DEPARTMENT OF THE ARMY U.S. Army Corps of Engineers Washington, DC 20314-1000

ER 10-1-55

CECW-CE

Regulation No. 10-1-55

30 June 2013

Organization and Functions ROLES AND RESPONSIBILITIES RISK MANAGEMENT CENTER

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U.S. Army Corps of Engineers Washington, DC 20314-1000 ER 10-1-55

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- 1. <u>Purpose</u>. This regulation establishes the roles and responsibilities of the Risk Management Center (RMC) located within the Institute for Water Resources, USACE. This regulation has been prepared to comply with the requirements in ER 1110-1-8158, Corps Wide Center of Expertise Program.
- 2. <u>Applicability</u>. This regulation applies to USACE Commands responsible for Civil Works projects.
- 3. <u>Distribution Statement</u>. This document is approved for public release. Distribution is unlimited.

4. References.

- a. ER 1110-2-1156, Safety of Dams Policy and Procedures
- b. ER 1110-1-8158, Corps Wide Centers of Expertise Program
- c. EC 1165-2-214, Civil Works Review
- d. Memorandum CEIWR-ZA, dated 20 November 2008, 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).
- 5. <u>Background</u>. From 2001 to 2008, USACE performed competency evaluations and investment assessments associated with the need to improve the management of dam and levee safety activities. The RMC was established by the direction of the USACE DCG on 20 November 2008. The USACE RMC is a national center of expertise that provides technical advice, oversight, and review of projects at the request of HQUSACE as well as program and decision support for the HQUSACE Dam and Levee Safety Programs. A comprehensive listing of roles and responsibilities for the USACE Dam Safety program is included as Appendix A. The listing of roles and responsibilities for the USACE Levee Safety program is being developed as a part of the Levee Safety policy.

- 6. <u>Guiding Principles</u>. The following are guiding principles for the USACE Dam and Levee Safety Programs:
- a. The purposes of the Dam and Levee Safety programs are to reduce and manage life-safety, economic, and environmental inundation risk due to failure of the structure by ensuring that all dams and levees are designed, constructed, operated, and maintained as safely and effectively as is reasonably practicable. A key mission of the USACE Dam and Levee Safety programs is to achieve an equitable and reasonably low level of risk to the public from its structures.
- b. Risk-Informed Corporate Approach. The USACE safety programs will be managed from a risk-informed USACE-wide portfolio perspective applied to all features of all systems on a continuing basis.
- c. The Corps of Engineers maintains a three-level decentralized organization, HQUSACE, MSCs (Regional), and Districts. The RMC is a Headquarters Field Operating Activity (FOA), and its primary purpose is to advise HQUSACE.
- 7. <u>Policy</u>. The roles and responsibilities of the USACE Risk Management Center (RMC) are identified in the following sub-paragraphs.
- a. Support Oversight. The RMC supports HQ with technical and programmatic oversight for all non-routine dam and levee safety activities. The RMC develops processes and procedures to standardize compliance with ER 1110-2-1156, EC 1165-2-214 or current Civil Works Review Policy, and the current levee safety policy. The RMC conducts sufficient quality reviews to ensure consistency in product development and continual improvement through lessons learned.
- b. Risk Management. The RMC is responsible for supporting and informing HQUSACE's management of the portfolio of dams and levees in the Corps' inventory with the goal of reducing risks in the most efficient manner possible. The RMC leads efforts to evaluate structures where risks are potentially unacceptable and manage the portfolio from a national perspective. The RMC, in consultation with the Dam Safety Senior Oversight Group (DSOG) and HQUSACE, manages resource queues for Periodic Assessments, Issue Evaluations, and Dam Safety Modification Studies, and approved projects awaiting design and construction funds. The RMC, in consultation with the Levee Safety Senior Oversight Group (LSOG) and HQUSACE, manages resource queues for Levee Safety policy and methodology development. The RMC also maintains a 5-, 10-, and 30-year plan to reduce risks across the USACE portfolio of dams.
- c. Risk Assessment. The RMC is responsible for leading the development of risk-related tools and risk methodology for the USACE Dam and Levee Safety programs and supports risk approaches in other related areas as directed by HQUSACE. The RMC develops these tools and methods internally and with District, MSC, HEC, ERDC,

and external support. The RMC leads and supports the development of methodology to support risk assessments in dam safety, levee safety, asset management, and other risk activities as requested by HQUSACE. The RMC also leads risk assessments and is the mandatory center for assessing life safety risks in accordance with the Dam Safety ER 1110-2-1156.

- d. Data Management. The RMC is responsible for managing data associated with non-routine dam and levee safety activities. The RMC works with Districts to coordinate storage and maintenance of routine dam and levee safety information. The RMC actively maintains a web page on the Technical Excellence Network (TEN).
- e. Policy Development. The RMC supports HQUSACE policy development and participates in strategic planning efforts as requested by HQUSACE. The RMC identifies gaps in existing policy and suggests improvements to existing policy.
- f. Quality Management. In accordance with EC 1165-2-214 or the current Civil Works Review Policy, the RMC serves as the Review Management Organization (RMO) for non-routine Dam Safety products, vegetation variance, and non-routine Levee Safety related products when appropriate (i.e. those completed without a decision document). The RMC does this in close coordination with the appropriate Planning Centers of Expertise and other Centers of Expertise within the Corps of Engineers. As such, the RMC reviews and endorses review plans prepared by Districts prior to MSC approval. The RMC is also responsible for managing Agency Technical Review (ATR) teams and Independent External Peer Review (IEPR) panels for those projects. The RMC also maintains contracts to procure the services of the Type II IEPR panels. The RMC is also responsible for managing ATRs associated with vegetation variances.
- g. Technical Competency. The RMC is responsible for leading efforts to coordinate technical competency and technology development for risk-based scientific and engineering analyses of dams and levees. The RMC coordinates with CoPs, Districts, MSCs, and other agencies/organizations to develop strategic partnerships that promote the advancement of the dam and levee safety missions.
- h. Support for Others. The RMC contributes to USACE dam safety support to outside organizations. The RMC supports HQUSACE as requested in providing services to international organizations for dam safety related products. The MSC is the first line of support to organizations seeking support from USACE. The MSC coordinates through the RMC to obtain the necessary resources in support of Dam Safety related products to international organizations.
- 8. <u>Organizational Structure/Command and Control</u>. The RMC is under the command and control of the Deputy Commanding General for Civil and Emergency Operations through the Director of the Institute of Water Resources. The senior rater for the Director of the RMC is the USACE Chief of Engineering and Construction. Appendix B graphically displays the command and control structure.

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- 9. <u>Conflict Resolution</u>. In the event a conflict exists between the RMC and another entity, the USACE Director of Civil Works shall have final decision making authority.
- 10. <u>Funding</u>. The RMC is a reimbursable organization. Funding for all activities of the RMC is provided through Headquarters or project funds as appropriate.
- 11. <u>HQUSACE Proponent</u>. The HQUSACE proponent for the RMC is the USACE Chief of Engineering and Construction.
- 12. <u>Upward Reporting</u>. The RMC is developing customer service, performance, and quality metrics to track performance of the Dam Safety and Levee Safety programs. A quarterly program and quality management report is forwarded to the HQUSACE proponent within two weeks of the conclusion of each quarter. The content and format of the report is documented in the Program Management Plan and posted to the Dam Safety Sub-Cop TEN Site. If HQUSACE indicates the need for changes or improvement in the delivery of RMC products, adaptive management will be employed to implement changes in processes and/or organizational structure as necessary to achieve the guiding principles and established metrics.

FOR THE COMMANDER:

3 Appendices (See Table of Contents)

CHERYLL. PARTEE

Chief of Staff

APPENDIX A

USACE Dam Safety Program Roles and Responsibilities Matrix

- A.1. <u>Roles and Responsibilities</u>. The USACE Dam Safety Program Roles and Responsibilities Matrix are published in several documents with the master version of the matrix published in Appendix N of ER 1110-2-1156. The master version of the matrix governs if future changes result in conflicts to arise between ER 1110-2-1156 and the copy published in other documents.
- A.2. <u>Legend of Role Symbols and Organizational Symbols</u>. The Symbols used in the matrices are defined in Tables A.1 and A.2.

Table A.1 – Legend of Symbols

	Table 7 th Logerta of Cymbols
Р	Primary - This represents the organization that primarily executes this role/task.
0	Oversight - This organization will provide the oversight to verify effective execution.
S	Support - This organization would be expected to be involved in supporting this activity on a regular basis (It is noted that all the organizations will support every function as necessary, but the "S" indicates the expectation of a more routine and higher level of support).
M	Mandatory - This is a mandatory role/function for this organization. Other organizations are mandated to utilize this organization for this function or this organization is mandated to maintain this service for use by the Agency. The details of this mandate will be defined within the Engineering Regulation establishing each center.

Table A.2 – Organizational Symbols

HQ	Headquarters, USACE
MSC	Major Subordinate Commands (Regions/Divisions)
Districts	Local Geographic USACE District
RMC	Risk Management Center
ERDC	Engineer Research and Development Center
DSPC	Regional Dam Safety Program Centers
DSMMCX	Dam Safety Modification Mandatory Center of Expertise
MMC	Modeling, Mapping, and Consequence Center of Expertise
DSOG	Dam Safety Senior Oversight Group
DSPCMG	Dam Safety Production Center Management Group
DSSC	Dam Safety Steering Committee
DSPPT	Dam Safety Policy and Procedures Team
DSPCSC	Dam Safety Production Center Steering Committee

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A.3. <u>Roles and Responsibilities Matrix</u>. The matrix consists of three tables for Overall Management, Routine Management, and Dam Safety Modification Management (Tables A.3, A.4, and A.5).

Table A.3 – Overall Dam Safety Program Management

Table A.3 – Overali Dam Safety Program Management													
<u>Responsibilities</u>	<u>HQ</u>	MSC	<u>District</u>	<u>RMC</u>	<u>ERDC</u>	<u>DSPC</u>	DSMMCX	MMC	DSOG	DSPC MG	<u>DSSC</u>	<u>DSPPT</u>	DSPC SC
Overall Dam Safety Program Management													
Periodic review/approval of centers	М			S			S	S			S		
Participation in NDSRB and ICODS	P	S		S	S			S			S		
Select/Appoint/Approve USACE DSO	M	3							S				
Select/Appoint/Approve Regional DSO	0	М							-				
Sustain National SME's in Dam Safety engineering	0	S	S	S	S	S	М	S		0	0		
Sustain Regional SME's in Dam Safety engineering		0	S			М							
QMS (Dam Safety National level)	М	S		S	S		S	S	S	S	S	S	
Quality Management System for DS Risk Products	0			М		S	S	S					
Quality Management System for MMC Products	0			0				М					
Management of Dam Safety Records													
Maintain project records for USACE dams			М			S							
Maintain project records for routine activities	0	0	М	S	S			S			0		
Maintain project records for DS modification activities	0	0	S	S	S	М	0	S		0			
Maintain TEN for centers	М			S	S		S	S					
Budget development	М	S	S	S	S	S	S	S	0				
Policies/Procedures	М	S	S	S	S	S	S	S			0	S	
Strategic Planning	М	S		S	S	S	S	S	S	S	S	S	0
Initiate and Manage Strategic Partnerships	М	S		S			S	S			0		
Asset Mangement	0	Р	S	S							S		
R&D	0	S	S	S	M		S	S			S	S	
Maintain National A-E contracts experienced in dam engineering	0		S	S		S	М	S		0			
Maintain Regional A-E contracts experienced in dam engineering			S	S		Р	S	S					
Manage Dam Safety Portfolio/DSAC	М	S	S	S		S	S	S	0				
Portfolio Risk Communication	М	S	S	S		S	S				S		
Project Risk Communication	0	S	M	S		S	S	S					

Table A.4 – Routine Dam Safety Program Management

Responsibilities	HQ	MSC	District	RMC	ERDC	DSPC	DSMMCX	MMC	DSOG	DSPC MG	DSSC	DSPPT	DSPC SC
Routine Dam Safety Program Management													
Routine Dain Salety Flogram Management													
Quality Management System (Regional)	0	P	S										
Quality Management System (District)													
Develop Processes for QMS	0	0	Р										
Develop Performance Measurements	P	S	S	S							S	S	
Track Performance (Including DS Scorecard)	0	0	P								S	S	
QC Reviews		0	Р	0									
ATR	0	0	S	М									
IEPR Type II	0	0	S	M									
Manage Routine Dam Safety Program													
Select/Appoint/Approve District DSO	0	0	M										
Select/Approve District DSPM		0	Р										
Conduct Dam Safety Committee Meetings (Regional)	0	M	S										-
Conduct Dam Safety Committee Meetings (District)		0	M										-
Periodic Inspection	0	0	M								0		-
Periodic Assessment	0	0		M						-			-
Facilitate Risk assessment/PFMA	0	0		S				S					-
Perform Risk Assessment and Prepare Documentation	0	0	M S	S				S M					-
Produce Mapping, Models and Consequences	0	0	M	S		S		IVI			0		-
Instrumentation Program Develop/Maintain IRRMP and Implement IRRMs	0	0	M	0		S		S			0		
Develop/Maintain Include and Implement IOP	0	0	M	0		S		S			0		-
Dam Safety Training (For Dam Operators, etc)	0	0	M			3		<u> </u>			0		
Emergency Action Plans	0	0	M					S			0		
Emergency Engineering Services/Floodfighting, etc.	S	S	P	S	S	S	S	S			0		
Technical Competency (TC) Management													
Coordinate with CoPs to identify agency gaps in DS Skills	Р	S	S	S							S		
Develop/Maintain Training Curricula to close gaps	Р	S	S	S							S		
Develop District level plan to eliminate gaps	0	S	Р								S		
Implement Plan to eliminate TC gaps	0	S	Р	S							S		
Coordinate/Integrate with Related CoPs	0	S	Р	S				S			S		
Manage Routine Dam Safety Projects													
Establish the Project Management Plan		0	М										
Project Management (PM)		0	М										
Lead Engineer		0	М										
Non-Technical PDT Members		0	М										
Technical PDT Members (in-house/A-E)		0	М			S		S					
Construction PDT Members		0	М										
Design Documentation Report		0	Р					S					
Production of Plans and Specifications		0	Р										
Cost Engineering Services		0	Р										
Engineering & Design during Construction		0	P										
Advertise, Award and Administer Construction Contract		0	P										

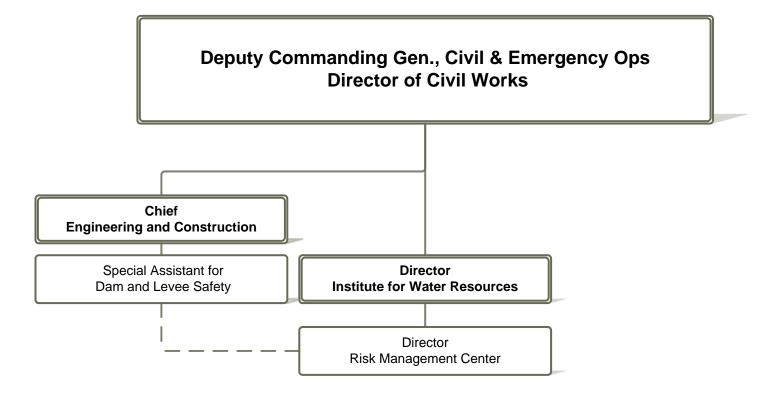
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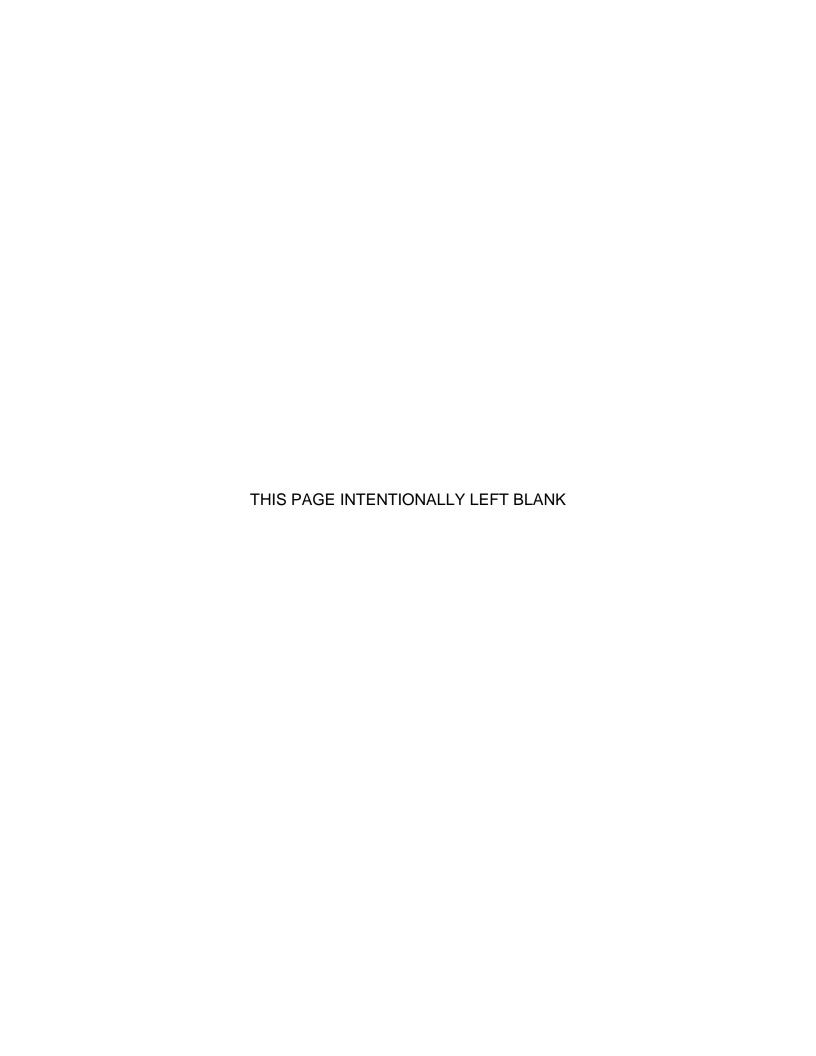
Table A.5 – Dam Safety Modification Program Management

Responsibilities	HQ	MSC	District	RMC	ERDC	DSPC	DSMMCX	MMC	DSOG	DSPC MG	DSSC	DSPPT	DSPC SC
Dam Safety Modification Program Manageme	nt												
Quality Management System	0	О	S	0		Р	0			S		S	
Develop Performance Measurements	0	0	S	S		S	М	S		S			
Track Performance	0	0	S	S		Р	M			S			
Project Review Plans	0	0	М	0		S							
QC Reviews		0	S	Р		Р	0	Р					
ATR	0		S	M		Р	Р	S					
IEPR	0		S	M		S							
Manage Dam Safety Modificaton Mission													
Manage and coordinate SOG activities	М			S		S	S	S	Р				
Chair Dam Safety Production Steering Committee	М												
Chair DSPC Management Group meetings							М						
DSPC Management Group meeting members	М			М		М	M	S					0
Technical competency Management						T							
Develop Dam Safety Engineer career path	0	S		S		S	М	S		S	0		0
Coordinate with CoPs to identify gaps in DS Skills	0		S	S		S	M	S		S			0
Develop a plan to eliminate gaps	0	S	S	S		S	M	S		S			0
Develop/Maintain Training Curricula	0			S			M	P		S			0
Implement Plan to eliminate TC gaps	0	S	S	S		S	M	P		S			0
Develop a mentoring program for DS	0	S	S	S		S	M	S		S			0
Implement/execute mentoring program	0	S	S	S		S	M	P		S			0
Maintain the Dam Safety Investment Plan	0	S	S	0		S	M	S		S			0
Coordinating workload among DSPCs	0	S	S	S		S	M			S			0
Coordinate/Integrate with Related CoPs	М	S	S	S		S	S	S		3		0	
Ensure districts receive effective service	0	S		S		M	0	S		S			0
Reimbusable support for others (national)	0	P	S	S		S	S	S		S			0
Reimbusable support for others (international)	P	S	S	S		S	S	S		S			0
408 implementation	0	0	P			S	S						
Manage Dam Safety Modification Projects													
Establish the Project Management Plan	0		М	S		0	0	S					
Project Manager		0	P										
Lead Engineer	0	0				М	0						
Non-Technical PDT Members		0	Р										
Technical PDT Members (in-house/A-E)		0	S	S		Р	0	S					
Construction PDT Members		0	P			0	S						
Issue Evaluation Studies			· ·										
Risk assessment	0	S	S	М	S	S	S	S	0	1			1
Document Preparation	0	0	M	S		S	S	S	0				
Produce Mapping, Models and Consequences	0		S	O		S	S	M	0				
Dam Safety Modifications										1			
Preparation of Decision Documents (DSMS/R)	0	0	S	0		М	0	S	0	0			
Design Documentation Report	0	0	S	0		P	0	S	0				
Production of Plans and Specifications	0	0	S	0		P	0	-	0	1			
Cost Engineering Services	0	0	S	0		P	0		0				1
Engineering & Design during Construction	0	0	S	S	1	P	0			1			1
Advertise, Award and Administer Construction Contract	0	0	M			S	S						
Re-evaluation post-construction risk	0		S	М		S	S	S	0	1		1	1

Appendix B

Risk Management Center Command and Control





Appendix C

Original MCX Establishment



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

CEIWR-ZA

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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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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)

- 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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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)

- 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).
- 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

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:

- 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.
- 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.
- 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;
- Serve as a technical center of expertise and nexus for infrastructure risk management and dam and levee engineering;
- Provide a national perspective while working to support the Engineering and Construction Community of Practice (CoP), districts, MSC's and HQUSACE;
- 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;
- Provide technical leadership for dam and levee safety risk-based engineering activities, within purview of relevant Engineering and Construction Communities of Practice (CoP);
- 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;

- 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;
- 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;
- 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.