

Reclamation Manual

Policy

Subject:	Power Operations and Maintenance (PO&M) Technical Standards
Purpose:	This Policy establishes the Bureau of Reclamation's technical requirements for PO&M to ensure the reliable, safe, economic, and efficient operation of Federal hydropower facilities. This Policy benefits Reclamation by establishing PO&M requirements to ensure that Federal hydropower facilities are in good condition in order to protect the Federal investment.
Authority:	The Reclamation Act of 1902 (Act of June 17, 1902, 32 Stat. 388), the Town Sites and Power Development Act of 1906 (Act of April 16, 1906, ch. 1361, 34 Stat. 116), Federal Power Act of 1920 (Act of June 10, 1920, ch. 285, 41 Stat. 1063), Reclamation Project Act of 1939 (Act of August 4, 1939, ch. 418, 53 Stat. 1187), Energy Policy Act of 1992 (Act of October 24, 1992, 106 Stat. 2776), Energy Policy Act of 2005 (Act of August 8, 2005, 119 Stat. 594), and acts relating to individual projects.
Approving Official:	Commissioner
Contact:	Power Resources Office (PRO) (86-51000)

1. **Introduction.** The goal of Reclamation's PO&M program is to properly operate and maintain Federal hydropower assets to enable safe and reliable delivery of water and power, ensure the safety of employees and the public, and comply with regulatory standards. As detailed in Paragraph 6, this Policy defines Reclamation's PO&M requirements and how Reclamation will document and assess PO&M activities. This Policy recognizes that a successful PO&M program also requires facilities to meet safety requirements, and to proactively plan and manage budgets, costs, and resources.

2. **Applicability.** This release is applicable to any Reclamation office and employee engaged in the PO&M of Reclamation owned and operated power facilities, and to those who administer programs associated with the PO&M of power facilities.

3. **Definitions.**
 - A. **Capital Asset Resource Management Application (CARMA).** The computer program used to schedule and track Reclamation PO&M activities.

 - B. **Job Plans.** Descriptions of work to be performed which include a sequence of instructions, list of labor and part requirements, list of tools and equipment, safety hazards, and expected results. Job plans may reference additional instructions (such as manufacturer's instructions), procedures, supporting documentation, and any other materials that craftsmen must follow when performing work.

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- C. **Power Review Information System (PRIS).** The system used to track recommendations from power program reviews.
 - D. **Technical Documents.** Technical Documents are Facilities Instructions, Standards, and Techniques Manuals, Power Equipment Bulletins, and Power Reliability Compliance Bulletins that define Reclamation's PO&M requirements.
 - E. **Variance.** A variance is an approved alternative practice or schedule that does not meet Reclamation requirements in black, bold, and bracketed Technical Document text.
 - F. **Waiver.** A waiver is a memorandum approving a request for a deviation from a Reclamation Manual requirement in red, bold, and bracketed text, granted in accordance with Reclamation Manual Directive and Standard, *Request for Waiver from a Reclamation Manual Requirement and Approval or Disapproval of the Request* (RCD 03-03).
 - G. **Work Order.** A document used to identify, plan, approve, and record work.
4. **Responsibilities.**
- A. **Regional Directors.** Regional directors are responsible for:
 - (1) implementing the PO&M program and program performance;
 - (2) approving variances or identifying staff who are authorized to approve variances; and
 - (3) developing a regional job plan and work order approval process.
 - B. **Senior Advisor, Hydropower.** The Senior Advisor, Hydropower, is responsible for:
 - (1) providing program oversight; and
 - (2) developing, improving, and maintaining Reclamation Manual releases and Technical Documents.
 - C. **PRO Manager.** The PRO Manager is responsible for:
 - (1) coordinating the development of Reclamation Manual releases and Technical Documents; and
 - (2) managing power program reviews.
 - D. **Regional Power Managers.** Regional power managers are responsible for:
 - (1) providing power program oversight within their respective regions; and

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- (2) participating in the development of Reclamation Manual releases and Technical Documents.
- E. **Area Managers and Facility Managers.** Area managers and facility managers are responsible for:
- (1) ensuring that facilities meet PO&M technical requirements;
 - (2) ensuring that job plans provide sufficient directions for accomplishing work;
 - (3) ensuring that PO&M activity documentation is approved, performed, maintained and reviewed in accordance with Paragraph 6.B.; and
 - (4) ensuring that power facilities are maintained in safe and reliable condition.
5. **Policy.** Reclamation's Technical Documents provide a minimum set of requirements for the PO&M of power facilities. These technical requirements provide a sufficient level of detail to ensure consistent application while providing flexibility for the use of innovative techniques and approaches. Reclamation will use CARMA to the fullest extent possible to plan, schedule, and track routine PO&M activities and corrective actions. Reclamation will rely on staff observations, event investigations, condition assessments, and power program reviews to identify PO&M best practices and deficiencies, and will track recommendations to completion in PRIS. To assess power facilities, Reclamation will use tools such as hydroAMP equipment condition assessments and performance benchmarking.
6. **PO&M Technical Requirements.**
- A. **Technical Requirements.** Technical Documents define Reclamation's PO&M requirements. Technical Documents were initially developed as guidance on how to operate and maintain equipment in safe and reliable condition based on industry standards and sound engineering practices. Technical Documents are premised on the belief there may be multiple ways to accomplish tasks and facilities have discretion as to how tasks will be accomplished based on equipment configurations and available resources. Reclamation's regions, PRO, and the Technical Services Center (TSC) agree that when consistent Reclamation-wide practices are needed to maintain the Federal investment, they will be designated by **[bold and bracketed text]**. The regions, PRO, and TSC will collaborate to ensure that Reclamation-wide required PO&M practices are designated by **[bold and bracketed text]**.
- (1) **Requirements in [Bold and Bracketed Text].**
 - (a) **{Red, bold, and bracketed text}** delineates mandatory power O&M requirements that Reclamation has determined must be consistent among all power facilities.

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- (i) A senior executive (generally the regional director) must request a waiver from requirements in **{red, bold, and bracketed text}** by submitting a waiver request as required by RCD 03-03.
- (ii) See Reclamation Manual, *Delegations of Authority*, Paragraph 6.Q.(2) for delegations related to the approval of Reclamation Manual waivers.
- (b) **[Black, bold, and bracketed text]** also delineates required power O&M activities.
 - (i) An office must request a variance from requirements in **[black, bold, and bracketed text]** through the regional chain of command by submitting a Variance Form ([POM-300](#)).
 - (ii) The regional director or authorized staff determines whether to approve the request.
- (2) **Plain Text.**
 - (a) Information in plain text (non-bold and bracketed text) includes instructions, background information, and best practices to ensure that equipment is operated and maintained in reliable condition, and must be consulted when developing job plans.
 - (b) Regions, area offices, and facilities shall ensure that PO&M maintenance tasks and frequencies discussed in plain text are planned and executed to maintain power facilities in safe and reliable condition.
 - (c) Regional directors have discretion to assign responsibilities for the implementation of PO&M activities described in plain text through the regional job plan approval process.
- B. **Documentation.** Reclamation will use CARMA to schedule and document completion of all PO&M activities.
 - (1) Regional directors shall develop and document job plan and work order approval processes.
 - (2) Facility managers shall ensure that job plans in CARMA are approved in accordance with the regional job plan approval process.
 - (3) Facility managers shall ensure that work is performed as described in CARMA work orders. If a task in a CARMA work order cannot be completed, facility managers shall ensure that staff document the reason, consult with a supervisor, and schedule necessary corrective action(s).

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- (4) Facility managers shall ensure that PO&M evidence is maintained, in accordance with record retention policies, for all completed CARMA work orders, including attachments of all files that contain information supporting completed work orders (e.g., additional instructions, checksheets, test results, notes, etc.).
 - (5) Facility managers shall ensure that completed work orders are reviewed for technical sufficiency by individuals knowledgeable and experienced with the work described, in accordance with the regional work order approval process.
- C. **Program Reviews.** To ensure Reclamation PO&M requirements are being administered effectively, the PRO, regional offices, area offices, and Reclamation hydropower facilities will participate in PO&M program reviews. The PO&M program review will help to identify best practices and deficiencies that will be used to improve Reclamation PO&M practices.
- (1) Regions, area offices, and facilities shall ensure that all recommendations are entered in PRIS and tracked to completion or resolution.
 - (2) Regions, area offices, and facilities shall ensure that completed or resolved recommendations reference CARMA work orders and/or other supporting documentation.
- D. **Condition Assessment and Benchmarking.**
- (1) Reclamation will use the hydroAMP condition assessment system to evaluate the condition of major hydropower equipment components.
 - (2) Reclamation will use a power facility benchmarking system to evaluate and improve the management of power facilities.
- E. **PO&M Improvements.**
- (1) Reclamation encourages the PRO, TSC, and regional, area, and facility staff to develop innovative maintenance techniques that increase efficiency and reliability while meeting Technical Document requirements, safety practices, and regulatory standards.
 - (2) The PRO, TSC, and regional, area, and facility staff will collaborate to continuously improve Reclamation PO&M activities through program reviews and the development of Technical Documents so that PO&M technical requirements are clear, concise, achievable, and essential for ensuring safe and reliable operation of power facilities.

RECLAMATION MANUAL TRANSMITTAL SHEET

Effective Date: _____

Release No. _____

Ensure all employees needing this information are provided a copy of this release.

Reclamation Manual Release Number and Subject

Summary of Changes

NOTE: This Reclamation Manual release applies to all Reclamation employees. When an exclusive bargaining unit exists, changes to this release may be subject to the provisions of collective bargaining agreements.

Filing instructions

Remove Sheets

Insert Sheets

All Reclamation Manual releases are available at <http://www.usbr.gov/recman/>

Filed by: _____

Date: _____