

**PART 220—DESIGN CRITERIA FOR
DAM AND LAKE PROJECTS****§ 220.1 Low level discharge facilities
for drawdown of impoundments.**

(a) *Purpose.* This regulation states the policy, objectives, and procedures in regard to facilities for drawdown of lakes to be impounded by Civil Works projects.

(b) *Applicability.* This regulation is applicable to all Divisions and Districts having responsibility for design of Civil Works projects.

(c) *Policy.* It is the policy of the Chief of Engineers that all future lakes impounded by Civil Works projects be provided with low level discharge facilities to meet the criteria for drawdown set forth in this ER. Low level discharge facilities, capable of essentially emptying the lake, provide flexibility in future project operation for unanticipated needs, such as, major repair of the structure, environmental controls or changes in reservoir regulation. The criteria set forth in this ER will govern in the majority of impoundment projects. However, it may be impracticable to provide the drawdown capability to meet the criteria for certain projects because of their size (unusually small or large) or because of their unique function. Such projects may be exempt from the criteria upon presentation of information in accordance with paragraph (e) of this section.

(d) *Design criteria.* As a minimum, low level discharge facilities will be sized to reduce the pool, within a period of four months, to the higher of the following pool levels: (1) A pool level that is within 20 feet of the pre-project "full channel" elevation, or (2) a pool level which will result in an amount of storage in the reservoir that is 10 percent of that at the beginning pool level. The beginning pool level for drawdown will be assigned at spillway crest for uncontrolled spillways and at top of spillway gates for controlled spillways. Inflow into the lake during the drawdown period will be developed by obtaining the average flow for each month of the year. The drawdown period inflow will then be assumed equivalent to the average flow of the highest consecutive four-month period.

(e) *Design Study and Report Requirements.* Feasibility (survey) reports and subsequent pertinent design memoranda should include the results of studies made to determine facilities required for drawdown of impoundments. The discharge capacity required to satisfy project purposes and diversion requirements during construction may be sufficient to meet the drawdown criteria set forth in paragraph (d) of this section. Where additional capacity is required, studies will be made to determine the most practical and economical means of increasing the capacity to meet the drawdown criteria. A synopsis of the alternatives considered and details of the recommended plan should be included in the Phase II General Design Memorandum or a feature design memorandum. The reporting should include the effects of the required discharge capacity on project costs, on existing downstream projects, and on the potential for downstream damage. When, due to specific project conditions, a drawdown capacity is recommended which does not meet the criteria set forth in paragraph (d) of this section, the following information should be presented:

(1) The drawdown period using the maximum drawdown capability of the proposed project facilities, under the situation described in paragraph (d) of this section. Information should be included on the pool elevation and corresponding storage volume at end of the period.

(2) Information on facilities that would be required to meet the design criteria for drawdown, including the estimated first cost and annual cost of these facilities. If the estimated cost for such facilities is significantly greater than for the proposed project facilities, similar information on intermediate facilities should be provided.

Reporting subsequent to the Phase I General Design Memorandum should include related discharge rating curves; hydrographs with inflow, outflow and pool stage plots; lake regulation plans needed for project purposes and needed to satisfy the drawdown criteria; and

other data essential in evaluating the study.

(49 Stat. 1571, 33 U.S.C. 701c)

[40 FR 20081, May 8, 1975, as amended at 40 FR 36774, Aug. 22, 1975]

PART 221—WORK FOR OTHERS

Sec.

221.1 Investigation and supervision of hydropower projects under the Federal Power Act (ER 1140-2-4).

APPENDIX A TO PART 221—PART 16—PROCEDURES RELATING TO TAKEOVER AND RELICENSING OF LICENSED PROJECTS

APPENDIX B TO PART 221—FEDERAL ENERGY REGULATORY COMMISSION FORM L-3 (REVISED OCTOBER 1975)

LIST OF FPC STANDARD ARTICLES FORMS USED IN PERMITS AND LICENSES FOR HYDROELECTRIC PROJECTS

AUTHORITY: Secs. 2 and 4(e) of the Federal Power Act of 1920 (41 Stat. 1603, 16 U.S.C. 791-823), as amended; sec. 10 of the River and Harbour Act of 1899 (30 Stat. 1151, 33 U.S.C. 403); and sec. 404 of Federal Water Pollution Control Act Amendments of 1972 (86 Stat. 816, 33 U.S.C. 1344)

SOURCE: 43 FR 4979, Feb. 7, 1978, unless otherwise noted.

§ 221.1 Investigation and supervision of hydropower projects under the Federal Power Act (ER 1140-2-4).

(a) *Purpose.* This regulation¹ establishes procedures for executing Corps of Engineers functions under the authority of the Federal Power Act (FPA) administered by the Department of Energy, Federal Energy Regulatory Commission (FERC), formerly Federal Power Commission. Based on a specific request from FERC, these functions include:

(1) Investigation of applications filed with FERC for permits and licenses, and for relicensing of projects to ascertain impacts on Corps of Engineers responsibilities.

(2) Investigation of applications for surrender or termination of license to ascertain impacts on Corps of Engineers responsibilities.

(3) Supervision and inspection of operations of licensed hydroelectric

projects to ascertain impacts on Corps of Engineers responsibilities.

(b) *Applicability.* This regulation applies to all field operating agencies having Civil Works responsibilities.

(c) *References.* (1) Federal Power Commission publication entitled "Federal Power Act", as amended, dated 1 April 1975. The Act was originally enacted 10 June 1920 (41 Stat. 1063, 16 U.S.C. 791-823). This publication can be obtained from the U.S. Government Printing Office, Washington, D.C. 20402.

(2) Code of Federal Regulations, Title 18, part 1 to 149 relating to FERC General Rules and Regulations, available at the U.S. Government Printing Office, Washington, D.C. 20402.

(3) ER 1145-2-303 (33 CFR 209.120),² Permits for Activities in Navigable Waters or Ocean Waters.

(4) ER 1140-2-1, Submission of Data for Headwater Benefits Determination.

(d) *Definitions*—(1) *Licensed project.* A non-Federal hydroelectric project for which the FERC has issued a license granting authority for either construction, in the case of a proposed project, or for continued operation and maintenance of an existing project.

(2) *Major projects.* Hydroelectric projects with more than 2,000 horsepower installed capacity.

(3) *Minor projects.* Hydroelectric projects having installed capacity of 2,000 horsepower or less.

(4) *Preliminary permit application.* An application filed by a non-Federal entity with the FERC as a preliminary step in anticipation of filing for a license to construct and operate a hydroelectric project. A preliminary permit does not authorize construction. It merely gives the permittee priority of application for a FERC license over other non-Federal entities for a period of time. The permittee then develops information necessary for inclusion in an application for license to construct and operate a hydroelectric project. Analysis of this information may result in a decision to apply for the license or to withdraw the intent.

(5) *Relicensing.* A procedure applicable to projects for which the original period of license (usually 50 years) will

¹This regulation supersedes ER 1140-2-4, 8 December 1967, and ER 1140-2-2, 10 September 1965.

²33 CFR 209.120 was removed at 42 FR 37133, July 19, 1977.