Federal Flood Risk Management Standard

2017 Interagency FRM Workshop
St. Louis, Mo - March 2017
The National Flood Insurance Program (NFIP) is a key component of the federal government’s efforts to limit the damage and financial impact of floods.

- The intent of the NFIP is to be funded with premiums collected from policyholders and not with tax dollars, the program was, by design, not actuarially sound.
- As of December 31, 2014, FEMA owed the Treasury $23 billion, up from $20 billion as of November 2012. FEMA made a $1 billion principal repayment at the end of December 2014—FEMA’s first such payment since 2010.
Billion Dollar Disasters

The U.S. has sustained 203 weather and climate disasters since 1980 where overall damages/costs reached or exceeded $1 billion (CPI adjusted to 2016). The total cost of these 203 events exceeds $1.1 trillion.

Prior to recent legislation, premiums were capped but did not reflect structure’s actual risk

- Pre-FIRM Subsidies *Provide reasonable rates for structures built before risk was identified by simply charging less*
- Grandfathering *Retain rating classification when maps change by cross subsidizing with other policyholders*

Recent legislation removed and reinstated subsidies

- Pre-FIRM Subsidies *25% Increases for non-primary, severe repetitive loss, business, substantial damage in 2012 upheld in 2014; sale to new owner immediate full risk in 2012, removed in 2014, replaced by 5-15% increases for all other than 25% groups.*
- Grandfathering *Eliminated in 2012, reinstated fully in 2014*
Common techniques to mitigate flooding

- Adopt/enforce floodplain management ordinances
- Review/Issue permits for Development in SFHA
- Coordinate for development approvals
- Require new construction/substantial improvements to be elevated or flood resistant
- Prohibit new development in designated floodways that would increase flood heights
- Verify compliance
Built in 2003, adjacent to the SFHA

Summary of the 2013 Colorado Floods

- Widespread notable event
- NOAA determined that the event was a maximum 1,000-year rainfall event
- Unprecedented rainfall resulted in catastrophic flooding
- In four days, more than 17 inches of rainfall was recorded in Boulder County

Rainfall amounts across the impacted area, majority of intense rainfall was in the three study counties – Boulder, Larimer, and Weld
Loss Summaries – SBA, IA and NFIP

- Total 2013 Colorado event losses determined from Federal assistance programs
  - National Flood Insurance Program (NFIP)
  - Individual Assistance (IA) Program
  - Small Business Administration (SBA)
- Includes verified program losses for Boulder, Larimer and Weld counties

$200 million
Boulder, Larimer and Weld Counties
Financial savings to cities or towns that experience a base flood event, but proactively adopted mitigation practices when they first entered the National Flood Insurance Program (NFIP), can be significant. The savings if these three practices were adopted earlier in the area studied would be:

- **Development Restrictions** = $486 million saved
- **Freeboard Restrictions** = $206 million saved
- **Critical Facility Restrictions** = $23 million saved

RESTRICT FLOODPLAIN DEVELOPMENT
If the communities studied restricted all development in the Special Flood Hazard Area (SFHA), the area subject to inundation by the base flood, when joining the NFIP, the savings in losses would have been $486 million. Furthermore, if no development was allowed in the floodway when the jurisdictions first entered the NFIP, there would have been $107 million in losses avoided.

Building setback requirement (no-build zone)

Minimum 2’ Freeboard Requirement Above the BFE

Freeboard

No Freeboard

More than 20 percent of flood insurance claims come from people outside of mapped high-risk flood areas.

Built in 2003, floodproofing extends two feet above the 100-year flood elevation, and one foot above the 500-year flood elevation. In 2013, this site experienced an estimated 1,000 year flood event.

In 2016, there were 15 weather and climate disaster events with losses exceeding $1 billion each across the United States.

Updating Federal Flood Risk Standards
Executive Order 11988

- Issued May 1977 governing federal actions in the floodplain

- Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for

  1. acquiring, managing, and disposing of federal lands, and facilities;
  2. providing federally undertaken, financed, or assisted construction and improvements;
  3. conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.
In 1978, the Water Resources Council (WRC) issued Floodplain Management Guidelines:

- Directed federal agencies to evaluate practicable alternatives to locating an action in a floodplain and
- Established an 8-step decision making process.

Source: HUD, 8-Step Decisions Making Process for EO-11988, retrieved 02/03/2017, from:
Goal to Increase Resilience to Flooding

- The FFRMS and Executive Order 13690 ensure that agencies expand management from the current base flood level to:
  - a higher vertical elevation, and
  - corresponding horizontal floodplain
- to address current and future flood risk and ensure that projects funded with taxpayer dollars last as long as intended.
Federal agencies will be given the flexibility to select the best approach for establishing the elevation and flood hazard area used when implementing Executive Order 11988 as amended by Executive Order 13690:

- Utilizing best-available, actionable data and methods that integrate current and future changes in flooding based on science;
- Two or three feet of elevation, (depending on criticality), above the 100-year, or 1%-annual-chance, flood elevation; or
- 500-year, or 0.2%-annual-chance, flood elevation.
Executive Order 13690 does not prohibit building in the floodplains.

EO 13690 does not apply to private investments in structures, facilities, or homes.

The Standard will not affect flood insurance premiums or the requirements for participation in the NFIP. No change to:

- community floodplain management requirements,
- FEMA’s flood mapping standards,
- FEMA’s levee accreditation regulations (44 CFR 65.10), or
- rating/pricing practices of the NFIP.
Federal agencies will continue to implement Executive Order 11988, replacing the 1% base flood elevation with the process identified in the Federal Flood Risk Management Standard.
What FFRMS looks like (up and out)

- Best available Science/Data
- 2’-3’ above BFE
- 0.2% / 500 year floodplain

Currently

- FEMA published a Notice of Proposed Rule Making in the Federal Register, and is in the process of adjudicating the comments and deciding what, if any changes, need to be made to the draft rule.