

US Army Corps of Engineers

Dam Safety Program
and Levee Safety Program:
“Cornerstones of Flood Damage Reduction”

Briefing for
Operations Manager Course

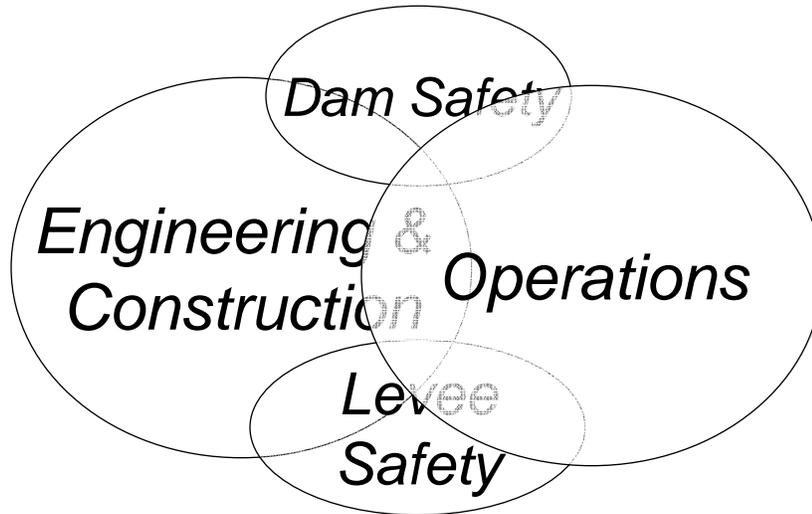
8 August 2006

Eric Halpin, PE
Special Assistant for Dam Safety

Welcome

- “We have too many high sounding words, and too few actions that correspond with them.”
 - Abigail Adams (1774)
- “The future is here. It’s just not widely distributed yet.”
 - William Gibson

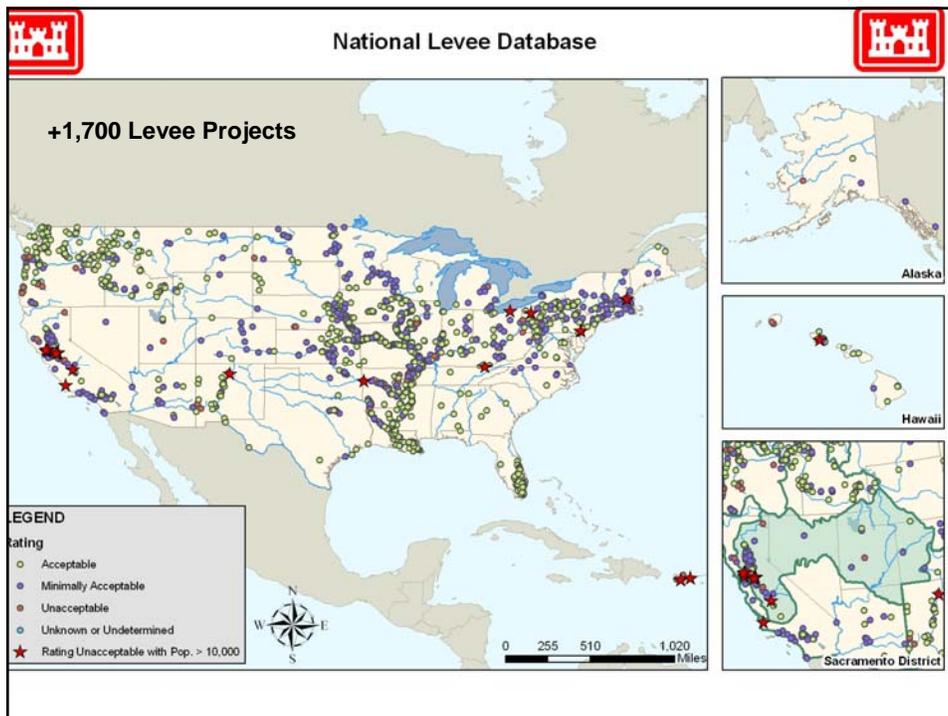
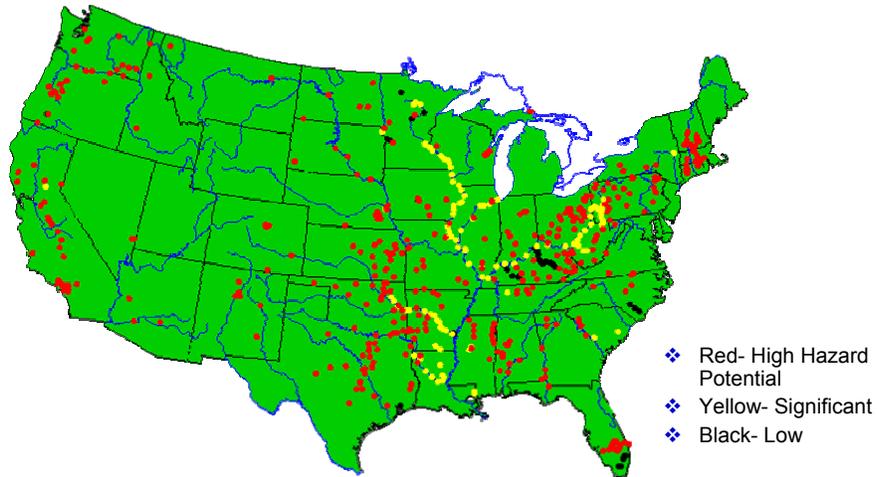
Discussion Topics



Corps Dam Portfolio

- Over **600 Dams and 1000** Separate Structures
- 2/3 of projects are **earthen** embankments
- Project Purposes:
 - Primarily Flood Control Dams: **many untested**
 - Navigation Dams
 - Hydropower
- Average age is **~50 years**
- Dams located in 45 of 48 CONUS States

Location of Corps Dams



Infrastructure Portfolio: So What?



Whittier Narrows Dam
Los Angeles, California

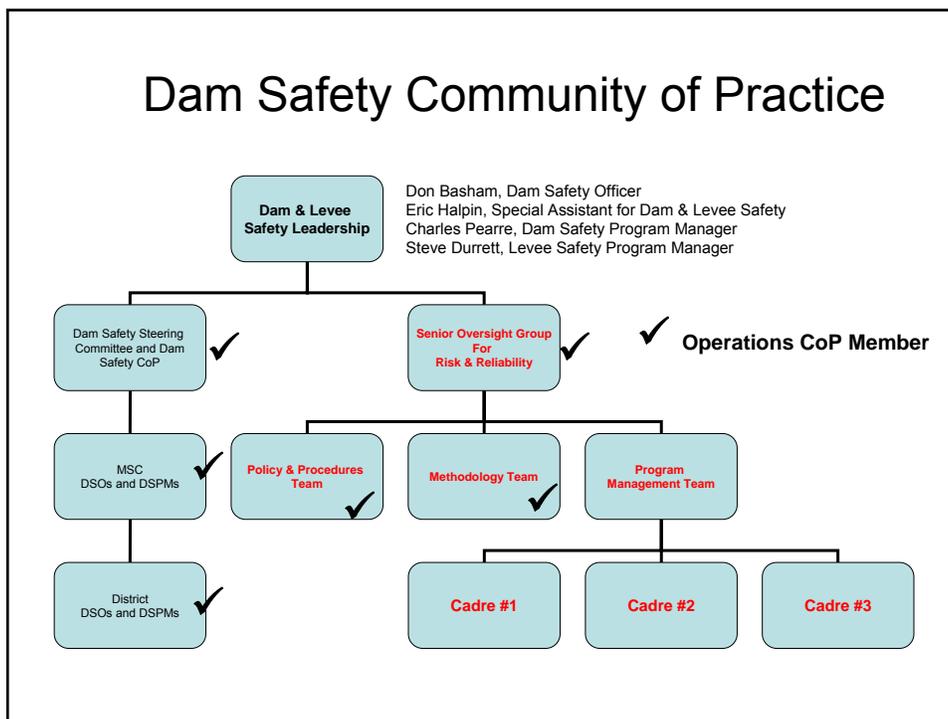
- No substitute for “eyes on target”
- Assuring Safety is more difficult with development and degradation
- Past Performance does not guarantee or even predict future performance!

Dam Safety Program

- Routine Activities
 - Inspections
 - Instrumentation
 - Emergency Action Plans
 - Training
 - Exercises
- Remedial Activities
 - Studies and Investigations
 - Remedial Fixes
 - DSA Program
 - Major Rehab Program
 - Non-Structural Risk Reduction Measures
- Policy and Criteria

Focus Area for
Operations Managers

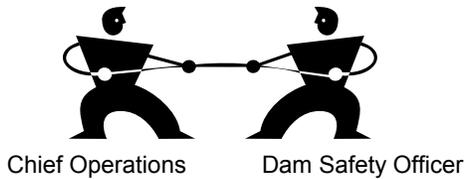
Dam Safety Community of Practice



Dam Safety Funding

- Multiple Funding Accounts
 - General Investigations Account (~\$200K/year or ~\$2.50/structure in the National Inventory of Dams)
 - O&M Account (~\$35M/year or ~\$35K/structure):
 - Routine Dam Safety Activities
 - Studies
 - Risk and Reliability
 - Construction General Account (\$227M in FY07)
 - Remedial Fixes and Repairs

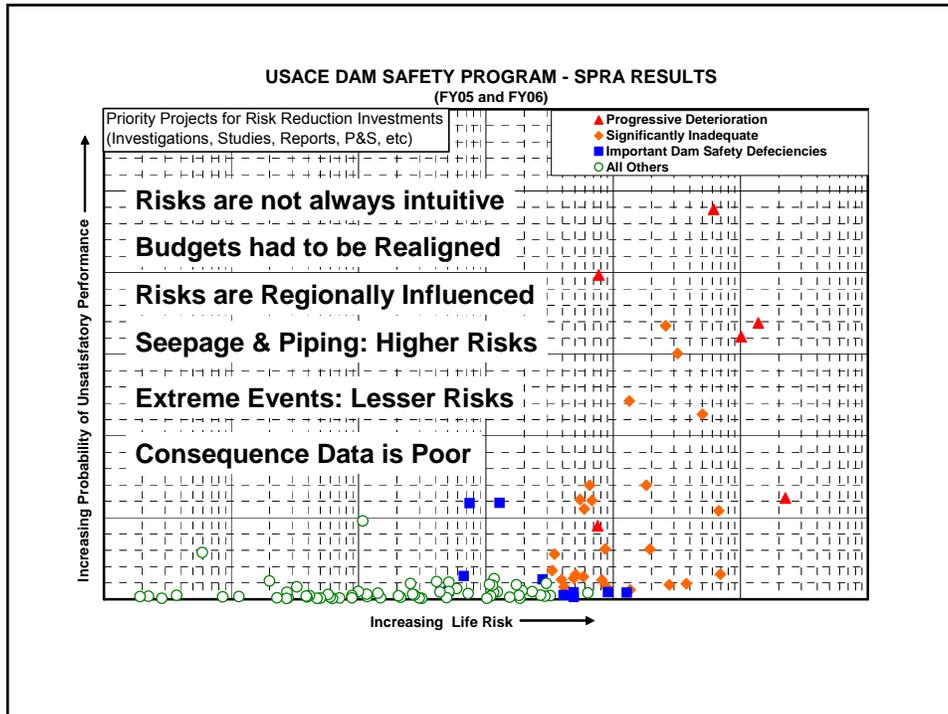
Budget Decisions



- Dam Safety should be in increment 1:
 - Operations Staff
 - Dam Safety Activities:
 - Inspections
 - Instrumentation
 - Exercises
 - Training
 - EAPs
- Who Makes the Trade Off Decisions?
- Safety is linked to Project Purpose!

Risk & Reliability Activities

- Benchmark & Align with US Bureau of Reclamation Dam Safety Program
- 2005 Risk Screening Results:
 - National Priorities vs. Local Priorities
 - Realign Budget Based on Risks
 - Centralized Funding for Highest Risks
- 2006 Risk Activities:
 - Further Develop Methodology and Policy
 - Build Risk Competencies



FY07 Budget Realignments

- High Priority Dam Safety Studies Adjusted Budget:
 - Some Centrally Added by HQ
 - Some Removed by HQ
- Revocations:
 - One time only in FY06 O&M Account
 - 0.5% for Dam Safety Risk & Reliability
 - Will yield a 5:1 Payback in FY08 Construction Account

FY08 Budget Realignment

- Budget Development and Coordination with ASA CW Underway
- Dam Safety Studies now under “construction” funding
 - Studies Identified for FY08 total +\$20M
 - Two years of risk analyses allows us to make strong case for reducing risks through additional studies and interim risk reduction measures

Safety Advice to OMs...

- Build Relationship with your larger Dam Safety Team
- Look for Safety “Encroachments” in Flood Damage Reduction System:
 - Operational Changes
 - Recreation Developments in Reservoirs
 - Environmental Structures in Reservoirs
 - Downstream Development Changes

Challenges

- O&M Funding Decline
 - Technical and Operational Staffing
 - Maintenance
 - Routine Safety Activities
 - Studies
- Transition to National Priorities
 - Congressional Push Back
- Dams ≠ Levees?

Katrina Take-Aways



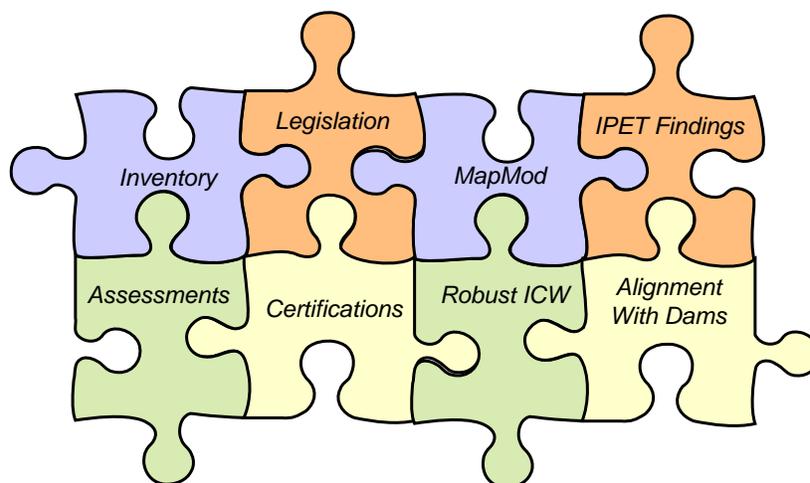
- Loss of Life = +1,500

Katrina Take-Aways

- High Levels of Risks with Protection Projects *Compared with Dams*
- Complex Systems: Technically, Organizationally, Politically, etc...
- A “Policy Maker” Event/Nexus
 - Look for Chief’s 12 Step Program
- Approach – Manage as Portfolio!

s1

National Direction: Levees



Slide 20

s1

s0cweech, 6/2/2006

Levee Challenges

- Fixing the Program:
 - Communicating Risks
 - Rigors
- Paying the bills: ??
- Scrutiny
- Integration with Flood Risk Management

HQ USACE Points of Contact

- Eric Halpin, PE Special Assistant
 - (202) 761-7775
 - eric.c.halpin@hq02.usace.army.mil
- Charles Pearre, PE Program Manager
 - (202) 761-8994
 - charles.m.pearre@hq02.usace.army.mil
- Don Basham, PE Dam Safety Officer
 - (202) 761-8826
 - donald.l.basham@hq02.usace.army.mil