



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
WASHINGTON, D.C. 20314-1000

REPLY TO  
ATTENTION OF:

CEIWR-ZA

NOV 20 2008

MEMORANDUM FOR MSC Commanders, Districts, Laboratories, and FOA's

SUBJECT: Establishment of a Risk Management Center (RMC) as an Expertise Center (CX) and Directory of Expertise (DX) at the U.S. Army Institute for Water Resources (CEIWR)

1. References:

- a. ER-1110-1-8158, *Corps-Wide Centers of Expertise Program*, 16 January 1998.
  - b. CEIWR Regulation No. 10-1-23, *Organization and Functions*, 15 June 2004.
  - c. *Civil Works Strategic Plan (2004-2009)*, March 2004
  - d. *USACE Campaign Plan*, Goal 3, Objectives 3b & 3c on improving the resiliency of critical infrastructure and using risk-informed analysis, August 2008
  - e. *Interagency Performance Evaluation Task Force Draft Final Report*, 1 June 2006.
  - f. Findings of the *AAA Audit of Earthen Dam Management*, February 2008.
  - g. Comments from External Peer Review, February 2008 and feedback from the National Technical Competency Team on the engineering expertise necessary for the national dam safety program, June 2008.
  - h. Decision Briefs to the DCG on establishment of a Risk Management Center within the Institute for Water Resources on 22 and 29 September 2008.
  - i. Decision Brief for the CG on establishment of a Risk Management Center within the Institute for Water Resources, 4 November 2008.
  - j. CECW-CE Memo establishing a virtual Engineering Risk & Reliability DX, 10 May 2006.
2. Concurrent with the release for the *Interagency Performance Evaluation Task Force Draft Final Report* on 1 June 2006 (reference 1(e) above), HQUSACE reiterated its commitment to take steps to integrate risk reduction methods, criteria for systems reliability and resiliency, and improved means for understanding and communicating residual risk into the Corps engineering and related communities of practice. This included a commitment to evaluate protective structures against risk-based design criteria and to stress the importance of redundancy and resiliency as essential characteristics of effective flood and storm damage protection systems, whether dams, floodwalls, levees, or other measures.

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3. HQUSACE also committed to not only apply our own internal quality assurance and quality control reviews to decision documents related to dam and levee safety programs, but to also submit them for external technical peer review outside the USACE command chain, along with a pledge to strengthen USACE's technical engineering expertise in the application of risk-based methods, to consistently renew our expertise in those areas as the state-of-the-art evolves, and to promote and support continued learning, growth and professional accreditation.
4. Per reference 3(f) above, findings of the *AAA Audit of Earthen Dam Management*, February 2008, called for improved budgeting and management of dam safety funding within the USACE Civil Works Program, along with improved technical management of DSAC II and DSAC III IRRMP's in order to improve the delivery of dam safety repair and rehabilitation plans. AAA's overall conclusions included concerns regarding the sustainability of the current ad-hoc approach to focus technical expertise thru the virtual Engineering Risk & Reliability DX, and emphasized the need to transition from local to national perspective in order to maintain and develop technical engineering expertise and address an increasing national dam safety workload, and stated: that the "lack of management controls could lead to an ineffective dam safety program, dam failures, loss of life, economic damage, and a lack of continuity as personnel retire".
5. USACE has had three years of experience in evaluating approaches that incorporate risk-informed concepts and focus our CW objectives to transition into a centrally managed but de-centrally executed dam safety program, and it's clear that the virtual nature of the Engineering Risk and Reliability DX (reference 3(j) above) is not sustainable from both a personnel and mission perspective context. USACE clearly requires a Corps-wide resource with a national perspective to serve as an independent advisor to senior leadership, maintain and develop risk competencies while supporting district and MSC dam and levee safety activities.
6. In light of paragraphs 2-5 above, it is essential that USACE place an increased emphasis on developing a robust engineering risk management capability on a national basis, to be made available for consultant services and technical assistance to districts and MSC's on dam and levee safety issues and studies, and to provide HQUSACE with the specialized expertise needed to develop, promulgate and infuse risk-based guidance and contemporary risk-informed methods, models and related problem solving capabilities throughout USACE. Such capacity development activities include custom workshops, PROSPECT/training courses, and on-the-job training for district engineering staff via mentoring and developmental assignments at the entry, journeyman and expert levels. The role and activities associated with such a national capability within a Risk Management Center are described in Attachment 1.
7. The designation of a national Risk Management CX/DX within the Institute for Water Resources (CEIWR) acknowledges the resident capabilities and legacy processes for risk-informed analysis under development for the last several decades, particularly within the Institute's Hydrologic Engineering Center (HEC), and with an enhanced capability in economics, consequences, and investment decision support in general over last five years.

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8. In particular, the management approach to the Risk Management Center follows the well-established and successful model of the Hydrologic Engineering Center, another operational unit of IWR, with the mission of the RMC being to assist and enable the Corps districts and MSC's to succeed in accomplishing work related to dam and levee safety - not for the RMC to accomplish said work itself. Within this construct, the designation of the RMC as a CX/DX addresses the concerns raised by Army Audit Agency, Corps Dam Safety Peer Review, and the National Technical Competency Team (references 3(f) and (g) above).

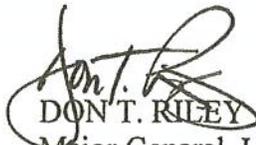
9. Consistent with the CG's approval of designating the RMC as a national CX/DX within the U.S. Army Institute for Water Resources (reference 3(i) above), CECW is hereby directed to work with the Director, CEIWR, to:

- a. Revise CEIWR's Mission & Function Statement to incorporate the RMC into the overall FOA;
- b. Begin incorporating FTE's for the RMC into CEIWR's future inputs to the USACE Consolidated Command Guidance (CCG), beginning in FY 2010;
- c. Establish the position of Director, RMC at the YF-03/GS-15 level, and, initiate recruitment to fill the position as soon as practical; and,
- d. Incorporate the legacy Risk & Reliability Center DX functions and staff (on a voluntary basis) into the RMC.

10. The Risk Management Center CX proponent at HQUSACE is CECW-CE, Mr. James Dalton and Mr. Eric Halpin. The POC at the Institute is the IWR Director, Robert Pietrowsky.

FOR THE COMMANDER:

Encl

  
DON T. RILEY  
Major General, USA  
Deputy Commander

## **Attachment 1 - Risk Management Center Mission, Roles and Activities**

The Risk Management Center (RMC) is a USACE national center of expertise (CX) and is an element of the U.S. Army Institute for Water Resources (IWR).

**Mission.** The mission of the RMC is to support USACE Civil Works by serving as:

1. An independent advisor to senior leadership at HQUSACE, MSC's and districts in the application of risk-informed evaluations and criteria for assessing the engineering risk associated with dams and levees and related public works.
2. A national CX for maintaining and developing the full range of engineering risk competencies across USACE, including staff development, and capacity building and enhancement through mentoring, training and education, and developmental opportunities.
3. A national technical resource in support of district and MSC dam and levee safety activities across USACE, CONUS and OCONUS, through the provision of consultant services, technical assistance, and advice.
4. Nexus for convening a critical mass of expertise in support of HQUSACE development of engineering risk-informed policies, processes, methods, tools, and systems to enhance dam safety, levee safety, protection of critical infrastructure, and related civil works activities.

**Roles & Activities.** The roles and activities of the Risk Management Center include:

1. Serve as a Corps-wide resource for risk-related tools, assessments, knowledge, methods;
2. Serve as a technical center of expertise and nexus for infrastructure risk management and dam and levee engineering;
3. Provide a national perspective while working to support the Engineering and Construction Community of Practice (CoP), districts, MSC's and HQUSACE;
4. Provide advice, technical assistance and technical leadership of teams primarily composed as regional or district cadres, in support of district and MSC technical activities relating to dam and levee safety;
5. Provide technical leadership for dam and levee safety risk-based engineering activities, within purview of relevant Engineering and Construction Communities of Practice (CoP);
6. Serve as a Corps-wide resource to advise on and interpret dam safety, levee safety, and related engineering policies and guidance;
7. Leads technical teams and/or provides technical facilitators and subject matter experts in collaboration and cooperation with districts and MSC's in support of the evaluation of engineering risks and consequences, and the development of alternative plans to address risk problems as part of Dam Safety Modification Study (DSMS) activities, and the equivalent levee activities;

8. Provide management oversight of the National Inventory of Dams (NID) and the equivalent national levee inventory system, and support efforts to unify real-time seismic monitoring systems for Corps facilities in seismically active areas;
9. Enhance the overall level of USACE professionalism and technical competency in the areas of dam and levee safety engineering risk by developing and leading training functions, mentoring and advising on career development, and providing career development opportunities on behalf of HQUSACE, MSC, and district forces;
10. Coordinate and participate in independent peer reviews of district dam and levee safety activities, as requested by MSC's or districts, or tasked by HQUSACE;
11. Advise on CECW and CERD research and development objectives to ensure alignment with future technical needs for analyzing, modeling, and assessing engineering risk associated with dams, levees, floodwalls, and related structures;
12. Assist in the integration of technically consistent and/or mission appropriate risk-based condition and performance (consequences) assessments associated with various USACE Civil Works programs, including, for example, Asset Management, Interim Risk Reduction Measure Plans (IRRMPs Periodic Assessments of Dam Safety and Levee Safety, Inspection of Completed Works, etc.
13. Support HQUSACE in maintaining effective interagency technical relationships with other Federal agencies, particularly the Bureau of Reclamation's Dam Safety Office and Technical Service Center, and the Dam Safety division of the Federal Energy Regulatory Commission (FERC) towards the development of mutual beneficial and joint activities to:
  - Develop professional and technical competencies;
  - Develop joint methods, policies, and procedures;
  - Develop comparable risk management strategies; and
  - Work jointly with professional organizations, academic institutions, and private industry to incorporate risk management into the water resources industry;
14. Support national and international technical interface with professional organizations, NGO's, academia, the private sector, and international institutions with an interest in engineering risk management, including, for example, the:
  - Association of State Dam Safety Officials (ASDSO)
  - U.S. Society of Dams (USSD)
  - American Society of Civil Engineers (ASCE)
  - Association of Engineering Geologists (AEG)
  - U.S. Universities, and key USACE overseas University partners
  - Private Sector - U.S. companies and those abroad
  - USACE International Partners.