

**FEMA's Risk MAP Strategy - *Integrating  
Mapping, Assessment, and Mitigation Planning***

Draft Strategy

February 20, 2008

## **Introduction**

With the strong foundation of Flood Map Modernization in place, Federal Emergency Management Agency's (FEMA's) Risk Analysis Division is implementing a philosophical and tactical shift in how it delivers information necessary for flood hazard reduction. The focus will be on filling flood hazard data needs and expanding and improving utility and accessibility of the flood hazard and risk data.

The Risk MAP (Mapping, Assessment, and Planning) Strategy provides a bridge between previously described concepts and future implementation. The Risk MAP concept is an improved, integrated approach where flood hazards are identified and then woven into watershed-based risk assessments and State and local hazard mitigation planning efforts. The Risk MAP concept helps move the partnership with local communities beyond simply mapping the flood hazard. It describes how to evolve existing activities in innovative ways to encourage local mitigation actions that reduce risk to life and property—the fundamental mission of FEMA. This Strategy supports FEMA's mission and lays out the roadmap to the future by describing cross-cutting themes and goals for Risk MAP.

FEMA will deliver Risk MAP through capable State, multi-jurisdictional, and industry partner. In coordination with its partners, FEMA will expand the use of cost share.

## **Risk MAP Vision**

*Reduce losses of life and property through demonstrated progress and effective local mitigation activities in mitigation plans supported by quality risk assessments and flood map data delivered to the right audience, using the right methods, at the right time.*

It is important that the Risk MAP Vision be a scalable yet flexible framework in order to be successful at any level of funding, and programmatic goals should be adjusted accordingly and clearly articulated. The majority of FEMA's initial efforts to implement Risk MAP, based on available resources, will be dedicated to improving and maintaining the quality of flood hazard data and maps, focusing on high risk areas impacted by coastal flood hazards and levees. Sustaining the quality of flood hazard data and maps forms the foundation of flood risk assessments and mitigation planning.

## **Overarching Themes for Risk MAP**

In developing the strategic goals and specific objectives, several consistent overarching themes emerge that are central to success in Risk MAP and that define what is valued. These themes drive FEMA Mitigation organization, FEMA collaboration with partners, and program delivery to impacted communities and work toward an integrated Risk MAP effort.

### ***An integrated program and organization***

A successful Risk Analysis organization is more than just mapping the flood and achieving individual missions. Planning, risk assessment, and flood hazard identification processes will be designed with the other elements in mind. Contractors, systems, and processes will appropriately connect.

### ***Clearly and effectively inform the public of their flood risk and impacts***

Communication products and activities will clearly indicate risk for both regulatory purposes and public understanding. Communications should take advantage of innovative yet proven technology and techniques but be able to reach all populations.

### ***An environment where efficiencies are sought and continually gained***

Efficiencies will be searched for at all levels, from programmatic decisions to day-to-day activities. Continue to search for efficiencies and build them into standard processes.

### ***Leverage and preserve the Flood Map Modernization investment***

Solutions should be designed to include the successes of Flood Map Modernization and utilize the products developed through the Flood Map Modernization effort.

## **Cross-cutting Goals and Objectives**

The Risk MAP Strategy builds upon the Vision to provide the organization with a well-defined pathway for the future. This Strategy helps us move away from the focus on individual Risk Analysis component missions to a much broader and integrated goal structure. This is intended to show that to be successful, Risk MAP efforts must be combined and resources used efficiently towards a common strategic direction. The following sections take the overarching themes and lay out specific goals to be considered as Risk MAP is implemented.

In the following, the word “**communities**” is used not just to refer to geopolitical communities, but also to the various communities of NFIP stakeholders, including state and local communities; product users; and other FEMA customers.

### **Theme #1 – *An integrated program and organization***

Goals include:

- Create an interactive process and cycle where communities work together to effectively develop, use, and share Risk MAP products

- Efficient use of technology to identify, quantify, store, share, and enhance risk analysis information
- Communicate, coordinate, and implement current and future programs to “buy-down” (reduce) identified flood risk

A successful Risk Analysis Division is more than just mapping flood hazards and progressing within individual program areas. The integration of Risk MAP includes contractors, systems, and processes. It is not enough to simply identify the flood hazard and accept minimum requirements—effective mitigation requires further action by the community. The key to integration is creating an interactive process and lifecycle that continuously engages all communities. The Risk MAP lifecycle is the foundation that needs to be realized and understood as FEMA moves forward.

**Theme #2 – *Clearly and effectively inform the public of their flood risk and impacts***

Goals include:

- Develop and implement an over-arching Risk MAP outreach strategy, including activities that have a consistent and continuous message and are integrated with other FEMA outreach activities
- Develop targeted messaging and innovative outreach tools that increase understanding of risk and mitigation, and inspire communities to action
- Within 5 years, through meaningful communication, ensure that a measurable increase of the public’s awareness and understanding of risk results in a measurable reduction of current and future vulnerability
- Understand who the Risk MAP communities are and their requirements, and make sure they understand risk information and the benefits of mitigation

As part of Flood Map Modernization, FEMA communicates with States, Tribes, local communities, and regional entities impacted by flood map updates throughout the entire flood hazard data and map production process. Mitigation planning processes further engage communities to understand and communicate risks through action. As FEMA moves into Risk MAP, the emphasis on communication at all levels needs to continue. The keys to success are to identify all the Risk MAP customers and move the focus beyond the standard NFIP audience to the multi-hazard audience. In order to be clear and effective in our communications, the over-arching messages must be kept simple. Messaging needs to target the level of detail to the audience and Risk MAP products need to be easily accessible to those audiences.

**Theme #3 – *An environment where efficiencies are sought and continually gained***

Goals include:

- Identify new Risk MAP users and their needs and refine existing user needs. Make products that are easy to use and understand
- Optimize utilization of resources with a balanced Risk MAP delivery
- Promote reliable self sustaining integrated Risk MAP processes and information

Keys to success are to understand the Risk MAP products building upon the current Map Modernization products (i.e. Digital Flood Insurance Rate Maps (DFIRM) and databases); risk assessment tools; and mitigation planning products (e.g. State, Tribal, and Local Mitigation Plans, FEMA Plans Repository), and the expanded broader user community for Risk MAP. FEMA needs to better collect, analyze, and refine requirements. Ensure that the Risk MAP products meet the needs of the communities, are accessible, and can easily be implemented.

In building an environment for efficiencies FEMA will need to balance time, cost, and quality while also balancing scope across Risk MAP. By empowering communities and rewarding innovation and improvement throughout the process, a reduction in risk and improved quality should be realized. The Risk MAP lifecycle must be streamlined and tied to a consistent and articulated update cycle so that Risk MAP can evolve to be self-sufficient.

#### ***Theme #4 - Leverage and preserve the Flood Map Modernization investment***

Goals include:

- Leverage knowledge gained in Flood Map Modernization to establish a clear governance structure allowing for accountability, integration and program oversight.
- Growing capable community relationships to advance risk management and reduction
- Build on benefits of Flood Map Modernization data and systems to evolve these into reliable and integrated Risk MAP delivery to meet the needs of the various communities.
- Develop an integrated outreach strategy that is flexible to regional variations, applicable to a variety of communities, and carried out throughout program delivery.

Flood Map Modernization has brought flood maps and the mapping process into the 21st century. The digital technologies advanced through Flood Map Modernization have opened doors that allow more informed, sophisticated, and effective ways for communities to assess, communicate, and reduce flood risk. The successes of Flood Map Modernization need to be leveraged as the Risk MAP Vision moves forward.

Keys to successfully leveraging the Flood Map Modernization investment include maintaining and enhancing our beneficial partnerships while also, enabling the expansion of our partners' skill sets. FEMA needs governance to integrate partner and contractor performance. The systems and processes developed through Flood Map Modernization need to be leveraged and evolve as Risk MAP is implemented.

## **The Risk MAP (Mapping, Assessment, and Planning) Lifecycle**

The concept and progression of Risk MAP is best described as a lifecycle with the purpose of constantly reducing losses to life and property. Flood mapping is used for risk assessments which are incorporated into mitigation plans where risk reduction measures are identified for future action. Future hazard identification requirements are developed and the cycle starts anew. Key to the success of Risk MAP is better integrating components, effectively communicating with the various communities, leveraging existing programs within Risk Analysis, and gaining efficiencies in our processes.

**Mapping** – This component of the lifecycle is centered on the flood hazard data identification with a broader eye towards supporting Risk MAP data needs. By improving the data as well as the means of maintaining and delivering it, FEMA ensures that assessments and plans have the right information at the right time.

**Assessment** – Within Risk MAP, there will be an emphasis on risk assessments. FEMA will describe the effects of the hazard on people and the built environment through effective, user-targeted products. Using the National Flood Hazard Layer, a National flood-risk-assessment baseline will be provided showing the potential annualized losses due to flood. FEMA will encourage more detailed, multi-hazard assessments from Federal, State, and local partners. Additionally, FEMA will improve the ability to assess future conditions and built environments (through State/local plans) to help measure the potential reduction in risk through both probabilistic and scenario based analysis. Ultimately, over time, the actual risk reduction must be quantified and tracked.

**Planning** – Show demonstrated progress in State, Tribal, and local mitigation plans to fully utilize Risk MAP products that are timely, targeted, and accurate. Mitigation plans rely on risk assessments information for communities to analyze, incorporate into plan updates, and to identify actionable strategies that reduce risks. There needs to be effective risk communications, incentives, and guidance across and within Federal, State, and local levels to encourage effective action on the mitigation plan that result in true risk reduction.

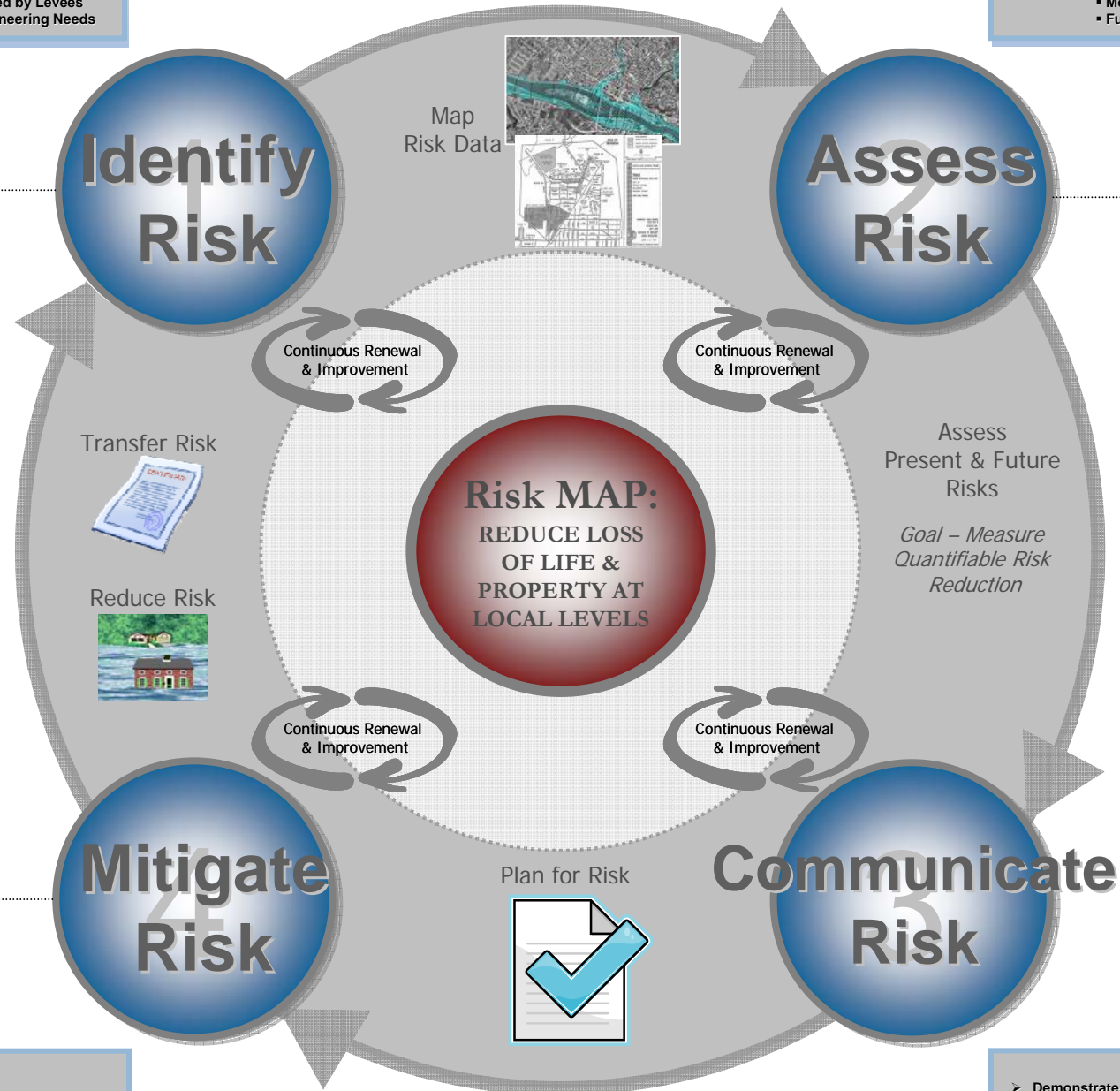
The attachment provides a visual representation of the Risk MAP lifecycle.

**Quality Products to Reduce Nation's Vulnerability**

- Watershed Based Prioritization
- Immediate Focus on:
  - Coastal Flood Studies
  - Mapping of Areas Impacted by Levees
  - Unmet Flood Hazard Engineering Needs

**Risk Assessments**

- National Coverage
- Layers Include:
  - 1% Assessments using Flood Hazard Data
  - More Detailed State/Local Assessments
  - Future Built Environment



**Identify Risk**

**Assess Risk**

**Mitigate Risk**

**Communicate Risk**

**Risk MAP:**  
REDUCE LOSS  
OF LIFE &  
PROPERTY AT  
LOCAL LEVELS

Assess  
Present & Future  
Risks

Goal - Measure  
Quantifiable Risk  
Reduction

Map  
Risk Data

Transfer Risk

Reduce Risk

Plan for Risk

Continuous Renewal  
& Improvement

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**Local Action**

- Effective Local Mitigation Activities
- Continuous Communication about Risk
- Build Local Ability to Assess Risks
- Work to Measure Quantifiable Risk Reduction

**Mitigation Planning**

- Demonstrate Progress in Planning Process
- Effective Action on Mitigation Plans Communicate Risk (across State, Local, Public)
- Full Utilization of RiskMAP Products