

# 2015 Interagency Flood Risk Management Workshop Southbridge, MA

December 1- 4, 2015

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Nonstructural Flood Proofing Committee  
Chief, AZ/NV Area Office Water Resources Planning  
USACE – Los Angeles District



US Army Corps of Engineers  
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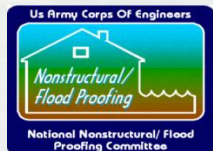
# USACE Nonstructural Flood Proofing Committee

## Members

- Chair: Randall Behm, Omaha District
- Exec. Secretary: Kim Gavigan, Los Angeles District
- Steve O'Leary, Huntington District
- Keven Lovetro, New Orleans District

## Advisors

- Robert Finch, Honolulu District
- Mary Weidel, Detroit District
- Lea Adams, Hydrologic Engineering Center
- Brian Rast, Kansas City District



**Flood Risk =  $f$  [Probability of Flooding x *Consequences*]**

## **Definitions**

**Nonstructural:** Flood risk reduction measures such as elevation, relocation, and flood proofing which adapt to the natural floodplain without changing characteristics of the flood (e.g., frequency, depth, duration, velocity).

**Structural:** Flood risk reduction measures such as levees, reservoirs and channel modifications which tend to change the characteristics of flooding



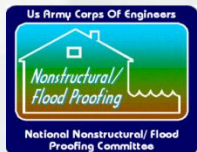
# Physical Nonstructural Flood Risk Adaptive Measures:

- Elevation
- Relocation
- Buyout/Acquisition
- Wet Flood Proofing
- Dry Flood Proofing
- Berms/Floodwalls



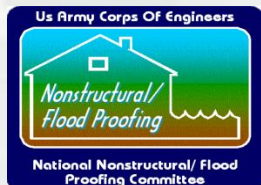
# Non-Physical Flood Risk Adaptive Measures:

- Flood Warning Systems
- Flood Insurance
- Floodplain Mapping
- Flood Emergency Preparedness Plans
- Land Use Regulation
- Zoning
- Evacuation Plans
- Risk Communication



# NFPC Technical Assistance

- USACE Feasibility Studies (e.g., Fargo-Moorhead, ND)
- Nonstructural and Floodplain Management Training
- Field Assessments
- Publications of Nonstructural Measures
- National Flood Barrier Testing and Certification Program
- Collaboration with FEMA on Technical Bulletin Revisions
- OMB Inventory of Nonstructural Flood Risk Management Activities
- Economic Benefit Analysis
- NFPC Website: <http://www.usace.army.mil/Missions/CivilWorks/ProjectPlanning/nfpc.aspx>



# NFPC National Support

- Resiliency Program PDT
- Levee Safety Investment Program
- Planning Guidance Notebook Modification PDT
- EO13690 Federal Flood Risk Management Standards USACE Implementation Committee
- Federal Guidelines for Dam Safety Review and Modification PDT
- Silver Jackets National Program
- FRM-PCX Flood Risk Advisory Committee
- Workshops, Webinars, and Presentations



# NFPC Support to Districts and Others

- Baltimore District PAS Nonstructural Assessment of Historic Structures in Annapolis, MD
- Cherry Creek Dam, Denver, Colorado Dam Safety Modification Study
- Southwest Coastal, LA Storm Surge Risk Reduction Study
- Moose Creek Dam DSMS, Alaska District
- California DWR Best Management Practices Handbook
- ATR Review on the Nonstructural Berm Design Guide from St. Paul District
- Big Blue River Floodplain Management Plan
- Little Apple, Manhattan, KS Nonstructural Assessment
- National Flood Barrier Testing and Certification Program Showcase with ASFPM and FM Approvals
- Estes Park, CO Nonstructural Assessment (FY2016)
- Philadelphia, PA Nonstructural Assessment (FY2016)



# Questions?



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