

# Reclamation Manual

## Policy

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- Subject:** Performing Design and Construction Activities
- Purpose:** To ensure Reclamation effectively conducts the design- and construction-related aspects of its mission.
- Authority:** Reclamation Project Act of 1902 and Supplementary Acts, Reclamation Safety of Dams Act of 1978 and Amendments of 1984, and specific Authorizing Project Legislation.
- Contact:** Director, Operations, W-6000
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### 1. Introduction.

- A. Design and construction activities are performed within Reclamation to maintain and develop project infrastructure, respond to emergencies, and provide technical assistance in support of the agency's mission. These activities are performed by Reclamation employees located within the Regions, at the Technical Service Center (TSC), by private sector contractors, or through other entities under various agency grant or cooperative agreements.
- B. Reclamation's design and construction activities are to be conducted in a manner which ensures a high level of technical quality while recognizing the need for cost effectiveness and timeliness. To ensure these goals are met consistently across the agency, clear authority to make decisions related to design and construction issues is established. Procedures for design and construction processes, and minimum standards of practice are provided for all Reclamation managers and technical personnel responsible for design and construction activities.
- C. Maintaining and developing a highly skilled design and construction technical capability in Reclamation is essential to meeting the specialized challenges presented by Reclamation's mission. Capability includes both human resources and the specialized facilities and equipment associated with these activities. Procedures will be followed throughout the agency in identifying, scheduling, and implementing design and construction activities that support the goal of maintaining technical capability.
2. **Scope.** This policy applies to all Reclamation design and construction activities. For the purpose of this policy, design activities include: engineering and geologic technical studies and analysis, geotechnical explorations and instrumentation, engineering and geologic aspects of planning and environmental studies and documents, design data collection, designs and estimates at all levels of detail, construction specifications, and design support during construction. Construction activities include all aspects of construction management including: construction contract administration, construction inspection, materials engineering and testing, and construction surveying.

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3. **Responsibilities.** The Director, Operations; each Regional Director; and the Director, TSC are responsible for ensuring that design and construction activities are conducted throughout Reclamation in accordance with this policy.
4. **Procedures.** Procedures and minimum standards of practice will be further defined through Reclamation Manual Directives and Standards, and related guidelines.

### A. Design Activities.

- (1) **Coordination of Design Activities.** Coordination among all Reclamation offices involved in design activities (which may include Area Offices, Construction Offices, Regional Offices, the TSC, and the Commissioner's Office) is essential to ensure designs meet the needs of the customers and stakeholders while maintaining Reclamation standards.
- (2) **Responsibility For Design Activities.** The Regional Director is delegated the responsibility for program accomplishment of design activities within the boundaries of the region. The Regional Director may redelegate these responsibilities, including obtaining any necessary design services required in support of individual programs, to an Area Manager, Division Chief, or other responsible official.
- (3) **Design Data.** The responsible official for the program is also responsible for the design data collection activities. The responsible official may obtain the services of another Reclamation Office to perform this work.
- (4) **Design Criteria and Standards.** To allow consistent application of applicable Reclamation and industry standards, the Director, TSC, is responsible for establishing and maintaining, or identifying design criteria and engineering and technical standards for all Reclamation design work. These criteria and standards will be prepared, reviewed, and approved in accordance with the Reclamation Manual, *Reclamation Directives Management System* (RCD 03-01).
  - (a) The Regional Directors and the Director, TSC are responsible for ensuring that these criteria and standards are applied for all design work within their jurisdiction performed by Reclamation personnel. Any deviations from these criteria and standards must be peer reviewed by a Reclamation employee registered in the applicable discipline to ensure the criteria and standards used comply with acceptable professional practice. The results of such peer reviews must be documented. The responsible Director must formally approve of any deviation of criteria or standard prior to implementation.

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(b) The use of these criteria and standards for work performed by others which is funded (all or in part) with Reclamation funds will be determined by the Director with jurisdiction over the program based on liability, financial, and other applicable issues.

- (5) **Professional Registration for Designers.** Professional registration for certain Reclamation staff who approve engineering decisions or are in responsible charge of architectural or engineering designs is required to demonstrate Reclamation's commitment to adhere to the highest professional standards of practice. Professional registration requirements for engineers and architects within Reclamation are documented in the Reclamation Manual, *Professional Registration for Engineers and Architects* (HRM 05-01).

### B. Drawing Development, Preparation, Maintenance, and Retention.

- (1) **Standardization of Drawings.** Drawings are a significant part of Reclamation's official record related to project design, construction, and operation. Because of the key role these records play in Reclamation's ability to fulfill its mission, standardized Reclamation-wide procedures for consistent and efficient development, preparation, maintenance, and retention of drawings will be followed.
- (2) **Management of Drawings.** The Information Management Handbook, Volume III, *Engineering Drawings Administrative Procedures Handbook* (issued under Reclamation Manual RCD 04-01) as well as Reclamation Manual Directives and Standards, and related guidelines issued under this policy will provide structure to this process and guidance for administering all phases of the life cycle of drawings.

### C. Construction Activities.

- (1) **Coordination of Construction Activities.** Coordination of construction activities among all Reclamation Offices, including Area Offices, Regional Offices, the TSC, Construction Offices, and the Commissioner's Office, is essential to ensure that construction activities are being performed in accordance with the Reclamation Manual, and related guidelines.
- (2) **Responsibility for Construction Activities.** The Regional Director is delegated the responsibility for program accomplishment of construction activities within the boundaries of the Region. The Regional Director may redelegate construction responsibility for individual programs to an Area Manager, Division Chief, or other responsible official.

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- (3) **Professional Registration for Construction Personnel.** Professional registration is required for certain Reclamation staff who manage construction. Professional registration requirements for construction personnel is documented in the Reclamation Manual, *Professional Registration for Engineers and Architects* (HRM 05-01).
- (4) **Construction Services.** It is the general practice of Reclamation to perform by contract the acquisition of materials and construction services, including the requirements for new construction, alterations, and rehabilitation of Reclamation facilities. Reclamation construction work may also be accomplished by Government forces where it is determined to be in the best interests of the Government.

### D. Development and Maintenance of Design and Construction Technical Capabilities.

- (1) **Utilizing Staff Resources.** Reclamation staff resources, in combination with support from private contractors, should accomplish the design and construction workload in a manner that fully utilizes Reclamation's staff capability while meeting workload demands in a timely, efficient, and cost effective manner. Reclamation's design and construction organization should be the providers of choice for all program related work.
- (2) **Developing Work Plans.** Responsible officials will jointly develop and document work plans with the TSC and regional design and construction service providers prior to the beginning of each fiscal year to ensure Reclamation resources are used in the most efficient manner. The work plans will, as a minimum, identify resources to be utilized, the estimated cost of services to be provided, and completion requirements.
- (3) **Services for Non-Reclamation Clients.** Performing reimbursable design or construction services for non-Reclamation clients is an acceptable means to maintain capabilities required for future Reclamation work. Each Director should establish and document management review processes to ensure that liability, financial, and other issues are appropriately addressed and that the work is consistent with Reclamation's mission.
- (4) **Maintaining Capability.** Factors relative to maintaining and developing technical capability should be considered when determining who will perform design and construction activities on individual projects. Personnel actions that disperse technical expertise should be avoided, and opportunities to consolidate

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design and construction organizations as the workload allows should be considered.

5. **Funding.** All Reclamation activities required by this policy will utilize appropriated funds or funds received from other sources (e.g., offsetting collections). All non-Reclamation work must be fully reimbursed by the non-Reclamation client.