



U.S. Army Corps of Engineers

Integrating Risk & Reliability Into USACE Infrastructure Management

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Risk



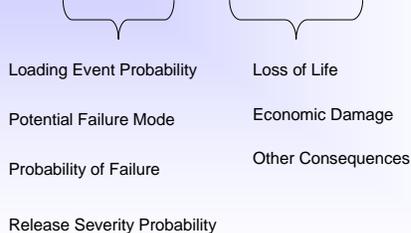
- What's wrong?
- How likely is it to occur?
- What are the consequences?



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Definitions

- **Risk = Probability X Consequence**



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Why Risk & Reliability?

- **Situational Awareness of Risks**
 - What are the priorities?
 - How much risk are we tolerating?
- **Better Business Decisions:**
 - Justify Funding
 - Buy Down Greatest Risk for \$\$ Spent
 - Consistent, Credible, & Compelling



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...Why Risk & Reliability?

- **Expectations**
 - Public and Congressional
 - Profession & Industry
 - Societal and Legal
 - Aligns with Corporate USACE:
 - Civil Works Strategic Plan, Goal 3: “Enhance Life Cycle Infrastructure Management”
 - USACE Vision: “...ready, responsive, reliable...innovative and effective solutions..”

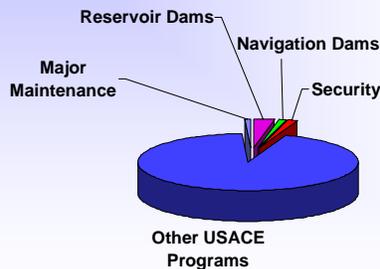
Business Area	Business Model		
	Historical	Current	Future
Reservoir Dams	Local Priorities	SPRA	PRA
Navigation Dams	BCR	SPRA	PRA
Major Maintenance	Local Priorities	Regional System Studies	*Aligned w/above
Security	Local Priorities	RAM-D+ & Vulnerability Studies	RAM-CAP?

Increasingly Disciplined & Risk Based



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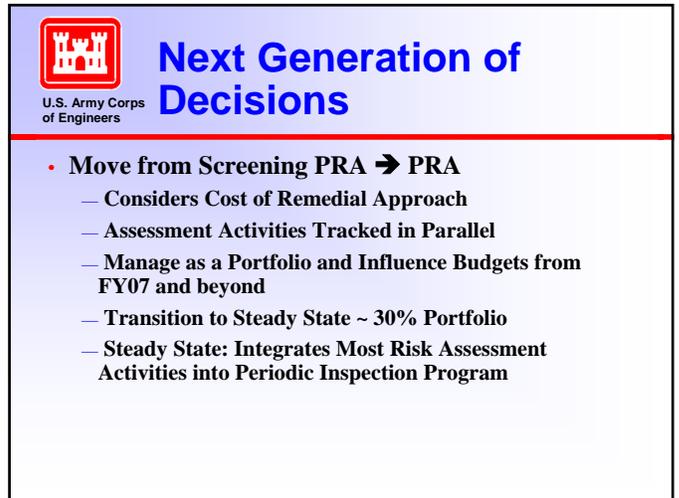
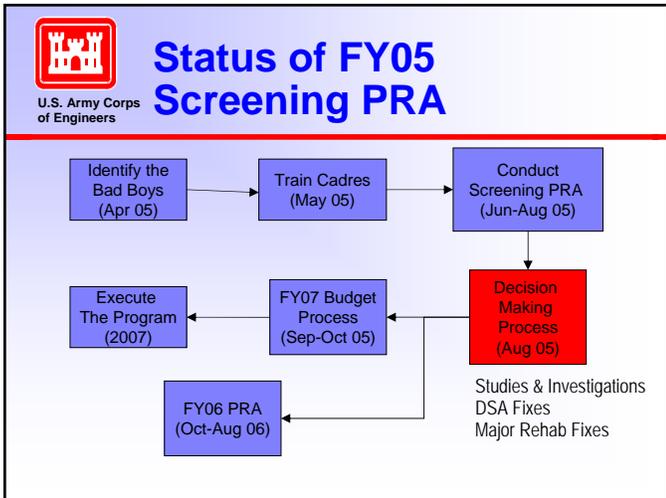
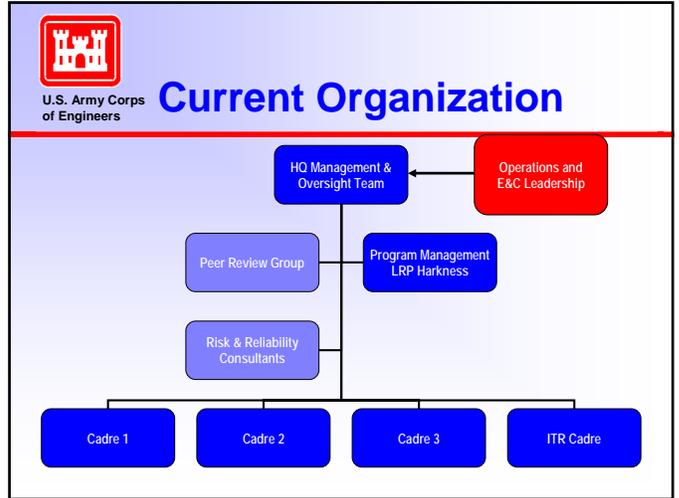
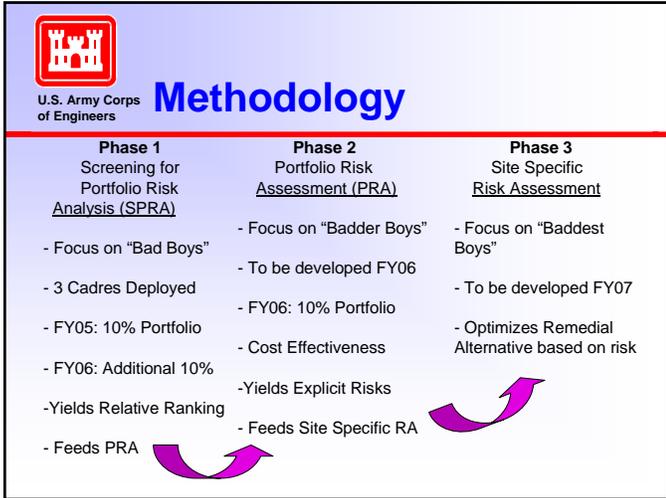
Influence of Risk & Reliability, FY06 Program

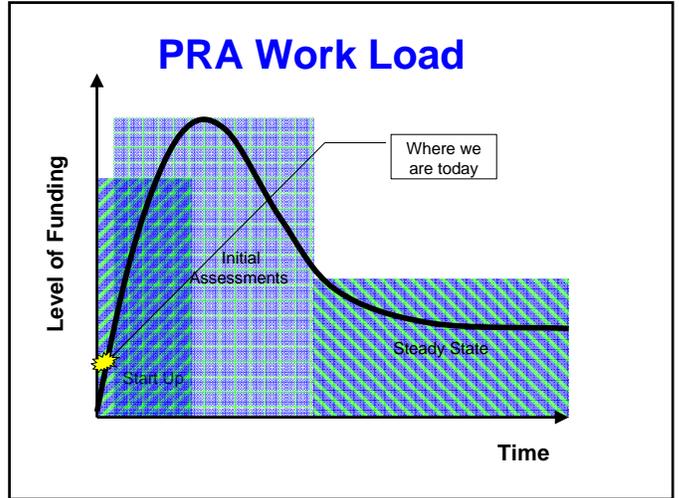
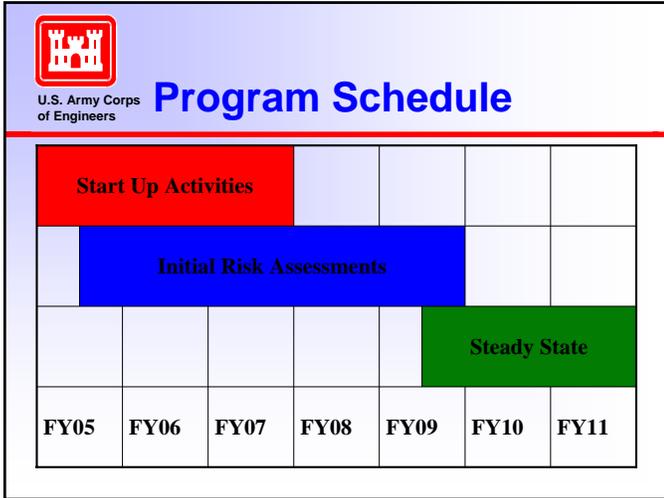


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Dam Safety Expenditures and Budget

	FY05	FY06
Operations and Maintenance Accounts (Total)	\$ 125,630,324	\$ 111,227,724
Construction General Accounts (Total)	\$ 48,553,054	\$ 144,831,000
General Investigation Accounts (Total)	\$ 244,400	\$ 271,000
Other Funding Accounts (Total)	\$ 2,370,500	\$ 2,485,500
Dam Safety Total All Accounts (Total)	\$ 176,798,278	\$ 258,815,224
Dam Safety FTE Total (O&M and Construction only)	504.8	531.8





Course of Action:
(MG Riley Brief of 11 July 05)

- **Adopt a Modified US Bureau of Reclamation Approach to Risk & Reliability**
 - Proven, Credible, & Rigorous
 - State of the Art
 - Modified for USACE Portfolio & to Capture Cost Effectiveness
- **Fund in FY06 and FY07 @ ~\$4M/year Level**
 - Working specifics with Programs, Business Lines, and ASA CW
- **Communicate Methodology to Stakeholders: ASA CW and Congress**

Challenges

- **Staffing:**
 - Additional Cadres to Accomplish Initial Assessments
 - Long Term Skill Sets
- **Integrated Management:**
 - Centralized Resourcing & Management
 - Regional, Permanent Cadres
- **Re-Engineering the Dam Safety Program**
 - Risk Based Routine Activities



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Risk and Reliability Eng. For Existing Infrastructures



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- **Questions**
- **Thank You**