

DEPARTMENT OF THE ARMY  
Corps of Engineers, Northwestern Division  
P.O. Box 2870  
Portland, Oregon 97208-2870

CENWD-CM-OC  
Regulation  
No. 1130-2-3

15 November 2001

Project Operation  
OPERATION AND MAINTENANCE OF MULTIPLE PURPOSE  
PROJECTS WITH POWER

**History.** This issue is a revision of the original publication NPDR 1130-2-3, same title, to bring it in line with the restructuring of Northwestern Division.

**Summary.** This regulation on the operation and maintenance of multiple purpose projects with power has been revised to update the references, change the division designation from NPD to NWD and further explain the functions of the Project Operations Branch.

1. PURPOSE.

a. This regulation delineates the principal functions and responsibilities for the physical operation and maintenance (O&M) of multiple purpose projects with power facilities and to establish basic standards and policies to be followed in this work

b. It is specifically directed to the physical O&M of these projects. It is not intended to cover the system operation plan, reservoir regulation manual or the operating agreements with the power-marketing agency, which are covered in NPDR 1165-2-2 (which will be revised in fiscal year 2002).

2. APPLICABILITY. This regulation is applicable to elements of the Division and District Offices and Project Offices with responsibility for multiple purpose projects with power in the Northwestern Division.

3. REFERENCES.

a. Required Publications.

(1) ER 385-1-31, The Control of Hazardous Energy (Safe Clearance Procedures).  
Cited in paragraph 7c.

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\*This regulation supersedes NPDR 1130-2-3, 30 April 1982.

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(2) ER 1130-2-500, Project Operations, Partners and Support (Work Management Policies). Cited in paragraph 9.

(3) EM 385-1-1, Safety Manual. Cited in paragraph 7c

(4) NWDR 10-1-2, Northwestern Division Mission and Functions. Cited in paragraph 5a.

(5) NWDR 1130-2-2, Operations Reports. Cited in paragraphs 8c and 12b.

(6) NPDR 1165-2-2, Water Management Responsibilities. Cited in paragraphs 1b and 7a.

b. Related Publications.

(1) ER 1130-2-510, Hydroelectric Power Operations and Maintenance Policies.

(2) EP 1130-2-510 Hydroelectric Power Operations and Maintenance Guidance and Procedures.

(3) NWDR 1130-2-1, Maintenance Program.

4. RESPONSIBILITIES. The responsibilities of the Division and District Offices and Project Offices will be as follows:

a. Division Office.

(1) Establish basic performance standards and policies for physical O&M of the projects.

(2) Coordinate outage schedules, physical operation, and maintenance of power projects with the appropriate Power Marketing Agencies.

(3) Provide staff QA inspections of O&M and Hydropower Test & Evaluation (HT&E) program implementation by the Districts.

(4) Advise and coordinate on O&M matters involving, affecting, and/or establishing a precedence or policy involving relations with organized employee groups with all Districts and Division Office elements as appropriate.

b. Districts.

(1) Assume responsibility for detailed O&M of the projects within the standards and policies of this regulation.

(2) Prepare and update project O&M manuals.

(3) Organize and staff projects.

(4) Supervise physical O&M of projects.

(5) Coordinate with the Division Office on O&M matters that may set precedence or effect a policy involving relations with organized employee groups.

(6) Provide staffing for the effective implementation of the HT&E program.

c. Projects. Assume responsibility for performing actual O&M of the project in accordance with this regulation and instruction issued by the District Office.

5. ORGANIZATION.

a. Division. The Division Office (NWD) functions will be performed by the Operations Division in accordance with NWDR 10-1-2. A Project Operations Branch is established for the direct accomplishment of the tasks stated herein.

b. Districts. The District Office functions are assigned to the Operations Division.

c. Projects. The project organization will be such as required to effect most efficient and economical O&M in consideration of local conditions, number and type of projects under one field office, and type and mix of work.

6. PROJECT STAFFING POLICY AND CRITERIA.

a. The staffing of projects will be held to the minimum number of personnel required for the proper safe operation and adequate maintenance of the project features.

b. No detailed criteria as to the number of O&M personnel are established in this regulation. Staffing of the projects should be reviewed periodically by project and district supervision and will be the subject of special reviews by NWD. Prior to staffing a new project, a

project organization chart showing the initial number of personnel by position and grade will be submitted to NWD for approval.

7. OPERATION STANDARDS.

a. Each project will be operated in accordance with the system-operating plan, reservoir regulation manual, Combine Reservoir Regulation/Power Production Orders, operating agreement for that project with the power marketing agency, all as set forth in NPDR 1165-2-2, Water Management Responsibilities.

b. The detailed operation of the project structures and equipment will be based upon the project O&M manual and any supplemental instructions thereto.

c. Safety Manual, EM 385-1-1 and The Control of Hazardous Energy (Safe Clearance Procedures) as set forth in ER 385-1-31 will be followed in all operations.

8. OPERATING RECORDS AND REPORTS.

a. Adequate records will be maintained covering essential phases of project operation. All records pertaining to power operation will be preserved in accordance with current instructions and guidance issued by the Federal Energy Regulatory Commission (FERC).

b. The Power Station Operating Log, ENG Form 2198, will be maintained in the control room at each project and will be the official station log book.

c. Reports will be prepared and submitted for each project in accordance with current instructions and NWDR 1130-2-2, Operations Reports.

d. The following power plant operator work criteria are established:

(1) Columbia and Missouri River Plants.

(a) In normal situations, at least one operator inspection per shift will be made of critical areas and critical project equipment.

(b) Plants will be operated on the centralized control principle with operators dispatched from the Control Room for specific jobs. The Operations Manager may assign permanent stations, other than the Control Room.

(c) In normal situations one operator will be in attendance in the Control Room at all times. The operator will be provided with means to obtain emergency assistance via code call, radio, etc.

(2) Other Attended and Remotely-Controlled Plants

(a) In normal situations, at least one inspection per shift will be made of critical areas and critical project equipment at attended plants. Maintenance personnel may make this inspection at remotely controlled plants on a daily basis, if an operator is unavailable.

(b) In normal situations the Control Room will not be manned on a full-time basis; however, the communication system will provide means to call the operator to the Control Room upon critical annunciation or for priority incoming calls.

(c) When there is only one person on duty, arrangements will be made to provide an hourly safety check-in system with another Corps of Engineers project or the dispatcher.

9. MAINTENANCE STANDARDS. All project equipment, structures, and facilities will be maintained in accordance with the policies and standards set forth in ER 1130-2-500, Partners and Support (Work Management Policies). Inspection frequencies in this guide shall be modified as appropriate to effect adequate and efficient maintenance in consideration of experience and equipment characteristics.

10. PERFORMANCE OF REPAIR AND MAINTENANCE WORK.

a. General. Project maintenance forces will perform all daily normal and routine maintenance work. Other work on equipment and structures will be performed by contract to the fullest extent practicable after consideration of the following factors:

(1) Any proposed project O&M contract work must first take into full consideration Public Law 101 which reads, "Activities currently performed by personnel under direction of the Secretary in connection with the operation and maintenance of hydroelectric power generating facilities at Corps of Engineers water resources projects are to be considered as inherently governmental functions and not commercial activities. This section does not prohibit contracting out major maintenance or other functions that are currently contracted out or studying services not directly connected with project maintenance and operations.

(2) Comparative costs with hired labor.

(3) Capability of fully and clearly defining the work in a specification.

(4) Availability of sufficient time to prepare plans and specifications and award contract.

(5) Nature of work is such that it can be turned over to a contractor as a complete job and be performed without undue interference with operating functions. All work which is determined not capable of being performed successfully by contract under the above will be done by project forces.

(6) The training and/or skill set refreshing benefits of the job are not needed in order to keep the government workers skill sets up.

b. Repair Shop Facilities. The policy on repair shop facilities and work is as follows:

(1) Repair facilities will be provided at projects for accomplishment of routine maintenance work.

(2) Specialized shop and repair facilities for non-routine work and special jobs will be provided at selected locations determined by the District. Maximum use of this equipment will be made by all projects through transfer of jobs as justified by costs and work considerations. Use of commercial shops and repair facilities and other Government agencies will also be considered in these determinations.

c. Organizing and Staffing for Maintenance and Repair. This organization will be based on the following:

(1) Each District will organize to perform the repair and maintenance work at its projects in the most economical and efficient manner making full use of personnel and equipment between projects and special repair crews to the greatest extent practicable.

(2) The organization will be established with the objective of obtaining maximum utilization from the minimum number of personnel through effective management and programming of the work. The regular basic crews for performing routine repair and maintenance work will be established at such strengths whereby they will be gainfully employed on essential work throughout the year. They will not be staffed for non-routine and peak workloads. Additional temporary personnel will be hired for this work as required.

11. HYDROPOWER TEST AND EVALUATION PROGRAM.

a. A sound maintenance and testing program of power station equipment is essential to insure the continued proper O&M of these stations. The prosecution and development of certain special tests and standards under this program will be accomplished by a District Hydropower Test and Evaluation (HT&E) program for all NWD projects.

b. The functions of this program, which is assigned to the NWD Project Operations Branch, are as follows:

(1) Periodically review the testing procedures and special maintenance practices being followed by project personnel on critical electrical power apparatus.

(2) Advise Districts on special maintenance and repair procedures. Districts will advise the HT&E program manager on special problems, equipment failures, etc.

12. OUTAGE SCHEDULES OF PROJECT POWER FACILITIES.

a. Each District will submit schedules annually to NWD, ATTN: CENWD-CM-W-N or CENWD-CM-W-M as appropriate WR, giving the outage period required and the preferred time for major maintenance of power units and other jobs requiring loss of generating capacity or affecting water regulation. In addition to major outages, short-term outages (two days or more) should be indicated at this time where the need is known and the time can be reasonably defined. These schedules will be coordinated by CENWD-CM-WR/W-M with other affected agencies and the approved schedules will be furnished to the Districts. The date for submission of these schedules will be established by separate correspondence. Changes to these schedules will be coordinated with CENWD-CM-WR/W-M who will make final coordination arrangements. For Kansas City district, outage schedules shall be coordinated with the Power Marketing Agency in their region, with copy forwarded to CENWD-CM-W-M.

b. Additional outages of two days or more duration may be arranged between a project (except a Willamette Valley project) and CENWD-CM-WR/W-M by telephone email or teletype as project maintenance needs require the power systems operating requirements permit. In the North Pacific region only, outages of less than two days duration may be arranged directly between a project and the Power Marketing Agent generation dispatcher, except for Albeni Falls, Dworshak, Libby or Willamette Valley projects. Such outages for Albeni Falls, Dworshak, or Libby Projects may be arranged directly between a project and the NWD Reservoir Control Center. Outages will be reported to CENWD-CM-WR by teletype in accordance with NWDR 1130-2-2.

c. On the Missouri River mainstem reservoirs power projects, outages will be requested for approval by CENWD-CM-W-M in advance of scheduled dates.

FOR THE COMMANDER:

A handwritten signature in blue ink, appearing to read 'Clifton P. Jackson, Jr.', is written over the printed name.

CLIFTON P. JACKSON, JR.  
Executive Assistant

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