



ASDSO USACE/FEMA Levee Discussion

# Meeting the Nation's Levee Challenges

November 2015

Presenters:

Richard Varuso, USACE

Michael Bishop, FEMA

# This Session's Objective



- **KNOWLEDGE** - Provide you with insight into:
  - ▶ USACE's and FEMA's agency specific and joint efforts
- **PARTICIPATION** - Provide a forum that encourages you to ask questions and provide feedback.

# The Continuing Levee Challenge

- The nation has thousands of miles of levees
- Over 1/4 of the counties in the US have levees
- Communities continue to depend on levees
- Field of levee safety is evolving rapidly
- Turning a corner with emphasis on “risk”



# Session Agenda

1. Joint USACE/FEMA efforts
2. Your questions
3. FEMA activities
4. Your questions
5. USACE activities
6. Your questions



# USACE and FEMA Roles with Levees

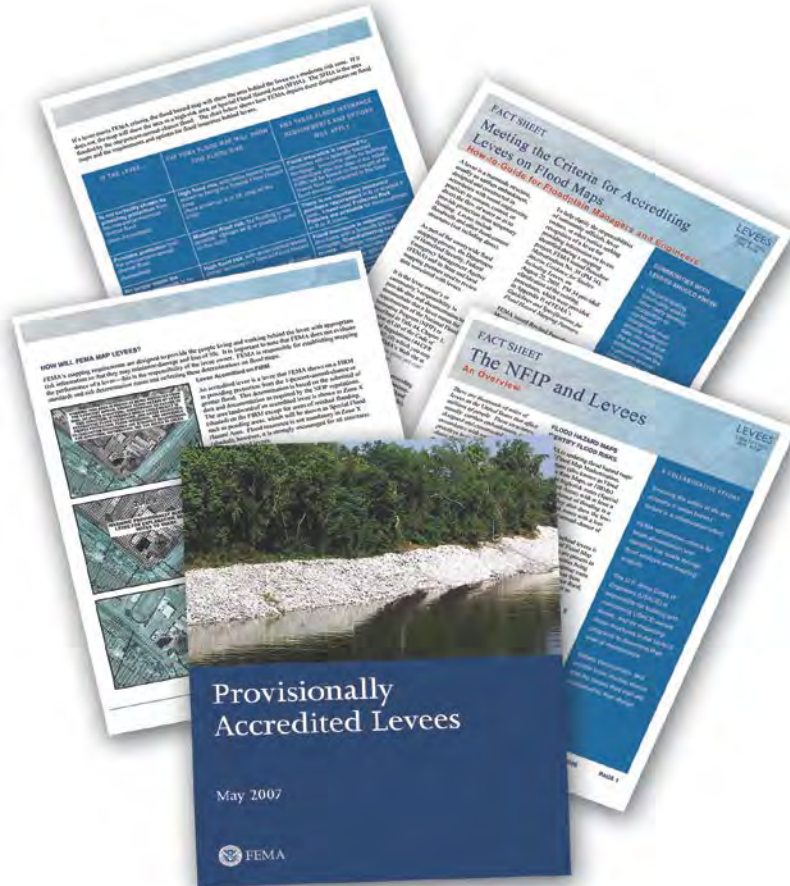
# Risk MAP (Mapping, Assessment, Planning)

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's Role in Levees



- Present flood hazard and risk information
- Establish appropriate risk zone determinations
- Establish mapping standards
- Accredite levee systems on FIRMs
- Produce outreach and communication materials
- Explain risk of living with levees

# USACE Levee Safety Program Mission



...ensure levee systems provide benefit to the Nation by working with sponsors and stakeholders to assess, communicate, and manage the risks to people, the economy, and the environment...



# Program Principles

- Hold life safety paramount
- Corporately manage risk – portfolio and system level
- Open and transparent engagement
- Learn and adapt



# How have we been coordinating?

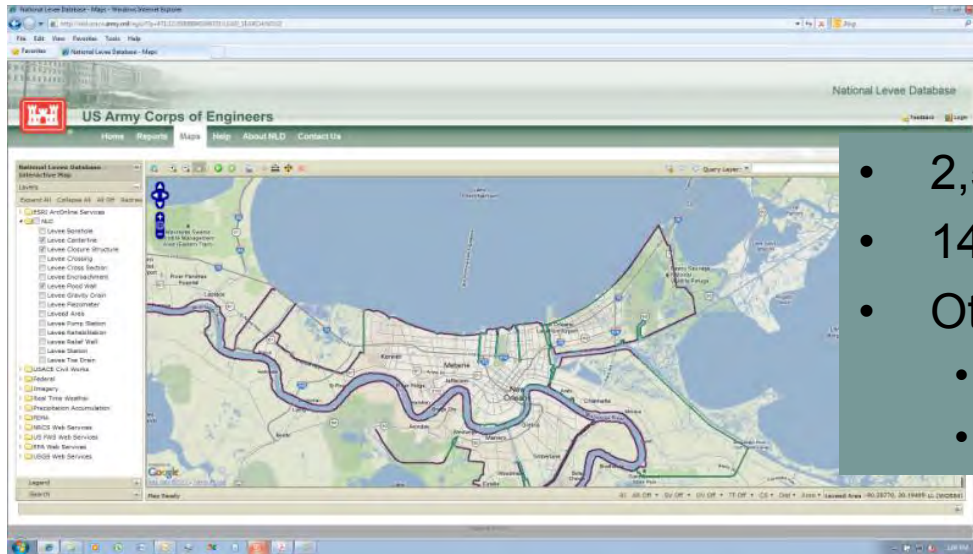
# USACE-FEMA MOU (11/13/2014)

- Purpose – Formalize the commitment for alignment of levee activities, information, and messaging
- Content – Coordination of policies, direct exchange of information for accreditation, consistent information sharing with sponsors and communities, and coordination for data management
- <http://www.usace.army.mil/Missions/CivilWorks/LeveeSafetyProgram/TaskForce>

# USACE-FEMA MOU

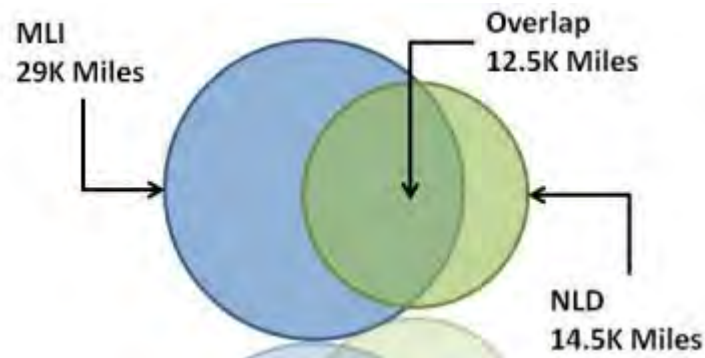
- Continue coordination as policies and activities evolve
- Both agree to use the National Levee Database as the central repository of levee information
- USACE will ensure that each time it conducts a risk assessment for a levee system, it will also provide a determination on levee performance to FEMA for NFIP mapping purposes
- FEMA will accept a risk assessment from USACE as fulfilling the design criteria requirements in 44 CFR 65.10
- USACE will identify when a levee system meets or does not meet a specified subset of requirements in 44 CFR 65.10 for inspections and screenings
- FEMA will accept a USACE screening or inspection showing that a subset of requirements in 44 CFR 65.10 are met

# National Levee Database



- 2,500 levee systems
- 14,700 miles
- Other agency levees
  - BOR = 172 miles
  - Miami Conservancy District = 2.6 miles

FEMA data is merged and under review





# Accreditation Stats

# Implementation : New USACE Risk Communication Guidance

- USACE Guidance for engaging sponsors and FEMA in Levee Safety Program activities (includes communicating risks associated with levees):
  - Placing information in a risk context
  - Focusing on risk factors and risk reduction actions
- Objectives:
  - Improve sponsor engagement in USACE levee safety activities
  - Develop increased understanding of benefits and risks of levee systems
  - Promote actions to manage risks
  - Build and improve relationships with FEMA

# FEMA – USACE Coordination

Why should FEMA and USACE work together to communicate risk?

- Complementary Goals for both agencies
- Provide timely and best available information to inform public and reduce risks to life and property



# FEMA – USACE Coordination

- Opportunity for increased visibility on what each agency is doing with respect to levees
- Improve coordinated messages between the agencies
- Improve relationships
- Link specific inspection and screening items and risk assessments to NFIP
- More joint participation with levee sponsors and communities
- Leverage ongoing activities – Silver Jackets and RiskMAP
- Share best practices and lessons learned





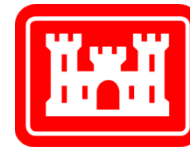


# Where are we going?

## Risk-Informed



FEMA



US Army Corps  
of Engineers®



FEMA



# Benefits to the Risk Approach

- Consider a range of flood events
- Being able to prioritize actions and determine sense of urgency of implementing actions
- Identification of potential consequences for different scenarios
- Understanding of areas of uncertainties and confidence in decisions
- Supports risk management decisions – levee sponsor, community, and individual residents

# Audience Feedback #1



- Any questions concerning the coordination that the two agencies are taking?
  - ▶ Any recommendations for improving coordination and outreach?
  - ▶ What will help you meet your challenges?
  
- Does this interagency cooperation meet your expectations; any concerns?

# FEMA Levee Updates

# FEMA's Levee Analysis and Mapping Approach

- For Non-Accredited Levee Systems
- Approach Document
  - ▶ Finalized July 2013
- Operating Guidance
  - ▶ Finalized September 2013



## Analysis and Mapping Procedures for Non-Accredited Levee Systems

New Approach  
July 2013

RiskMAP  
Increasing Resilience Together

[www.fema.gov/plans/planned/030613\\_riskmap\\_approach](http://www.fema.gov/plans/planned/030613_riskmap_approach) | 1-877-FEMA-8000

## Operating Guidance 12-13 Non-Accredited Levee Analysis and Mapping Guidance

September 2013



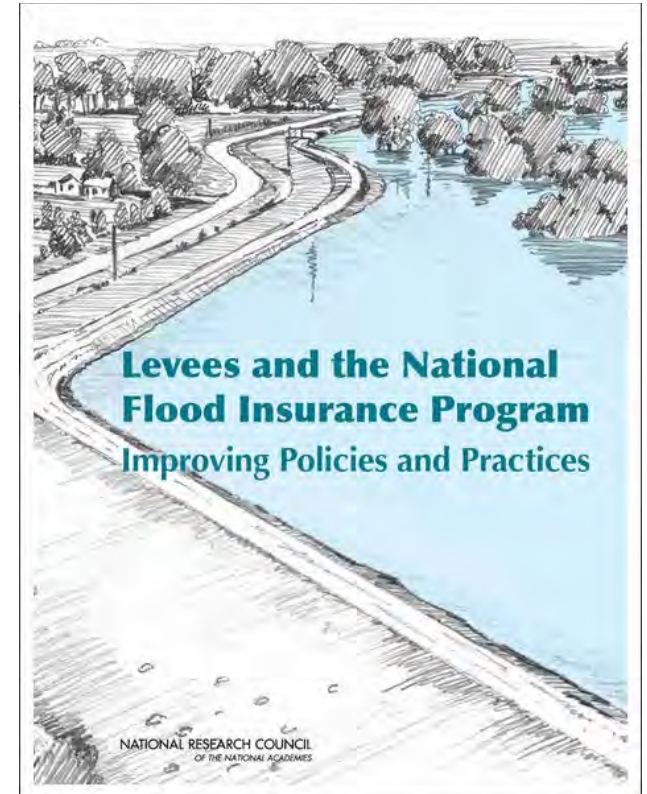


# Non-Accredited Levees

- New process allows a non-accredited levee system to be analyzed as multiple “Reaches”
- A “Reach” is a discrete section of a levee for which one of the five levee analysis procedures can be applied
  - Sound Reach
  - Freeboard Deficient
  - Overtopping
  - Structural Based Inundation
  - Natural Valley
- Primarily data dependent:
  - O&M Plan available?
  - As-Builts/Levee Survey?
  - Evaluation of overtopping erosion?
  - Structurally sound?
  - Closures/Tie-Ins?

# Future: Mapping Flood Risk

- Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12)
- Homeowners Flood Insurance Affordability Act (HFIAA) of 2014
- Water Resources Reform and Development Act (WRRDA) of 2014
- National Research Council (NRC) – National Academy of Sciences (NAS)
- American Society of Civil Engineers (ASCE) 2014 Report on National Flood Risk Management
- Association of State Floodplain Managers (ASFPM), National Association of Flood & Stormwater Management (NAFSMA), etc.
- Technical Mapping Advisory Council (TMAC)



# National Flood Mapping Program

## 42 U.S.C. §4101b (Section 216 of BW12)

### (b) Mapping

#### (1) In general

In carrying out the program established under subsection (a), the Administrator shall—

(A) identify, review, update, maintain, and publish National Flood Insurance Program rate maps with respect to—

- (i) all populated areas and areas of possible population growth located within the 100-year floodplain;
- (ii) all populated areas and areas of possible population growth located within the 500-year floodplain;
- (iii) areas of residual risk, including areas that are protected by levees, dams, and other flood control structures;
- (iv) areas that could be inundated as a result of the failure of a levee, dam, or other flood control structure;
- (v) areas that are protected by non-structural flood mitigation features; and
- (vi) the level of protection provided by flood control structures and by non-structural flood mitigation features;

(B) establish or update flood-risk zone data in all such areas, and make estimates with respect to the rates of probable flood caused loss for the various flood risk zones for each such area

# Audience Feedback #2



- How many of you involved in:
  - ▶ FEMA certification - accreditation?
  - ▶ LAMP efforts?
- Any reaction to - Mapping of residual risk areas?
- Any recommendations?

# USACE Levee Updates



# Levee Safety Program Guidance

## Current Draft

- 369 pages, 16 chapters, 29 Appendices
- Mix of Topics
- Added Appendices to fill policy gaps
- Repeated Content

## Future

- Streamlined, limited to policy
- Reorganized



# Levee Safety Program Guidance

## Part I: Program Governance

- ▶ Principles, objectives, activities, metrics
- ▶ Roles and responsibilities

## Part II: Risk Assessment

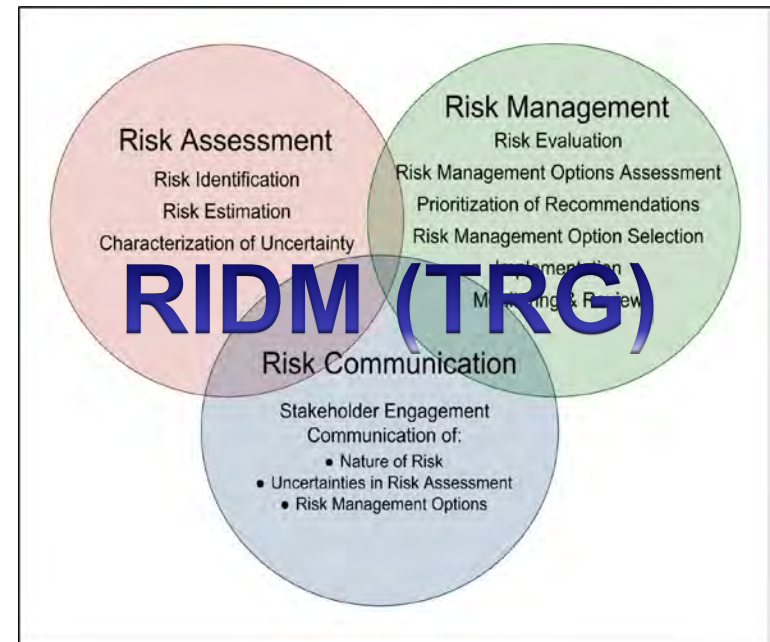
- ▶ Inventory/Inspections
- ▶ Methodology
- ▶ Risk characterization

## Part III: Risk Management

- ▶ Risk management actions
- ▶ Portfolio risk management

## Part IV: Risk Communication

- ▶ Stakeholder engagement

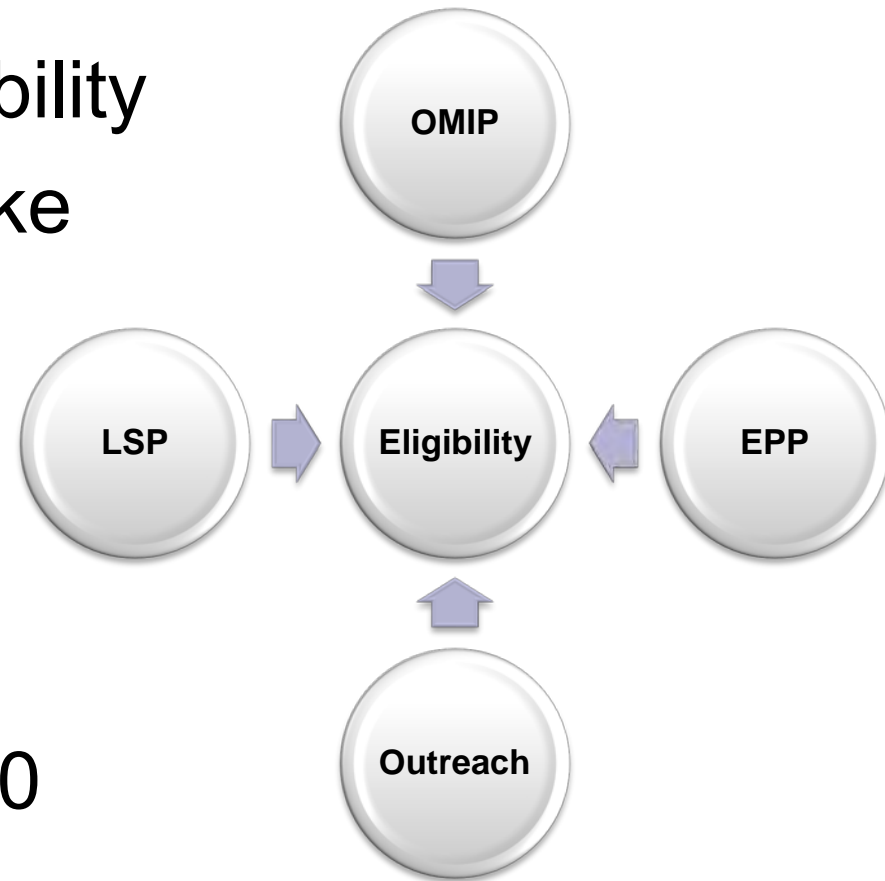


# Policy Gaps and Changes

- Thread together the risk framework and risk-informed decision making to levees.
- Clearly define how tolerable risk guidelines will be applied to levees.
- Change terminology, criteria for Levee Safety Action Classification, essential guidelines, and planning studies.

# Rehabilitation Program (PL84-99)

- Inspection Rating  $\neq$  Eligibility
- EP will be a guide to make eligibility determinations
- Requirements synchronized with Levee Safety EC
- Update to 33 CFR 203.10



# Section 408 Alterations

- 33 USC 408
- Provides the Secretary of the Army authority to grant permission to alter a USACE civil works project if
  1. Does not impair usefulness of the project
  2. Not injurious to the public interest

# Purpose

- Improve consistency in the way USACE considers, processes, and documents decisions for requests for alterations to Civil Works projects.
- Create a process that is applicable to all types of Civil Works projects.
- Be transparent on what information is required.
- Create a process that can be tailored by districts to the appropriate scope, scale, and complexity of a proposed alteration.



# Basic Steps

- Step 1: Pre-Coordination
- Step 2: Written Request
- Step 3: Required Documentation
- Step 4: District Agency Technical Review
- Step 5: Summary of Findings
- Step 6: Division Review, if required
- Step 7: HQ Review, if required
- Step 8: Notification
- Step 9: Post-Permission Oversight

# Section 408 and Levees

- Builds upon, alters, improves, moves, occupies, or otherwise affects the usefulness or the structural integrity of a USACE federally authorized levee
- District 408 coordinator, Levee Safety Officer, and the Levee Safety Program Manager
- Non-federal sponsor
- FEMA
- Risk Management Center (Type II IEPRs)
- Existing risk assessment information
- Levee Senior Oversight Group
- EO 11988

# Section 408

- Collect internal and external feedback on USACE Civil Works webpage at <http://www.usace.army.mil/Missions/CivilWorks>
- Will begin revising the current policy in FY16

# Last Opportunity – Final Audience Feedback



- What is the best way for us to help you stay engaged?
- Any other issues/concerns or questions you would raise?