

Flood Risk management

History/Mission/Policies

Flood Control vs. Flood Risk Management

- Floods have occurred throughout time, and are not necessarily damaging
- Early legislation authorized “**flood control**” in response to devastating losses
- We can’t really **control** floods, but we can modify water flows in space and time
- Corps’ mission is to assist with and provide leadership in managing flood risk; this includes making Federal investments for **reducing damages** from floods, hence FDR

Flood Risk Management Plan

- “A complete description of a plan includes all structural, nonstructural, legal, and institutional features, both proposed and existing, that contribute to the intended flood control outputs.”
EP 1165-2-1 30 Jul 99, 13-8.

Flood Risk Management Beginnings

- Swamp Acts 1849, 1850
- Mississippi River Commission 1879
- California Debris Commission 1893
- Flood Control Act of 1917
- Flood Control Act of 1936

Federal Interest Development

- Flood Control Act (FCA) of 1944
- Section 206 of the Flood Control Act of 1960
- Executive Order 11988
- Section 73 of Public Law 93-251 (FCA 74)
- Water Resources Development Act (WRDA) of 1986

Nonstructural Highlights

- FCA 1938—land acquisition approved
- National Flood Insurance Act (1968)
- P&S (1973)—planning process to include nonstructural
- Sec. 73 WRDA 1974—required consideration of nonstructural measures for flood control

Nonstructural Highlights

- EO 11988 (1977)—agency role in flood plain management
- Revisions to P&S (1979)—nonstructural plan required
- Principles and Guidelines (1983)

Nonstructural Highlights

- WRDA 1986 – Established local cost sharing advantages over structural
- WRDA 1986 – Section 402, requires local participation in NFIP for Corps flood projects
- WRDA 1986 – Section 905, requires that feasibility reports include “a description of a nonstructural alternative to the recommended plan when such plan does not contain significant nonstructural features”
- WRDA 1999 - Section 219, changes benefit computation

Corps Programs for Flood Risk Management

- General Investigations
- Continuing Authorities
 - Section 14 - Emergency Streambank and Shoreline Protection (1946)
 - Section 205 - Flood Damage Reduction (1948)
 - Section 208 - Snagging and Clearing (1937)
- Operation and Maintenance
 - Section 216 - Review of Completed Projects (1970)

Evolution of Flood Risk Management Authorities and Policies

- Flood Control to Flood Damage Reduction
- Limited measures to a broad array
- Local projects to Nationwide programs
- Single purpose to multi-purpose
- Growing emphasis on non-structural and flood plain management for comprehensive flood risk management

Policies You Need To Know

- Considered local drainage issue unless
 - 800 cfs at the 10 year event, unless 100-year > 1,800 cfs
 - 1-1/2 square miles drainage basin
- Land development benefits can't be claimed for structural projects, however non-structural evacuation projects may claim benefits for new uses of evacuated floodplain
- Risk-based analytical framework to be used

Policies You Need To Know (cont.)

- Cost sharing for flood damage reduction
- Cost sharing advantages for nonstructural
- Flood Plain Management Plans requirement for locals
- Section 308, WRDA 1990 – New structures built after June 1991 must have first floor above 100-year flood elevation, or cannot be included in benefit calculations

Flood Risk Management Cost Sharing

- Non-structural
 - Local sponsor must provide 35% of total project costs
- Structural:
 - Local Sponsor must provide 5% up front in cash
 - Local Sponsor must provide LERRD
 - Local Sponsor must provide additional cash to bring the local share up to 35% of the total project cost
 - Local Sponsor's share is limited to 50%

For Further Information

- Contact the National Planning Center of Expertise for Flood Risk Management at CESPD
- Attend other Flood Risk Management PROSPECT Course
- Check the IWR Planning References CD
- Visit the FRM PCX Website at www.spd.usace.army.mil/frm-pcx

Flood Risk Management Planning Center of Expertise (FRM PCX)

- Director – SPD Planning CoP POC
 - Dan Sulzer (Acting)
- Program Manager
 - Eric Thaut
- Core team composed of ERDC, HEC, IWR, LRD, MVD, NFPC, NWD, and SPD technical leaders & members
- Virtual regional and national resources

Take Away Points

- The perception of what we do has changed from Flood Control to Flood Damage Reduction and is now moving towards Flood Risk Management (FRM)
- There has been a growing emphasis on non-structural solutions and flood plain management
- There are several policies that are critical to plan formulation of flood damage reduction measures