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| CECW-CE<br>Engineer Regulation<br>1110-2-1400 | Department of the Army<br>U.S. Army Corps of Engineers<br>Washington, DC 20314-1000                  | ER 1110-2-1400<br><br>30 May 2016 |
|   | Engineering and Design<br>RESERVOIR/WATER CONTROL<br>MANAGEMENT                                      |                                   |
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Regulation  
No. 1110-2-1400

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Engineering and Design  
RESERVOIR/WATER CONTROL MANAGEMENT

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RESERVOIR/WATER CONTROL MANAGEMENT

1. Purpose. This Engineer Regulation (ER) provides for the establishment of Water Management Divisions (WM Divisions) in the major subordinate commands (MSC), summarizes basic activities of the WM Divisions, and describes the delegated responsibilities to the WM Divisions for water management activities. This version of ER 1110-2-1400 supersedes all previous versions.
2. Applicability. This regulation applies to all HQUSACE elements, MSCs, Districts, Laboratories, and field operating activities (FOA) having civil works responsibilities.
3. Distribution Statement. Approved for public release, distribution is unlimited.
4. References.
  - a. Public Law 101-640, Water Resources Development Act (WRDA) 1990 Section 310, Reservoir Management
  - b. Public Law 106-53, Water Resources Development Act (WRDA) 1999 Section 511, Water Control Management
  - c. AR 335-15, Management Information Control System
  - d. ER 200-2-2, Procedures for Implementing NEPA
  - e. ER 1110-2-240, Water Control Management
  - f. ER 1110-2-1156, Safety of Dams - Policy and Procedures
  - g. ER 1110-2-8156, Preparation of Water Control Manuals
  - h. EM 1110-2-3600, Management of Water Control Systems

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5. Discussion.

a. WM Divisions, formerly referred to as Reservoir/Water Control Centers, were originally created at each MSC as authorized in ER 10-1-2, except CEPOD. Establishment of a WM Division requires specific actions by the MSC and approval of the Commander, USACE. WM Divisions were originally created and approved in the Engineering Divisions or Operations Divisions; today they exist in both Programs and Regional Business Directorates, depending on the MSC. WM Divisions currently exist in CEMVD, CELRD, CESWD, CESAD and CENWD.

b. WM Divisions generally fall into two categories: those that have only "management/oversight" responsibilities and those that have "management/oversight" as well as "operational" responsibilities. Staffing levels in WM Divisions with only management/oversight responsibilities range from five to eleven professional engineers, scientists, and technicians. There are three Operational WM Divisions that also have real-time mainstem reservoir regulation responsibilities: the Columbia River Basin Water Management and Missouri River Basin Water Management Divisions, both in NWD, and the lower Ohio and Mississippi Rivers Water Management Division in the Great Lakes and Ohio River Division. Staffing levels in these Operational WM Divisions are commensurate with real-time mainstem reservoir regulation and management/oversight responsibilities.

c. The responsibilities of these WM Divisions may not be delegated to the Districts unless delegation authority is granted by the Chief of Engineers or higher (Secretary of Army for the lower Ohio and Mississippi Rivers Water Management Division in the Great Lakes and Ohio River Division). Section 511, PL 106-53 WRDA 1999, reinforces this responsibility and added an additional requirement of coordination with Congress. Although this coordination with Congress was a onetime requirement, it was the intent of Congress that proper coordination with House and Senate Committees was prudent before delegation authority be granted.

6. Activities of Water Management Divisions.

a. Objectives. The basic purpose of establishing WM Divisions in MSCs is to improve capabilities of USACE to perform its Civil Works water management mission, especially when basin boundaries are regional or national in nature. The responsibilities, specific objectives, and activities for the WM Divisions are described below.

b. Scope of water management activities. The Districts have the primary role in performing water management activities at projects within the District's area of responsibility, except for those that are regulated by one of the three Operational WM Divisions. Each WM Division will be primarily responsible for initiation, leadership, and coordination of actions pertaining to water management and will be supported by other elements as required to develop staff proposals for approval of the MSC Commander or by higher authority. Responsibilities of each WM Division will include necessary contacts, management actions, and technical consultations with

representatives of Districts and others in performing these duties, in conformance with prevailing regulations and policies of HQUSACE and such special instructions as the MSC Commander deems appropriate. In addition, Operational WM Divisions will also be responsible for real-time reservoir regulation activities of the main stem projects and designated tributary projects.

c. Oversight of Management of water management activities. Each WM Division, including the Operational WM Divisions, is responsible for all water management activities in its MSC to achieve project purposes such as flood control (flood risk management), water quality control, water supply, irrigation, navigation, hydropower, recreation, and fish and wildlife, and to alleviate sediment and erosion problems. The WM Divisions are responsible primarily for oversight and management of these activities, which requires expert knowledge of the engineering and scientific aspect of the work and water management policies (see ER 1110-2-240). Staffs will normally depend on other District Hydrologic and Hydraulic elements to provide technical studies assistance to the WM Divisions and to perform engineering analysis. Staffs of the WM Divisions will provide guidance regarding improving efficiency and effectiveness of water management activities, including operational management of rivers that cross multiple Districts or Divisions, interagency coordination, public involvement, public relations, and progressive improvement of water management technology. Other elements of MSC organizations may also be called upon to assist the WM Divisions as warranted.

In addition to the responsibilities listed above, the three Operational WM Divisions, as part of their real-time regulation responsibilities, require staff composed of technical experts capable of performing real-time operations, completing related technical studies, and formulating reservoir operating plans.

d. Supervision of water management activities. Each MSC Commander is responsible for making appropriate arrangements to ensure that regulation of reservoirs and other water management facilities, over the full range of hydrologic conditions, conforms to provisions of approved water control plans. Under some circumstances, it is advantageous to delegate to District Commanders the responsibility for assembling and interpreting data affecting current activities, and for carrying out water management plans approved in advance, without WM Division participation in routine evaluations and activities. A Guidance Memorandum (paragraph 9b) will be prepared for each WM Division describing in basic terms the degree of centralization proposed for the daily operations of MSC water management facilities. WM Divisions will maintain close surveillance of conditions affecting water management requirements during actual events and will be prepared to participate in technical evaluations and judgment decisions when major problems are involved. Operational WM Divisions will also be responsible for the same as it applies to the real-time reservoir regulation activities of the mainstem and designated tributary projects.

e. Coordination with Dam Safety activities. Each MSC commander is responsible for ensuring appropriate coordination between water management and dam safety activities. These responsibilities include coordinating, reviewing, and approving Interim Risk Reduction Measures (IRRM) plans for higher risk dams (DSAC I, II, or III) with dam safety concerns. The Districts are responsible for developing, coordinating, and executing all IRRM plans. IRRM can include regulation changes to the water control plan. These changes must be documented and a formal deviation request must be submitted to the MSC. See ER-1110-2-1156 for more information on IRRM.

## 7. Delegation of Responsibilities.

a. MSC Commanders are delegated primary responsibility for within their respective areas and for technical evaluations and performance of activities associated with water management.

b. MSC Commanders are authorized to require the development of water control plans and manuals conforming to pertinent project authorizations and policies of HQUSACE and to approve field use of such plans and manuals in the regulation of reservoirs and other water management facilities under the direct supervision of USACE, subject to the provisions specified in this regulation. MSC Commanders are responsible for reviewing and approving deviations to the approved water control plan. This responsibility may be delegated at the MSC to the responsible Senior Executive, or Chief, WM Division or Operational WM Division. Approval of minor deviations may be delegated to the District Commander. However, before this can occur, the guidance memorandum must reflect such deviation policy and must be developed at the MSC by qualified technical staff, by the WM Division, or by the Operational WM Division and approved by the MSC Commander and HQUSACE. In all cases, the delegated approving official must be a registered professional engineer with civil engineering background.

c. Authorizations, responsibilities, and procedures pertaining to the processing of regulations under Section 7 of the 1944 Flood Control Act, and other authorizations that require the Secretary of the Army to prescribe regulations for water control projects are defined in ER 1110-2-240.

d. Within the general provisions of paragraphs 7a and 7b, responsibilities delegated to MSC Commanders will be described in additional detail in the Guidance Memorandum specified in paragraph 9b of this regulation. This Guidance Memorandum should include clarification as needed of special considerations and variations in the responsibilities of the specific MSC. The Guidance Memorandum, and CECW-CE approvals thereof, should also identify any special responsibilities that are covered by instructions other than this regulation. Examples include certain international treaty activities and interregional arrangements.

#### 8. HQUSACE Role in Water Management Activities.

a. With the establishment of WM Divisions, the Commander of USACE has delegated to MSC Commanders a high degree of responsibility and authority for direct action with respect to all phases of water management, including not only technical evaluations and field operations, but also a major role in implementing policies and developing criteria and concepts that determine water control plans. Nevertheless, it is essential that a reasonable degree of consistency be maintained in basic policies and practices in the activities of the WM Divisions. HQUSACE (CECW-CE) will develop the basic policies and review MSC interpretation of policy to maintain such consistency and provide oversight, when needed, to ensure practices conform to authorized project purposes and all applicable federal laws.

b. In accordance with delegations of responsibilities prescribed herein, WM Divisions are expected to exercise initiative and leadership in all phases of water management activities. HQUSACE elements will be involved in these activities to the extent needed to stimulate or supplement actions taken at field level to achieve proper operational performance.

c. Review and approval of water control plans and manuals and deviations to these plans are transferred to the MSC Commander by this regulation and ER 1110-2-240. However, a certain level of oversight is retained at HQUSACE whenever a change to the water control plan is proposed by the MSC Commander (see paragraph 10c).

d. Representatives of CECW-CE will maintain necessary contacts with programs and activities conducted or proposed by WM Divisions, including participation in meetings at field level to provide an appropriate level of oversight and maintain chain-of-command.

9. Management of Water Control Documents.

a. General. EM 1110-2-3600 provides technical guidelines for preparing water control manuals for individual projects and systems. It is the responsibility of WM Divisions to improve and supplement technical procedures presented in EM 1110-2-3600 and in other available documents, as required to ensure up-to-date analysis of water management issues and formulation of the most satisfactory plans and manuals for specific projects and systems.

b. Guidance Memorandum.

(1) A Guidance Memorandum is required for each WM Division and is intended for administrative use in the management of water management activities. Each MSC Guidance Memorandum will be used to amplify explanations of functions that require special emphasis such as deviation policy, and to define any responsibility or requirement that differs from the usual because of regional or national considerations.

(2) Guidance Memorandums will provide useful information for acquainting various interested agencies with the activities of WM Divisions or general aspects of water management activities in the region. These incidental uses should be described in the memorandums.

(3) Following approval by Director of Civil Works, the Guidance Memorandum will be used as the basic guide by the MSC for water management activities. The Guidance Memorandum should be updated as needed when roles or functions change.

10. Role of Water Management Divisions in Preparation of Water Control Plans and Manuals.

a. In accordance with activities and delegation of responsibilities specified in this regulation, WM Divisions will maintain close contact with Districts relative to the development of water control plans and manuals, and will take appropriate action to assure adequate progress in completing and updating of all plans and manuals within their area of responsibility.

b. Problems associated with the preparation or revisions of water control plans and manuals, proposals for solutions, and the status of manual preparations will be reviewed during meetings of HQUSACE and field representatives. In addition, requests for special consultation with representatives of CECW-CE will be initiated by the WM Divisions whenever such assistance is needed.

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c. New water control manuals or revised water control manuals which contain a change to the water control plan must be developed with full public involvement as required by WRDA 1990, Sec. 310, must comply with the National Environmental Policy Act (NEPA) per ER 200-2-2, and must be sent to CECW-CE for review and comment prior to MSC approval, in accordance with ER 1110-2-240. As referenced in paragraph 9, each WM Division should use the MSC guidance memorandum as a guide for determining the extent of the water control manual revision or change and the associated level of coordination. New manuals should be created digitally and maintained in a central depository internal to USACE. The process for storage and the repository will be determined by CECW-CE.

d. Water control manuals will be reviewed by the information proponent for the originating office to determine and apply the appropriate distribution statements and markings to the water control manual in accordance with current policy and legal requirements for release of information.

e. After approval by the MSC Commander, one copy of the water control manual will be transmitted to CECW-CE to retain for information, with a cover letter discussing any actions taken in compliance with paragraph 10c above and calling attention to any other problems or contents of the manual which the MSC Commander considers should receive special attention.

## 11. Program Reviews.

a. General. It is essential that representatives of HQUSACE be kept informed regarding water management issues and activities. It is also important that field representatives have an opportunity to present background information in support of current or proposed activities, and receive advice on matters of concern. A free exchange of views and discussions regarding pertinent subjects will aid in reaching decisions. Although some objectives can be achieved through correspondence, experience has shown that meetings are generally more efficient in reaching mutual understandings on questions of the nature involved in water management activities.

b. Annual meetings. At least one meeting in each WM Division should be formulated at field level each year and coordinated with CECW-CE, if needed, at the discretion of each MSC. The main point of contact is the Hydrology, Hydraulics and Coastal Community of Practice (HH&C CoP) leader. The range of topics to be covered will be agreed upon by the WM Division and CECW-CE in advance. Attendance at the meeting should include personnel from the District, WM Division, and CECW-CE.

c. Documentation of programs and activities. Based on results of the annual meeting referred to above, and other pertinent information, a report will be prepared by the WM Division with District input summarizing activities of significance during the previous year and programs proposed for the next year, and will be submitted to CECW-CE for information. (Exempt report, paragraphs 7-2b and 7-2y, AR 335-15.)

d. Other contacts. Although annual meetings and reports will be utilized to minimize requirements for correspondence and meetings, additional contacts will be scheduled for special purposes when warranted.

12. Advisories to HQUSACE.

a. ER 1110-2-240 indicates the nature and scope of information reports and advisories required in water control activities.

b. The Guidance Memorandum for each Center will specify the nature of information releases to be prepared in the course of project regulation.

13. Abbreviations.

|              |   |
|--------------|---|
| CECW-CE      | USACE, Civil Works - Construction and Engineering       |
| CELRD        | USACE, Great Lakes and Ohio River Division              |
| CEMVD        | USACE, Mississippi Valley Division                      |
| CENWD        | USACE, Northwestern Division                            |
| CESAD        | USACE, South Atlantic Division                          |
| CESWD        | USACE, Southwestern Division                            |
| CoP          | Community of Practice                                   |
| DSAC         | Dam Safety Action Classification                        |
| FOA          | Field Operating Activities                              |
| HH&C CoP     | Hydraulics, Hydrology and Coastal Community of Practice |
| HQUSACE      | Headquarters, USACE                                     |
| MSC          | Major Subordinate Commands                              |
| NEPA         | National Environmental Policy Act                       |
| NWS          | National Weather Service                                |
| RFC          | River Forecast Center                                   |
| USACE        | U.S. Army Corps of Engineers                            |
| WM Divisions | Water Management Divisions                              |
| WRDA         | Water Resources Development Act                         |

FOR THE COMMANDER:

  
D. PETER HELMLINGER  
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Chief of Staff

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