

**PART 208—FLOOD CONTROL
REGULATIONS**

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AUTHORITY: Sec. 7, 58 Stat. 890; 33 U.S.C. 709.

§ 208.10 Local flood protection works; maintenance and operation of structures and facilities.

(a) *General.* (1) The structures and facilities constructed by the United States for local flood protection shall be continuously maintained in such a manner and operated at such times and for such periods as may be necessary to obtain the maximum benefits.

(2) The State, political subdivision thereof, or other responsible local agency, which furnished assurance that it will maintain and operate flood control works in accordance with regulations prescribed by the Secretary of the Army, as required by law, shall appoint a permanent committee consisting of or headed by an official hereinafter called the "Superintendent," who shall be responsible for the development and maintenance of, and directly in charge of, an organization re-

sponsible for the efficient operation and maintenance of all of the structures and facilities during flood periods and for continuous inspection and maintenance of the project works during periods of low water, all without cost to the United States.

(3) A reserve supply of materials needed during a flood emergency shall be kept on hand at all times.

(4) No encroachment or trespass which will adversely affect the efficient operation or maintenance of the project works shall be permitted upon the rights-of-way for the protective facilities.

(5) No improvement shall be passed over, under, or through the walls, levees, improved channels or floodways, nor shall any excavation or construction be permitted within the limits of the project right-of-way, nor shall any change be made in any feature of the works without prior determination by the District Engineer of the Department of the Army or his authorized representative that such improvement, excavation, construction, or alteration will not adversely affect the functioning of the protective facilities. Such improvements or alterations as may be found to be desirable and permissible under the above determination shall be constructed in accordance with standard engineering practice. Advice regarding the effect of proposed improvements or alterations on the functioning of the project and information concerning methods of construction acceptable under standard engineering practice shall be obtained from the District Engineer or, if otherwise obtained, shall be submitted for his approval. Drawings or prints showing such improvements or alterations as finally constructed shall be furnished the District Engineer after completion of the work.

(6) It shall be the duty of the superintendent to submit a semiannual report to the District Engineer covering inspection, maintenance, and operation of the protective works.

(7) The District Engineer or his authorized representatives shall have access at all times to all portions of the protective works.

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(8) Maintenance measures or repairs which the District Engineer deems necessary shall be promptly taken or made.

(9) Appropriate measures shall be taken by local authorities to insure that the activities of all local organizations operating public or private facilities connected with the protective works are coordinated with those of the Superintendent's organization during flood periods.

(10) The Department of the Army will furnish local interests with an Operation and Maintenance Manual for each completed project, or separate useful part thereof, to assist them in carrying out their obligations under this part.

(b) *Levees—(1) Maintenance.* The Superintendent shall provide at all times such maintenance as may be required to insure serviceability of the structures in time of flood. Measures shall be taken to promote the growth of sod, exterminate burrowing animals, and to provide for routine mowing of the grass and weeds, removal of wild growth and drift deposits, and repair of damage caused by erosion or other forces. Where practicable, measures shall be taken to retard bank erosion by planting of willows or other suitable growth on areas riverward of the levees. Periodic inspections shall be made by the Superintendent to insure that the above maintenance measures are being effectively carried out and, further, to be certain that:

(i) No unusual settlement, sloughing, or material loss of grade or levee cross section has taken place;

(ii) No caving has occurred on either the land side or the river side of the levee which might affect the stability of the levee section;

(iii) No seepage, saturated areas, or sand boils are occurring;

(iv) Toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged;

(v) Drains through the levees and gates on said drains are in good working condition;

(vi) No revetment work or riprap has been displaced, washed out, or removed;

(vii) No action is being taken, such as burning grass and weeds during inappropriate seasons, which will retard or destroy the growth of sod;

(viii) Access roads to and on the levee are being properly maintained;

(ix) Cattle guards and gates are in good condition;

(x) Crown of levee is shaped so as to drain readily, and roadway thereon, if any, is well shaped and maintained;

(xi) There is no unauthorized grazing or vehicular traffic on the levees;

(xii) Encroachments are not being made on the levee right-of-way which might endanger the structure or hinder its proper and efficient functioning during times of emergency.

Such inspections shall be made immediately prior to the beginning of the flood season; immediately following each major high water period, and otherwise at intervals not exceeding 90 days, and such intermediate times as may be necessary to insure the best possible care of the levee. Immediate steps will be taken to correct dangerous conditions disclosed by such inspections. Regular maintenance repair measures shall be accomplished during the appropriate season as scheduled by the Superintendent.

(2) *Operation.* During flood periods the levee shall be patrolled continuously to locate possible sand boils or unusual wetness of the landward slope and to be certain that:

(i) There are no indications of slides or sloughs developing;

(ii) Wave wash or scouring action is not occurring;

(iii) No low reaches of levee exist which may be overtopped;

(iv) No other conditions exist which might endanger the structure.

Appropriate advance measures will be taken to insure the availability of adequate labor and materials to meet all contingencies. Immediate steps will be taken to control any condition which endangers the levee and to repair the damaged section.

(c) *Flood walls—(1) Maintenance.* Periodic inspections shall be made by the Superintendent to be certain that:

(i) No seepage, saturated areas, or sand boils are occurring;

(ii) No undue settlement has occurred which affects the stability of the wall or its water tightness;

(iii) No trees exist, the roots of which might extend under the wall and offer accelerated seepage paths;

(iv) The concrete has not undergone cracking, chipping, or breaking to an extent which might affect the stability of the wall or its water tightness;

(v) There are no encroachments upon the right-of-way which might endanger the structure or hinder its functioning in time of flood;

(vi) Care is being exercised to prevent accumulation of trash and debris adjacent to walls, and to insure that no fires are being built near them;

(vii) No bank caving conditions exist riverward of the wall which might endanger its stability;

(viii) Toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged.

Such inspections shall be made immediately prior to the beginning of the flood season, immediately following each major high water period, and otherwise at intervals not exceeding 90 days. Measures to eliminate encroachments and effect repairs found necessary by such inspections shall be undertaken immediately. All repairs shall be accomplished by methods acceptable in standard engineering practice.

(2) *Operation.* Continuous patrol of the wall shall be maintained during flood periods to locate possible leakage at monolith joints or seepage underneath the wall. Floating plant or boats will not be allowed to lie against or tie up to the wall. Should it become necessary during a flood emergency to pass anchor cables over the wall, adequate measures shall be taken to protect the concrete and construction joints. Immediate steps shall be taken to correct any condition which endangers the stability of the wall.

(d) *Drainage structures—(1) Maintenance.* Adequate measures shall be taken to insure that inlet and outlet channels are kept open and that trash, drift, or debris is not allowed to accumulate near drainage structures. Flap gates and manually operated gates and valves on drainage structures shall be

examined, oiled, and trial operated at least once every 90 days. Where drainage structures are provided with stop log or other emergency closures, the condition of the equipment and its housing shall be inspected regularly and a trial installation of the emergency closure shall be made at least once each year. Periodic inspections shall be made by the Superintendent to be certain that:

(i) Pipes, gates, operating mechanism, riprap, and headwalls are in good condition;

(ii) Inlet and outlet channels are open;

(iii) Care is being exercised to prevent the accumulation of trash and debris near the structures and that no fires are being built near bituminous coated pipes;

(iv) Erosion is not occurring adjacent to the structure which might endanger its water tightness or stability.

Immediate steps will be taken to repair damage, replace missing or broken parts, or remedy adverse conditions disclosed by such inspections.

(2) *Operation.* Whenever high water conditions impend, all gates will be inspected a short time before water reaches the invert of the pipe and any object which might prevent closure of the gate shall be removed. Automatic gates shall be closely observed until it has been ascertained that they are securely closed. Manually operated gates and valves shall be closed as necessary to prevent inflow of flood water. All drainage structures in levees shall be inspected frequently during floods to ascertain whether seepage is taking place along the lines of their contact with the embankment. Immediate steps shall be taken to correct any adverse condition.

(e) *Closure structures—(1) Maintenance.* Closure structures for traffic openings shall be inspected by the Superintendent every 90 days to be certain that:

(i) No parts are missing;

(ii) Metal parts are adequately covered with paint;

(iii) All movable parts are in satisfactory working order;

(iv) Proper closure can be made promptly when necessary;

(v) Sufficient materials are on hand for the erection of sand bag closures and that the location of such materials will be readily accessible in times of emergency.

Tools and parts shall not be removed for other use. Trial erections of one or more closure structures shall be made once each year, alternating the structures chosen so that each gate will be erected at least once in each 3-year period. Trial erection of all closure structures shall be made whenever a change is made in key operating personnel. Where railroad operation makes trial erection of a closure structure infeasible, rigorous inspection and drill of operating personnel may be substituted therefor. Trial erection of sand bag closures is not required. Closure materials will be carefully checked prior to and following flood periods, and damaged or missing parts shall be repaired or replaced immediately.

(2) *Operation.* Erection of each movable closure shall be started in sufficient time to permit completion before flood waters reach the top of the structure sill. Information regarding the proper method of erecting each individual closure structure, together with an estimate of the time required by an experienced crew to complete its erection will be given in the Operation and Maintenance Manual which will be furnished local interests upon completion of the project. Closure structures will be inspected frequently during flood periods to ascertain that no undue leakage is occurring and that drains provided to care for ordinary leakage are functioning properly. Boats or floating plant shall not be allowed to tie up to closure structures or to discharge passengers or cargo over them.

(f) *Pumping plants—(1) Maintenance.* Pumping plants shall be inspected by the Superintendent at intervals not to exceed 30 days during flood seasons and 90 days during off-flood seasons to insure that all equipment is in order for instant use. At regular intervals, proper measures shall be taken to provide for cleaning plant, buildings, and equipment, repainting as necessary, and lubricating all machinery. Adequate supplies of lubricants for all types of machines, fuel for gasoline or diesel powered equipment, and flash

lights or lanterns for emergency lighting shall be kept on hand at all times. Telephone service shall be maintained at pumping plants. All equipment, including switch gear, transformers, motors, pumps, valves, and gates shall be trial operated and checked at least once every 90 days. Megger tests of all insulation shall be made whenever wiring has been subjected to undue dampness and otherwise at intervals not to exceed one year. A record shall be kept showing the results of such tests. Wiring disclosed to be in an unsatisfactory condition by such tests shall be brought to a satisfactory condition or shall be promptly replaced. Diesel and gasoline engines shall be started at such intervals and allowed to run for such length of time as may be necessary to insure their serviceability in times of emergency. Only skilled electricians and mechanics shall be employed on tests and repairs. Operating personnel for the plant shall be present during tests. Any equipment removed from the station for repair or replacement shall be returned or replaced as soon as practicable and shall be trial operated after reinstallation. Repairs requiring removal of equipment from the plant shall be made during off-flood seasons insofar as practicable.

(2) *Operation.* Competent operators shall be on duty at pumping plants whenever it appears that necessity for pump operation is imminent. The operator shall thoroughly inspect, trial operate, and place in readiness all plant equipment. The operator shall be familiar with the equipment manufacturers' instructions and drawings and with the "Operating Instructions" for each station. The equipment shall be operated in accordance with the above-mentioned "Operating Instructions" and care shall be exercised that proper lubrication is being supplied all equipment, and that no overheating, undue vibration or noise is occurring. Immediately upon final recession of flood waters, the pumping station shall be thoroughly cleaned, pump house sumps flushed, and equipment thoroughly inspected, oiled and greased. A record or log of pumping plant operation shall be kept for each station, a copy of which shall be furnished the District Engineer following each flood.

(g) *Channels and floodways*—(1) *Maintenance*. Periodic inspections of improved channels and floodways shall be made by the Superintendent to be certain that:

(i) The channel or floodway is clear of debris, weeds, and wild growth;

(ii) The channel or floodway is not being restricted by the depositing of waste materials, building of unauthorized structures or other encroachments;

(iii) The capacity of the channel or floodway is not being reduced by the formation of shoals;

(iv) Banks are not being damaged by rain or wave wash, and that no sloughing of banks has occurred;

(v) Riprap sections and deflection dikes and walls are in good condition;

(vi) Approach and egress channels adjacent to the improved channel or floodway are sufficiently clear of obstructions and debris to permit proper functioning of the project works.

Such inspections shall be made prior to the beginning of the flood season and otherwise at intervals not to exceed 90 days. Immediate steps will be taken to remedy any adverse conditions disclosed by such inspections. Measures will be taken by the Superintendent to promote the growth of grass on bank slopes and earth deflection dikes. The Superintendent shall provide for periodic repair and cleaning of debris basins, check dams, and related structures as may be necessary.

(2) *Operation*. Both banks of the channel shall be patrolled during periods of high water, and measures shall be taken to protect those reaches being attacked by the current or by wave wash. Appropriate measures shall be taken to prevent the formation of jams of ice or debris. Large objects which become lodged against the bank shall be removed. The improved channel or floodway shall be thoroughly inspected immediately following each major high water period. As soon as practicable thereafter, all snags and other debris shall be removed and all damage to banks, riprap, deflection dikes and walls, drainage outlets, or other flood control structures repaired.

(h) *Miscellaneous facilities*—(1) *Maintenance*. Miscellaneous structures and facilities constructed as a part of the

protective works and other structures and facilities which function as a part of, or affect the efficient functioning of the protective works, shall be periodically inspected by the Superintendent and appropriate maintenance measures taken. Damaged or unserviceable parts shall be repaired or replaced without delay. Areas used for ponding in connection with pumping plants or for temporary storage of interior run-off during flood periods shall not be allowed to become filled with silt, debris, or dumped material. The Superintendent shall take proper steps to prevent restriction of bridge openings and, where practicable, shall provide for temporary raising during floods of bridges which restrict channel capacities during high flows.

(2) *Operation*. Miscellaneous facilities shall be operated to prevent or reduce flooding during periods of high water. Those facilities constructed as a part of the protective works shall not be used for purposes other than flood protection without approval of the District Engineer unless designed therefor.

(Sec. 3, 49 Stat. 1571, as amended; 33 U.S.C. 701c)

[9 FR 9999, Aug. 17, 1944; 9 FR 10203, Aug. 22, 1944]

§ 208.11 Regulations for use of storage allocated for flood control or navigation and/or project operation at reservoirs subject to prescription of rules and regulations by the Secretary of the Army in the interest of flood control and navigation.

(a) *Purpose*. This regulation prescribes the responsibilities and general procedures for regulating reservoir projects capable of regulation for flood control or navigation and the use of storage allocated for such purposes and provided on the basis of flood control and navigation, except projects owned and operated by the Corps of Engineers; the International Boundary and Water Commission, United States and Mexico; and those under the jurisdiction of the International Joint Commission, United States, and Canada, and the Columbia River Treaty. The intent of this regulation is to establish an understanding between project owners, operating agencies, and the Corps of Engineers.

(b) *Responsibilities.* The basic responsibilities of the Corps of Engineers regarding project operation are set out in the cited authority and described in the following paragraphs:

(1) Section 7 of the Flood Control Act of 1944 (58 Stat. 890, 33 U.S.C. 709) directs the Secretary of the Army to prescribe regulations for flood control and navigation in the following manner:

Hereafter, it shall be the duty of the Secretary of War to prescribe regulations for the use of storage allocated for flood control or navigation at all reservoirs constructed wholly or in part with Federal funds provided on the basis of such purposes, and the operation of any such project shall be in accordance with such regulations: *Provided*, That this section shall not apply to the Tennessee Valley Authority, except that in case of danger from floods on the lower Ohio and Mississippi Rivers the Tennessee Valley Authority is directed to regulate the release of water from the Tennessee River into the Ohio River in accordance with such instructions as may be issued by the War Department.

(2) Section 9 of Public Law 436-83d Congress (68 Stat. 303) provides for the development of the Coosa River, Alabama and Georgia, and directs the Secretary of the Army to prescribe rules and regulations for project operation in the interest of flood control and navigation as follows:

The operation and maintenance of the dams shall be subject to reasonable rules and regulations of the Secretary of the Army in the interest of flood control and navigation.

NOTE: This Regulation will also be applicable to dam and reservoir projects operated under provisions of future legislative acts wherein the Secretary of the Army is directed to prescribe rules and regulations in the interest of flood control and navigation. The Chief of Engineers, U.S. Army Corps of Engineers, is designated the duly authorized representative of the Secretary of the Army to exercise the authority set out in the Congressional Acts. This Regulation will normally be implemented by letters of understanding between the Corps of Engineers and project owner and will incorporate the provisions of such letters of understanding prior to the time construction renders the project capable of significant impoundment of water. A water control agreement signed by both parties will follow when deliberate impoundment first begins or at such time as the responsibilities of any Corps-owned projects may be transferred to another entity. Promulgation of this Regulation for a given project will occur at such time as the

name of the project appears in the FEDERAL REGISTER in accordance with the requirements of paragraph 6k. When agreement on a water control plan cannot be reached between the Corps and the project owner after coordination with all interested parties, the project name will be entered in the FEDERAL REGISTER and the Corps of Engineers plan will be the official water control plan until such time as differences can be resolved.

(3) Federal Energy Regulatory Commission (FERC), formerly Federal Power Commission (FPC), Licenses.

(i) Responsibilities of the Secretary of the Army and/or the Chief of Engineers in FERC licensing actions are set forth in reference 3c above and pertinent sections are cited herein. The Commission may further stipulate as a licensing condition, that a licensee enter into an agreement with the Department of the Army providing for operation of the project during flood times, in accordance with rules and regulations prescribed by the Secretary of the Army.

(A) Section 4(e) of the Federal Power Act requires approval by the Chief of Engineers and the Secretary of the Army of plans of dams or other structures affecting the navigable capacity of any navigable waters of the United States, prior to issuance of a license by the Commission as follows:

The Commission is hereby authorized and empowered to issue licenses to citizens * * * for the purpose of constructing, operating and maintaining dams, water conduits, reservoirs, powerhouses, transmission lines, or other project works necessary or convenient for the development and improvement of navigation and for the development, transmission, and utilization of power across, along, from or in any of the streams or other bodies of water over which Congress has jurisdiction * * * *Provided further*, That no license affecting the navigable capacity of any navigable waters of the United States shall be issued until the plans of the dam or other structures affecting navigation have been approved by the Chief of Engineers and the Secretary of the Army.

(B) Sections 10(a) and 10(c) of the Federal Power Act specify conditions of project licenses including the following:

(1) *Section 10(a).* "That the project adopted * * * shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan

for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of waterpower development, and for other beneficial public uses * * *.”

(2) *Section 10(c)*. “That the licensee shall * * * so maintain and operate said works as not to impair navigation, and shall conform to such rules and regulations as the Commission may from time to time prescribe for the protection of life, health, and property * * *.”

(C) Section 18 of the Federal Power Act directs the operation of any navigation facilities built under the provision of that Act, be controlled by rules and regulations prescribed by the Secretary of the Army as follows:

The operation of any navigation facilities which may be constructed as part of or in connection with any dam or diversion structure built under the provisions of this Act, whether at the expense of a licensee hereunder or of the United States, shall at all times be controlled by such reasonable rules and regulations in the interest of navigation; including the control of the pool caused by such dam or diversion structure as may be made from time to time by the Secretary of the Army, * * *.

(ii) Federal Power Commission Order No. 540 issued October 31, 1975, and published November 7, 1975 (40 FR 51998), amending §2.9 of the Commission’s General Policy and Interpretations prescribed Standardized Conditions (Forms) for Inclusion in Preliminary Permits and Licenses Issued Under part I of the Federal Power Act. As an example, Article 12 of Standard Form L-3, titled: “Terms and Conditions of License for Constructed Major Projects Affecting Navigable Waters of the United States,” sets forth the Commission’s interpretation of appropriate sections of the Act, which deal with navigation aspects, and attendant responsibilities of the Secretary of the Army in licensing actions as follows:

The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be

controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, * * * and the Licensee shall release water from the project reservoir at such rate * * * as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

(c) *Scope and terminology*. This regulation applies to Federal authorized flood control and/or navigation storage projects, and to non-Federal projects which require the Secretary of the Army to prescribe regulations as a condition of the license, permit or legislation, during the planning, design and construction phases, and throughout the life of the project. In compliance with the authority cited above, this regulation defines certain activities and responsibilities concerning water control management throughout the Nation in the interest of flood control and navigation. In carrying out the conditions of this regulation, the owner and/or operating agency will comply with applicable provisions of Pub. L. 85-624, the Fish and Wildlife Coordination Act of 1958, and Pub. L. 92-500, the Federal Water Pollution Control Act Amendments of 1972. This regulation does not apply to local flood protection works governed by §208.10, or to navigation facilities and associated structures which are otherwise covered by part 207 (Navigation Regulations) of title 33 of the code. Small reservoirs, containing less than 12,500 acre-feet of flood control or navigation storage, may be excluded from this regulation and covered under §208.10, unless specifically required by law or conditions of the license or permit.

(1) The terms *reservoir* and *project* as used herein include all water resource impoundment projects constructed or modified, including natural lakes, that are subject to this regulation.

(2) The term *project owner* refers to the entity responsible for maintenance, physical operation, and safety of the project, and for carrying out the water control plan in the interest of flood control and/or navigation as prescribed by the Corps of Engineers. Special arrangements may be made by the

project owner for “operating agencies” to perform these tasks.

(3) The term *letter of understanding* as used herein includes statements which consummate this regulation for any given project and define the general provisions or conditions of the local sponsor, or owner, cooperation agreed to in the authorizing legislative document, and the requirements for compliance with section 7 of the 1944 Flood Control Act, the Federal Power Act or other special congressional act. This information will be specified in the water control plan and manual. The letter of understanding will be signed by a duly authorized representative of the Chief of Engineers and the project owner. A “field working agreement” may be substituted for a letter of understanding, provided that the specified minimum requirements of the latter, as stated above, are met.

(4) The term *water control agreement* refers to a compilation of water control criteria, guidelines, diagrams, release schedules, rule curves and specifications that basically govern the use of reservoir storage space allocated for flood control and navigation and/or release functions of a water control project for these purposes. In general, they indicate controlling or limiting rates of discharge and storage space required for flood control and/or navigation, based on the runoff potential during various seasons of the year.

(5) For the purpose of this regulation, the term *water control plan* is limited to the plan of regulation for a water resources project in the interest of flood control and/or navigation. The water control plan must conform with proposed allocations of storage capacity and downstream conditions or other requirements to meet all functional objectives of the particular project, acting separately or in combination with other projects in a system.

(6) The term *real-time* denotes the processing of current information or data in a sufficiently timely manner to influence a physical response in the system being monitored and controlled. As used herein the term connotes * * * the analyses for and execution of water control decisions for both minor and major flood events and for navigation, based on prevailing

hydrometeorological and other conditions and constraints, to achieve efficient management of water resource systems.

(d) *Procedures*—(1) *Conditions during project formulation.* During the planning and design phases, the project owner should consult with the Corps of Engineers regarding the quantity and value of space to reserve in the reservoir for flood control and/or navigation purposes, and for utilization of the space, and other requirements of the license, permit or conditions of the law. Relevant matters that bear upon flood control and navigation accomplishment include: Runoff potential, reservoir discharge capability, downstream channel characteristics, hydrometeorological data collection, flood hazard, flood damage characteristics, real estate acquisition for flowage requirements (fee and easement), and resources required to carry out the water control plan. Advice may also be sought on determination of and regulation for the probable maximum or other design flood under consideration by the project owner to establish the quantity of surcharge storage space, and freeboard elevation of top of dam or embankment for safety of the project.

(2) *Corps of Engineers involvement.* If the project owner is responsible for real-time implementation of the water control plan, consultation and assistance will be provided by the Corps of Engineers when appropriate and to the extent possible. During any emergency that affects flood control and/or navigation, the Corps of Engineers may temporarily prescribe regulation of flood control or navigation storage space on a day-to-day (real-time) basis without request of the project owner. Appropriate consideration will be given for other authorized project functions. Upon refusal of the project owner to comply with regulations prescribed by the Corps of Engineers, a letter will be sent to the project owner by the Chief of Engineers or his duly authorized representative describing the reason for the regulations prescribed, events that have transpired, and notification that the project owner is in violation of the Code of Federal Regulations. Should an

impasse arise, in that the project owner or the designated operating entity persists in noncompliance with regulations prescribed by the Corps of Engineers, measures may be taken to assure compliance.

(3) *Corps of Engineers implementation of real-time water control decisions.* The Corps of Engineers may prescribe the continuing regulation of flood control storage space for any project subject to this regulation on a day-to-day (real-time) basis. When this is the case, consultation and assistance from the project owner to the extent possible will be expected. Special requests by the project owner, or appropriate operating entity, are preferred before the Corps of Engineers offers advice on real-time regulation during surcharge storage utilization.

(4) *Water control plan and manual.* Prior to project completion, water control managers from the Corps of Engineers will visit the project and the area served by the project to become familiar with the water control facilities, and to insure sound formulation of the water control plan. The formal plan of regulation for flood control and/or navigation, referred to herein as the water control plan, will be developed and documented in a water control manual prepared by the Corps of Engineers. Development of the manual will be coordinated with the project owner to obtain the necessary pertinent information, and to insure compatibility with other project purposes and with surcharge regulation. Major topics in the manual will include: Authorization and description of the project, hydrometeorology, data collection and communication networks, hydrologic forecasting, the water control plan, and water resource management functions, including responsibilities and coordination for water control decision-making. Special instructions to the dam tender or reservoir manager on data collection, reporting to higher Federal authority, and on procedures to be followed in the event of a communication outage under emergency conditions, will be prepared as an exhibit in the manual. Other exhibits will include copies of this regulation, letters of understanding consummating this regulation, and the water control

agreements. After approval by the Chief of Engineers or his duly authorized representative, the manual will be furnished the project owner.

(5) *Water control agreement.* (i) A water control diagram (graphical) will be prepared by the Corps of Engineers for each project having variable space reservation for flood control and/or navigation during the year; e.g., variable seasonal storage, joint-use space, or other rule curve designation. Reservoir inflow parameters will be included on the diagrams when appropriate. Concise notes will be included on the diagrams prescribing the use of storage space in terms of release schedules, runoff, nondamaging or other controlling flow rates downstream of the damsite, and other major factors as appropriate. A water control release schedule will be prepared in tabular form for projects that do not have variable space reservation for flood control and/or navigation. The water control diagram or release schedule will be signed by a duly authorized representative of the Chief of Engineers, the project owner, and the designated operating agency, and will be used as the basis for carrying out this regulation. Each diagram or schedule will contain a reference to this regulation.

(ii) When deemed necessary by the Corps of Engineers, information given on the water control diagram or release schedule will be supplemented by appropriate text to assure mutual understanding on certain details or other important aspects of the water control plan not covered in this regulation, on the water control diagram or in the release schedule. This material will include clarification of any aspects that might otherwise result in unsatisfactory project performance in the interest of flood control and/or navigation. Supplementation of the agreement will be necessary for each project where the Corps of Engineers exercises the discretionary authority to prescribe the flood control regulation on a day-to-day (real-time) basis. The agreement will include delegation of the responsibility. The document should also cite, as appropriate, section 7 of the 1944 Flood Control Act, the Federal Power

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Act and/or other congressional legislation authorizing construction and/or directing operation of the project.

(iii) All flood control regulations published in the FEDERAL REGISTER under this section (part 208) of the code prior to the date of this publication which are listed in §208.11(e) are hereby superseded.

(iv) Nothing in this regulation prohibits the promulgation of specific regulations for a project in compliance with the authorizing acts, when agreement on acceptable regulations cannot be reached between the Corps of Engineers and the owner.

(6) *Hydrometeorological instrumentation.* The project owner will provide instrumentation in the vicinity of the damsite and will provide communication equipment necessary to record and transmit hydrometeorological and reservoir data to all appropriate Federal authorities on a real-time basis unless there are extenuating circumstances or are otherwise provided for as a condition of the license or permit. For those projects where the owner retains responsibility for real-time implementation of the water control plan, the owner will also provide or arrange for the measurement and reporting of hydrometeorological parameters required within and adjacent to the watershed and downstream of the damsite, sufficient to regulate the project for flood control and/or navigation in an efficient manner. When data collection stations outside the immediate vicinity of the damsite are required, and funds for installation, observation, and maintenance are not available from other sources, the Corps of Engineers may agree to share the costs for such stations with the project owner. Availability of funds and urgency of data needs are factors which will be considered in reaching decisions on cost sharing.

(7) *Project safety.* The project owner is responsible for the safety of the dam and appurtenant facilities and for regulation of the project during surcharge storage utilization. Emphasis upon the safety of the dam is especially important in the event surcharge storage is utilized, which results when the total storage space reserved for flood control is exceeded. Any assistance provided by

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the Corps of Engineers concerning surcharge regulation is to be utilized at the discretion of the project owner, and does not relieve the owner of the responsibility for safety of the project.

(8) *Notification of the general public.* The Corps of Engineers and other interested Federal and State agencies, and the project owner will jointly sponsor public involvement activities, as appropriate, to fully apprise the general public of the water control plan. Public meetings or other effective means of notification and involvement will be held, with the initial meeting being conducted as early as practicable but not later than the time the project first becomes operational. Notice of the initial public meeting shall be published once a week for 3 consecutive weeks in one or more newspapers of general circulation published in each county covered by the water control plan. Such notice shall also be used when appropriate to inform the public of modifications in the water control plan. If no newspaper is published in a county, the notice shall be published in one or more newspapers of general circulation within that county. For the purposes of this section a newspaper is one qualified to publish public notices under applicable State law. Notice shall be given in the event significant problems are anticipated or experienced that will prevent carrying out the approved water control plan or in the event that an extreme water condition is expected that could produce severe damage to property or loss of life. The means for conveying this information shall be commensurate with the urgency of the situation. The water control manual will be made available for examination by the general public upon request at the appropriate office of the Corps of Engineers, project owner or designated operating agency.

(9) *Other generalized requirements for flood control and navigation.* (i) Storage space in the reservoirs allocated for flood control and navigation purposes shall be kept available for those purposes in accordance with the water control agreement, and the plan of regulation in the water control manual.

(ii) Any water impounded in the flood control space defined by the water control agreement shall be evacuated as

rapidly as can be safely accomplished without causing downstream flows to exceed the controlling rates; i.e., releases from reservoirs shall be restricted insofar as practicable to quantities which, in conjunction with uncontrolled runoff downstream of the dam, will not cause water levels to exceed the controlling stages currently in force. Although conflicts may arise with other purposes, such as hydro-power, the plan or regulation may require releases to be completely curtailed in the interest of flood control or safety of the project.

(iii) Nothing in the plan of regulation for flood control shall be construed to require or allow dangerously rapid changes in magnitudes of releases. Releases will be made in a manner consistent with requirements for protecting the dam and reservoir from major damage during passage of the maximum design flood for the project.

(iv) The project owner shall monitor current reservoir and hydro-meteorological conditions in and adjacent to the watershed and downstream of the damsite, as necessary. This and any other pertinent information shall be reported to the Corps of Engineers on a timely basis, in accordance with standing instructions to the damtender or other means requested by the Corps of Engineers.

(v) In all cases where the project owner retains responsibility for real-time implementation of the water control plan, he shall make current determinations of: Reservoir inflow, flood control storage utilized, and scheduled releases. He shall also determine storage space and releases required to comply with the water control plan prescribed by the Corps of Engineers. The owner shall report this information on a timely basis as requested by the Corps of Engineers.

(vi) The water control plan is subject to temporary modification by the Corps of Engineers if found necessary in time of emergency. Requests for and action on such modifications may be made by the fastest means of communication available. The action taken shall be confirmed in writing the same day to the project owner and shall include justification for the action.

(vii) The project owner may temporarily deviate from the water control plan in the event an immediate short-term departure is deemed necessary for emergency reasons to protect the safety of the dam, or to avoid other serious hazards. Such actions shall be immediately reported by the fastest means of communication available. Actions shall be confirmed in writing the same day to the Corps of Engineers and shall include justification for the action. Continuation of the deviation will require the express approval of the Chief of Engineers, or his duly authorized representative.

(viii) Advance approval of the Chief of Engineers, or his duly authorized representative, is required prior to any deviation from the plan of regulation prescribed or approved by the Corps of Engineers in the interest of flood control and/or navigation, except in emergency situations provided for in paragraph (d)(9)(vii) of this section. When conditions appear to warrant a prolonged deviation from the approved plan, the project owner and the Corps of Engineers will jointly investigate and evaluate the proposed deviation to insure that the overall integrity of the plan would not be unduly compromised. Approval of prolonged deviations will not be granted unless such investigations and evaluations have been conducted to the extent deemed necessary by the Chief of Engineers, or his designated representatives, to fully substantiate the deviation.

(10) *Revisions.* The water control plan and all associated documents will be revised by the Corps of Engineers as necessary, to reflect changed conditions that come to bear upon flood control and navigation, e.g., reallocation of reservoir storage space due to sedimentation or transfer of storage space to a neighboring project. Revision of the water control plan, water control agreement, water control diagram, or release schedule requires approval of the Chief of Engineers or his duly authorized representative. Each such revision shall be effective upon the date specified in the approval. The original (signed document) water control agreement shall be kept on file in the respective Office the Division Engineer, Corps of Engineers, Department of the

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Army, located at division offices throughout the continental USA. Copies of these agreements may be obtained from the office of the project owner, or from the office of the appropriate Division Engineer, Corps of Engineers.

(11) *Federal Register*. The following information for each project subject to section 7 of the 1944 Flood Control Act and other applicable congressional acts shall be published in the FEDERAL REGISTER prior to the time the projects becomes operational and prior to any significant impoundment before project completion or * * * at such time as the responsibility for physical operation and maintenance of the Corps of Engineers owned projects is transferred to another entity:

(i) Reservoir, dam, and lake names,

(ii) Stream, county, and State corresponding to the damsite location,

(iii) The maximum current storage space in acre-feet to be reserved exclusively for flood control and/or navigation purposes, or any multiple-use space (intermingled) when flood control or navigation is one of the purposes, with corresponding elevations in feet above mean sea level, and area in acres, at the upper and lower limits of said space,

(iv) The name of the project owner, and

(v) Congressional legislation authorizing the project for Federal participation.

(e) *List of projects*. The following tables, "Pertinent Project Data—Section 208.11 Regulation," show the pertinent data for projects which are subject to this regulation.

LIST OF PROJECTS
[Non-Corps projects with Corps Regulation Requirements]

Project name ¹	State	County	Stream ¹	Project purpose ²	Storage 1000 AF	Elev limits feet M.S.L.		Area in acres		Authorizing legis. ³	Proj. owner ⁴
						Upper	Lower	Upper	Lower		
Col. No. 1	2	3	4	5	6	7	8	9	10	11	12
Agency Valley Dam & Res	OR	Malheur	N Fork Malheur R	FICR	60.0	3340.0	3263.0	1900	0	PL 68-292	USBR.
Alpine Dam	IL	Winnebago	Keith Cr	F	0.6	796.0	760.0	52	0	PWA Proj	Rkfd, IL
Altus Dam & Res	OK	Jackson	N Fork Red R	F	19.6	1562.0	1559.0	6800	6260	PL 761	USBR.
Anderson Ranch Dam & Res	ID	Elmore	S Fk Boise R	IMR	132.6	1539.0	1517.5P	735	1150	Act of 1939 53 Stat 1187.	USBR.
Arbuckle Dam & Res	OK	Murray	Rock Cr	F	36.4	885.3	872.0	3130	2350	PL 594	USBR.
Arrowrock Dam & Res	ID	Elmore	Boise R	MRC	62.5	872.0	827.0	2350	606	Act of 1902 32 Stat 388.	USBR.
Bear Cr Dam	MO	Marion Ralls	Bear Cr	F	8.7	546.5	520.0	540	0	PL 83-780	Hnbl, MO.
Bear Swamp Five Brook (Lo)	MA	Franklin	Deerfield R	E	6.9	870.0	830.0	152	115	FERC 2669	NEPC.
Bear Swamp PS (Upper)	MA	Franklin	Deerfield R Trib	E	8.9	1600.0	1550.0	118	102	Fed Pwr Act	NEPC.
Bellows Falls Dam & Lk	VT	Cheshire	Connecticut R	E	7.5	291.6	273.6	2804	836	FERC 1885	NEPC.
Big Dry Creek and Div	CA	Fresno	Big Dry Cr & Dog Cr.	F	16.2	425.0	393.0	1530	0	PL 77-228	Reim, B CA.
Blue Mesa Dam & Res	CO	Gunnison	Gunnison R	FER	748.5	7519.4	7393.0	9180	2790	PL 84-485	USBR.
Boca Dam & Res	CA	Nevada	Little Truckee R	I	32.8	5596.5	5521.0	873	52	PL 61-289	USBR.
Bonny Dam & Res	CO	Yuma	S Fork Republic R	F	8.0	5605.0	5596.0	980	873	PL 68-292	USBR.
Boysen Dam & Res	WY	Fremont	Wild R	ICR	39.2	3672.0	3638.0	2042	2042	PL 78-534	USBR.
Brantley Dam & Res	NM	Eddy	Pecos R	FIQ	150.4	4732.2	4725.0	22170	331	PL 79-732	USBR.
Brownlee Dam & Res	OR	Baker	Snake R	FIQ	146.1	4725.0	4717.0	19560	19560	PL 78-534	USBR.
Bully Cr Dam & Res	ID	Washington	Bully Cr	FE	403.8	4717.0	4685.0	16960	9280	PL 92-515	USBR.
Camanche Dam & Res	CA	San Joaquin	Mokelumne R	FE	348.5	3283.0	3210.7	21294	38	FERC No 1971-C	ID Pwr.
Canyon Ferry Dam & Lk	MT	Lewis Clark	Missouri R	FE	975.3	2077.0	1976.0	13840	6650	PL 86-248	USBR.
Cedar Bluff Dam & Res	KS	Trego	Smoky Hill R	FE	31.6	2516.0	2456.8	1082	140	PL 86-645	EB-MUD.
Cheney Dam & Res	KS	Sedgwick	N Fork Ninnescah R.	FRIE	200.0	235.5	205.1	7600	5507	PL 78-534	USBR.
				RIE	230.9	205.1	92.0	5507	0		
				F	795.1	3800.0	3797.0	32800	32800		
				FEI	711.5	3728.0	3728.0	24125	24125		
				EI	191.9	2168.0	2144.0	10790	6869		
				F	149.8	2144.0	2107.8	6869	2086		
				IMCR	80.9	1429.9	1421.6	9540	9540		
				F	151.8	1421.6	1392.9	1970	1970		
				MC	0.0	0.0	0.0	0	0		

LIST OF PROJECTS—Continued
[Non-Corps projects with Corps Regulation Requirements]

Project name ¹	State	County	Stream ¹	Project purpose ²	Storage 1000 AF	Elev limits feet M.S.L.		Area in acres		Authorizing legis. ³	Proj. owner ⁴
						Upper	Lower	Upper	Lower		
Col. No. 1	2	3	4	5	6	7	8	9	10	11	12
Clark Canyon Dam & Res	MT	Beaverhead	Beaverhead R	F	79.1	5560.4	5546.1	5900	5160	PL 78-534	USBR.
				FI	50.4	5546.1	5535.7	5160	4495		
Del Valle Dam & Res	CA	Alameda	Alameda Cr	I	126.1	5535.7	5470.6	4495	220		DWR.
				F	37.0	745.0	703.1	1060	710	PL 87-874	CA.
				FIM	1.0	703.1	702.2	710	700		
Don Pedro Dam & Lk	CA	Tuolumne	Tuolumne R	IMR	29.0	702.2	635.0	700	275		M&T.
				FIER	340.0	830.0	802.0	12900	11260	PL 78-534	lfr.
				EIR	1381.0	802.0	600.0	11260	3520		
East Canyon Dam & Res	UT	Morgan	East Canyon Cr	FEIM	308.0	600.0	342.0	3520	29		USBR.
Echo Dam & Res	UT	Summit	Weber R	FEIM	48.0	5705.5	5578.0	684	130	PL 81-273	USBR.
Emigrant Dam & Res	OR	Jackson	Emigrant Cr	FIR	74.0	5560.0	5450.0	1455	0	PL 81-83	USBR.
Enders Dam & Res	NE	Chase	Frenchman Cr	F	39.0	2241.0	2131.5	801	80	PL 83-606	USBR.
				F	30.0	3127.0	3112.3	2405	1707	PL 78-534	USBR.
Folsom Dam & Lk	CA	Sacramento	American R	ICR	34.5	3112.3	3082.4	1707	658	PL 84-505	USBR.
				FEIM	400.0	466.0	427.0	11450	9040		
				EIM	610.0	427.0	210.0	9040	0		
Fort Cobb Dam & Res	OK	Caddo	Pond (Cobb) Cr	F	63.7	1354.8	1342.0	5980	4100	PL 419	USBR.
				IMCR	78.3	1342.0	1300.0	4100	337		
Foss Dam & Res	OK	Custer	Washita R	F	180.6	1668.6	1652.0	13140	8800	PL 419	USBR.
				IMRC	243.8	1652.0	1597.2	8800	1360		
Friant Dam & Millerton Lk	CA	Fresno	San Joaquin R	FEIM	390.5	578.0	466.3	4850	2101	PL 75-392	USBR.
Galesville Dam	OR	Douglas	Cow Cr	FEMCR	42.2	1881.5	1780.0	760	150	FERC No. 71	Dgls. CO.
Gaston Dam & Res	NC	Halifax	Roanoke R	FE	63.0	203.0	200.0	22500	20300	61001	VA Pwr.
				FE	63.0	203.0	200.0	22500	20300	Fed Pwr Act	
Glen Elder Dam & Waconda Lk	KS	Mitchel	Solomon R	F	722.3	1488.3	1455.6	33682	12602	PL 78-534	USBR.
				IM	204.8	1455.6	1428.0	3341	3341	PL 79-526	USBR.
Glendo Dam & Res	WY	Platte	N Platte R	F	271.9	4653.0	4635.0	17990	12370	PL 78-534	USBR.
				EIM	454.3	4635.0	4570.0	12370	5130		
Grand Coulee Dam & FDR Lk	WA	Okanogan Grant	Columbia R	FEI	5185.5	1290.0	1208.0	82280	45592	PL 89-561	USBR.
H Neely Henry Dam & Res	AL	Calhoun St. Clair	Coosa R	FE	49.7	508.0	502.5	11235	7632	PL 83-436	AL Pwr.
Harris Dam & Res	AL	Randolph	Tallapoosa R	FE	215.0	793.0	785.0	10661	9012	PL 89-789	AL Pwr.
Heart Butte Dm & Lk Tschida	ND	Grant	Heart R	F	147.9	2094.5	2064.5	3400	3400	PL 78-534	USBR.
				IQ	69.0	2064.5	2030.0	3400	810		
Hells Canyon Dam & Res	OR	Wallowa	Snake R	EN	11.7	1888.0	1883.0	2380	2280	FERC No 1971-A	ID Pwr.
Hoover Dam & Lk Mead	NV	Clark Mohave	Colorado R	F	1500.0	1229.0	1219.6	162700	156500	PL 70-642	USBR.
	AZ	Clark Mohave	Colorado R	FEIMCAR	15.8	1219.6	1083.0	83500	83500		
Hungry Horse Dam & Res	MT	Flathead	S Fork Flathead R	FEI	2982.0	3560.0	3336.0	23800	5400	PL 78-329	USBR.

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Indian Valley Dam & Res	CA	Lake	N Fork Cache Cr	FIMR	40.0	1485.0	1474.0	3975	3734	PL 84-984	Yolo FC&W.
Jamestown Dam & Res	ND	Stutsman	James R	IMR	260.0	1474.0	1334.0	3734	308	PL 78-534	USBR.
Jocassee Dam & Res	SC	Pickens	Keowee R	PRC	185.4	1454.0	1429.8	13210	2090	FERC 2503	USBR Pwr.
Keowee Dam & Lk	SC	Pickens	Keowee R	F	28.1	1429.8	1400.0	2090	160	FERC 2503	Duke Pwr.
Kerr Dam Flathead Lk	MT	Lake	Flathead R	FPMCAR	1160.0	1110.0	1080.0	7565	6815	FERC No 5	GRD Auth.
Kerr Dam & Lk Hudson (Mark- ham Ferry Project).	OK	Mayes	Grand Neosho R	FER	392.0	800.0	775.0	18372	12000	PL 76-476	USBR.
Keyhole Dam & Res	WY	Crook	Belle Fourche R	F	1219.0	2893.0	2883.0	123560	10900	PL 78-534	USBR.
Kirwin Dam & Res	KS	Phillips	N Fork Solomon R	F	244.2	636.0	619.0	18800	4500	PL 78-534	USBR.
Lake Kemp Dam & Res	TX	Wichita	Wichita R	F	48.6	619.0	599.0	10900	9410	PL 78-534	USBR.
Leesville Dam & Res	VA	Campbell	Roanoke R	EQ	140.5	411.5	4099.3	13730	820	PL 78-534	USBR.
Lemon Dam & Res	CO	La Plata	Florida R	F	185.8	4099.3	4051.0	9410	5080	PL 79-732; PL 79- 526.	WF&C.
Lewis M Smith Dam & Res	AL	Walker Culman	Sipsey Fork; Black Warrior R	EQ	215.1	1757.3	1729.3	10640	1010	SD 144	WID2.
Little Wood	ID	Blain	Little Wood R	F	89.6	1729.2	1697.0	5080	15590	Fed Pwr Act	Appl Pwr.
Logan Martin Dam & Res	AL	Talladega	Cossa R	F	234.9	1156.0	1144.0	23830	3350	PL 84-485	USBR.
Los Banos Dam & Detention Res.	CA	Merced	Los Banos Cr	F	268.0	1144.0	1114.0	15590	2400	Fed Pwr Act	AL Pwr.
Los Banos Dam & Res	CA	Merced	Los Banos Cr	F	37.8	613.0	600.0	3235	62	PL 84-993	USBR.
Lost Creek Dam & Res	UT	Morgan	Lost Cr.	F	39.0	8148.0	8023.0	622	15260	PL 83-436	AL Pwr.
Lovewell Dam & Res	KS	Jewell	White Rock Cr	F	280.6	522.0	510.0	25700	11887	PL 86-488	USBR.
Marshall Ford Dam & Res	TX	Travis	Colorado R	ICR	394.3	510.0	488.0	21200	467	PL 81-273	USBR.
Mayfield Dam & Res	WA	Lewis	Cowlitz R	NEIM	30.0	5237.3	5127.4	572	0	PL 78-534	USBR.
McGee Creek Dam & Res	OK	Atoka	McGee Cr	FER	245.3	477.0	465.0	26310	15260	PL 84-485	AL Pwr.
Medicine Cr Dam Harry Strunk Lk.	NE	Frontier	Medicine Cr	MCR	20.6	327.8	231.2	467	11887	PL 86-488	USBR.
Mossyrock Dam Davison Lk	WA	Lewis	Cowlitz R	F	14.0	353.5	327.8	619	467	PL 81-273	USBR.
Mt Park Dam Tom Steed Res	OK	Kiowa	W Otter Cr	ICR	20.0	6005.0	5912.0	365	93	PL 78-534	USBR.
Navajo Dam & Res	NM	San Juan	San Juan R	F	50.5	1595.3	1582.6	5025	2986	PL 79-732	USBR.
New Bullards Bar Dam & Res	CA	Yuba	Yuba R	ICR	24.9	1582.6	1571.7	2986	1704	PL 73-392	USBR.
New Exchequer Dam & Lk	CA	Tuolumne	Merced R	F	779.8	714.0	681.0	29060	18955	PL 78-534	USBR.
New Melones Dam & Lk	CA	Tuolumne	Stanislaus R	FER	810.5	681.0	618.0	18955	8050	FPC No 2016-A	Tac. WN.
				F	21.4	425.0	415.0	2250	2030	PL 94-423	USBR.
				MRC	85.3	595.5	577.1	5540	3810	PL 78-534	USBR.
				FEIRQ	108.0	577.7	515.1	3810	370	PL 84-505	Tac. WN.
				FEIMR	52.7	2366.2	2366.1	3483	1840	FERC No 2016-B	USBR.
				EIMR	26.8	2366.1	2343.0	1840	701	PL 90-503	USBR.
				FEIR	1397.0	778.5	600.0	11830	4250	PL 84-485	USBR.
				EIR	20.3	1414.0	1411.0	7130	6400	PL 89-298	YCWA.
				IR	89.0	1411.0	1386.3	6400	1270	PL 86-645	Mrcd. Irr.
				FEIMR	1036.1	6085.0	5990.0	15610	7400	PL 87-874	USBR.
				EIMR	170.0	1956.0	1918.3	4809	4225	PL 87-874	USBR.
				FEIR	790.9	1918.3	1447.5	4225	129	PL 86-645	Mrcd. Irr.
				EIR	400.0	867.0	799.7	7110	4849	PL 87-874	USBR.
				IR	451.6	799.7	660.0	4849	1900	PL 87-874	USBR.
				FEIMR	171.0	660.0	467.0	1900	150	PL 87-874	USBR.
				EIMR	450.0	1088.0	1049.5	10900	10900	PL 87-874	USBR.
				FEIMR	1670.0	1049.5	808.0	3500	3500	PL 87-874	USBR.
				IMR	300.0	808.0	540.0	3500	0	PL 87-874	USBR.

LIST OF PROJECTS—Continued [Non-Corps projects with Corps Regulation Requirements]												
Project name ¹	State	County	Stream ¹	Project purpose ²	Storage 1000 AF	Elev limits feet M.S.L.		Area in acres		Authorizing legis. ³	Proj. owner ⁴	
						Upper	Lower	Upper	Lower			
Col. No. 1	2	3	4	5	6	7	8	9	10	11	12	
Northfield Mt (Up) PS	MA	Franklin	Connecticut	E	14.0	965.0	938.0	196	134	FERC 1889	WMEC.	
Norton Dam & Kiehl Sebelius Lk.	KS	Norton	Prairie Dog Cr	F	98.8	2331.4	2304.3	5316	2181	PL 78-534	USBR.	
				IMRC	30.7	2304.3	2280.4	2181	587	PL 79-526		
										PL 79-732		
Ochoco Dam & Res	OR	Crook	Ochoco Cr	FICR	52.5	3136.2	0.0	1130	130	PL 84-992	USBR.	
Oroville Dam & Lk	CA	Butte	Feather R	FEIMAR	750.0	900.0	848.5	15600	13346	PL 85-500	CA.	
				EIMAR	2788.0	848.5	210.0	13346	0			
Pactola Dam & Res	SD	Pennington	Rapid Cr	F	43.1	4621.5	4580.2	1230	860	PL 78-534	USBR.	
				IM	55.0	4580.2	4456.1	860	100			
Palisades Dam & Res	ID	Bonneville	Snake R	FIE	1202.0	5620.0	5452.0	16100	2170	PL 81-864	USBR.	
Paonia Dam & Res	CO	Gunnison	Muddy Cr	FIR	17.0	6447.5	6373.0	334	120	PL 80-177	USBR.	
										PL 84-485		
Pensacola Dam Grand Lake O' the Cherokees.	OK	Mayes	Grand (Neosho) R	F	525.0	755.0	745.0	59200	46500	PL 77-228	Grid, Auth.	
Pineview Dam & Res	UT	Weber	Ogden R	E	1192.0	745.0	705.0	46500	17000			
Platoro Dam & Res	CO	Conejos	Conejos R	FEIM	110.0	4900.0	4818.0	2874	0	PL 81-273	USBR.	
				F	6.0	10034.0	10027.5	947	920	PL 76-640	USBR.	
				IF	54.0	10027.5	9911.0	920	0			
Priest Rapids Dam & Res	WA	Grant	Columbia R	FER	44.0	488.0	481.5	7600	6500	FERC No 2114-A	Grnt, PUD.	
Prineville Dam & Res	OR	Crook	Crooked R	FIRC	233.0	3257.9	3114.0	3997	140	PL-84-992	USBR.	
Prosser Cr Dam & Res	CA	Nevada	Prosser Cr	C	8.6	5703.7	5661.0	334	86	PL 84-858	USBR.	
				FC	20.0	5761.0	5703.7	745	334	PL 85-706		
				F	93.0	4898.7	4880.5	5671	4640	PL 87-590	USBR.	
Pueblo Dam & Res	CO	Pueblo	Arkansas R	IF	261.4	4880.5	4764.0	4640	421			
Red Willow Dam Hugh Butler Lk.	NE	Frontier	Red Willow Cr	F	48.9	2804.9	2581.8	2682	1629	PL 78-534	USBR.	
				IRC	27.3	2881.8	2558.0	1629	787	PL 85-783		
										PL 84-505		
Ririe Dam & Res	ID	Bonneville	Willow Cr	FIRC	99.0	5119.0	5023.0	150	360	PL 87-874	USBR.	
Roanoke Rapids Dam & Res	NC	Halifax	Roanoke R	EC	16.8	132.0	128.0	4600	4100	FPC 2009	VA, Pwr.	
Rocky Reach Dam Lk Entiat	WA	Chelan	Columbia R	FER	36.0	707.0	703.0	9920	9490	FERC No 2145	Chln PUD.	
Rocky River PS Lk Candlewood	CT	Litchfield	Housatonic R	E	142.5	430.0	418.0	5608	4692	FERC 2576	CLPC.	
Ross Dam & Res	WA	Whatcom	Skagit R	E	1052.0	1602.5	1475.0	11700	4450	FERC 553	Stll.	
Sanford Dam & Lk Meredith	TX	Hutchison	Canadian R	F	462.1	2965.0	2941.3	21640	17320	PL 81-898	USBR.	
				IMCRQ	761.3	2941.3	2860.0	17320	4500			
Savage River Dam & Res	MD	Garrett	Savage R	FMA	20.0	1468.5	1317.0	366	0	PL 78-534	Ptmc Comm.	
Scoggins Dam Henry Hagg Lk	SD	Perkins	Scoggins Cr	F	56.3	305.8	235.3	116	4	PL 89-596	USBR.	
Shadhill Dam & Res	SD	Perkins	Grand R	F	218.3	2302.0	2271.9	9900	4800	PL 78-534	USBR.	
				IQ	80.9	2271.9	2250.8	4800	2800			
Shasta Dam Lk	CA	Shasta	Sacramento R	FEIA	1300.0	1067.0	1018.6	29570	23894	PL 75-392	USBR.	
				EIA	3241.0	1018.6	735.8	23894	2200			
Shepaug Dam & Lk	CT	Litchfield	Housatonic R	E	5.0	200.0	172.0	1882	1125	FERC 2576	CLPC.	

Smith Mtn Dam & Res	Bedford Franklin	Roanoke R	E	40.8	795.0	793.0	20600	20200	Fed Pwr Act	Appl Pwr.
Stampede Dam & Res	Roanoke	Little Truckee R	FEM	22.0	5949.0	5942.1	3430	3230	PL 84-858	USBR.
Stanvalton Dam and Res	Pitsywnita	Strawberry R	EM	199.4	5798.0	5798.0	3230	210	PL 84-485	USBR.
Stevens Creek Dam & Res	Sierra	Savannah River	FIM	165.3	5712.0	5595.0	3310	689	FERC 2535	SC E&G.
Stevenson Dam Lk Zoar	Duchesne	Housatonic R	P	10.5	187.5	183.0	4300	0	FERC 2576	CLPC.
Summer Dam & Lk	Columbia	Pecos R	E	5.0	108.0	80.0	1148	516	PL 83-780	USBR.
Tat Monolikt Dam & Lake	Litchfield	Santa Rosa Wash	FI	51.4	4261.0	1480.0	11790	0	PL 89-298	BIA.
Tiber Dam & Res	De Baca	Marias R	FIC	198.5	1539.0	2993.0	23150	17890	PL 78-534	USBR.
Trenton Dam & Res	Pinal	Republican R	F	400.9	3012.5	2976.0	17890	13790	PL 78-534	USBR.
Turners Falls (Low) Dam & Lk	Libert Toole	Connecticut R	FIQ	268.0	2893.0	2866.4	13790	4922	FERC 1889	WMEC
Twin Buttes Dam & Lake	Hitchcock	Concho R	IQ	121.7	2976.0	2752.0	9080	670	PL 85-152	USBR
Twitshell Dam & Res	Franklin	Cuyama R	F	134.1	2773.0	1885.0	3671	2556	PL 83-774	USBR
Upper Baker Dam Baker Lk	Tom Green	Baker R	IM	99.8	2752.0	623.0	2556	0	PL 89-298	Pgt P&L
Vallecito Dam & Res	Santa Barbara	Los Pinos R	FE	184.6	724.0	674.0	4985	2375	FERC 2150B	USBR
Vernon Dam & Lk	Whatcom	Connecticut R	FEI	125.4	7665.0	7562.5	2720	350	PL 61-288	USBR
Wanapum Dam & Res	La Plata	Columbia R	E	18.3	220.1	212.1	2550	1980	PL 68-292	NEPC
Wanship Dam & Rockport	Windham	Weber R	FER	151.6	571.5	560.0	14300	13350	FERC 1904	Gmt
Warm Springs Dam & Res	Grant	Middle Fork Malheur R.	FEIM	61.0	6037.0	5930.0	1077	121	FERC No 2114-B	PUD
Waterbury Dam & Res	Summit	Little R	FICR	191.0	3406.0	3327.0	460	90	PL 81-273	USBR
Webster Dam & Res	Malheur	S Fork Solomon R	FP	27.7	617.5	592.0	1330	890	PL 78-534	Vale
Weiss Dam & Res	Washington	Coosa R	F	183.4	1923.7	1892.5	8480	3772	PL 78-534	USBR
Wells Dam L Pateros	Rocks	Columbia R	IRC	72.1	1892.5	1860.0	3772	906	PL 79-526	USBR
Wilder Dam & Lk	Cherokee	Connecticut R	F	397.0	574.0	564.0	50000	30200	PL 79-732	AL Pwr
Yellowtail Dam & Bighorn Lk	Douglas	Bighorn R	E	148.4	564.0	558.0	30200	19545	PL 83-436	Dgls PUD
	Big Horn		FER	74.0	781.0	771.0	10000	8000	FERC No 2149	NEPC
	Windsor		E	13.3	365.0	360.0	3100	2240	FERC 1893	USBR
	Big Horn		F	258.3	3657.0	3640.0	17280	12600	PL 78-534	PUD
			FEIQ	240.3	3614.0	3547.0	12600	6915		
			EIQ	336.1	3614.0		6915	4150		

¹ Cr—Creek; CS—Control Structure; Div—Diversion; DS—Drainage Structure; FG—Floodgate; Fk—Fork; GIWW—Gulf Intercoastal Waterway; Lk—Lake; L&D—Lock & Dam; PS—Pump Station; R—River; Res—Reservoir
² F—Flood Control; N—Navigation; P—Corps Hydropower; E—Non Corps Hydropower; I—Irrigation; M—Municipal and/or Industrial Water Supply; C—Fish and Wildlife Conservation; A—Low Flow Augmentation or Pollution Abatement; R—Recreation; O—Water Quality or Silt Control
³ FCA—Flood Control Act; FERC—Federal Energy Regulatory Comm; HD—House Document; PL—Public Law; PW—Public Works; RHA—River & Harbor Act; SD—Senate Document; WSA—Water Supply Act

⁴ Appl Pwr—Appalachian Power; Chin PUD—Chelan Cnty PUD 1; CLPC—CT Light & Power Co; Dgls PUD—Douglas Cnty PUD 1; DWR—Department of Water Resources; EB—MUD—East Bay Municipal Utility Dist; GRD—Grand River Dam Auth; Gmt PUD—Grant Cnty PUD 2; Hnbi—city of Hamibat; M&T Irr—Modesto & Turlock Irr; Mrcd Irr—Merced Irr; NEPC—New England Power Co; Pgmt P&L—Puget Sound Power & Light; Pmcc Comm—Upper Potomac R Comm; Rclm B—Reclamation Board; Rkld—city of Rockford; Sll—city of Seattle; Tac—City of Tacoma; Vale USBR—50% Vale Irr 50% USBR; WF&CWID—City of Wichita Falls and Wichita Cnty Water Improvement District No. 2; WMEC—Western MA Electric Co; YCWA—Yuba City Water Auth; Yolo FC&W—Yolo Flood Control & Water Conserv Dist

(Sec. 7, Pub. L. 78-534, 58 Stat. 890 (33 U.S.C. 709); the Federal Power Act, 41 Stat. 1063 (16 U.S.C. 791(A)); and sec. 9, Pub. L. 83-436, 68 Stat. 303)

[43 FR 47184, Oct. 13, 1978, as amended at 46 FR 58075, Nov. 30, 1981; 55 FR 21508, May 24, 1990]

§ 208.19 Marshall Ford Dam and Reservoir (Mansfield Dam and Lake Travis), Colorado River, Tex.

The Secretary of the Interior, through his agent, the Lower Colorado River Authority (LCRA) shall operate the Marshall Ford Dam and Reservoir in the interest of flood control as follows:

(a) *Water Control Plan*—(1) *General objectives.* The objectives of the Marshall Ford Reservoir (Lake Travis) are the improvement of navigation, flood control, stream regulation, generation of power, irrigation, water supply, and recreation uses.

(2) *Overall plan for water control.* Within the Colorado River Basin, four Federal projects provide flood control protection: Twin Buttes, O. C. Fisher, Hords Creek, Marshall Ford Reservoir. The considerable distance (328 river miles) and large intervening area (19,990 square miles) separating Marshall Ford Reservoir and the three upper basin flood-control projects prevent realizing any significant benefits from coordinating releases to control the inflow into Marshall Ford. Marshall Ford Reservoir is the fifth project in a tandem of six lakes operated and controlled by the Lower Colorado River Authority for the generation of hydroelectric power. These six projects in downstream order are: Lake Buchanan, Lake Inks, Lake Lyndon B. Johnson (Alvin Wirtz Dam), Lake Marble Falls (Max Starcke Dam), Marshall Ford Reservoir (Lake Travis and Mansfield Dam) and Lake Austin (Tom Miller Dam). The releases from each of the six projects are closely coordinated by the LCRA System Operation Control Center. Three of the projects (Lake Inks, Lake Marble Falls, and Lake Austin) are run-of-the-river projects. The capability of the four upstream lakes to control the inflow of flood water into Marshall Ford depends on their antecedent lake elevations. The majority of inflows to Marshall Ford are comprised of the mainstream flows of the Colorado River, the tributary flows of the

Llano River (entering the Colorado River between Lakes Inks and Lyndon B. Johnson) and the unregulated tributary flows of the Pedernales River (entering between Lake Marble Falls and Marshall Ford Reservoir). During flood conditions, the following upstream U.S. Geological Survey gaging stations are used as indicators of the magnitude of the inflows to Marshall Ford Reservoir:

- (i) Colorado River near San Saba (08147000).
- (ii) Pedernales River near Johnson City (08153500).
- (iii) Llano River at Llano (08151500).

(3) *Standing instructions to dam tender.* During normal conditions, the dam tender will regulate the project in accordance with instructions received from the LCRA System Operator. During flood conditions, when the Marshall Ford Reservoir level is within the flood control zone, the LCRA System Operator will regulate the project in accordance with instructions received from the Corps of Engineers. In the event of a communication outage, the LCRA System Operator will rely on the Emergency Release Schedule, to make changes in the rate of releases from the lake.

(4) *Flood control regulation*—(i) *General.* At all times, releases shall be coordinated such that the Colorado River, Texas, will be controlled when possible, to remain below control stages at downstream official U.S. Geological Survey (USGS) gaging stations; except that no curtailment of normal hydroelectric turbine releases shall result thereby at any time. The USGS river stations and their control stages are as follows:

KEY DOWNSTREAM CONTROL POINTS

Station	Control stage (feet)	Equivalent cubic feet per second (c.f.s.)
Austin (08158000)	20.5	30,000
	124.8	150,000
Bastrop (08159200)	25.1	45,000
	126.7	150,000

KEY DOWNSTREAM CONTROL POINTS—
Continued

Station	Control stage (feet)	Equivalent cubic feet per second (c.f.s.)
Columbus (08161000)	25.5	50,000

¹ Control stage when elevation 710 is forecast to be exceeded.

Forecasted reservoir inflows and the upstream USGS gaging stations Pedernales River near Johnson City (08153500), Llano River at Llano (08151500), and Colorado River near San Saba (08147000) will be considered when scheduling flood releases.

(ii) *Flood control release schedule.* Marshall Ford will be regulated to reduce flooding on the Colorado River below the dam. This plan of regulation will govern flood control releases from Marshall Ford Dam as follows:

(A) *Elevation 681-683.* If the reservoir level is forecast to rise above elevation 681 feet, m.s.l. (top of conservation pool) but not to exceed elevation 683 feet, m.s.l., the releases shall be increased to 3,000 c.f.s. and maintained until the reservoir level recedes to elevation 681 feet, m.s.l. These release rates may need to be reduced due to excessive downstream runoff to prevent exceeding the control stages specified in paragraph (a)(4)(i) of this section.

(B) *Elevation 683-685.* If the reservoir elevation is forecast to rise above elevation 683 feet, m.s.l. but not to exceed elevation 685 the releases shall be increased to 5,000 c.f.s. and maintained until the reservoir level recedes below 683 feet, m.s.l. These release rates may need to be reduced due to excessive downstream runoff to prevent exceeding the control stages specified in paragraph (a)(4)(i) of this section.

(C) *Elevation 685-691.* Seasonal. (1) During the months of January through April, July through August, and November through December: If the reservoir elevation is forecast to rise above elevation 685 feet, m.s.l. but not to exceed elevation 691, the releases shall be increased to 5,000 c.f.s. and maintained until the reservoir level recedes below 683 feet, m.s.l. These release rates may need to be reduced due to excessive downstream runoff to prevent exceeding the control stages spec-

ified in paragraph (a)(4)(i) of this section.

(2) During the months of May, June, September, and October: Should the reservoir elevation be forecast to exceed 685 feet, m.s.l. but not to exceed elevation 691 feet, m.s.l: Releases will be made at 30,000 c.f.s. from the project or at a rate such that, when combined with local inflows below the dam, will equal but not exceed downstream control stages on the Colorado River as specified in paragraph (a)(4)(i) of this section. These release rates will be maintained until the reservoir level falls below elevation 685 feet, m.s.l.

(D) *Elevation 691-710.* Should the reservoir elevation be forecast to exceed 691 feet, m.s.l. (the top of the joint use pool) but not to exceed elevation 710 feet, m.s.l: Releases will be made at 30,000 c.f.s. from the project or at a rate such that, when combined with local inflows below the dam, will equal but not exceed downstream control stages on the Colorado River as specified in paragraph (a)(4)(i) of this section. These release rates will be so controlled until the reservoir level falls below elevation 691 feet, m.s.l.

(E) *Elevation 710-714.* If the reservoir level is forecast to exceed 710 feet, m.s.l. but not to exceed elevation 714 feet, m.s.l: Releases will be made at 50,000 c.f.s. from the project or at a rate such that, when combined with local inflows below the dam, will equal but not exceed the downstream control stages on the Colorado River as specified in paragraph (a)(4)(i) of this section. These release rates will be maintained until the reservoir level falls below elevation 710 feet, m.s.l.

(F) *Elevation 714-722.* If the reservoir level is forecast to exceed 714 feet, m.s.l. but not to exceed 722 feet, m.s.l: Releases will be made at 90,000 c.f.s. from the project. Releases shall not exceed the associated peak flood reservoir inflow.

(G) *Elevation 722 and above.* If the reservoir level is forecast to exceed elevation 722 feet, m.s.l., the Bureau of Reclamation will schedule releases as required for the safety of the structure.

(iii) *Normal flood control regulation schedule.* The following table, Flood

Control Regulation Schedule, summarizes the flood control releases scheduled for given reservoir levels and river conditions:

MARSHALL FORD DAM AND RESERVOIR NORMAL FLOOD CONTROL REGULATION SCHEDULE

Condition	Reservoir level	Flood control release	Control points
Pool Rising	Forecast: 681-683 ¹	3,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin. 45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
Do	Forecast: 683-685	5,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin. 45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
Do	Forecast: 685-691: (a) During January, February, March, April, July, August, November, December.	5,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin. 45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
	(b) During May, June, September, October.	30,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin.
Do	Forecast: 691-710	30,000 c.f.s	45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
Do	Forecast: 710-714	50,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin. 45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
Do	Forecast: 714-722 ²	90,000 c.f.s	50,000 c.f.s. (24.8 ft.) at Austin. 50,000 c.f.s. (26.7 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
Do	Forecast: above 722	The Bureau of Reclamation will specify the releases for safety of the structure.do.	No controls.
Pool Falling	Above 722do.	No controls.
Do	722-714 ²	90,000 c.f.s	50,000 c.f.s. (24.8 ft.) at Austin. 50,000 c.f.s. (26.7 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
Do	714-710	50,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin. 45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
Do	710-691	30,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin. 45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
Do	691-685: (a) During May, June, September, October.	30,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin. 45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
	(b) During January, February, March, April, July, August, November, December.	5,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin.
Do	685-683	5,000 c.f.s	45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.
Do	683-681	3,000 c.f.s	30,000 c.f.s. (20.5 ft.) at Austin. 45,000 c.f.s. (25.1 ft.) at Bastrop. 50,000 c.f.s. (25.5 ft.) at Columbus.

¹ During flood conditions, when the reservoir level is below elevation 681 ft., m.s.l., the Corps of Engineers will provide recommendations to the Lower Colorado River Authority on flood control releases.

² Releases shall not exceed the associated peak flood reservoir inflow.

NOTE: No curtailment of normal hydroelectric turbine releases shall be required due to flood control operations.

(5) *Deviation from normal regulation.*
(i) There are occasions when it is necessary or desirable to deviate from the water control plan for short periods of time as indicated in the following paragraphs:

(A) The water control plan is subject to temporary modification by the Corps of Engineers, if found necessary in time of emergency. Requests for and action on such modifications may be made by the fastest means of communication available. The action taken

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shall be confirmed in writing the same day to the project owner and shall include justification for the action.

(B) The project owner may temporarily deviate from the water control plan in the event an immediate short-term departure is deemed necessary for emergency reasons to protect the safety of the dam, or to avoid serious hazards. Such actions shall be immediately reported by the fastest means of communication available. Actions shall be confirmed in writing the same day to the Corps of Engineers and shall include justification for the action. Continuation of the deviation will require the express approval of the Chief of Engineers, or his duly authorized representative.

(C) Advance approval of the Chief of Engineers, or this duly authorized representative, is required prior to any deviation from the plan of regulation prescribed or approved by the Corps of Engineers in the interest of flood control and/or navigation, except in emergency situations provided for in paragraph (a)(5)(i)(B) of this section. When conditions appear to warrant a prolonged deviation from the approved plan, the project owner and the Corps of Engineers will jointly investigate and evaluate the proposed deviation to insure that the overall integrity of the plan would not be unduly compromised. Approval of prolonged deviations will not be granted unless such investigations and evaluations have been conducted to the extent deemed necessary by the Chief of Engineers, or his designated representative, to fully substantiate the deviations.

(ii) The Fort Worth District Corps of Engineers will serve as the LCRA contact point for any deviation from or modification of the water control plan. The communication network will be described in the Water Control Manual. The Fort Worth District will notify the Division Engineer, Southwestern Division, Corps of Engineers of any deviations or modifications of the water control plan and request his approval. The Division Engineer has been designated as the authorized representative of the Chief of Engineers in matters relating to projects within the Southwestern Division which are sub-

ject to provisions of Section 7 of the 1944 Flood Control Act.

(b) *Reports to the Corps of Engineers.*
(1) The Authority shall furnish the District Engineer, Fort Worth District, U.S. Army Corps of Engineers, by 0900 hours daily, with the following:

(i) Project information.
(A) Lake elevations at midnight and 0800 hours.

(B) Uncontrolled spillway, flood-control conduits, and turbine releases: Cubic feet per second at 0800 hours, and day-second-feet average for the previous 24 hours, ending at midnight.

(C) Computed average inflow, in day-second-feet for the previous 24 hours, ending at midnight.

(D) Total precipitation in inches for the previous 24 hours at the dam, ending at 0800 hours.

(E) Summary of streamflow and channel conditions at gages named in paragraphs (a)(2) and (a)(4)(i) of this section.

(ii) Lake Buchanan Pool elevation at 0800 hours.

(2) Whenever flood conditions are imminent, or stages of 16 feet (20,000 c.f.s.) or more at the Austin gage have been reached, the Authority shall report at once to the District Engineer by the fastest means of communications available. Data listed in paragraph (b)(1) of this section shall be reported to, and at intervals prescribed by the District Engineer for the duration of flood surveillance and control operations.

(Sec. 7, Pub. L. 78-534, 58 Stat. 890 (33 U.S.C. 709))

[44 FR 24552, Apr. 26, 1979; 44 FR 29050, May 18, 1979]

§ 208.22 Twin Buttes Dam and Reservoir, Middle and South Concho Rivers, Tex.

The Bureau of Reclamation, or its designated agent, shall operate the Twin Buttes Dam and Reservoir in the interest of flood control as follows:

(a) Whenever the Twin Buttes Reservoir level is between elevations 1,940.2 (top of conservation pool) and elevation 1,969.1 (top of flood control pool) the flood control discharge facilities shall be operated under the direction of the District Engineer, Corps of Engineers, Department of the Army, in

charge of the locality, so as to reduce as much as practicable the flood damage below the reservoir. All flood control releases shall be made in amounts which, when combined with releases from San Angelo Reservoir on the North Concho River and local inflow below the dam, will not produce flows in excess of bankful capacities on the South Concho and Concho Rivers downstream of the reservoir. In order to accomplish this purpose, flows shall not exceed a 22.5-foot stage (25,000 c.f.s.) on the USGS gage on the Concho River near San Angelo, Tex. (river mile 60.9); or a 22.8-foot stage (25,000 c.f.s.) on the USGS gage near Paint Rock, Tex. (river mile 19.6).

(b) When the Twin Buttes Reservoir level exceeds elevation 1,969.1 (top of flood control pool), releases shall be made at the maximum rate possible and continued until the pool elevation recedes to elevation 1,969.1 when releases shall be made to equal inflow or the maximum release permissible under paragraph (a) of this section, whichever is greater.

(c) The representative of the Bureau of Reclamation in immediate charge of operation of the Twin Buttes Dam shall furnish daily to the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, a report, on forms provided by the District Engineer for this purpose, showing (1) for Twin Buttes Reservoir, the elevation of the reservoir level; number of river outlet works gates in operation with their respective openings and releases; uncontrolled spillway releases; storage; reservoir inflow; available evaporation data; and precipitation in inches; and (2) for Nasworthy Reservoir, the elevation of the reservoir level; irrigation outlet works and controlled spillway releases; storage; tailwater elevation; and reservoir inflow. Normally, one reading at 8 a.m. shall be shown for each day. Readings of all items except evaporation shall be shown for at least three observations a day when the Twin Buttes Reservoir level is above elevation 1,940.2. Whenever the Twin Buttes Reservoir level rises to elevation 1,940.2 and releases for flood regulation are necessary or appear imminent, the Bureau representative shall report at once to the

District Engineer by telephone or telegraph and, unless otherwise instructed, shall report once daily thereafter in that manner until the reservoir level recedes to elevation 1,940.2. These latter reports shall reach the District Engineer by 9 a.m. each day.

(d) The regulations of this section insofar as they govern use of the flood control storage capacity in Twin Buttes Reservoir above elevation 1,940.2 are subject to temporary modification in time of flood by the District Engineer, if found desirable on the basis of conditions at the time. Such desired modifications shall be communicated to the representative of the Bureau of Reclamation in immediate charge of operations of the Twin Buttes Dam by any available means of communication and shall be confirmed in writing under date of the same day to the Regional Director in charge of the locality, with a copy to the representative in charge of the Twin Buttes Dam.

(e) Flood control operation shall not restrict releases necessary for municipal, industrial, and irrigation uses.

(f) Releases made in accordance with the regulations of this section are subject to the condition that releases shall not be made at rates or in a manner that would be inconsistent with emergency requirements for protecting the Twin Buttes Dam and Reservoir from major damage or inconsistent with safe routing of the inflow design flood (spillway design flood).

(g) The discharge characteristics of the river outlet works (capable of discharging approximately 32,470 c.f.s. with the reservoir level at elevation 1,969.1) shall be maintained in accordance with the construction plans (Bureau of Reclamation Specifications No. DC-5274 as modified by revised drawings and criteria in Designers' Operating Criteria, Twin Buttes Dam, dated February 1963).

(h) All elevations stated in this section are at Twin Buttes Dam and are referred to the datum in use at that location.

[31 FR 12521, Sept. 22, 1966]

§ 208.25

**§ 208.25 Pensacola Dam and Reservoir,
Grand (Neosho) River, Okla.**

The representative of the agency charged with the operation of the Pensacola Dam, referred to in this section as the Representative shall operate the dam and reservoir in the interest of flood control as follows:

(a) Whenever the pool stage exceeds elevation 745 at the dam, the discharge facilities shall be operated under the direction of the District Engineer, Engineer Department at Large, in charge of the locality, so as to reduce as much as practicable the flood damage below the reservoir and to limit the pool stage to elevation 755 at the dam.

(b) The District Engineer will advise the Representative when inflow rates are anticipated which will raise the pool above elevation 745 at the dam. The District Engineer will also advise the Representative of essential increase in the flood control storage capacity of the reservoir which should be provided by drawing the pool down below elevation 745 at the dam in order to obtain maximum flood control benefits, with the provision that the suggested reduction in power storage shall at no time exceed the replacement volume of flow then in sight in the streams above the reservoir.

(c) The Representative shall furnish the District Engineer, daily, a report showing the elevation of the reservoir pool and the tailwater, number of gates in operation, spillway and turbine releases, evaporation, storage, reservoir inflow, and precipitation in inches as shown by Agency gages. One reading shall be shown for each day with additional readings of releases for all changes in spillway gate operation, and with readings of all items except evaporation three times daily when the District Engineer advises the Representative that flood conditions are imminent. By agreement between the Representative and the District Engineer, any of the foregoing information may be furnished by telephone and may, if agreed upon, be omitted from the report. Whenever the pool is above elevation 745 at the dam the Representative shall submit additional reports by telegraph or telephone as directed by the District Engineer, with a report to be furnished immediately whenever the

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pool rises above elevation 745 at the dam.

(d) The District Engineer will furnish the Representative with all available information and detailed instructions for operation of the reservoir in the interest of flood control during an emergency condition when communications between the dam and the District Office are broken. In the event that the District Engineer or his authorized representative cannot be reached by telephone, telegraph or by other means during a flood emergency, these instructions will govern. The provisions of paragraphs (a), (b), and (c) of this section will govern at all times except during such an emergency.

(e) Elevations stated in this section are referred to Pensacola datum which is 1.07 feet below mean sea level.

[10 FR 15044, Dec. 14, 1945]

**§ 208.26 Altus Dam and Reservoir,
North Fork Red River, Okla.**

The Bureau of Reclamation, or its designated agent, shall operate the Altus Dam and Reservoir in the interest of flood control as follows:

(a) Flood control storage in the reservoir between elevation 1559 (top of conservation pool) and elevation 1562 (top of flood control pool) amounts to 21,448 acre-feet (based on 1953 sedimentation survey). Whenever the reservoir level is within this elevation range, the flood control discharge facilities shall be operated under the direction of the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, so as to reduce as much as practicable the flood damage below the dam, and to limit the reservoir level to elevation 1562 when possible.

(b) When the reservoir level is below elevation 1559 and the predicted volume of runoff from the area above the dam exceeds the volume of water necessary to raise the reservoir level above elevation 1559, the reservoir will be operated to obtain maximum overall benefits which may consist of preflood releases: *Provided*, That all preflood releases will have prior concurrence of the Bureau of Reclamation or its designated agent. The preflood releases shall not result in a reservoir level

below elevation 1559 at the end of the flood.

(c) When the reservoir level exceeds elevation 1559, releases will be made equal to inflow or 2,000 c.f.s., whichever is smaller, except that when the reservoir elevation forecast indicates that this operation will result in a reservoir level exceeding elevation 1562, releases will be increased in order to provide maximum overall benefits and prevent the reservoir level from exceeding elevation 1562, insofar as possible. The flood control pool will be emptied by continuing the peak discharge rate until the reservoir level recedes to elevation 1559, at which time releases will be made equal to inflow.

(d) If the reservoir level exceeds elevation 1562 (top of flood control pool) releases shall be made at the maximum rate possible through the spillway gates, conduit, and the uncontrolled spillway and continued until the reservoir level recedes to elevation 1559, at which time releases will be made equal to inflow.

(e) Whenever the reservoir level is above elevation 1559 and communication with the Bureau of Reclamation Regional Office and the Corps of Engineers District Office is unobtainable, releases shall be made equal to inflow until all gates are fully open. The maximum release thus obtained shall be maintained until the pool recedes to elevation 1559 at which time releases shall be made to equal inflow.

(f) The representative of the Bureau of Reclamation, or its designated agent, in immediate charge of the operation of Altus Dam will furnish daily to the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, a report on forms provided by the District for this purpose, showing the reservoir pool elevation; the number of spillway gates in operation with their respective opening and releases; the uncontrolled spillway release; conduit, canal outlet wasteway, and irrigation releases; storage; reservoir inflow; available evaporation data; and precipitation in inches. A reading at 8 a.m., noon, 4 p.m., and midnight, shall be shown for each day. Whenever the reservoir level rises to elevation 1559 and releases for flood control regulation are necessary

or appear imminent, the representative of the Bureau of Reclamation or its designated agent, shall report at once to the District Engineer by telephone or telegraph and, unless otherwise instructed, shall report at 8 a.m., noon, and 3 p.m. thereafter, in that manner, until the reservoir level recedes to elevation 1559. These latter reports shall reach the District Engineer by 9 a.m., 1 p.m., and 4 p.m. each day.

(g) The regulations of this section, insofar as they govern use of the flood control storage capacity above elevation 1559 are subject to temporary modification by the District Engineer in time of flood, if found desirable on the basis of conditions at the time. Such desired modifications shall be coordinated with and approved by the Bureau of Reclamation.

(h) Flood control operation shall not restrict releases necessary for irrigation, municipal, and industrial uses.

(i) Releases made in accordance with the regulations of this section are subject to the conditions that releases shall not be made at rates or in a manner that would be inconsistent with emergency requirements for protecting the dam and reservoir from major damage.

(j) Any time that the Bureau of Reclamation determines that operation in accordance with the regulations of this section will jeopardize the safety of Altus Dam, they will so advise the District Engineer and will assume operational responsibility and take action necessary to assure the safety of the dam.

(k) The discharge characteristics of the controlled and the uncontrolled spillways (capable of discharging approximately 42,800 c.f.s. and 2,000 c.f.s., respectively, with the reservoir level at elevation 1562) shall be maintained in accordance with the construction plans (Bureau of Reclamation Drawing No. 258-D-69).

(l) All elevations stated in this section are at Altus Dam and are referred to the datum in use at that location.

[33 FR 12733, Sept. 7, 1968]

§ 208.27 Fort Cobb Dam and Reservoir, Pond (Cobb) Creek, Oklahoma.

The Bureau of Reclamation shall operate the Fort Cobb Dam and Reservoir

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in the interest of flood control as follows:

(a) Whenever the reservoir level is between elevation 1342.0, top of the conservation pool, and elevation 1354.8, top of flood control pool, the flood control discharge facilities shall be operated under the direction of the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, so as to reduce as much as practicable the flood damage below the reservoir. All flood control releases shall be made in amounts which, when combined with local inflow below the dam, will not produce flows in excess of bankfull on Pond (Cobb) Creek downstream of the reservoir and on the Washita River downstream of their confluence. In order to accomplish this purpose, flows shall not exceed a 13.0-foot stage (1,300 cfs) on the USGS gage on Pond (Cobb) Creek near Fort Cobb, Oklahoma, river mile 5.0; a 19.0-foot stage (6,000 cfs) on the USGS gage on the Washita River near Anadarko, Oklahoma, river mile 305.0; or a 19.0-foot stage on the USGS gage near Bradley, Oklahoma, river mile 210.6.

(b) When the reservoir level exceeds elevation 1354.8, top of flood control pool, releases shall be made at the maximum rate possible and continued until the pool elevation recedes to elevation 1354.8 when releases shall be made to equal inflow or the maximum release permissible under paragraph (a) of this section, whichever is greater.

(c) The representative of the Bureau of Reclamation in immediate charge of operation of the Fort Cobb Dam shall furnish daily to the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, a report, on forms provided by the District Engineer showing the elevation of the reservoir level; number of river outlet works gates in operation with their respective openings and releases; uncontrolled spillway and municipal outlet works release; storage; tailwater elevation; reservoir inflow; available evaporation data; and precipitation in inches. Normally, one reading at 8:00 a.m., shall be shown for each day. Readings of all items except evaporation shall be shown for at least three observations a day when the reservoir level is above elevation 1342.0. When-

ever the reservoir level rises to elevation 1342.0 and releases for flood regulation are necessary or appear imminent, the Bureau representative shall report at once to the District Engineer by telephone or telegraph and, unless otherwise instructed, shall report once daily thereafter in that manner until the reservoir level recedes to elevation 1342.0. These latter reports shall reach the District Engineer by 9:00 a.m., each day.

(d) The regulations of this section insofar as they govern use of the flood control storage capacity above elevation 1342.0 are subject to temporary modification in time of flood by the District Engineer if found desirable on the basis of conditions at the time. Such desired modifications shall be communicated to the representative of the Bureau of Reclamation in immediate charge of operations of the Fort Cobb Dam by any available means of communication and shall be confirmed in writing under date of the same day to the Regional Director in charge of the locality, with a copy to the representative in charge of the Fort Cobb Dam.

(e) Flood control operation shall not restrict releases necessary for municipal-industrial and irrigation uses:

(f) Releases made in accordance with the regulations of this section are subject to the condition that releases shall not be made at rates or in a manner that would be inconsistent with emergency requirements for protecting the dam and reservoir from major damage or inconsistent with safe routing of the inflow design flood.

(g) All elevations stated in this section are at Fort Cobb Dam and are referred to the datum in use at that location.

[26 FR 3190, Apr. 14, 1961]

§ 208.28 Foss Dam and Reservoir, Washita River, Oklahoma.

The Bureau of Reclamation shall operate the Foss Dam and Reservoir in the interest of flood control as follows:

(a) Whenever the reservoir level is between elevation 1652.0, top of conservation pool, and elevation 1668.6, top of flood control pool, the flood control discharge facilities shall be operated

under the direction of the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, so as to reduce as much as practicable the flood damage below the reservoir. All flood control releases shall be made in amounts which, when combined with local inflow below the dam, will not produce flows in excess of bankfull on the Washita River downstream of the reservoir. In order to accomplish this purpose, flows shall not exceed an 18.0 foot stage (3,000 c.f.s.) on the USGS gage on the Washita River near Clinton, Oklahoma, river mile 447.4, or an 18.0 foot stage (6,000 c.f.s.) on the USGS gage on the Washita River near Carnegie, Oklahoma, river mile 353.9.

(b) When the reservoir level exceeds elevation 1668.6, top of flood control pool, releases shall be made at the maximum rate possible through the river outlet works and uncontrolled spillway and continued until the pool elevation recedes to elevation 1668.6 when releases shall be made to equal inflow or the maximum release permissible under paragraph (a) of this section, whichever is greater.

(c) The representative of the Bureau of Reclamation in immediate charge of operation of the Foss Dam shall furnish daily to the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, on forms provided by the District Engineer for this purpose, a report, showing the elevation of the reservoir level; number of river outlet works gates in operation with their respective openings and releases; canal outlet works, municipal outlet works and uncontrolled spillway releases; storage; tailwater elevation; reservoir inflow; available evaporation data; and precipitation in inches. Normally, one reading at 8:00 a.m. shall be shown for each day. Readings of all items except evaporation shall be shown for at least three observations a day when the reservoir level is above elevation 1652.0. Whenever the reservoir level rises to elevation 1652.0 and releases for flood regulation are necessary or appear imminent, the Bureau representative shall report at once to the District Engineer by telephone or telegraph and, unless otherwise instructed, shall report once daily thereafter in that man-

ner until the reservoir level recedes to elevation 1652.0. These latter reports shall reach the District Engineer by 9:00 a.m., each day.

(d) The regulations of this section insofar as they govern use of the flood control storage capacity above elevation 1652.0 are subject to temporary modification in time of flood by the District Engineer if found desirable on the basis of conditions at the time. Such desired modifications shall be communicated to the representative of the Bureau of Reclamation in immediate charge of operations of the Foss Dam by any available means of communication and shall be confirmed in writing under date of the same day to the Regional Director in charge of the locality, with a copy to the representative in charge of the Foss Dam.

(e) Flood control operations shall not restrict releases necessary for municipal-industrial and irrigation uses.

(f) Releases made in accordance with the regulations of this section are subject to the condition that releases shall not be made at rates or in a manner that would be inconsistent with emergency requirements for protecting the dam and reservoir from major damage or inconsistent with safe routing of the inflow design flood.

(g) All elevations stated in this section are at Foss Dam and are referred to the datum in use at that location.

[26 FR 6982, Aug. 3, 1961]

§ 208.29 Arbuckle Dam and Lake of the Arbuckles, Rock Creek, Okla.

The Bureau of Reclamation, or its designated agent, shall operate the Arbuckle Dam and Lake of the Arbuckles in the interest of flood control as follows:

(a) Flood control storage in Lake of the Arbuckles between elevation 872 (top of conservation pool) and elevation 885.3 (top of flood control pool) initially amounts to 36,400 acre-feet. Whenever the lake level is within this elevation range the flood control discharge facilities shall be operated under the direction of the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, so as to reduce as much as practicable of the flood damage below the lake. In order to accomplish this purpose, flood

control releases shall be limited to amounts, which when combined with local inflows below the dam will not produce flows in excess of bankfull on Rock Creek downstream of the lake and on the Washita River, from the confluence of Rock Creek to Durwood, Okla. Operating stages and corresponding flows are as follows: An 11-foot stage (15,000 c.f.s.) on the U.S.G.S. gage on Rock Creek near Dougherty, Okla., river mile 1; and a 20-foot stage (15,000 c.f.s.) on the U.S.G.S. gage on the Washita River near Durwood, Okla., river mile 63.4.

(b) When the level in Lake of the Arbuckles exceeds elevation 885.3 (top of flood control pool), releases shall be made at the maximum rate possible through the river outlet works and the uncontrolled spillway and continued until the lake level recedes to elevation 885.3 when releases shall be made to equal inflow or the maximum release permissible under paragraph (a) of this section, whichever is greater.

(c) The representative of the Bureau of Reclamation or its designated agent in immediate charge of operation of the Arbuckle Dam shall furnish daily to the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, a report, on forms provided by the District Engineer for this purpose, showing the lake elevation; the number of river outlet works gates in operation with their respective openings and releases; uncontrolled spillway release; municipal pumping rate; tailwater elevation; available evaporation data; and precipitation in inches. Normally, a reading at 8 a.m., noon, 4 p.m., and midnight shall be shown for each day. Whenever the lake level rises to elevation 872 and releases for flood regulation are necessary or appear imminent, the representative of the Bureau of Reclamation or its designated agent, shall report at once to the District Engineer by telephone or telegraph and unless otherwise instructed shall report once daily thereafter in that manner until the lake level recedes to elevation 872. These latter reports shall reach the District Engineer by 9 a.m. each day.

(d) The regulations of this section, insofar as they govern use of flood con-

trol storage capacity above elevation 872, are subject to temporary modification in time of flood by the District Engineer if found desirable on the basis of conditions at the time. Such desired modifications shall be communicated to the representative of the Bureau of Reclamation and its designated agent in immediate charge of operation of the Arbuckle Dam by any available means of communication, and shall be confirmed in writing under date of the same day to the Regional Director in charge of the locality, and his designated agent, with a copy to the representative in charge of the Arbuckle Dam.

(e) Flood control operation shall not restrict pumping necessary for municipal and industrial uses and releases necessary for downstream users.

(f) Releases made in accordance with the regulations of this section are subject to the condition that releases shall not be made at rates or in a manner that would be inconsistent with emergency requirements for protecting the dam and lake from major damage or inconsistent with the safe routing of the inflow design flood (spillway design flood).

(g) The discharge characteristics of the river outlet works (capable of discharging approximately 1,880 c.f.s. when the lake level is at 872) shall be maintained in accordance with the construction plans (Bureau of Reclamation Specifications No. 6099 as modified by the "as built" drawings).

(h) All elevations stated in this section are at Arbuckle Dam and are referred to the datum in use at that location.

[33 FR 263, Jan. 9, 1968]

§ 208.32 Sanford Dam and Lake Meredith, Canadian River, Tex.

The Bureau of Reclamation, or its designated agent, shall operate the Sanford Dam and Lake Meredith in the interest of flood control as follows:

(a) Flood control storage in the reservoir, Lake Meredith, between elevation 2941.3 (top of conservation pool) and elevation 2965.0 (top of flood control pool) initially amounts to 462,100 acre-feet. Whenever the reservoir level is within this elevation range, the flood

control discharge facilities shall be operated under the direction of the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, so as to reduce as much as practicable the flood damage below the reservoir. All flood control releases shall be made in amounts which, when combined with local inflow below the dam, will not produce flows in excess of bankfull on the Canadian River downstream of the reservoir. In order to accomplish this purpose, flows shall not exceed 25,000 c.f.s. at the Sanford Dam site or an 8.0-foot stage (75,000 c.f.s.) on the U.S.G.S. gage on the Canadian River near Canadian, Tex., river mile 433.9.

(b) When the reservoir level exceeds elevation 2965.0 (top of flood control pool) releases shall be made at the maximum rate possible through the flood control outlet works, the river outlet works and the uncontrolled spillway and continue until the pool level recedes to elevation 2965.0 when releases will be made to equal inflow or the maximum release permissible under paragraph (a) of this section, whichever is greater.

(c) The representative of the Bureau of Reclamation, or its designated agent in immediate charge of operation of the Sanford Dam will furnish daily to the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, a report, on forms provided by the District Engineer for this purpose showing the pool elevation; the number of flood control outlet works gates in operation with their respective openings and releases; the uncontrolled spillway release; and the municipal outlet works release; storage; tailwater elevation; reservoir inflow; available evaporation data; and precipitation in inches. Normally a reading at 8 a.m., noon, 4 p.m., and midnight, shall be shown for each day. Readings of all items except evaporation shall be shown for at least four observations a day when the reservoir level is at or above elevation 2941.3. Whenever the reservoir level rises to elevation 2941.3 and releases for flood regulation are necessary or appear imminent, the representative of the Bureau of Reclamation, or its designated agent, shall report at once to the Dis-

trict Engineer by telephone or telegraph and, unless otherwise instructed, will report once daily thereafter in that manner until the reservoir level recedes to elevation 2941.3. These latter reports shall reach the District Engineer by 9 a.m. each day.

(d) The regulations of this section, insofar as they govern use of the flood control storage capacity above elevation 2941.3, are subject to temporary modification in time of flood by the District Engineer if found desirable on the basis of conditions at the time. Such desired modifications shall be communicated to the representative of the Bureau of Reclamation and its designated agent in immediate charge of operation of the Sanford Dam by the best available means of communication, and shall be confirmed in writing under date of the same day to the Regional Director in charge of the locality, and his designated agent, with a copy to the representative in charge of the Sanford Dam.

(e) Flood control operation shall not restrict pumping necessary for municipal and industrial uses and releases necessary for downstream users.

(f) Release made in accordance with the regulations of this section are subject to the condition that releases shall not be made at rates or in a manner that would be inconsistent with emergency requirements for protecting the dam and reservoir from major damage or inconsistent with the safe routing of the inflow design flood (spillway design flood).

(g) The discharge characteristics of the flood control outlet works (capable of discharging approximately 22,000 c.f.s. with the reservoir level at elevation 2941.3) shall be maintained in accordance with the construction plans (Bureau of Reclamation Specifications No. DC-5725 as modified by revised drawings and criteria in Designers' Operating Criteria, Sanford Dam, dated October 1965).

(h) All elevations stated in this section are at Sanford Dam and are referred to the datum in use at that location.

[31 FR 7751, June 1, 1966]

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**§ 208.33 Cheney Dam and Reservoir,
North Fork of Ninnescah River,
Kans.**

The Bureau of Reclamation, or its designated agent, shall operate the Cheney Dam and Reservoir in the interest of flood control as follows:

(a) Flood control storage in the reservoir is the capacity between elevation 1421.6 (top of the conservation pool) and elevation 1429.0 (top of the flood control pool), and initially amounts to 80,860 acre-feet. Whenever the reservoir level is within this range the flood control discharge facilities shall be operated under the direction of the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, so as to reduce as much as practicable the flood damage below the reservoir. All flood control releases shall be made in amounts which, when combined with local inflow below the dam, will not produce flows in excess of bankfull on the North Fork of Ninnescah and Ninnescah River downstream of the reservoir and on the Arkansas River to Arkansas City, Kans. In order to accomplish this, flows shall not exceed a 90-foot stage (2,500 c.f.s.) on the U.S.G.S. gage on North Fork of Ninnescah River near Cheney, Kans., river mile 8.8; a 12-foot stage (7,000 c.f.s.) on the U.S.G.S. gage on Ninnescah River near Peck, Kans., river mile 31.6; and a 16-foot stage (18,000 c.f.s.) on the U.S.W.B. gage on Arkansas River at Arkansas City, Kans., river mile 701.4.

(b) When the reservoir level exceeds elevation 1429.0 (top of flood control pool), releases shall be made at the maximum rate possible through the river outlet works and the uncontrolled spillway and continued until the pool recedes to elevation 1429.0 when releases shall be made to equal inflow or the maximum release permissible under paragraph (a) of this section, whichever is greater.

(c) The representative of the Bureau of Reclamation or its designated agent in immediate charge of operation of the Cheney Dam shall furnish daily to the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, a report, on forms provided by the District Engi-

neer for this purpose, showing the pool elevation; the number of river outlet works gates in operation with their respective openings and releases; uncontrolled spillway release; municipal pumping rate; storage; tailwater elevation; reservoir inflow; available evaporation data; and precipitation in inches. Normally, a reading at 8 a.m., noon, 4 p.m., and midnight, shall be shown for each day. Whenever the reservoir pool rises to elevation 1421.6 and releases for flood regulation are necessary or appear imminent, the representative of the Bureau of Reclamation or its designated agent, shall report at once to the District Engineer by telephone or telegraph, and, unless otherwise instructed, shall report once daily thereafter in that manner until the reservoir pool recedes to elevation 1421.6. These latter reports shall reach the District Engineer by 9 a.m. each day.

(d) The regulations of this section, insofar as they govern use of flood control storage capacity above elevation 1421.6, are subject to temporary modification in time of flood by the District Engineer if found desirable on the basis of conditions at the time. Such desired modifications shall be communicated to the representative of the Bureau of Reclamation and its designated agent in immediate charge of operations of the Cheney Dam by any available means of communication, and shall be confirmed in writing under date of the same day to the Regional Director in charge of the locality, and his designated agent, with a copy to the representative in charge of the Cheney Dam.

(e) Flood control operation shall not restrict pumping necessary for municipal and industrial uses and releases necessary for downstream users.

(f) Releases made in accordance with the regulations of this section are subject to the condition that releases shall not be made at rates or in a manner that would be inconsistent with emergency requirements for protecting the dam and reservoir from major damage or inconsistent with the safe routing of the inflow design flood (spillway design flood).

(g) The discharge characteristics of the river outlet works (capable of discharging approximately 3,590 c.f.s. with the reservoir level at elevation 1421.6) shall be maintained in accordance with the construction plans (Bureau of Reclamation Specifications No. DC-5744 as modified by revised drawings and criteria in Designers' Operating Criteria, Cheney Dam, dated November 1964).

(h) All elevations stated in this section are at Cheney Dam and are referred to the datum in use at that location.

[31 FR 7751, June 1, 1966]

§ 208.34 Norman Dam and Lake Thunderbird, Little River, Okla.

The Bureau of Reclamation, or its designated agent, shall operate Norman Dam and Lake Thunderbird in the interest of flood control as follows:

(a) Flood control storage in Lake Thunderbird between elevation 1039 (top of the conservation pool) and elevation 1049.4 (top of flood control pool) initially amounts to 76,600 acre-feet. Whenever the reservoir level is within this elevation range the flood control discharge facilities at Norman Dam shall be operated under the direction of the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, so as to reduce as much as practicable the flood damage below the reservoir. In order to accomplish this purpose, flood control releases shall be limited to amounts which, when combined with local inflows below the dam, will not produce flows in excess of bankfull on the Little River downstream of the reservoir. Controlling bankfull stages and corresponding flows, as presently estimated, are as follows: A 7.5-foot stage (1,800 c.f.s.) on the U.S.G.S. gage on Little River near Tecumseh, Okla., river mile 77.2 and a 17-foot stage (6,500 c.f.s.) on the U.S.G.S. gage on Little River near Sasakwa, Okla., river mile 24.1.

(b) When the reservoir level in Lake Thunderbird exceeds elevation 1049.4 (top of flood control pool), releases shall be made at the maximum rate possible through the river outlet works and the uncontrolled spillway and continued until the pool recedes to elevation 1049.4 when releases shall be

made to equal inflow or the maximum release permissible under paragraph (a) of this section, whichever is greater.

(c) The representative of the Bureau of Reclamation or its designated agent in immediate charge of operation of the Norman Dam shall furnish daily to the District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, a report, on forms provided by the District Engineer showing the pool elevation; the number of river outlet works gates in operation with their respective openings and releases; uncontrolled spillway release; municipal pumping rate; storage; tail water elevation; reservoir inflow; available evaporation data; and precipitation in inches. Normally, a reading at 8 a.m., noon, 4 p.m. and midnight, shall be shown for each day. Whenever the reservoir level rises to elevation 1039 and releases for flood regulation are necessary or appear imminent, the representative of the Bureau of Reclamation or its designated agent, shall report at once to the District Engineer by telephone or telegraph and, unless otherwise instructed, shall report once daily thereafter in that manner until the reservoir level recedes to elevation 1039. These latter reports shall reach the District Engineer by 9 a.m. each day.

(d) The regulations of this section, insofar as they govern use of flood control storage capacity above elevation 1039.0, are subject to temporary modification in time of flood by the District Engineer if found desirable on the basis of conditions at the time. Such desired modifications shall be communicated to the representative of the Bureau of Reclamation and its designated agent in immediate charge of operations of the Norman Dam by any available means of communication, and shall be confirmed in writing under date of the same day to the Regional Director in charge of the locality, and his designated agent, with a copy to the representative in charge of the Norman Dam.

(e) Flood control operation shall not restrict pumping necessary for municipal and industrial uses and releases necessary for downstream users.

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(f) Releases made in accordance with the regulations of this section are subject to the condition that releases shall not be made at rates or in a manner that would be inconsistent with emergency requirements for protecting the dam and reservoir from major damage or inconsistent with the safe routing of the inflow design flood (spillway design flood).

(g) The discharge characteristics of the river outlet works (capable of discharging approximately 5,400 c.f.s. with the reservoir level at elevation 1039.0) shall be maintained in accordance with the construction plans (Bureau of Reclamation Specifications No. DC-5793 as revised by the "as built drawings").

(h) All elevations stated in this section are at Norman Dam and are referred to the datum in use at that location.

[34 FR 4967, Mar. 7, 1969]

§ 208.82 Hetch Hetchy, Cherry Valley, and Don Pedro Dams and Reservoirs.

The Turlock Irrigation District and Modesto Irrigation District, acting jointly, hereinafter called the Districts, shall operate Don Pedro Dam and Reservoir in the interest of flood control, and the City and County of San Francisco, hereinafter called the City, shall operate Hetch Hetchy Dam and Reservoir and Cherry Valley Dam and Reservoir in the interest of flood control all as follows:

(a) Storage space in Don Pedro Reservoir shall be kept available for flood-control purposes in accordance with the Flood-Control Storage Reservation Diagram currently in force for that reservoir, except when storage of floodwater is necessary as prescribed in paragraph (d) of this section. The Flood-Control Storage Reservation Diagram in force as of the promulgation of this section is that dated 4 April 1956, File No. TU-1-26-7, and is on file in the Office of the Chief of Engineers, Department of the Army, Washington, D.C., in the office of the Turlock Irrigation District, Turlock, California, and in the office of the Modesto Irrigation District, Modesto, California. Revisions of the Flood-Control Storage Reservation Diagram may be developed from time to time as nec-

essary by the Corps of Engineers and the Districts. Each such revision shall be effective upon the date specified in the approval thereof by the Chief of Engineers and by the presidents of the Districts and from that date until replaced shall be the Flood-Control Storage Reservation Diagram currently in force for the purpose of this section. Copies of the Flood-Control Storage Reservation Diagram currently in force shall be kept on file in and may be obtained from the office of the District Engineer, Corps of Engineers, in charge of the locality, the office of the Turlock Irrigation District, Turlock, California, and the office of the Modesto Irrigation District, Modesto, California.

(b) Storage space in Hetch Hetchy Reservoir shall be kept available for flood-control purposes in accordance with the Flood-Control Storage Reservation Diagram for that reservoir currently in force, except when storage of floodwater is necessary as prescribed in paragraph (e) of this section. The Flood-Control Storage Reservation Diagram in force as of the promulgation of this section is that dated April 4, 1956, File No. TU-3-26-1, and is on file in the Office, Chief of Engineers, Department of the Army, Washington, D.C., and in the office of the Public Utilities Commission of the City and County of San Francisco, California. Revisions of the Flood-Control Storage Reservation Diagram may be developed from time to time as necessary by the Corps of Engineers and the City. Each such revision shall be effective upon the date specified in the approval thereof by the Chief of Engineers and by the Public Utilities Commission of the City and County of San Francisco, California, and from that date until replaced shall be the Flood-Control Storage Reservation Diagram currently in force for the purpose of this section. Copies of the Flood-Control Storage Reservation Diagram currently in force shall be kept on file in and may be obtained from the office of the District Engineer, Corps of Engineers, in charge of the locality, and the office of the Public Utilities Commission of the City and County of San Francisco, California.

(c) Storage space in Cherry Valley Reservoir shall be kept available for flood-control purposes in accordance with the Flood-Control Reservation Diagram currently in force for that reservoir except when storage of flood-water is necessary as prescribed in paragraph (e) of this section. The Flood-Control Storage Reservoir Diagram in force as of the promulgation of this section is that dated April 4, 1956, File No. TU-2-26-6, and is on file in the Office, Chief of Engineers, Corps of Engineers, Department of the Army, Washington, D.C., and in the office of the Public Utilities Commission of the City and County of San Francisco, California. Revisions of the Flood-Control Storage Reservation Diagram may be developed from time to time as necessary by the Corps of Engineers and the City. Each such revision shall be effective upon the date specified in the approval thereof by the Chief of Engineers and by the Public Utilities Commission of the City and County of San Francisco, California, and from that date until replaced shall be the Flood-Control Storage Reservation Diagram currently in force for the purpose of this section. Copies of the Flood-Control Storage Reservation Diagram currently in force shall be kept on file in and may be obtained from the office of the District Engineer, Corps of Engineers, in charge of the locality, and the office of the Public Utilities Commission of the City and County of San Francisco, California.

(d) Any water temporarily stored in the flood-control space indicated by the Flood-Control Storage Reservation Diagram currently in force for Don Pedro Reservoir shall be released as rapidly as can be accomplished without causing flows in Tuolumne River below LaGrange Dam to exceed 7,000 c.f.s. during rain floods or to exceed 9,000 c.f.s. at all other times.

(e) Any water temporarily stored in the flood-control space indicated by the Flood-Control Storage Reservation Diagrams currently in force for Hetch Hetchy and Cherry Valley Reservoirs shall be released as rapidly as can be accomplished without exceeding the respective safe channel capacities, and without materially contributing to major encroachment into the flood-

control space at Don Pedro Reservoir. Such releases shall be proportioned between Hetch Hetchy and Cherry Valley Reservoirs in such manner as to assure that the percentage of encroachment into the flood-control space at the two reservoirs will tend toward equality insofar as possible. Whenever the storage space in Don Pedro Reservoir is less than 90 percent of that indicated by the Flood-Control Storage Reservation Diagram currently in force for that reservoir, releases from Hetch Hetchy and Cherry Valley Reservoirs shall be restricted to those required in connection with the generation of hydroelectric power in the power system of the City and in connection with diversion into the water supply system of the City.

(f) In the event that the water level in Don Pedro Reservoir rises above elevation 605.55 at the dam (top of spillway gates), subsequent operation of the dam shall be such as to cause downstream flows to exceed as little as possible the criteria prescribed in paragraph (d) of this section, and in no event to cause the maximum subsequent release from the reservoir to exceed the estimated maximum subsequent inflow to the reservoir.

(g) In the event that the water level in Hetch Hetchy Reservoir rises above elevation 3806 at the dam (top of spillway gates), subsequent operation of the dam shall be such as to cause downstream flows to exceed as little as possible the criteria prescribed in paragraph (e) of this section, and in no event to cause the maximum subsequent release from the reservoir to exceed the estimated maximum subsequent inflow to the reservoir.

(h) In the event that the water level in Cherry Valley Reservoir rises above elevation 4700 at the dam (spillway crest), subsequent operation of the dam shall be such as to cause downstream flows to exceed as little as possible the criteria prescribed in paragraph (e) of this section, and in no event to cause the maximum subsequent release from the reservoir to exceed the estimated maximum subsequent inflow to the reservoir.

(i) Nothing in the regulations of this section shall be construed to require

dangerously rapid changes in magnitudes of releases from any of the reservoirs.

(j) The Districts shall procure such current basic hydrologic data, make such current determinations of required flood-control storage reservation in Don Pedro Reservoir, and current calculations of permissible releases from Don Pedro Reservoir as are required to accomplish the flood-control objectives of the regulations of this section.

(k) The City shall procure such current basic hydrologic data, and make such current calculations of permissible releases from Hetch Hetchy and Cherry Valley Reservoirs as are required to accomplish the flood-control objectives of the regulations of this section.

(l) The City shall keep the District Engineer, Corps of Engineers, in charge of the locality, and the Districts currently advised of reservoir releases, reservoir storages, basic operating criteria which affect the schedule of operations, and such other operating data as the District Engineer, Corps of Engineers, may request for Hetch Hetchy, Eleanor, and Cherry Valley Reservoirs.

(m) The Districts shall keep the District Engineer, Corps of Engineers, in charge of the locality, and the City currently advised of reservoir releases, reservoir storages, basic operating criteria which affect the schedule of operations, and such other operating data as the District Engineer, Corps of Engineers, may request for Don Pedro Reservoir.

(n) The flood-control regulations of this section are subject to temporary modification by the District Engineer, Corps of Engineers, if found necessary in time of flood emergency. Request for and action on such modifications may be made by any available means of communication, and such action shall be confirmed in writing under date of same day to the operating agency for the reservoir affected.

[21 FR 2682, Apr. 26, 1956]

PART 209—ADMINISTRATIVE PROCEDURE

Sec.

- 209.50 Mississippi River Commission: Public observation of Commission meetings.
- 209.138a Authorization for exploratory drilling in the Gulf of Santa Catalina, Calif.
- 209.140 Operations of the Corps of Engineers under the Federal Power Act.
- 209.141 Coordination of hydroelectric power operations with power marketing agencies.
- 209.155 Expenditure of Federal funds for work shoreward of harbor lines.
- 209.160 The California Debris Commission.
- 209.170 Violations of laws protecting navigable waters.
- 209.180 Temporary closure of waterway to navigation.
- 209.190 [Reserved]
- 209.200 Regulations governing navigable waters.
- 209.220 Flood control regulations.
- 209.230 Use of reservoir areas for recreation.
- 209.300 Flood control regulations.
- 209.310 Representation of submarine cables and pipelines on nautical charts.
- 209.315 Public access to navigation works.
- 209.320 Policy on release of commercial statistics.
- 209.325 Navigation lights, aids to navigation, navigation charts, and related data policy, practices and procedure.
- 209.335 Publication.
- 209.340 Laboratory investigations and materials testing.
- 209.345 Water resource policies and authorities.

APPENDIX A TO PART 209—PUBLIC LAW 90-483, 90TH CONGRESS, S. 3710, AUGUST 13, 1968

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SOURCE: 33 FR 18670, Dec. 18, 1968, unless otherwise noted.

§ 209.50 Mississippi River Commission: Public observation of Commission meetings.

(a) *Purpose.* (1) The purpose of this regulation is to afford to the public, to the fullest possible extent, information regarding the decisionmaking processes of the Mississippi River Commission and to open all meetings of the Mississippi River Commission to public observation except in instances where a portion or portions of a meeting may be closed to the public in accordance with this regulation in order to protect the rights of individuals and/or in order to permit the Mississippi River Commission to carry out its statutory and