



FEMA

Hazard Mitigation Planning and Integration: Linking Local Planning Efforts

**National Association of Latino Elected and Appointed
Officials**

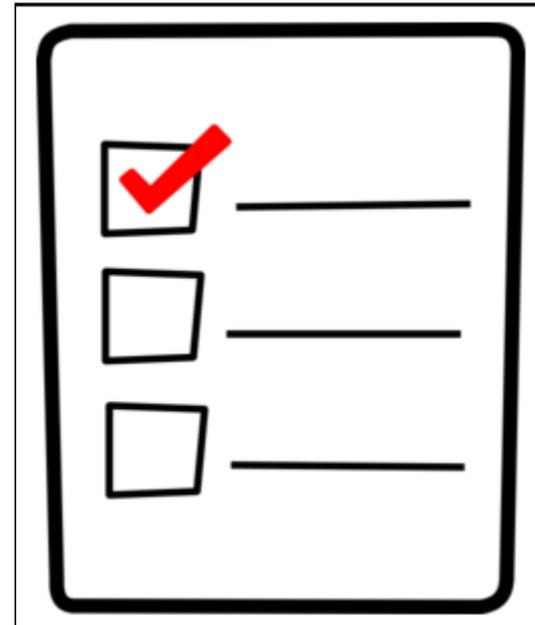
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Outline

1. Introduction to Hazard Mitigation Planning
2. Planning Integration
3. Plan Integration Guide



Hazard Mitigation Planning - Purpose

- Developing hazard mitigation plans enables state, tribal, and local governments to:
- Increase education and awareness around threats, hazards, and vulnerabilities;
- Build partnerships for risk reduction involving government, organizations, businesses, and the public;
- Identify long-term, broadly-supported strategies for risk reduction;
- Align risk reduction with other state, tribal, or community objectives;
- Identify implementation approaches that focus resources on the greatest risks and vulnerabilities; and
- Communicate priorities to potential sources of funding.

What Is Plan Integration?

- A **two-way exchange** of information between hazard mitigation plans (State and local) and other community plans.
- Blending your community's **plans, policies, codes and programs** that guide development and the roles of **people and government** in implementing these capabilities.
- Specific to your community and depends on the hazards and **vulnerability of your built environment** to those hazards.



Plan Integration Reduces Risk

- Lends a **better understanding of a community's risk** to specific hazards and actions to address those risks, which can influence decisions.
- Having a local hazard mitigation plan is not enough, since it may not get implemented. By **integrating hazard mitigation principles** into other community growth and development policies, a community's risk can be reduced.
- Provides opportunities for **various departments** within the local government to work together.

Plans and People

- Integrate **natural hazard information and mitigation principles** into local planning mechanisms and vice versa.
 - Consider natural hazards (past events, impacts, and vulnerabilities)
 - Identify hazard-prone areas throughout the community
 - Identify inconsistencies, gaps, and recommendations
- Encourage **collaborative planning** and implementation, and inter-agency coordination.
 - Involve key community officials with authority to execute policies and programs
 - Collaborate across departments to share knowledge and build relationships for successful implementation

Who Should Be Involved?

- **State Agencies and Regional Entities**
 - Emergency Management
 - Transportation
 - Environmental Services
 - Planning
- **County Department Representatives**
 - Emergency Management
 - Planning
 - Transportation
 - Floodplain Management
 - Environmental and Historic Services
 - Utilities/Public works
- **Municipalities Representatives**



Questions to consider: Land Use

- Does the future land use plan identify adequate space for projected future growth outside of high hazard areas?
- Does the plan include policies to restrict the density of new development in high-hazard areas or guide new development away from high-hazard areas? Does the plan include policies to relocate vulnerable existing development to less vulnerable areas?
- Does the plan include policies for existing structures and facilities to be strengthened, elevated, or relocated during the redevelopment process?
- Are there any areas in the land use plan where a proposed rezoning would put more people at risk (for example, by allowing higher-density development in the 100-year floodplain)?

Questions to consider: Transportation and Infrastructure

- Is the transportation network developed in a manner that provides redundancy (i.e. alternate routes) if certain key nodes or routes is affected by disaster?
- Are there policies in place to protect transportation facilities such as airports from hazard events and to locate them outside of high-hazard areas?
- Are there policies in place for design and siting of water and sewer systems, roads, bridges, hospitals, and public safety facilities to protect these facilities during hazard events and for their continued operation after a disaster event?
- Are there any public transit stations/lines and highways close to flood-prone areas?

Questions to consider: Emergency Management

- Has your community adopted an evacuation and shelter plan to deal with emergencies from natural hazards?
- Does your Emergency Operations Plan (EOP) show major evacuation routes that are prone to flooding?
- Has your community prepared a post-disaster redevelopment plan (PDRP) that includes policies to reduce the exposure of human life and public and private property to natural hazards after a disaster?
- Does the PDRP include policies to address: 1) short-term repair and cleanup actions needed to protect public health and safety and long-term repair and redevelopment activities; 2) relocating or retrofitting damaged infrastructure; 3) limiting redevelopment in areas of repeated damage; and 4) incorporating hazard mitigation policies into the short- and long-term recovery process?

Questions to consider: Environment and Open Space

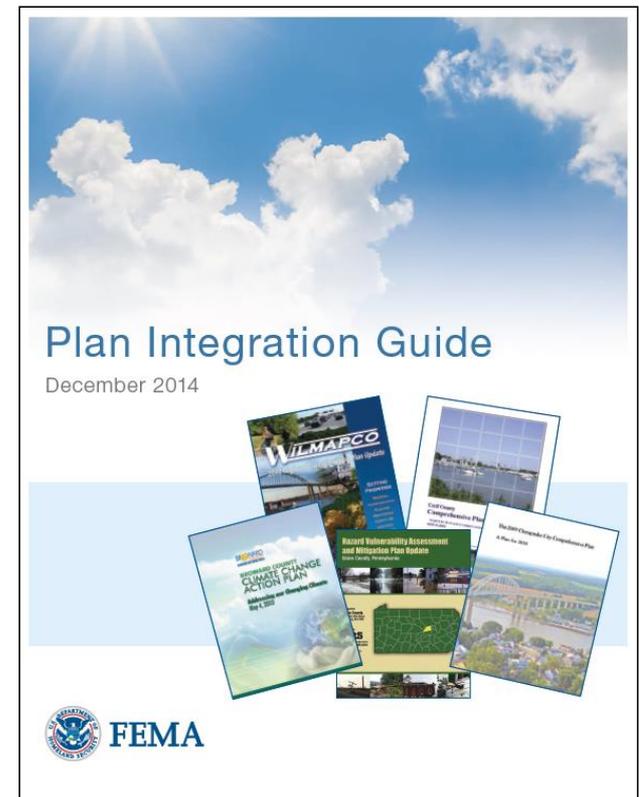
- Is there a policy to utilize land that is otherwise unsuitable for development (such as in the floodplain, steep slopes) for recreational purposes, thereby lowering the community's risk?
- Are there policies to encourage development of waterfront areas for recreational purposes to serve as tourist attractions and provide an economic benefit to the community on land prone to hazards?
- Are the hazard vulnerability implications of land development considered on a regional (or watershed) basis?
- Do environmental policies maintain and restore protective ecosystems and provide incentives to develop outside protective ecosystems?

Questions to consider: Plan Implementation

- Are there policies to reduce vulnerability to wind, fire, extreme temperatures, etc. through regulating the location, size, design, type, construction methods, and materials used in structures?
- Does the zoning ordinance conform to the Comprehensive Plan in terms of discouraging development or redevelopment in hazard-prone areas and contain natural hazard overlay zones that set conditions for land use within such zones?
- Does the Capital Improvement Plan (CIP) limit expenditures on projects that would encourage new development or additional development in vulnerable areas?
- Do infrastructure policies limit extension of existing infrastructure, facilities that would encourage development in vulnerable areas?

Plan Integration Guide

- Part 1 – Integration of Hazard Mitigation Principles into Local Planning Mechanisms
- Part 2 – Integration of Hazard Mitigation Principles into Comprehensive Plan Elements
- Part 3 – Integration Across Agencies and Departments
- Part 4- Case Studies
- Appendices



https://www.fema.gov/media-library-data/1440522008134-ddb097cc285bf741986b48fdcef31c6e/R3_Plan_Integration_0812_508.pdf

Plan Integration Guide Icons

- **Instructions** guide the reader through a step-by-step process on how to perform Plan Integration.
- Refer to your plan/ordinance, review and answer relevant Guide questions from Appendix A.
 - Each department should answer the set of questions that are pertinent to them.
 - If you answer yes, then you are currently performing Plan Integration. Identify where it is addressed, and include the page number and section. Also include any inconsistencies between plans.
 - If you answer no, you have identified a gap. Make a recommendation to address the potential gap using the examples listed in Step 3.



Plan Integration Guide Icons

- **Examples** show how other communities have performed plan integration. These examples can be considered best practices in plan integration.
- **Illustrations** help you develop sections of the plan integration document. The language provided may be expanded, deleted, or modified as necessary to fit your community's situation and requirements.



Part 1

Integration of Hazard Mitigation into Local Planning Mechanisms

- **Capital Improvement Plans** – Budgeting for future infrastructure or facility new construction, rehabilitation, expansion, and/or improvements.
- **Zoning Ordinances** – Examples of zoning methods that affect flood hazard mitigation include: 1) adopting ordinances that limit development in the floodplain; 2) limiting the density of development in the floodplain; and 3) requiring that floodplains be maintained as open space.
- **Subdivision Ordinances** – Elevation data collection during platting process, having buildable space on lots above the base flood elevation.

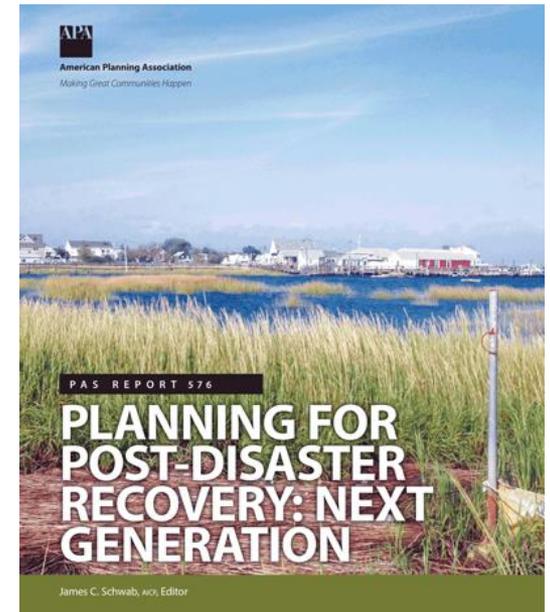


Part 1

Integration of Hazard Mitigation into Local Planning Mechanisms

- **Building Codes** – Requirements for building design standards and enforcement of elevation of residential and elevation or floodproofing of non-residential structures, and requirements that consider snow loads and wind loads.
- **Stormwater Management** – Stormwater ordinances may regulate development in upland areas to reduce stormwater runoff. Examples of erosion control techniques within a watershed include bank stabilization with terracing hillsides, installing riprap, etc.
- **Post-Disaster Recovery Ordinances/Plans** – Regulate repair activities and prepare a community to respond to a disaster event in an orderly fashion by requiring citizens to obtain permits for repairs or make repairs using standard methods.

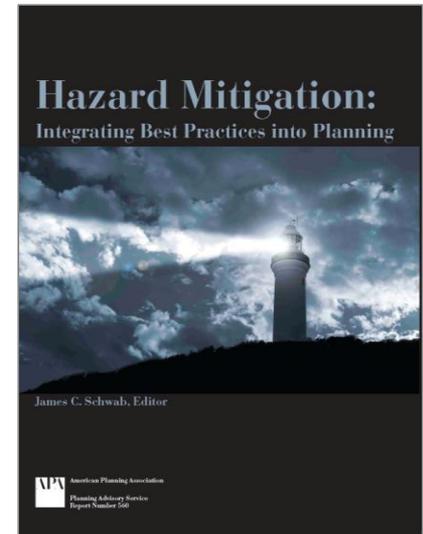
<https://www.planning.org/publications/report/9026899/>



Part 2

Integration of Hazard Mitigation Principles into Comprehensive Plan Elements

- Hazard mitigation is an integral component of a community's comprehensive planning efforts and can influence future decisions made in important areas such as **land use, transportation, and economic development**.
- Since the Comprehensive Plan is a legal mechanism to implement development control and guidance mechanisms such as zoning and capital improvements by the community's desired development pattern, **hazard mitigation strategies have a higher likelihood of being implemented** if they are part of the community's Comprehensive Plan.



<https://www.planning.org/publications/report/9026884/>

Part 2

Integration of Hazard Mitigation Principles into Comprehensive Plan Elements

- **Future Land Use**

- Growth management techniques, land conservation, buffering
- Clustering of development, concentrating development outside high-hazard areas

- **Revitalization**

- Redevelop and retrofit structures with deficiencies to ensure structural integrity to withstand hazards
- Relocate out of hazard areas to maintain the continuance of county services after a natural disaster

- **Housing**

- Program to retrofit or replace public and publicly subsidized affordable housing to reduce damage to inhabitants during a disaster

Part 2

Integration of Hazard Mitigation Principles into Comprehensive Plan Elements

- **Environmental Resources**

- Policies that aim to restore and protect natural resources such as wetlands and preserve their natural functions that buffer and absorb the impacts of floodwaters.

- **Public Works/Infrastructure**

- Analysis of the adequacy of the existing and projected transportation system to evacuate the population prior to an impending natural disaster.

- **Historic Preservation**

- Historic resource protection, including historic site identification and establishing performance standards for development and sensitive reuse of historic resources.

Part 3

Integration Across Agencies and Departments

- Interagency coordination is key for any planning process to be successful.
 - Understanding their **viewpoints**, learning **expertise**, and **vesting more interest** in planning.

Table 3.1: Integration across Agencies and Departments

Jurisdiction	Planning & Zoning	Community Development	Transportation	Public Works	Emergency Management	Budgeting	GIS	Housing	Parks and Recreation	Permits and Inspections	Other	Other
Planning and Zoning												
Community Development												
Transportation												
Public Works												
Emergency Management												
Budgeting												
GIS												
Housing												
Parks and Recreation												
Permits and Inspections												
Other												

Part 4

Case Studies Overview

Case Studies	Cecil County, MD	Broward County, FL
Location	NE Maryland	SE Florida
Population	101,000	1,800,000
Density	290 per square mile	3,740 per square mile
Area	417 square miles	1,3189 square miles
Municipalities	8	31
Character	Primarily rural	Primarily urban (east) Everglades National Park (west)
County Seat	Elkton	Fort Lauderdale
Plan Integration	Pilot in 2014	Integration performed 2010-2012 with several plan updates

Benefits of Plan Integration

Learning about best practices from other jurisdictions:

- Punta Gorda, FL – Post-Hurricane Charley Sunloft Center Revitalization

Before



After



Benefits of Plan Integration

Learning about best practices from other jurisdictions:

- Punta Gorda, FL – Post-Hurricane Charley Housing Authority Revitalization

Before



After



Even more Benefits of Plan Integration!

- Plan Integration enhances risk reduction through community-wide planning by:
 - Improving **interdepartmental coordination**
 - Developing specific recommendations for integration into community-wide plans
 - Compiling existing plan measures to include in your Hazard Mitigation Plan to illustrate that integration is being performed, and **meeting the Local Mitigation Plan Review Tool requirements**

LOCAL MITIGATION PLAN REVIEW TOOL

The Local Mitigation Plan Review Tool demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

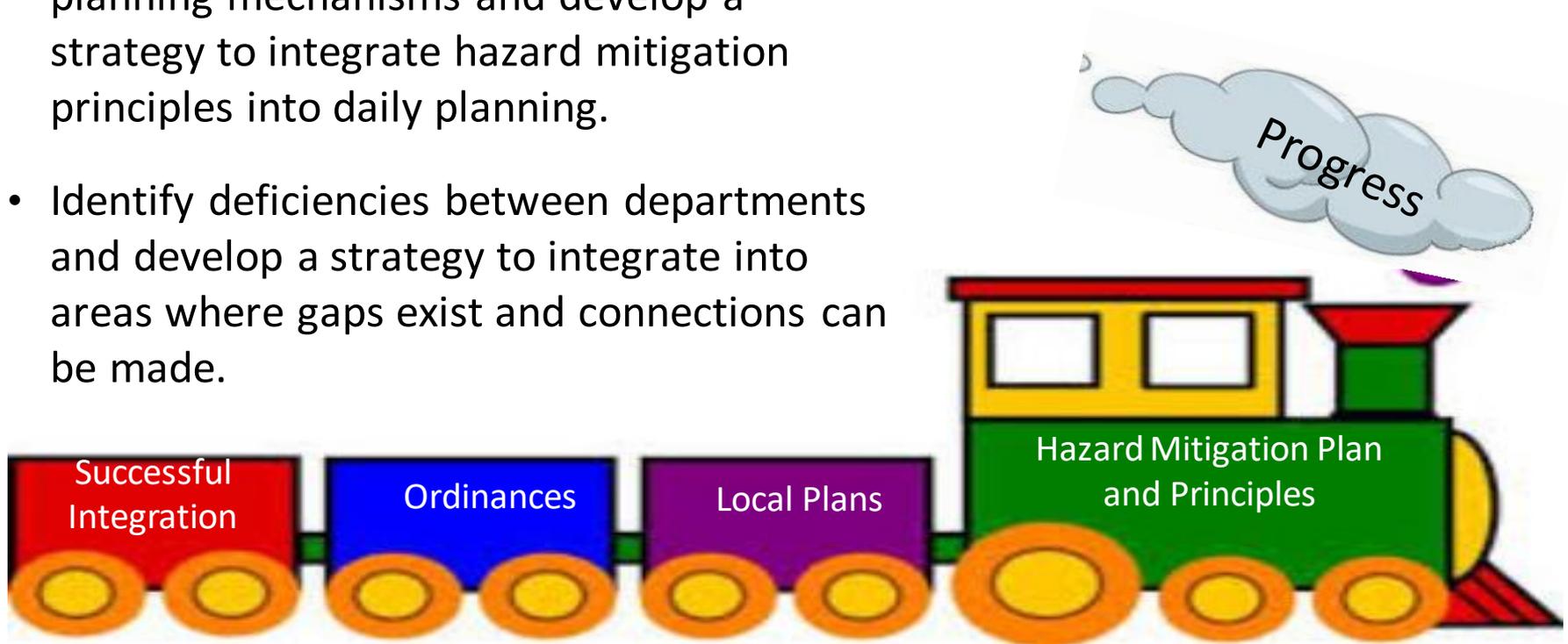
- The **Regulation Checklist** provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The **Plan Assessment** identifies the plan's strengths as well as documents areas for future improvement.
- The **Multi-jurisdiction Summary Sheet** is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this Local Mitigation Plan Review Guide when completing the Local Mitigation Plan Review Tool.

Jurisdiction:	Title of Plan:	Date of Plan:
Local Point of Contact:		Address:
Title:		
Agency:		
Phone Number:		
Email:		
State Reviewer:	Title:	Date:
FEMA Reviewer:	Title:	Date:
Date Received in FEMA Region (month)		
Plan Not Approved		
Plan Approvable Pending Adoption		
Plan Approved		

Tips For Successful Plan Integration

- Use the Hazard Mitigation Plan as a driver and platform to integrate plans.
- Identify where gaps exist between local planning mechanisms and develop a strategy to integrate hazard mitigation principles into daily planning.
- Identify deficiencies between departments and develop a strategy to integrate into areas where gaps exist and connections can be made.



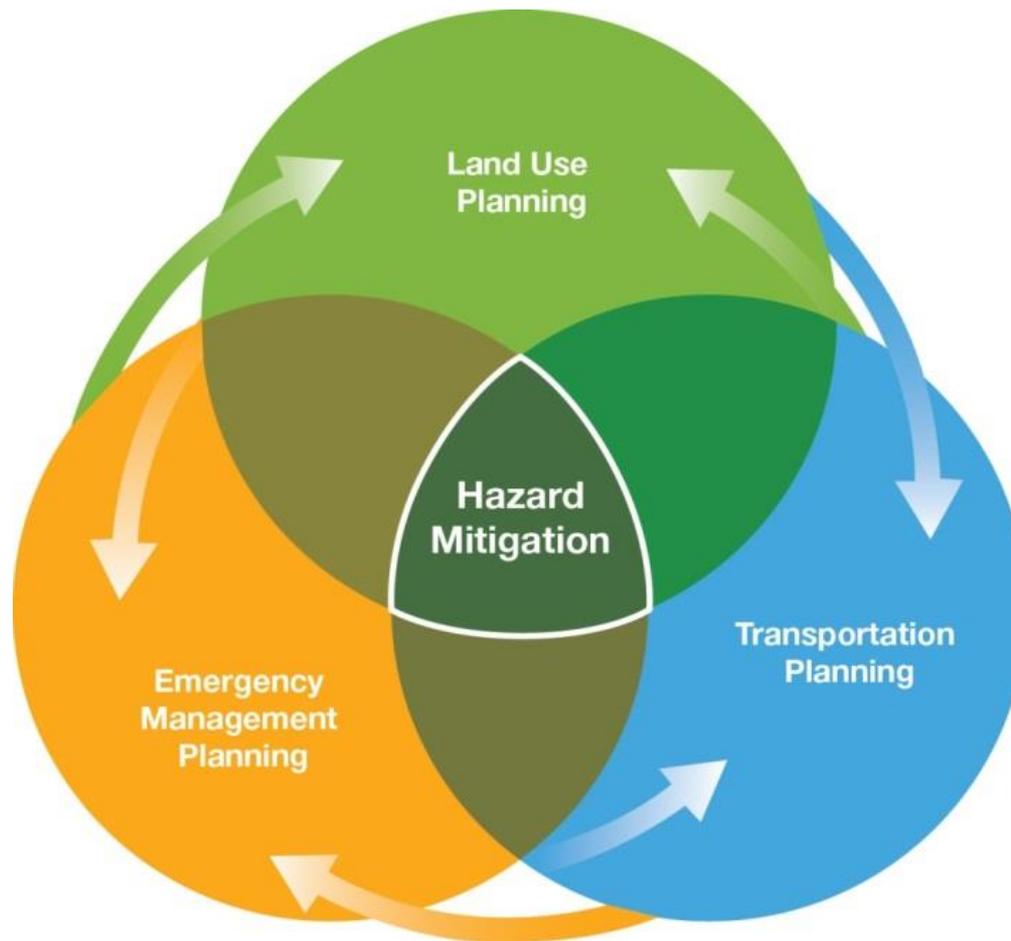
Resources

- State Plan Review Guide (2016)
 - <https://www.fema.gov/media-library/assets/documents/101659>
- State Mitigation Planning Key Topics Bulletins (2016)
 - <https://www.fema.gov/media-library/assets/documents/115780>
- Local Plan Review Guide (2011)
 - <https://www.fema.gov/media-library/assets/documents/23194>
- Local Mitigation Plan Handbook (2013)
 - <https://www.fema.gov/media-library/assets/documents/31598>
- Tribal Plan Review Guide (currently being revised)
 - <http://www.fema.gov/media-library/assets/documents/18355>

Resources

- FEMA Planning and mitigation resources
 - <https://www.fema.gov/hazard-mitigation-planning>
- American Planning Association: Many free publications
 - <https://www.planning.org/>

Questions?





FEMA

Thank You!

