

# FEMA Flood Hazard Mapping Future Vision

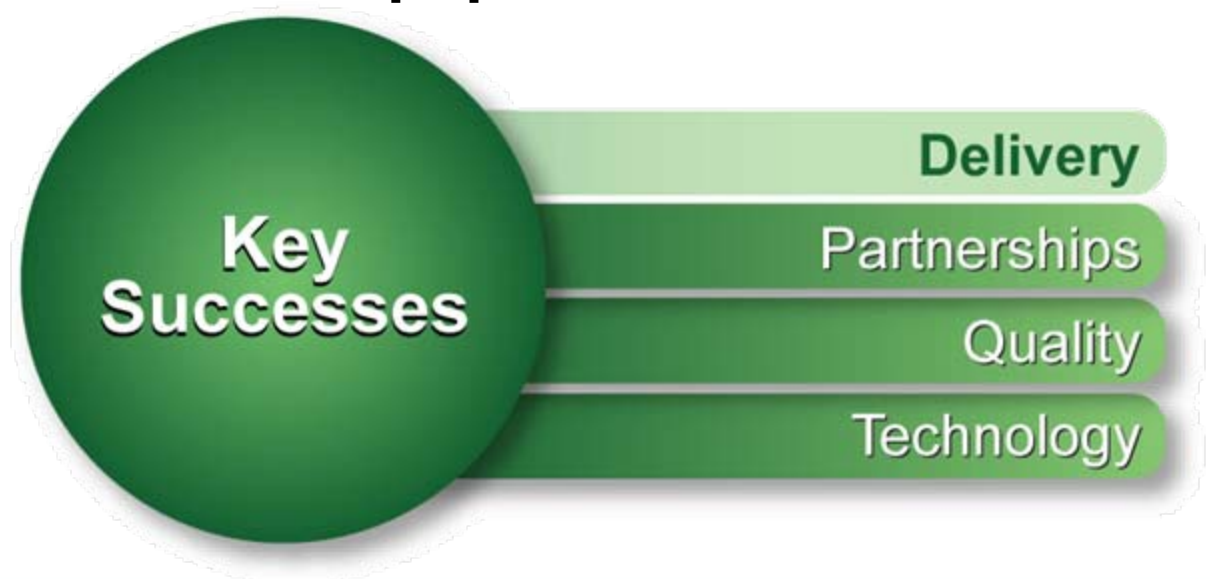
# Agenda

- **Map Modernization status**
- **Changes in printing and distribution**
- **Risk MAP – Integrating Mapping, Analysis and Planning**

# Delivery

## Map Modernization Successes

- **Effective program management**
- **Acute attention to cost/schedule**
- **Stakeholder engagement**
- **Maps for 92% of the Nation's population**

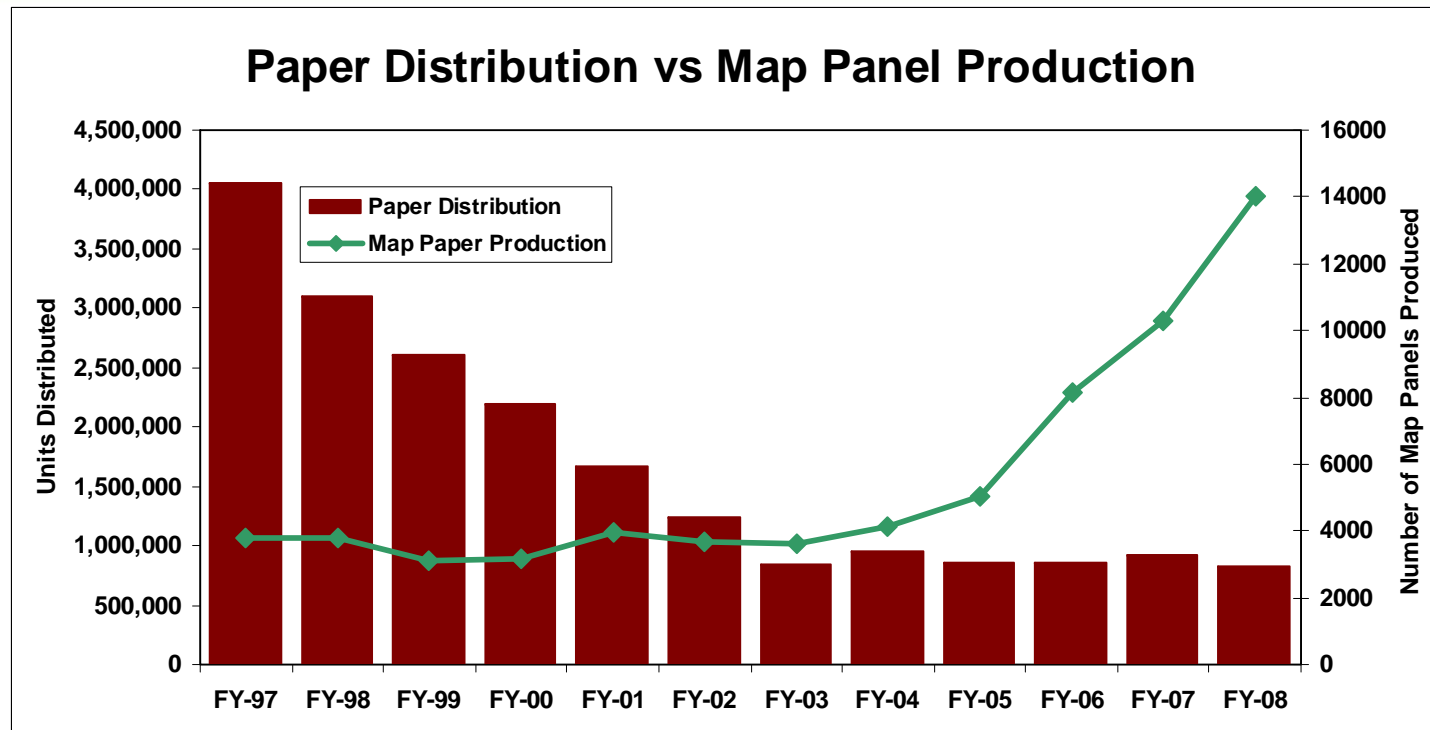


# Delivery

## Map Modernization Successes

- **72.5% of the population has received modernized flood maps as of calendar year 2008 close.**
- **84% of the stream miles on modernized flood maps have updated floodplain boundaries (over 465,000 stream miles)**
- **45% of the stream miles on modernized flood maps have new or updated flood elevations (over 248,520 stream miles)**

# Distribution Shifted to Digital



- Over 80% of products distributed are digital
- 80% reduction in paper distribution despite a 350% increase in panel production

# FY08 Paper Map Distribution

- Most of the paper maps go to FEMA, FEMA Contractors, other Federal Agencies, Flood Determination Companies

Company Type		Total
FEMA		8.15%
FEMA Contractors		6.12%
Federal		17.32%
State		18.13%
Local		12.62%
Flood Determination		25.23%
Other		12.42%
Total		100.00%

# Realizing the Vision of Map Modernization

- Beginning with map effective dates of April 1, 2010 FEMA will only provide digital flood hazard maps and flood insurance studies
- Except – Communities receiving updated flood hazard maps will receive paper copies of their maps and study

# Current Business Process

- Free paper maps create incentives contrary to the goals of modernization
- Current process requires producing film negatives and printing maps in volume.
- The minimum order is 150 copies
- We only use a fraction of these maps and store the rest in case they are needed in the future
- Other state, local and Federal organizations maintain their own paper libraries with copies of our maps



# New Business Process

- **Puts priority on adapting to new technology**
- **Use digital products when appropriate**
- **Print paper copies as needed**
  - FIRMettes for typical site lookups
  - Full size FIRMs
  - Smaller scale, complete FIRMs
  - Custom maps integrating FEMA flood data and local information
- **Rely on commercial vendors for remaining outsourced printing requirements**
- **FEMA will realize a cost savings of \$3M-\$5M each year**

# Future Vision

- **Maps information is accessed when needed so it is always current**
- **The view of the flood hazard or flood risk information is specific to the application**
- **Information is current, easy to access, easy to understand and leads to action to reduce risk**

# Expected Impacts

- **FEMA is changing internal processes to use digital products**
- **Flood map determination industry will need to switch to digital or have their maps printed commercially**
- **Other Federal agencies and State agencies are being notified that they will now only receive digital maps**

# Expected Impacts

- **The smallest communities will still have a paper map for use in the office**
- **Communities with adequate computers will begin using the Desktop-FIRMette tool for many day-to-day uses**
- **Larger communities with GIS staff will use more custom maps and use the FIRMs less frequently and will print their own paper maps as needed**

# Additional Paper Copies

- **Currently about 3% of communities request additional paper maps each year**
- **We have a cooperative agreement with ASFPM that is looking at what circumstances will drive the need for more paper maps**
- **We are planning to allow states to include limited map printing for local governments in their CAP-SSSE grants or CTP grants**

# Other Actions

- **Improving the FIRMette tools**
- **Publishing better documentation**
- **Improving the packaging and explanatory information shipped to communities**

# Implementation

- **Impacts on communities will be gradual as new maps are issued and requirements for additional copies arise.**
- **FEMA will monitor problems that come up and take additional actions as needed**

# Risk Map

- **Vision builds on capabilities of digital flood data to move beyond hazard maps to comprehensive risk assessments that improve our ability to increase public understanding and generate actions to reduce risks.**



# Risk MAP Vision

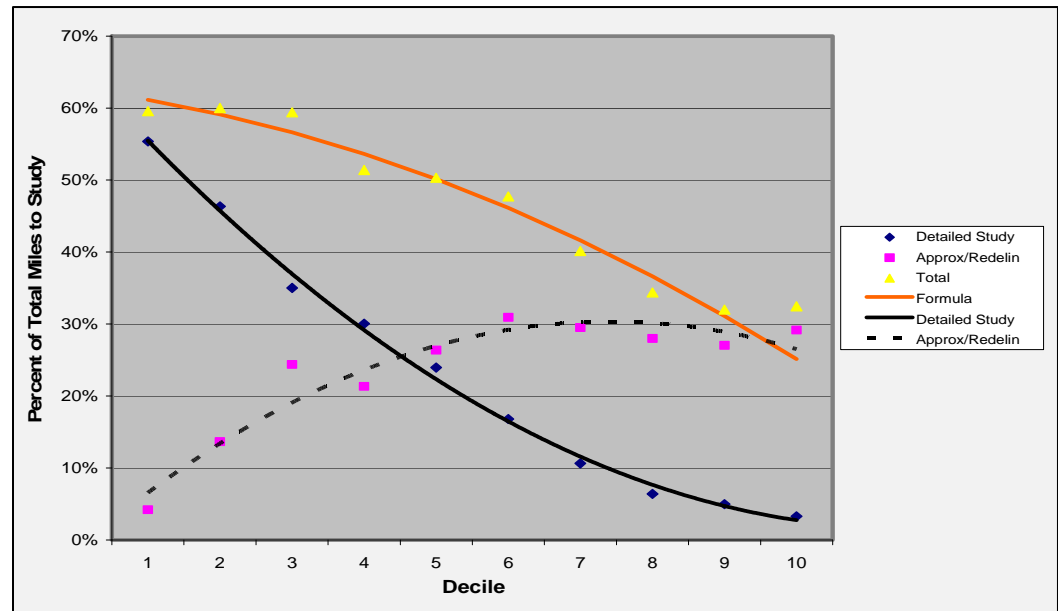
**Through collaboration with State, local and Tribal entities, Risk MAP will deliver quality data that increases public awareness and leads to action that reduces risk to life and property.**



# Flood Hazard Data

## ■ Goal 1:

**Address gaps** in flood hazard data to form a solid foundation for risk assessment, floodplain management and actuarial soundness of the National Flood Insurance Program.

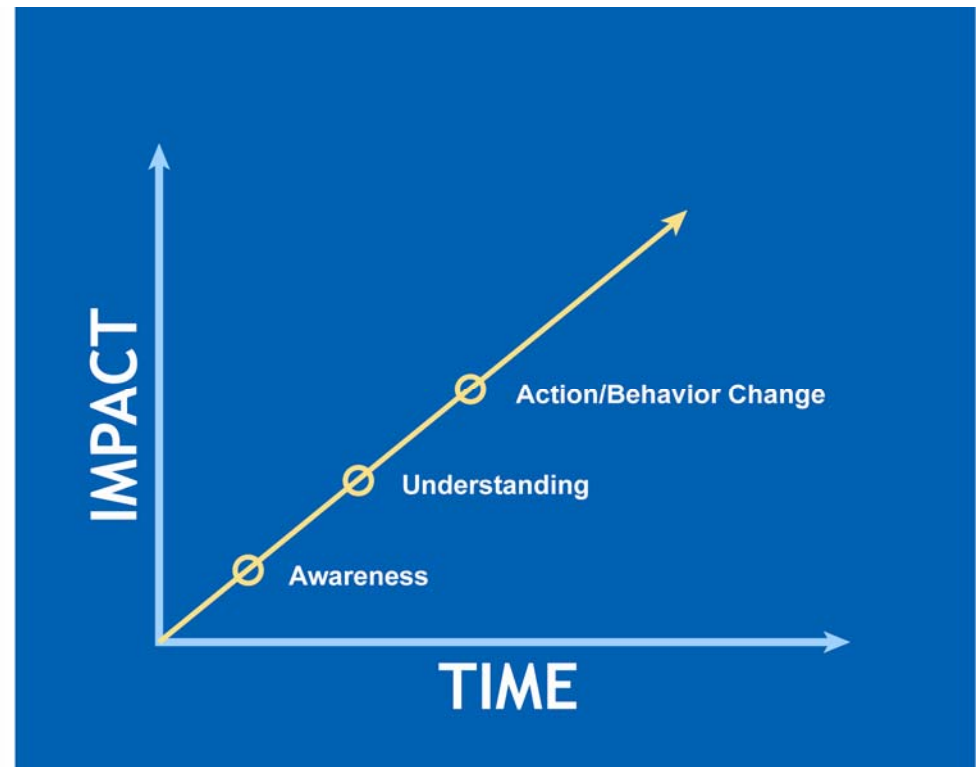


Flood Study Determination by Type

# Increase Public Awareness

## ■ Goal 2:

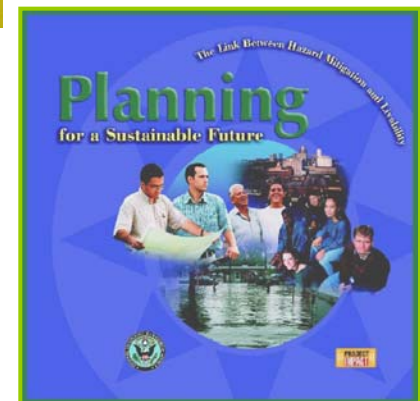
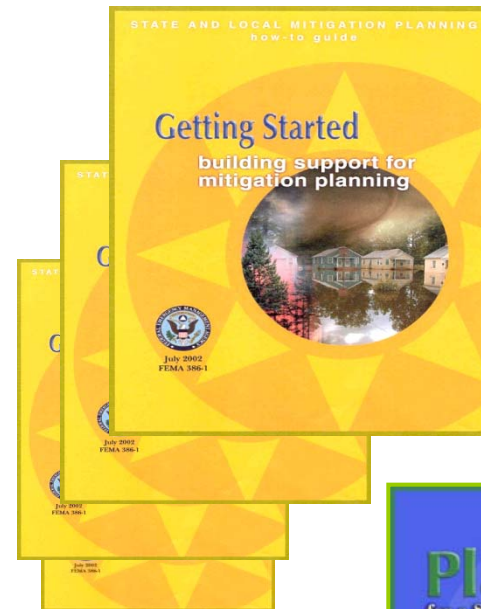
Ensure that a **measurable** increase the **public's awareness and understanding of risk** results in a **measurable reduction** of current a future vulnerability.



# Hazard Mitigation Planning

## ■ Goal 3:

Lead and support States, local, and Tribal communities to effectively **engage in risk-based mitigation planning** resulting in **sustainable actions** that **reduce or eliminate risks** to life and property from natural hazards.



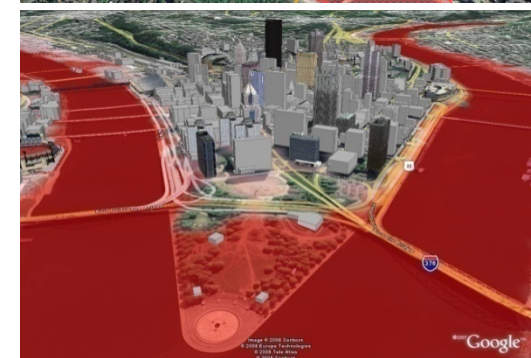
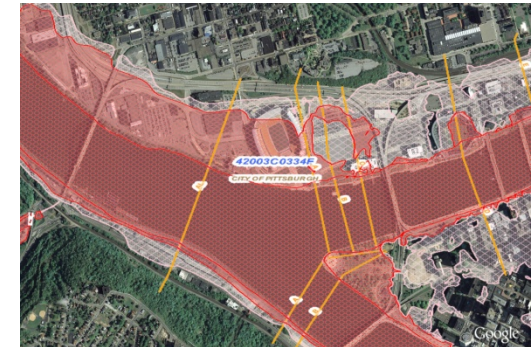
# Enhanced Digital Platform

## ■ Goal 4:

Provide an **enhanced digital platform** that improves management of Risk MAP, stewards information produced by Risk MAP, **and improves communication and sharing of risk data** and related products to **all levels of government and the public**.



Mapping Information Platform  
<https://hazards.fema.gov>



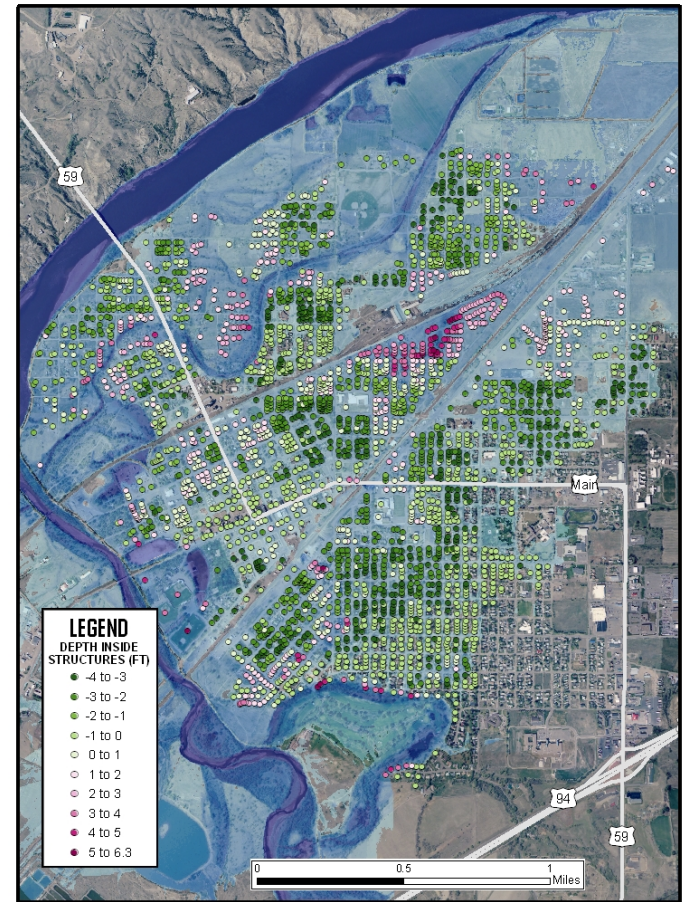
The NFHL enables users to visualize FEMA flood information in a digital environment, including stream cross-sections and base flood elevations. The images above show flood hazard areas (in red) overlaid on two- and three-dimensional scenes in Google Earth™ of Pittsburgh.



# Alignment and Synergies

## ■ Goal 5:

**Align Risk Analysis programs** and develop synergies to **enhance decision making capabilities** through effective risk communication and management.



Flood Loss Analysis for Miles City, Montana

# Objectives

- **Assess the Nation's flood risk and use this information to increase public awareness of risk. We will use a consistent, quantitative flood risk assessment to track progress toward reducing flood risk to target resources.**
- **Increase public awareness of risk from natural hazards and establish a baseline of local knowledge and understanding of risk management concepts.**
- **Ensure 80 percent of Nation's flood hazards are current—the flood hazard data are new, have been updated or deemed still valid.**
- **Continue to meet statutory requirements of NFIP through assessing on a watershed basis, the need to revise and update all floodplain areas and flood risk zones identified, delineated or established.**

# Objectives



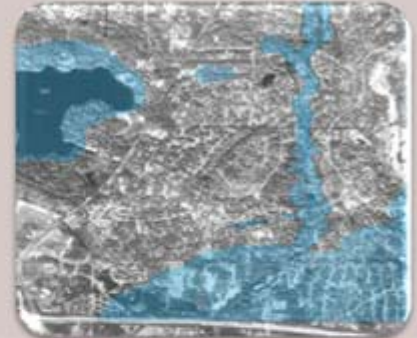
**Identify  
Risk**



**Assess  
Risk**



**Communicate  
Risk**



**Mitigate  
Risk**



# Risk MAP Vision

Through collaboration with State, local and Tribal entities, Risk MAP will deliver quality data that increases public awareness and leads to action that reduces risk to life and property.





# FEMA