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	Engineering and Design DAM SAFETY- ORGANIZATION, RESPONSIBILITIES, AND ACTIVITIES	
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**Engineering and Design
DAM SAFETY - ORGANIZATION, RESPONSIBILITIES,
AND ACTIVITIES**

1. Purpose

This regulation prescribes the policy, organization, responsibilities, and procedures for implementation of dam safety activities within the Corps of Engineers.

2. Applicability

This regulation applies to HQUSACE/OCE elements, major subordinate commands (MSC), districts, and field operating activities (FOA) having responsibility for planning, site selection, design, construction, operation, and maintenance of civil works projects.

3. References

- a.* PL 92-367, Dams - Inspection - Secretary of the Army.
- b.* ER 1110-2-100, Periodic Inspection and Continuing Evaluation of Completed Civil Works Structures.
- c.* ER 1110-2-101, Reporting of Evidence of Distress of Civil Works Projects.
- d.* ER 1110-2-110, Instrumentation for Safety - Evaluations of Civil Works Projects.
- e.* ER 1110-2-112, Required Visits to Construction Sites by Design Personnel.
- f.* ER 1110-2-241, Use of Storage Allocated for Flood Control and Navigation at Non-Corps Projects.
- g.* ER 1110-2-1150, Engineering After Feasibility Studies.

h. ER 1110-2-1942, Inspection, Monitoring and Maintenance of Relief Wells.

i. ER 1130-2-417, Major Rehabilitation Program and Dam Safety Assurance Program.

j. ER 1130-2-419, Dam Operations Management Policy.

k. Federal Guidelines for Dam Safety, June 1979.

4. Background and Scope

The safety of dams has been a major concern of the Corps of Engineers since it began building dams in the 1840's. As part of the flood control development of the Muskingum River in the 1930's, the Corps started its multiple level of review requirement for dam design. For many years the Corps has made extensive use of expert consultants to advise on unusual and difficult designs. Advisory boards have been helpful in establishing design criteria and standards. Experience gained from the Fort Peck slide led the Corps to adhere to the highest design standards and comprehensive inspection and testing for construction. The Corps was one of the first agencies to initiate a periodic inspection and evaluation program.

a. As a result of several dam failures in the mid 1970's, a Presidential Memorandum was issued on 23 April 1977 that required each Federal agency having responsibility for dams to review their practices and activities related to dam safety. This memorandum also directed the Federal Coordinating Council for Science, Engineering and Technology to prepare guidelines for management practices and procedures to ensure dam safety. "Federal Guidelines for Dam Safety" was published in June 1979, and with a memorandum dated

4 October 1979, President Carter asked each Federal agency having responsibility for dams to adopt and implement these guidelines and report their progress to the Federal Emergency Management Agency (FEMA) on a biennial basis. Executive Order 12148 gives FEMA the responsibility to coordinate dam safety in the nation. The Interagency Committee on Dam Safety (ICODS) was established in 1979 to promote and monitor Federal and State dam safety programs. The Corps of Engineers is the Department of Defense representative on ICODS. The purpose of these guidelines is to enhance national dam safety and to encourage high safety standards in the management procedures and technical activities of Federal agencies. The guidelines require the head of each Federal agency having responsibility for design, construction, operation and regulation of dams to establish a dam safety office (officer) which reports directly to the head of the agency.

b. On 7 February 1980, the Chief of Engineers appointed the Chief of the Engineering Division, Directorate of Civil Works, as the HQUSACE Dam Safety Officer. This appointment also required that the Dam Safety Officer chair a standing committee composed of individuals having assigned responsibilities for dam safety to include programming and policy functions. The purpose of this committee is to provide surveillance, evaluation, and guidance for the administrative, technical, and regulatory practices within the Corps of Engineers. The Dam Safety Officer is advisory to the Chief of Engineers, through the Director of Civil Works.

c. The purpose and intent of this regulation is to ensure that the responsible officials at all levels within the decentralized organization of the Corps of Engineers implement and maintain a strong dam safety program that is in compliance with the Federal guidelines and ensures that all dams are designed, constructed, and operated safely and effectively under all conditions. Managers at all levels should ensure that they have sufficient organizational staffing of highly qualified personnel and that their programs related to dam safety are established and realistically funded.

5. Organization and Responsibilities

The Corps of Engineers maintains a decentralized organization of three levels. Each level will be staffed with qualified and experienced personnel in areas of design, construction, and operations of dams and appurtenant

structures. Each level will have a Dam Safety Officer and organization as follows:

a. *HQUSACE/OCE.*

(1) Organization. The HQUSACE/OCE Dam Safety Officer is the Chief, Engineering Division, Directorate of Civil Works. The standing Dam Safety Committee members are as follows:

(a) Chief, Engineering Division, Directorate of Military Programs.

(b) Chief, Operations, Construction and Readiness Division, Directorate of Civil Works.

(c) Chief, Geotechnical and Materials Branch, Engineering Division, Directorate of Civil Works.

(d) Chief, Hydraulics and Hydrology Branch, Engineering Division, Directorate of Civil Works.

(e) Chief, Structural Branch, Engineering Division, Directorate of Civil Works.

(f) Chief, Electrical and Mechanical Branch, Engineering Division, Directorate of Civil Works.

(g) Chief, Construction Branch, Operations, Construction and Readiness Division, Directorate of Civil Works.

(h) Chief, Policy Development Branch, Policy and Planning Division, Directorate of Civil Works.

(2) Responsibilities.

(a) Dam Safety Officer. The HQUSACE/OCE Dam Safety Officer is responsible for ensuring that the Corps of Engineers maintains a proactive Dam Safety Program and is implementing all of the practices and procedures outlined in the "Federal Guidelines for Dam Safety." He is responsible for establishing technical criteria and the priority of work. He or his designated representative will represent the Corps of Engineers on ICODS. He will establish a program for implementing dam safety needs and monitor the activities of the MSCs. He will ensure that the HQUSACE/OCE committee periodically reviews and evaluates the existing policy, technical criteria and practices, administrative procedures, and regulatory functions to ensure their adequacy

to support the agency dam safety program. Functions include oversight of design, construction, operation, maintenance, and rehabilitation programs to improve internal practices related to dam safety. He will perform an annual review of the status of emergency action plans and dam safety training. The Dam Safety Officer will monitor the activities of MSCs and periodically report to the Director of Civil Works and the Assistant Secretary of the Army for Civil Works.

(b) Dam Safety Committee. The committee will meet at least semiannually or as directed, make periodic inspections and field visits as necessary, and perform the following functions:

- Monitor and review the dam safety practices and procedures in the Corps of Engineers. Review and evaluate agency policy, directives, regulations, technical criteria, administrative procedures, and regulatory functions to ensure their consistency and adequacy to support the Corps' dam safety program.
- Review reservoir regulation, operation, emergency response plans and dam safety preparedness. Ensure that the inventory of dams is current and adequately maintained.
- Review the agency manpower to ensure that organizational staffing of highly qualified personnel is sufficient at all levels and that the MSC dam safety program is realistically funded.
- Review the research and development programs to ensure that the latest technologies related to dam safety receive consideration and evaluation.
- Review reports and make recommendations to the Assistant Secretary of the Army for Civil Works on dam safety matters.

b. Major Subordinate Commands (MSC).

(1) Organization. The MSC Dam Safety Officer will be the Chief/Director of Engineering. The standing committee will contain the Chiefs of the same disciplines as those in paragraph 5a(1) (b) through (g).

(2) Responsibilities. The MSC Dam Safety Officer and Committee are responsible for coordination and

implementation of the dam safety program. The committee will conduct a minimum of two meetings per year or as needed. Their responsibilities include:

- (a) Ensure the organizational staffing of qualified personnel is sufficient and that their program is established and realistically funded.
- (b) Establish dam safety related work priorities within the MSC.
- (c) Ensure that at least two levels of review are conducted for all features of major civil works projects.
- (d) Ensure adequate exploration and testing is accomplished in all stages of design and construction.
- (e) Ensure adequate performance monitoring and evaluations of all dams is conducted and documented.
- (f) Monitor the status of Emergency Action Plans.
- (g) Monitor the public awareness program and coordinate with state agencies as required.
- (h) Ensure adequate dam safety training is being conducted.
- (i) Ensure that accurate data is submitted for the inventory of Corps dams.
- (j) Plan, monitor, and conduct dam safety exercises.

c. District Commands.

(1) Organization. The District Dam Safety Officer will be the Chief, Engineering Division. The standing committee will comprise the same disciplines as that in the MSC.

(2) Responsibilities. The District Dam Safety Officer and Committee are responsible for the execution of the dam safety program. A minimum of two meetings will be held annually with the minutes forwarded to the Division. Responsibilities include but are not limited to:

- (a) Ensuring that the organizational staff of qualified technical personnel is sufficient for program implementation.

(b) Establishing a public awareness program with information at each project and coordination with downstream local interests.

(c) Monitoring and evaluating the performance of all dams and appurtenant structures and recommending remedial measures when necessary.

(d) Establishing the priority of dam safety related work.

(e) Conducting dam safety training for the technical staff and project operation and maintenance personnel.

(f) Ensuring that each dam has an adequate surveillance plan.

(g) Coordinating with local and State dam safety officials.

6. Applicable Dams

a. The Corps of Engineers' involvement in dams can be categorized as follows:

(1) Dams which the Corps has designed, constructed, operates, and maintains. Ownership remains with the Corps of Engineers.

(2) Dams which the Corps has designed and constructed but are owned, operated, and maintained by others.

(3) Dams that are designed, constructed, operated, maintained, and owned by others in which flood control

storage has been provided at Federal expense under the authority of the 1944 Flood Control Act.

(4) Dams for which the Corps has issued permits under its regulatory authority.

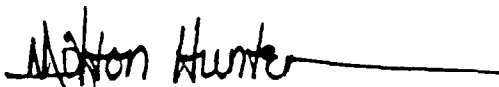
(5) Dams inspected and evaluated by the Corps under the authority of the National Program for the Inspection of Non-Federal Dams, PL 92-367.

b. In category 1, the Corps of Engineers has a definite responsibility for dam safety. For dams in category 2, the primary responsibility for dam safety is with the agency or sponsor which accepts the project. The Corps' responsibility in this case is a supporting role with respect to the design and construction and to participate in periodic inspections conducted by the owner. In category 3, the Corps should maintain pertinent data on the project and participate in inspections to ensure that the Federal flood control interest is being properly maintained. For categories 4 and 5, the Corps has no legal liability or financial responsibility for dam safety.

7. Emergency Preparedness

Each MSC and district command is responsible for the planning, preparation, assignment of responsibilities, and coordination with local officials for each project's Emergency Action Plan. The Dam Safety Officer should conduct training, inspections, and exercises to ensure adequate preparedness for the full range of events that would affect dam operation.

FOR THE COMMANDER:


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