possible Points
322.g. Natural Floodplain Functions (MI7)	20 points
332.a. Outreach Projects (OP)	200 points
332.d. Stakeholder Delivery (STK)	50 points
412.e. More Restrictive Floodway Standard (FWS)	140 points
422.a. Open Space Preservation (OSP)	1,450 points
422.b. Deed Restrictions (DR)	50 points
422.c. Natural Functions Open Space (NFOS)	350 points
422.d. Special Flood Related Hazards Open Space (SHOS)	150 points
422.e. Coastal Erosion Open Space (CEOS)	750 points
422.f. Open Space Incentives (OSI)	250 points
422.g. Low Density Zoning (LZ)	600 points
422.h. Natural Shoreline Protection (NSP)	120 points
432.a. Development Limitations (DL)	1,330 points
432.l. Special Flood-Related Hazard Regulations (SHR)	100 points
432.n. Coastal Erosion Hazard Regulations (CER)	370 points
442.d. Erosion Data Maintenance (EDM)	20 points
452.a. Stormwater Management Regulations (SMR)	380 points
452.b. Watershed Master Plan (WMP)	315 points
452.c. Erosion and Sediment Control Regulations (ESC)	40 points
452.d. Water Quality Regulations (WQ)	20 points
512.c. Natural Floodplain Functions Plan (NFP)	100 points
Activity 520 522.a. Buildings Acquired or Relocated (bAR), 522.b. Buildings on the Repetitive Loss List (bRL), and 522.c. Severe Repetitive Loss Properties (bSRL)	2,250 points
542.c. Capital Improvement Program (CIP)	70 points

Example: Green (Open) Space Possible Points

NHMA Local Initiative: Disaster Risk Reduction (DRR) Ambassador Curriculum

- Focuses on supporting community leaders from the private and public sector to engage and lead community-level DRR dialogue by providing:

  - Educational resources
  - Self-study curricula
  - Training workshops (First Pilot 2015)
  - Webinars

DISASTER RISK REDUCTION Ambassador Curriculum

NHMA Local Initiative: Disaster Risk Reduction (DRR) Ambassador Curriculum

Curriculum development is underway with continued NHMA member expertise and contractor support made possible by the FEMA CTP Grant.

The goal of the DRR Ambassador Curriculum is to facilitate DRR efforts for the "Whole Community" by:

1. Engaging in discussion of how disasters can be reduced through local action
2. Sharing insights among local leaders and technical experts to enable the development of cross-functional solutions
3. Acquiring the best-available information, knowledge of best practices, and analytic tools to enable better-informed decisions before, during, and after disasters

The target audience includes those involved in community development decision-making, such as local community staff, volunteer and stakeholder groups, and federal and state officials.

Varied delivery methods will provide multiple options for access by the target audience. DRR Ambassador modules will be available via webinars presented by NHMA or partner organizations, presented in conferences and/or classrooms by qualified instructor(s), or downloadable for individual study from the NHMA website.

NHMA Local Initiative: Disaster Risk Reduction (DRR) Ambassador Curriculum

DRR AMBASSADOR CURRICULUM AT-A-GLANCE

I. Disaster Risk Reduction for a Safe and Prosperous Future	
1	Introduction to the Natural Hazard Mitigation Association and Disaster Risk Reduction Ambassador Curriculum *
2	Introduction to Disaster Risk Reduction as a Foundation of Whole Community Resilience *
3	Leadership for Disaster Risk Reduction *
4	Whole Community Disaster Risk Reduction and Adaptation *
5	Approaching the Challenge of Disaster Risk Reduction *
II. Forming a Community's Vision for Disaster Risk Reduction	
6	Starting with Assets and Community Vision *
7	Achieving Community Buy-in: Win-Win Approaches *
8	Leveraging Resources to Improve Disaster Risk Reduction *
III. Realizable, Practical, and Affordable Approaches for Moving from a Vision for Disaster Risk Reduction to a Strategy	
9	Best Practices and Options for Disaster Risk Reduction *
10	Hazard Mitigation Planning Process *
11	Beyond Codes and Low-Impact Development
12	The Floodplain Management Process Model *
IV. Resources and Tools for Implementing a Community's Disaster Risk Reduction Strategy	
13	Climate and Weather Tools and Trends
14	Risk Assessment Basics *
15	Legal and Policy Opportunities *
16	Linking Catastrophe Insurance to Disaster Risk Reduction *
V. Resources for Hazard-Specific Disaster Risk Reduction	
17	Living with Water: Inland and Coastal Flooding
18	Design for Flood Resilience: Flood Basics and Floodplain Management *
19	Design for Flood Resilience: Flood Resistant Design and Case Studies *
20	Floodplains, Floodways and Wetlands: Understanding the Limitations of FEMA Flood Maps *
21	Wildfire Mitigation
22	The Wildfire-Flood Connection
23	Severe Thunderstorm / Tornado Safe Rooms *
24	From Policy to Engineering: Earthquake Risks

Thank You!

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