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	Engineering and Design WATER CONTROL MANAGEMENT	
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DAEN-CWH-W

DEPARTMENT OF THE ARMY
U. S. Army Corps of Engineers
Washington, DC 20314-1000

ER 1110-2-240
Change 1

Regulation
No. 1110-2-240

30 April 1987

Engineering and Design
WATER CONTROL MANAGEMENT

1. This change to ER 1110-2-240, dated 8 October 1982, corrects the original Appendix E which is now void.
2. Substitute the attached pages as shown below:

Remove pages

Insert pages

Appendix E

Appendix E

3. File this change sheet in front of the publication for reference purposes.

FOR THE COMMANDER:



ARTHUR E. WILLIAMS
Colonel, Corps of Engineers
Chief of Staff

CECW-EH-W

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, DC 20314

ER 1110-2-240
33 CFR Part 222
Sec 222.7
Change 2

Regulation
No. 1110-2-240

1 March 1994

Engineering and Design
WATER CONTROL MANAGEMENT

1. This change to ER 1110-2-240, 8 October 1982, expands the Corps requirements for public meetings and public involvement in preparing water control plans in order to conform with the requirements of Public Law 101-640 (Water Resources Development Act of 1990), Section 310.(b). The guidance contained in this change was announced to the public in the Tuesday, August 11, 1992 issue of the Federal Register.

2. Substitute the attached pages as shown below:

Remove Pages

5 and 6

Insert Pages

4a, 5, and 6

3. File this change sheet in front of the regulation for reference purposes.

FOR THE COMMANDER:



WILLIAM D. BROWN
Colonel, Corps of Engineers
Chief of Staff

Regulation
No. 1110-2-240

8 October 1982

Engineering and Design
WATER CONTROL MANAGEMENT

1. Purpose. This regulation prescribes policies and procedures to be followed by the US Army Corps of Engineers in carrying out water control management activities, including establishment of water control plans for Corps and non-Corps projects, as required by Federal laws and directives.
2. Applicability. This regulation is applicable to all field operating activities having civil works responsibilities.
3. References. Appendix A lists US Army Corps of Engineers publications and sections of Federal statutes and regulations that are referenced herein.
4. Authorities.

a. US Army Corps of Engineers Projects. Authorities for allocation of storage and regulation of projects owned and operated by the Corps of Engineers are contained in legislative authorization acts and referenced project documents. These public laws and project documents usually contain provisions for development of water control plans, and appropriate revisions thereto, under the discretionary authority of the Chief of Engineers. Some modifications in project operation are permitted under congressional enactments subsequent to original project authorization. Questions that require interpretations of authorizations affecting regulation of specific reservoirs will be referred to CDR USACE (DAEN-CWE-HW), WASH DC 20314, with appropriate background information and analysis, for resolution.

b. Non-Corps Projects. The Corps of Engineers is responsible for prescribing flood control and navigation regulations for certain reservoir projects constructed or operated by other Federal, non-Federal or private agencies. There are several classes of such projects: Those authorized by special acts of Congress; those for which licenses issued by the Federal Energy Regulatory Commission (Formerly Federal Power Commission) provide that operation shall be in accordance with instructions of the Secretary of the Army; those covered by agreements between the operating agency and the Corps of Engineers; and those that fall under the terms of general legislative and administrative provisions. These authorities, or illustrative examples, are described briefly in Appendix B.

This regulation supersedes ER 1110-2-240, 22 April 1970

5. Terminology: Water Control Plans and Reservoir Regulation Schedules.

a. Water control plans include coordinated regulation schedules for project/system regulation and such additional provisions as may be required to collect, analyze and disseminate basic data, prepare detailed operating instructions, assure project safety and carry out regulation of projects in an appropriate manner.

b. The term "reservoir regulation schedule" refers to a compilation of operating criteria, guidelines, rule curves and specifications that govern basically the storage and release functions of a reservoir. In general, schedules indicate limiting rates of reservoir releases required during various seasons of the year to meet all functional objectives of the particular project, acting separately or in combination with other projects in a system. Schedules are usually expressed in the form of graphs and tabulations, supplemented by concise specifications.

6. General Policies.

a. Water control plans will be developed for reservoirs, locks and dams, reregulation and major control structures and interrelated systems to conform with objectives and specific provisions of authorizing legislation and applicable Corps of Engineers reports. They will include any applicable authorities established after project construction. The water control plans will be prepared giving appropriate consideration to all applicable Congressional Acts relating to operation of Federal facilities, i.e., Fish and Wildlife Coordination Act (P.L. 85-624), Federal Water Project Recreation Act-Uniform Policies (P.L. 89-72), National Environmental Policy Act of 1969 (P.L. 91-190), and Clean Water Act of 1977 (P.L. 95-217). Thorough analysis and testing studies will be made as necessary to establish the optimum water control plans possible within prevailing constraints.

b. Necessary actions will be taken to keep approved water control plans up-to-date. For this purpose, plans will be subject to continuing and progressive study by personnel in field offices of the Corps of Engineers. These personnel will be professionally qualified in technical areas involved and familiar with comprehensive project objectives and other factors affecting water control. Organizational requirements for water control management are further discussed in ER 1110-2-1400.

c. Water control plans developed for specific projects and reservoir systems will be clearly documented in appropriate water control manuals. These manuals will be prepared to meet initial requirements when storage in the reservoir begins. They will be revised as necessary to conform with changing requirements resulting from developments in the project area and downstream, improvements in technology, new legislation and other relevant factors, provided such revisions comply with existing Federal regulations and established Corps of Engineers policy.

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d. Development and execution of water control plans will include appropriate consideration for efficient water management in conformance with the emphasis on water conservation as a national priority. The objectives of efficient water control management are to produce beneficial water savings and improvements in the availability and quality of water resulting from project regulation/operation. Balanced resource use through improved regulation should be developed to conserve as much water as possible and maximize all project functions consistent with project/system management. Continuous examination should be made of regulation schedules, possible need for storage reallocation (within existing authority and constraints) and to identify needed changes in normal regulation. Emphasis should be placed on evaluating conditions that could require deviation from normal release schedules as part of drought contingency plans (ER 1110-2-1941).

e. Adequate provisions for collection, analysis and dissemination of basic data, the formulation of specific project regulation directives, and the performance of project regulation will be established at field level.

f. Appropriate provisions will be made for monitoring project operations, formulating advisories to higher authorities, and disseminating information to others concerned. These actions are required to facilitate proper regulation of systems and to keep the public fully informed regarding all pertinent water control matters.

g. In development and execution of water control plans, appropriate attention will be given to project safety in accordance with ER 1130-2-417 and ER 1130-2-419 so as to insure that all water impounding structures are operated for the safety of users of the facilities and the general public. Care will be exercised in the development of reservoir regulation schedules to assure that controlled releases minimize project impacts and do not jeopardize the safety of persons engaged in activities downstream of the facility. Water control plans will include provisions for issuing adequate warnings or otherwise alerting all affected interests to possible hazards from project regulation activities.

h. In carrying out water control activities, Corps of Engineers personnel must recognize and observe the legal responsibility of the National Weather Service (NWS), National Oceanic and Atmospheric Administration (NOAA), for issuing weather forecasts and flood warnings, including river discharges and stages. River forecasts prepared by the Corps of Engineers in the execution of its responsibilities should not be released to the general public, unless the NWS is willing to make the release or agrees to such dissemination. However, release to interested parties of factual information on current storms or river conditions and properly quoted NWS forecasts is permissible. District offices are encouraged to provide assistance to communities and individuals regarding

the impact of forecasted floods. Typical advice would be to provide approximate water surface elevations at locations upstream and downstream of the NWS forecasting stream gages. Announcement of anticipated changes in reservoir release rates as far in advance as possible to the general public is the responsibility of Corps of Engineers water control managers for projects under their jurisdiction.

i. Water control plans will be developed in concert with all basin interests which are or could be impacted by or have an influence on project regulation. Close coordination will be maintained with all appropriate international, Federal, State, regional and local agencies in the development and execution of water control plans. Effective public information programs will be developed and maintained so as to inform and educate the public regarding Corps of Engineers water control management activities.

j. Fiscal year budget requests for water control management activities will be prepared and submitted to the Office of the Chief of Engineers in accordance with requirements established in Engineer Circular on Annual Budget Requests for Civil Works Activities. The total annual costs of all activities and facilities that support the water control functions, (excluding physical operation of projects, but including flood control and navigation regulation of projects subject to 33 CFR 208.11) are to be reported. Information on the Water Control Data Systems and associated Communications Category of the Plant Replacement and Improvement Program will be submitted with the annual budget. Reporting will be in accordance with the annual Engineer Circular on Civil Works Operations and Maintenance, General Program.

7. Responsibilities: US Army Corps of Engineers Projects.

a. Preparation of Water Control Plans and Manuals. Normally, district commanders are primarily responsible for background studies and for developing plans and manuals required for reservoirs, locks and dams, reregulation and major control structures and interrelated systems in their respective district areas. Policies and general guidelines are prescribed by OCE engineer regulations while specific requirements to implement OCE guidance are established by the division commanders concerned. Master Water Control Manuals for river basins that include more than one district are usually prepared by or under direct supervision of division representatives. Division commanders are responsible for providing such management and technical assistance as may be required to assure that plans and manuals are prepared on a timely and adequate basis to meet water control requirements in the division area, and for pertinent coordination among districts, divisions, and other appropriate entities.

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b. Public Involvement and Information.

(1) Public Meeting and Public Involvement. The Corps of Engineers will sponsor public involvement activities, as appropriate, to apprise the general public of the water control plan. In developing or modifying water control manuals, the following criteria is applicable.

(a) Conditions that require public involvement and public meetings include: development of a new water control manual that includes a water control plan; or revision or update of a water control manual that changes the water control plan.

(b) Revisions to water control manuals that are administrative or informational in nature and that do not change the water control plan do not require public meetings.

(c) For those conditions described in paragraph (a) above, the Corps will provide information to the public concerning proposed water control management decisions at least 30 days in advance of a public meeting. In so doing, a separate document(s) should be prepared that explains the recommended water control plan or change, and provides technical information explaining the basis for the recommendation. It should include a description of its impacts (both monetary and nonmonetary) for various purposes, and the comparisons with alternative plans or changes and their effects. The plan or manual will be prepared only after the public involvement process associated with its development or change is complete.

(d) For those conditions described in paragraph (a) above, the responsible division office will send each proposed water control manual to the Army Corps of Engineers Headquarters, ATTN: CECW-EH-W for review and comment prior to approval by the responsible division office.

(2) Information Availability. 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. Public notice shall be given in the event of occurring or anticipated significant changes in reservoir storage or flow releases. The method of conveying this information shall be commensurate with the urgency of the situation and the lead time available.

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c. Authority for Approval of Plans and Manuals. Division commanders are delegated authority for approval of water control plans and manuals, and associated activities.

d. OCE Role in Water Control Activities. OCE will establish policies and guidelines applicable to all field offices and for such actions as are necessary to assure a reasonable degree of consistency in basic policies and practices in all Division areas. Assistance will be provided to field offices during emergencies and upon special request.

e. Methods Improvement and Staff Training. Division and district commanders are responsible for conducting appropriate programs for improving technical methods applicable to water control activities in their respective areas. Suitable training programs should be maintained to assure a satisfactory performance capability in water control activities. Appropriate coordination of such programs with similar activities in other areas will be accomplished to avoid duplication of effort, and to foster desirable exchange of ideas and developments. Initiative in re-evaluating methods and guidelines previously established in official documents referred to in paragraph 9 is encouraged where needs are evident. However, proposals for major deviations from basic concepts, policies and general practices reflected in official publications will be submitted to CDR USACE (DAEN-CWE) WASH DC 20314 for concurrence or comment before being adopted for substantial application in actual project regulation at field level.

8. Directives and Technical Instruction Manuals.

a. Directives issued through OCE Engineer Regulations will be used to foster consistency in policies and basic practices. They will be supplemented as needed by other forms of communication.

b. Engineering Manuals (EM) and Engineer Technical Letters (ETL) are issued by OCE to serve as general guidelines and technical aids in developing water control plans and manuals for individual projects or systems.

c. EM 1110-2-3600 discusses principles and concepts involved in developing water control plans. Instructions relating to preparation of "Water Control Manuals for specific projects" are included. EM 1110-2-3600 should be used as a general guide to water control activities. The instructions are sufficiently flexible to permit adaptation to specific regions. Supplemental information regarding technical methods is provided in numerous documents distributed to field offices as "hydrologic references."

d. Special assistance in technical studies is available from the Hydrologic Engineering Center, Corps of Engineers, 609 Second Street, Davis, California 95616 and DAEN-CWE-HW.

9. Water Control Manuals for U.S. Army Corps of Engineers Projects.

a. As used herein, the term "Water Control Manual" refers to manuals that relate primarily to the functional regulation of an individual project or system of projects. Although such manuals normally include background information concerning physical features of projects, they do not prescribe rules or methods for physical maintenance or care of facilities, which are covered in other documents. (References 15 and 23, Appendix A.)

b. Water control manuals prepared in substantially the detail and format specified in instructions referred to in paragraph 8 are required for all reservoirs under the supervision of the Corps of Engineers, regardless of the purpose or size of the project. Water Control manuals are also required for lock and dam, reregulation and major control structure projects that are physically regulated by the Corps of Engineers. Where there are several projects in a drainage basin with inter-related purposes, a "Master Manual" shall be prepared. The effects of non-Corps projects will be considered in appropriate detail, including an indication of provisions for interagency coordination.

c. "Preliminary Water Control Manuals" for projects regulated by the Corps of Engineers should contain regulation schedules in sufficient detail to establish the basic plan of initial project regulation.

d. As a general rule, preliminary manuals should be superseded by more detailed interim or "final" manuals within approximately one year after the project is placed in operation.

e. Each water control manual will contain a section on special regulations to be conducted during emergency situations, including droughts. Preplanned operations and coordination are essential to effective relief or assistance.

f. One copy of all water control manuals and subsequent revisions shall be forwarded to DAEN-CWE-HW for file purposes as soon as practicable after completion, preferably within 30 days from date of approval at the division level.

10. Policies and Requirements for Preparing Regulations for Non-Corps Projects.

a. Division and district commanders will develop water control plans as required by Section 7 of the 1944 Flood Control Act, the Federal Power Act and Section 9 of Public Law 436-83 for all projects located within their areas, in conformance with ER 1110-2-241. That regulation prescribes the policy and general procedures for regulating reservoir projects capable of regulation for flood control or navigation, except projects owned and operated by the Corps of Engineers; the International Boundary and Water Commission, United States and Mexico; those under the jurisdiction of the International Joint Commission, United States and Canada, and the Columbia River Treaty. ER 1110-2-241 permits 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 Engineers and the owners. Appendix B provides a summary of the Corps of Engineers responsibilities for prescribing regulations for non-Corps reservoir projects.

b. Water control plans will be developed and processed as soon as possible for applicable projects already completed and being operated by other entities, including projects built by the Corps of Engineers and turned over to others for operation.

c. In so far as practicable, water control plans for non-Corps projects should be developed in cooperation with owning/operating agencies involved during project planning stages. Thus, tentative agreements on contents, including pertinent regulation schedules and diagrams, can be accomplished prior to completion of the project.

d. The magnitude and nature of storage allocations for flood control or navigation purposes in non-Corps projects are governed basically by conditions of project authorizations or other legislative provisions and may include any or all of the following types of storage assignments:

- (1) Year-round allocations: Storage remains the same all year.
- (2) Seasonal allocations: Storage varies on a fixed seasonal basis.

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(3) Variable allocations of flood control from year to year, depending on hydrologic parameters, such as snow cover.

e. Water control plans should be developed to attain maximum flood control or navigation benefits, consistent with other project requirements, from the storage space provided for these purposes. When reservoir storage capacity of the category referred to in paragraph 10d(3) is utilized for flood control or navigation, jointly with other objectives, the hydrologic parameters and related rules developed under provisions of ER 1110-2-241 should conform as equitably as possible with the multiple-purpose objectives established in project authorizations and other pertinent legislation.

f. Storage allocations made for flood control or navigation purposes in non-Corps projects are not subject to modifications by the Corps of Engineers as a prerequisite for prescribing 33 CFR 208.11 regulations. However, regulations developed for use of such storage should be predicated on a mutual understanding between representatives of the Corps and the operating agency concerning the conditions of the allocations in order to assure reasonable achievement of basic objectives intended. In the event field representatives of the Corps of Engineers, and the operating agency are unable to reach necessary agreements after all reasonable possibilities have been explored, appropriate background explanations and recommendations should be submitted to DAEN-CWE-HW for consideration.

g. The Chief of Engineers is responsible for prescribing regulations for use of flood control or navigation storage and/or project operation under the provisions of the referenced legislative acts. Accordingly, any regulations established should designate the division/district commander who is responsible to the Chief of Engineers as the representative to issue any special instructions required under the regulation. However, to the extent practicable, project regulations should be written to permit operation of the project by the owner without interpretations of the regulations by the designated representative of the Commander during operating periods.

h. Responsibility for compliance with 33 CFR 208.11 regulations rests with the operating agency. The division or district commander of the area in which the project is located will be kept informed regarding project operations to verify reasonable conformance with the regulations. The Chief of Engineers or his designated representative may authorize or direct deviation from the established water control plan when conditions warrant such deviation. In the event unapproved deviations from the prescribed regulations seem evident, the division or district commander concerned will bring the matter to the attention of the operating agency by appropriate means.

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If corrective actions are not taken promptly, the operating agency should be notified of the apparent deviation in writing as a matter of record. 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, the Office of Chief Counsel should be advised through normal channels and requested to take necessary measures to assure compliance.

i. Regulations should contain information regarding the required exchange of basic data between the representative of the operating agency and the US Army Corps of Engineers, that are pertinent to regulation and coordination of interrelated projects in the region.

j. All 33 CFR 208.11 regulations shall contain provisions authorizing the operating agency to temporarily deviate from the regulations in the event that it is necessary for emergency reasons to protect the safety of the dam, to avoid health hazards, and to alleviate other critical situations.

11. Developing and Processing Regulations for Non-Corps Projects. Guidelines concerning technical studies and development of regulations are contained in ER 1110-2-241 and EM 1110-2-3600. Appendix C of this regulation summarizes steps normally followed in developing and processing regulations for non-Corps projects.

12. Water Control During Project Construction Stage. Water control plans discussed in preceding paragraphs are intended primarily for application after the dam, spillway and outlet structures; major relocations; land acquisitions, administrative arrangements and other project requirements have reached stages that permit relatively normal project regulation. With respect to non-Corps projects, regulations normally become applicable when water control agreements have been signed by the designated signatories, subject to special provisions in specific cases. In some instances, implementation of regulations has been delayed by legal provisions, contract limitations, or other considerations. These delays can result in loss of potential project benefits and possible hazards. Accordingly, it is essential that appropriate water control and contingency plans be established for use from the date any storage may accumulate behind a partially completed dam until the project is formally accepted for normal operations. Division commanders shall make certain that construction-stage regulation plans are established and maintained in a timely and adequate manner for projects under the supervision of the Corps of Engineers. In addition, the problems referred to should be discussed with authorities who are responsible for non-Corps projects, with the objective of assuring that such projects operate as safely and effectively as possible during the critical construction stage and any period that may elapse before regular

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operating arrangements have been established. These special regulation plans should include consideration for protection of construction operations; safety of downstream interests that might be jeopardized by failure of partially completed embankments; requirements for minimizing adverse effects on partially completed relocations or incomplete land acquisition; and the need for obtaining benefits from project storage that can be safely achieved during the construction and early operation period.

13. Advisories to OCE Regarding Water Control Activities.

a. General. Division commanders will keep the Chief of Engineers currently informed of any unusual problems or activities associated with water control that impact on his responsibilities.

b. Annual Division Water Control Management Report (RCS DAEN-CWE-16 (R1)). Division commanders will submit an annual report on water control management activities within their division. The annual report will be submitted to (DAEN-CWE-HW) by 1 February each year and cover significant activities of the previous water year and a description of activities to be accomplished for the current year. Funding information for Water Control activities will be provided in the letter of transmittal for in-house use only. The primary objective of this summary is to keep the Chief of Engineers informed regarding overall water management activities Corps-wide, thus providing a basis to carry out OCE responsibilities set forth in paragraph 7d above.

c. Status of Water Control Manuals. A brief discussion shall be prepared annually by each division commander, as a separate section of the annual report on water control management activities discussed in paragraph b above listing all projects currently in operation in his area, or expected to begin operation within one-year, with a designation of the status of water control manuals. The report should also list projects for which the Corps of Engineers is responsible for prescribing regulations, as defined in ER 1110-2-241.

d. Monthly Water Control Charts (RCS DAEN-CWE-6 (R1)). A monthly record of reservoirs/lakes operated by the Corps of Engineers and other agencies, in accordance with 33 CFR 208.11, will be promptly prepared and maintained by district/division commanders in a form readily available for transmittal to the Chief of Engineers, or others, upon request. Record data may be prepared in either graphical form as shown in EM 1110-2-3600, or tabular form as shown in the sample tabulation in Appendix D.

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e. Annual Division Water Quality Reports (RCS DAEN-CWE-15). By Executive Order 12088, the President ordered the head of each Executive Agency to be responsible for ensuring that all necessary actions are taken for prevention, control, and abatement of environmental pollution with respect to Federal facilities and activities under control of the agency. General guidance is provided in references 24 and 25, Appendix A, for carrying out this agency's responsibility. Annual division water quality reports are required by reference 24, Appendix A. The report is submitted in two parts. The first part addresses the division Water quality management plan while the second part presents specific project information. A major objective of this report is to summarize information pertinent to water quality aspects of overall water management responsibilities. The annual division water quality report may be submitted along with the annual report on water control management activities discussed in paragraph 13b above.

f. Master Plans for Water Control Data Systems (RCS DAEN-CWE-21).

(1) A water control data system is all of the equipment within a division which is used to acquire, process, display and distribute information for real-time project regulation and associated interagency coordination. A subsystem is all equipment as defined previously within a district. A network is all equipment as defined previously which is used to regulate a single project or a group of projects which must be regulated interdependently.

(2) Master plans for water control data systems and significant revisions thereto will be prepared by division water control managers and submitted to DAEN-CWE-HW by 1 February each year for review and approval of engineering aspects. Engineering approval does not constitute funding approval. After engineering approval is obtained, equipment in the master plan is eligible for consideration in the funding processes described in ER 1125-2-301 and engineering circulars on the annual budget request for civil works activities. Master plans will be maintained current and will:

(a) Outline the system performance requirements, including those resulting from any expected expansions of Corps missions.

(b) Describe the extent to which existing facilities fulfill performance requirements.

(c) Describe alternative approaches which will upgrade the system to meet the requirements not fulfilled by existing facilities, or are more cost effective than the existing system.

(d) Justify and recommend a system considering timeliness, reliability, economics and other factors deemed important.

(e) Delineate system scope, implementation schedules, proposed annual capital expenditures by district, total costs, and sources of funding.

(3) Modified master plans should be submitted to DAEN-CWE-HW by 1 February, whenever revisions are required, to include equipment not previously approved or changes in scope or approach. Submittal by the February date will allow adequate time for OCE review and approval prior to annual budget submittals.

(4) Division commanders are delegated authority to approve detailed plans for subsystems and networks of approved master plans. Plans approved by the division commander should meet the following conditions:

(a) The plan conforms to an approved master plan.

(b) The equipment is capable of functioning independently.

(c) An evaluation of alternatives has been completed considering reliability, cost and other important factors.

(d) The plan is economically justified, except in special cases where legal requirements dictate performance standards which cannot be economically justified.

(5) Copies of plans approved by the division commander shall be forwarded to appropriate elements in OCE in support of funding requests and to obtain approval of Automatic Data Processing Equipment (ADPE), when applicable.

(6) Water control data systems may be funded from Plant Revolving Fund; O&M General; Flood Control, MR&T, and Construction, General. Funding for water control equipment that serves two or more projects will be from Plant Revolving Fund in accordance with ER 1125-2-301. District and division water control managers will coordinate plant revolving fund requests with their respective Plant Replacement and Improvement Program (PRIP) representatives following guidance provided in ER 1125-2-301. Budget funding requests under the proper appropriation title should be submitted only if the equipment is identified in an approved master plan.

(7) Justification for the Automatic Data Processing Equipment (ADPE) aspects of water control data systems must conform to AR 18-1, Appendix I or J as required. The "Funding for ADPE" paragraph in Appendixes I and J must cite the source of funds and reference relevant information in the approved master plan and detailed plan.

(8) Division water control managers will submit annual letter summaries of the status of their respective water control systems and five-year plan for improvements. These summaries will be submitted to DAEN-CWE by 1 June for coordination with DAEN-CWO, CWB and DSZ-A, prior to the annual budget request. Summaries should not be used to obtain approval of significant changes in master plans. Sources of funding for all items for each district and for the division should be delineated so that total system expenditures and funding requests are identified. Changes in the master plan submitted 1 February should be documented in this letter summary if the changes were approved.

g. Summary of Runoff Potentials in Current Season (RCS DAEN-CWO-2).

(1) The Chief of Engineers and staff require information to respond to inquiries from members of Congress and others regarding runoff potentials. Therefore, the division commander will submit a snowmelt runoff and flood potential letter report covering the snow accumulation and runoff period, beginning generally in February and continuing monthly, until the potential no longer exist. Dispatch of supplemental reports will be determined by the urgencies of situations as they occur. The reports will be forwarded as soon as hydrologic data are available, but not later than the 10th of the month. For further information on reporting refer to ER 500-1-1.

(2) During major drought situations or low-flow conditions, narrative summaries of the situation should be furnished to alert the Chief of Engineers regarding the possibility of serious runoff deficiencies that are likely to call for actions associated with Corps of Engineers reservoirs.

(3) The reports referred to in subparagraphs (1) and (2) above will include general summaries regarding the status of reservoir storage, existing and forecasted at the time of the reports.

h. Reports on Project Operations During Flood Emergencies.

Information on project regulations to be included in reports submitted to the Chief of Engineers during flood emergencies in accordance with ER 500-1-1 include rate of inflow and outflow in CFS, reservoir levels, predicted maximum level and anticipated date, and percent of flood control storage utilized to date. Maximum use should be made of computerized communication facilities in reporting project status to DAEN-CWO-E/CWE-HW in accordance with the requirements of ER 500-1-1.

i. Post-Flood Summaries of Project Regulation. Project regulation effects including evaluation of the stage reductions at key stations and estimates of damages prevented by projects will be included in the post flood reports required by ER 500-1-1.

14. Water Control Management Boards.

a. The Columbia River Treaty Permanent Engineering Board was formed in accordance with the Columbia River Treaty with Canada. This board, composed of U.S. and Canadian members, oversees the implementation of the Treaty as carried out by the U.S. and Canadian Entities.

b. The Mississippi River Water Control Management Board was established by ER 15-2-13. It consists of the Division Commanders from LMVD, MRD, NCD, ORD, and SWD with the Director of Civil Works serving as chairman. The purposes of the Board are:

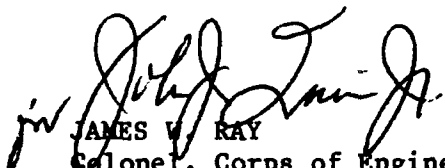
(1) To provide oversight and guidance during the development of basin-wide management plans for Mississippi River Basin projects for which the US Army Corps of Engineers has operation/regulation responsibilities.

(2) To serve as a forum for resolution of water control problems among US Army Corps of Engineers Divisions within the Mississippi River Basin when agreement is otherwise unobtainable.

15. List of Projects. Projects owned and operated by the Corps of Engineers subject to this regulation are listed with pertinent data in Appendix E. This list will be updated periodically to include Corps projects completed in the future. Federal legislation, Federal regulations and local agreements have given the Corps of Engineers wide responsibilities for operating projects which it does not own. Non-Corps projects subject to this regulation are included in Appendix A of ER 1110-2-241.

FOR THE COMMANDER:

5 Appendixes
APP A - References
APP B - Authorities Relating
to non-Corps Reservoirs
APP C - Procedures Regarding
33 CFR 208.11 Regulations
APP D - Sample Tabulation
APP E - List of Projects


JAMES W. RAY
Colonel, Corps of Engineers
Chief of Staff

APPENDIX A

REFERENCES

1. The Federal Power Act, Public Law 436-83, approved 10 June 1920, as amended (41 Stat. 1063; 16 U.S.C. 791(a))
2. Section 3 of the Flood Control Act approved 22 June 1936, as amended (49 Stat. 1571; 33 U.S.C. 701(c))
3. Section 9(b) of Reclamation Project Act of 1939, approved 4 August 1939 (53 Stat. 1187; 43 U.S.C. 485)
4. Section 7 of the Flood Control Act approved 22 December 1944 (58 Stat. 890; 33 U.S.C. 709)
5. Section 5 of Small Reclamation Projects Act of 6 August 1956, as amended (70 Stat. 1046; 43 U.S.C. 422 (e))
6. Section 9 of Public Law 436-83d Congress (68 Stat. 303)
7. The Fish and Wildlife Coordination Act of 1958, Public Law 85-624
8. The Federal Water Project Recreation Act Uniform Policies, Public Law 89-72
9. The National Environmental Policy Act of 1969 Public Law 91-190
10. The Clean Water Act of 1977, Public Law 95-217
11. Executive Order 12088, Federal Compliance with Pollution Control Standards, 13 October 1978.
12. 33 CFR 208.10, Local flood protection works; maintenance and operation of structures and facilities (9 FR 9999; 9 FR 10203)
13. 33 CFR 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 (43 - FR - 47184).
14. AR 18-1
15. ER 11-2-101
16. ER 15-2-13

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17. ER 500-1-1
18. ER-1110-2-241
19. ER 1110-2-1400
20. ER 1110-2-1402
21. ER 1110-2-1941
22. ER 1125-2-301
23. ER 1130-2-303
24. ER 1130-2-334
25. ER 1130-2-415
26. ER 1130-2-417
27. ER 1130-2-419
28. EM 1110-2-3600

APPENDIX B

SUMMARY OF CORPS OF ENGINEERS RESPONSIBILITIES
FOR PRESCRIBING REGULATIONS
FOR NON-CORPS RESERVOIR PROJECTS

No.

SUMMARY

- 1 a. "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" (33 CFR 208.11) prescribe 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.
- b. Pertinent information on projects for which regulations are prescribed under Section 7 of the 1944 Flood Control Act, (Public Law 78-58 Stat. 890(33 U.S.C. 709)) the Federal Power Act (41 Stat. 1063(16 U.S.C. 791(A))) and Section 9 of Public Law 436-83d Congress (68 Stat. 303) is published in the Federal Register in accordance with 33 CFR 208.11.

Publication in the Federal Register establishes the fact and the date of a project's regulation plan promulgation.

- 2 Section 7 of Act of Congress approved 22 December 1944 (58 Stat. 890; 33 U.S.C. 709), reads as follows:

"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."

- 3 Section 9(b) of the Reclamation Project Act of 1939, approved 4 August 1939 (53 Stat. 1189, 43 U.S.C. 485), provides that the Secretary of the Interior may allocate to flood control or navigation as part of the cost of new projects or supplemental works; and that in connection therewith he shall consult with the Chief of Engineers and may perform any necessary investigations under a cooperative agreement with the Secretary of the Army. These projects are subject to 33 CFR 208.11 regulations.
- 4 Several dams have been constructed by State agencies under provisions of legislative acts wherein the Secretary of the Army is directed to prescribe rules and regulations for project operation in the interest of flood control and navigation. These projects are subject to 33 CFR 208.11 regulations.
- 5 There are a few dams constructed under Emergency Conservation work authority or similar programs, where the Corps of Engineers has performed major repairs or rehabilitation, that are operated and maintained by local agencies which are subject to 33 CFR 208.11 regulations.
- 6 The Federal Power Act, approved 10 June 1920, as amended (41 stat. 1063, 16 U.S.C. 791 (A)), established the Federal Power Commission, now Federal Energy Regulatory Commission (FERC), with authority to issue licenses for constructing operating and maintaining dams or other project works for the development of navigation, for utilization of water power and for other beneficial public uses in any streams over which Congress has jurisdiction. The Chief of Engineers is called upon for advice and assistance as needed in formulating reservoir regulation requirements somewhat as follows:
- a. In response to requests from the FERC, opinions and technical appraisals are furnished by the Corps of Engineers for consideration prior to issuance of licenses by the FERC. Such assistance may be limited to general presentations, or may include relatively detailed proposals for water control plans, depending upon the nature and scope of projects under consideration. The information furnished is subject to such consideration and use as the Chairman, FERC, deems appropriate. This may result in inclusion of simple provisions in licenses without elaboration, or relatively detailed requirements for reservoir regulation schedules and plans.

b. Some special acts of Congress provide for construction of dams and reservoirs by non-Federal agencies or private firms under licenses issued by the FERC, subject to stipulation that 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. Ordinarily no Federal funds are involved, thus Section 7 of the 1944 Flood Control Act does not apply. However, if issuance of regulations by the Secretary of the Army is required by the authority under which flood control or navigation provisions are included as functions of the specific project or otherwise specified in the FERC license, regulation plans will be prescribed in accordance with 33 CFR 208.11 regulations.

7 Projects constructed by the Corps of Engineers for local flood protection purposes are subject to conditions of local cooperation as provided in Section 3 of the Flood Control Act approved 22 June 1936, as amended. One of those conditions is that a responsible local agency will maintain and operate all works after completion in accordance with regulations prescribed by the Secretary of the Army. Most such projects consist mainly of levees and flood walls with appurtenant drainage structures. Regulations for operation and maintenance of these projects has been prescribed by the Secretary of the Army in 33 CFR 208.10. When a reservoir is included in such a project, it may be appropriate to apply 33 CFR 208.10 in establishing regulations for operation, without requiring their publication in the Federal Register. For example, if the reservoir controls a small drainage area, has an uncontrolled flood control outlet with automatic operation or contains less than 12,500 acre-feet of flood control or navigation storage, 33 CFR 208.10 may be suitable. However, 33 CFR 208.11 regulations normally would be applicable in prescribing flood control regulations for the individual reservoir, if the project has a gated flood control outlet by which the local agency can regulate floods.

8 Regulation plans for projects owned by the Corps of Engineers are not prescribed in accordance with 33 CFR 208.11. However, regulation plans for projects constructed by the Corps of Engineers and turned over to other agencies or local interests for operation may be prescribed in accordance with 33 CFR 208.11.

- 9 The small Reclamation Projects Act of 6 August 1956 provides that the Secretary of the Interior may make loans or grants to local agencies for the construction of reclamation projects. Section 5 of the Act provides in part that the contract covering any such grant shall set forth that operation be in accordance with regulations prescribed by the head of the Federal department or agency primarily concerned. Normally, 33 CFR 208.11 is not applicable to these projects.

APPENDIX C

PROCEDURES FOR DEVELOPING AND PROCESSING
REGULATIONS FOR NON-CORPS PROJECTS IN
CONFORMANCE WITH 33 CFR 208.11

1. Sequence of actions:

a. Discussions leading to a clarification of conditions governing allocations of storage capacity to flood control or navigation purposes and project regulation are initiated by District/Division Engineers through contacts with owners and/or operating agencies concerned at regional level.

b. Background information on the project and conditions requiring flood control or navigation services, and other relevant factors, are assembled by the District Engineer and incorporated in a "Preliminary Information Report". The Preliminary Information Report will be submitted to the Division Engineer for review and approval. Normally, the agency having jurisdiction over the particular project is expected to furnish information on project features, the basis for storage allocations and any other available data pertinent to the studies. The Corps of Engineers supplements this information as required.

c. Studies required to develop reservoir regulation schedules and plans usually will be conducted by Corps of Engineers personnel at District level, except where the project regulation affects flows in more than one District, in which case the studies will be conducted by or under supervision of Division personnel. Assistance as may be available from the project operating agency or others concerned will be solicited.

d. When necessary agreements are reached at district level, and regulations developed in accordance with 33 CFR 208.11 and EM 1110-2-3600, they will be submitted to the Division Commander for review and approval, with information copies for DAEN-CWE-HW. Usually the regulations include diagrams of operating parameters.

e. For projects owned by the Bureau of Reclamation, the respective Regional Directors are designated as duly authorized representatives of the Commissioner of Reclamation. By letter of 20 October 1976, the Commissioner delegated responsibilities to the Regional Directors as follows: "Regarding the designated authorization of representatives of the Commissioner of Reclamation in matters relating to the development and processing of Section 7 flood control regulations, we are designating each Regional Director as our duly authorized representative to sign all letters of understanding, water control agreements, water control diagrams, water control release schedules and other documents which may

become part of the prescribed regulations. The Regional Director also will be responsible for obtaining the signature of the designated operating agency on these documents where such is required. Regarding internal coordination within the Bureau of Reclamation, the Regional Directors will obtain the review and approval of this office and at appropriate offices with our Engineering and Research Center, Denver, Colorado, prior to signing water control documents."

f. In accordance with the delegation cited in paragraph e, 33 CFR 208.11 regulations pertaining to Bureau of Reclamation projects will be processed as follows:

(1) After regulation documents submitted by District Commanders are reviewed and approved by the Division Commander they are transmitted to the respective Regional Director of the Bureau of Reclamation for concurrence or comment, with a request that tracings of regulation diagrams be signed and returned to the Division Commander.

(2) If any questions arise at this stage appropriate actions are taken to resolve differences. Otherwise, the duplicate tracings of the regulation diagram are signed by the Division Commander and transmitted to the office of the project owner for filing.

(3) After full agreement has been reached in steps (1) and (2), the text of proposed regulations is prepared in final form. Copies of any diagrams involved are included for information only.

(4) A letter announcing completion of action on processing the regulations, with pertinent project data as specified in paragraph 208.11 (d) (11) of 33 CFR 208.11, and one copy of the signed tracings of diagrams are forwarded to HQDA (DAEN-CWE-HW) WASH DC 20314 for promulgation and filing. The Office of the Chief of Engineers will forward the pertinent project data to the Liaison Officer with the Federal Register, requesting publication in the Federal Register.

g. Regulations developed in accordance with 33 CFR 208.11 and applicable to projects that are not under supervision of the Bureau of Reclamation are processed in substantially the manner described above. All coordination required between the Corps of Engineers and the operating agency will be accomplished at field level.

h. Upon completion of actions listed above, Division Commanders are responsible for informing the operating agencies at field level that regulations have been promulgated.

2. Signature blocks: Some 33 CFR 208.11 regulations contain diagrams of parameter curves that cannot be published in the Federal Register, but are made a part thereof by appropriate reference. Each diagram bears a

title block with spaces for the signature of authenticating officials of the Corps of Engineers and the owner/operating agency of the project involved.

3. Designation of Corps of Engineers Representatives. Division Commanders are designated representatives of the Chief of Engineers in matters relating to development and processing of 33 CFR 208.11 regulations for eventual promulgation through publication of selected data specified in paragraph 208.11 (d) (11) of 33 CFR 208.11. Division Commanders are designated as the Corps of Engineers signee on all letters of understanding, water control agreements and other documents which may become part of prescribed regulations for projects located in their respective geographic areas, and which are subject to the provisions of 33 CFR 208.11.

APPENDIX D

SAMPLE TABULATION

BARDWELL LAKE
MONTHLY LAKE REPORT
MAY 1975

DAY:	ELEVATIONS		:STORAGE:	EVAP:	PUMP:	RELEASE:	INFLOW:	RAIN
:	0800	: 2400	: 2400 :	:	:	:	ADJ. :	:
:	FEET-MSL		: A-F :	DSF:	DSF:	DSF :	DSF :	INCH
1	421.30	421.31	55979	28	2.0	0	84	.00
2	421.32	421.37	56196	5	2.0	0	117	.00
3	421.43	421.44	56449	23	1.9	0	152	.14
4	421.45	421.47	56558	1	1.8	0	58	.00
5	421.49	421.34	56088	1	2.0	324	50	.00
6	421.20	421.01	54902	14	1.9	632	50	.00
7	420.88	420.89	54473	4	2.0	269	59	.09
8	420.89	420.91	54544	5	2.3	0	44	.00
9	420.90	420.89	54473	11	1.5	0	38	.00
10	420.90	420.90	54509	28	3.0	0	27	.00
11	420.91	421.35	56124	26	1.8	0	842	.00
12	421.54	421.65	57213	31	2.1	0	582	1.61
13	421.70	421.75	57578	29	2.2	0	216	.00
14	421.78	421.76	57614	34	1.9	249	303	.03
15	421.69	421.52	56739	22	1.9	643	225	.57
16	421.39	421.28	55871	39	2.1	535	138	.00
17	421.19	421.09	55188	10	2.2	393	119	.00
18	421.03	421.05	55045	46	2.0	143	60	.00
19	421.04	421.07	55116	17	2.3	0	55	.00
20	421.06	421.30	55943	21	2.1	0	440	.21
21	421.39	421.47	56558	20	2.1	0	332	.97
22	421.50	421.39	56268	42	2.1	247	145	.00
23	421.37	424.91	69726	31	2.0	328	7146	.22
24	425.61	426.15	74825	22	2.0	0	2595	2.38
25	426.15	426.55	76523	18	2.3	0	876	.11
26	426.72	426.80	77598	42	2.1	0	586	.00
27	426.95	427.00	78465	23	2.0	0	462	.00
28	427.14	427.15	79116	31	2.1	0	361	.19
29	427.31	427.70	81528	61	1.9	0	1279	.20
30	427.94	428.05	83082	11	2.0	0	796	1.02
31	428.20	428.22	83837	7	2.1	0	389	.00
MONTHLY TOTAL (DSF)				700	64	3763	18626	7.74
(A-F)			27966	1389	126	7464	36945	

APPENDIX E—LIST OF PROJECTS

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
Lower Mississippi Valley Division									
Alligator—Catfish FG	MS Issaquena	Little Sunflower	F	0.0	0.0	0.0	0	0	FCA Jun 36.
Arkabutla Lk	MS Desoto	Coldwater	F	525.0	238.3	209.3	33,400	5,100	FCA Jun 36.
Ascalmore—Tippo FG & CS	MS Tallahatchie	Ascalmore	F	0.0	136.0	118.0	0	0	FCA Jun 36.
Bienvenue FG	LA St Bernard	Bayou Bienvenue	F	0.0	2.0	2.0	0	0	PL 298-89
Big Lk Ditch #81 CS	AR Mississippi	Ditch 81 Extension	C	0.0	0.0	230.0	0	0	FCA Oct 65.
Big Lk Div CS	AR Mississippi	Little R.	C	0.0	0.0	230.0	0	0	FCA Oct 65.
Big Lk North End CS	AR Mississippi	Little R.	C	0.0	0.0	230.0	0	0	FCA Oct 65.
Big Lk South end CS	AR Mississippi	Ditch 28	C	0.0	0.0	230.0	0	0	FCA Oct 65.
Birds Point—New Madrid Div Floodway	MO New Madrid	Mississippi	F	0.0	330.5	328.5	131,000	71,000	FCA May 28.
Bodcau Lk	LA Bossier	Bayou Bodcau	F	35.3	199.5	157.0	21,000	110	PL 74-839.
Bonnet Carre Div Spillway	LA St Charles	Mississippi R	F	0.0	24.0	20.0	0	0	FCA May 28.
Bowman Lock	LA Vermilion	GIWW	J	0.0	1.2	1.2	0	0	PL 79-14.
Caddo Lk	LA Caddo	Cypress Bayou	N	128.6	182.7	168.5	59,000	26,800	FCA Oct 65.
Cairo 10th & 20th St PS	IL Pulaski	Ohio	F	0.0	310.5	299.0	0	0	PL 90-483.
Calcasieu SW Barrier & Lock	LA Calcasieu	Calcasieu R	I	0.0	1.2	1.2	0	0	RHA Oct 62 PL 79-525.
Calion L&D	AR Union	Ouachita	N	0.0	77.0	77.0	12,200	12,200	RHA 1950.
Calumet FG East & West	LA St Mary	Wax Lake Outlet Bayou Teche	FN	0.0	3.0	3.0	0	0	FCA Jun 36.
Cannon Re-reg	MO Ralls	Salt R	PCA	5.8	528.0	521.0	1,020	460	HD 507.
Carlyle Lk	IL Clinton	Kaskaskia R	F	699.0	462.5	445.0	50,440	24,580	SD 44.
Catahoula Lk CS	LA LaSalle	Catahoula Div	NMCR	233.0	445.0	429.5	0	7,100	
Cattfish Point CS	LA Cameron	Mermentau R	FN	118.0	34.0	27.0	25,000	94	RHA 1960.
Charenton FG	LA St Mary	Grand Lk	FN	0.0	1.2	1.2	0	0	FCA Aug 41, RHA Jul 64.
Charenton FG	LA St Mary	Grand Lk	FN	0.0	0.0	0.0	0	0	RHA Jul 46, FCA May 28.
Cocodrie FG FG	LA Concorida	Bayou Cocodrie	F	0.0	46.0	13.0	0	0	FCA Aug 41.
Collins Cr	MS Warren	Collins Cr	F	0.0	84.0	67.0	0	0	FCA 1941.
Columbia L&D	LA Caldwell	Ouachita	N	0.0	52.0	52.0	7,070	7,070	RHA 1950.
Connerly CS	AR Chicot	Connerly Bayou	FCR	0.0	116.0	106.0	0	0	FCA Aug 68.
Courtableau Drainage CS	LA St Landry	Bayou Courtableau	F	0.0	18.0	16.0	0	0	FCA May 28, PL 391-70.
Darbonne CS	LA St. Landry	Bayou Darbonne	FI	0.0	18.0	16.0	0	0	FCA May 28 PL391-70.
DeGray Lk	AR Desoto	Caddo	FNPMRA	881.9	423.0	345.0	23,800	6,400	RHA 1950, WSA 1958.
DeGray Rereg. St.	AR Clark	Caddo	NMRA	3.6	221.0	209.0	430	90	RHA 1950.
Ditch Bayou Dam	AR Chicot	Ditch Bayou	FCR	0.0	106.0	93.0	0	0	FCA Aug 68.
Drainage Dist #17 PS	AR Mississippi	Ditch 71	F	3.0	236.0	228.0	4,100	0	FCA Aug 68, PL 90-483.
Drinkwater PS	MO Mississippi	Drinkwater Sewer	F	20.6	315.0	307.0	4,000	700	FCA May 50, PL 516.
Dupre FG	LA St Bernard	Bayou Dupre	F	0.0	2.0	2.0	0	0	PL 298-89.
East St Louis PS	IL St. Clair	IDD	F	0.0	0.0	0.0	0	0	FC Act 36.
Empire FG Hurr Prot & Lock	LA Plaque mines	Mississippi R	F	0.0	5.0	5.0	0	0	PL 874-87.
Enid Lk	MS Yalobusha	Yacona	F	660.0	268.0	230.0	28,000	6,100	FCA Jun 36.
Felsenthal L&D	AR Union	Ouachita	N	32.5	70.0	65.0	46,500	17,500	RHA 1950.
Finley Street PS	TN Dyer	Forked Deer	F	0.5	269.0	257.0	94	22	FCA 1948, PL 85-500.
Freshwater Lock	LA Vermilion	Freshwater Bayou	I	0.0	0.0	0.0	0	0	PL 86-645.
Graham Burke PS	AR Phillips	White	F	2,805.0	174.8	140.0	149,000	2,500	FCA May 28, PL 85-500.
Grenada Lk	MS Grenada	Yalobusha Skuna	F	1,357.4	231.0	193.0	64,600	9,800	FCA Jun 36.
Huxtable PS	AR Lee	St Francis	F	2,863.0	207.2	165.0	18,500	1,400	FCA May 50.
Jonesville L&D	LA Catahoula	Black	N	0.0	34.0	34.0	7,120	7,120	RHA 1950.
Kaskaskia L&D	IL Randolph	Kaskaskia R	N	1.1	368.0	363.0	1,300	1,200	SD 44.
L&D 1	LA Catahoula	Red R	N	0.0	40.0	40.0	0	0	PL 90-483.
L&D 2	LA Rapides	Red R	N	0.0	71.2	64.0	0	0	PL 90-483.
L&D 3	LA Rapides	Red R	N	0.0	95.0	91.5	0	0	PL 90-483.
L&D 4	LA Natchitoches	Red R	N	0.0	120.0	119.6	0	0	PL 90-483.
L&D 5	LA Red R	Red R	N	0.0	145.0	140.2	0	0	PL 90-483.
L&D 24	MO Pike	Mississippi R	N	29.7	449.0	445.0	13,000	12,000	R&H Act, Jul 3/30.
L&D 25	MO Lincoln	Mississippi R	N	49.7	434.0	429.7	18,000	16,600	R&H Act, Aug 30/35.
L&D 26	IL Madison	Mississippi R	N	107.1	419.0	414.0	30,000	27,700	R&H Act, Jul 3/30.
Larose to Golden Meadow Hurr Prot FG	LA LaFourche	Bayou LaFourche	F	0.0	3.0	3.0	0	0	FCA Oct 65, PL 89-298.
Little Sunflower CS	MS Issaquena	Lit. Sunflower	F	0.0	85.0	60.0	0	0	FCA 1941.
Lk #9 Culvert & PS	KY Fulton	Mississippi	F	6.5	286.0	282.0	0	0	FCA Oct 65.
Lk Chicot PS	AR Chicot	Macon Lk	FCR	0.0	118.2	90.0	0	0	FCA Aug 68.
Lk Greeson	AR Pike	Little Missouri	P	0.0	563.0	436.9	0	0	FCA 1941.
Lk Ouachita	AR Garland	Ouachita	FP	407.9	563.0	504.0	9,800	2,500	
Long Branch DS	LA Catahoula	Catahoula Div	P	0.0	592.0	480.0	0	0	FCA Dec 44.
Mark Twain Lk	LA Catahoula	Catahoula Div	F	0.0	32.5	32.5	0	0	FCA May 50.
Mark Twain Lk	MO Ralls	Salt R	F	894.0	638.0	606.0	38,400	18,600	HD 507.
Marked Tree Siphon	AR Poinsett	St. Francis	FMCR	457.0	606.0	567.2	18,600	5,900	
Morganza Div CS	LA Point Coupee	Morganza Floodway	F	0.0	229.0	198.3	0	0	FCA Jun 30.
Muddy Bayou CS	MS Warren	Muddy Bayou	FC	0.0	59.5	49.0	0	0	FCA May 28.
Old River Div CS Low Sill Overbank & Aux.	LA W. Feliciana	Old R	F	30.0	76.9	70.0	4,350	2,860	FCA Oct 65.
Old River Lock	LA W Feliciana	Old R	F	0.0	70.0	5.0	0	0	PL 83-780.
Old River Lock	LA W Feliciana	Old R	N	0.0	65.4	10.0	0	0	FCA Sep 54, PL 780-83.
Port Allen Lock	LA Port Allen	GIWW	N	0.0	46.1	2.6	0	0	RHA Jul 46.

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
Prairie Dupont East & West PS	IL St Clair	IDD	F	0.0	0.0	0.0	0	0	FC Act 62
Rapides-Boeuf Div Canal CS	LA Rapides	Bayou Rapides	F	0.0	66.0	62.2	0	0	FCA Aug 41, GD 359-77.
Rend Lk	IL Franklin	Big Muddy R	F	109.0	405.0	410.0	24,800	18,900	HD 541.
Sardis Lk	MS Panola	Little Sunflower	F	160.0	405.0	391.3	18,900	5,400	FCA Jun 36.
Schooner Bayou CS & Lock	LA Vermilion	Schooner Bayou	I	1,569.9	281.4	236.0	58,500	10,700	FCA Aug 41.
Shelbyville Lk	IL Shelby	Kaskaskia R	F	0.0	1.2	1.2	0	0	FCA Aug 41.
Sorrrell Lock	LA Iberville	GIWW	N	474.0	626.5	599.7	25,300	11,100	HD 232.
St Francis Lk CS	AR Poinsett	Oak Donnick Floodway	C	180.0	599.7	573.0	11,100	3,000	FCA May 28.
Steele Bayou CS	MS Issaquena	Steele Bayou	F	0.0	0.0	210.0	0	2,240	FCA Oct 65.
Tchula Lk Lower FG	MS Humphreys	Tchula Lk	F	0.0	68.5	60.0	0	0	FCA Jun 36.
Tchula Lk Upper FG	MS Humphreys	Tchula Lk	F	0.0	110.0	84.0	0	0	FCA Jun 36.
Teche-Vermilion PS & CS	LA St Mary	Atchafalaya R	MI	0.0	108.0	92.0	0	0	FCA Jun 36.
Tensas-Cocodrie PS	LA Cocordia	Bayou Corcodrie	F	0.1	18.0	16.0	0	0	PL 89-789, FCA May 28
Treasure Island PS	MO Dunklin	Little R	F	0.0	37.0	23.0	0	0	FCA Oct 65.
Wallace Lk	LA Caddo	Cypress Bayou	F	23.4	252.0	235.0	7,800	180	FCA Jul 46.
Wappapello Lk	MO Wayne	St Francis R	F	96.1	158.0	142.0	9,300	2,300	RHA Mar 45, PL 75-761.
Wasp Lk	MS Humphreys	Wasp Lk-Bear Cr	F	613.2	394.7	354.7	23,200	5,200	HD 159.
West Hickman PS	KY Fulton	Mississippi	F	0.0	111.6	88.5	0	0	FCA Jun 36.
Wood R PS	IL Madison	IDD	F	0.0	302.0	296.0	9	4	FCA 1948.
Yazoo City PS	MS Yazoo	Yazoo	F	0.0	0.0	0.0	0	0	FC Act 38.
			F	0.0	96.0	69.0	0	0	FCA Jun 36.

Missouri River Division

Bear Creek Dam & Res	CO Jefferson	Bear Cr	F	28.8	5,635.5	5,558.0	718	109	PL 90-483.
Big Bend Dam & Lk Sharpe	SD Lyman Buffalo Hughes	Missouri R	F	1.9	5,558.0	5,528.0	109	17	SD 87-90.
Blue Springs Dam & Lk	MO Jackson	Little Blue R	F	61.0	1,423.0	1,422.0	61,000	60,000	PL 78-534.
Blue Stem Lake & Dam 4	NE Lancaster	Olive Br. Salt Creek	F	117.0	1,422.0	1,420.0	60,000	57,000	SD 247-78.
Bowman-Haley Dam & Res	ND Bowman	No Fk Grand River	F	15.8	820.0	802.0	982	722	PL 90-483.
Branched Oak Lk & Dam 18	NE Lancaster	Oak Creek trib. Salt Creek	F	10.8	802.0	760.0	722	0	HD 169-90.
Bull Hook Dam	MT Hill	Bull Hook Cr Scott Coulee	F	7.2	1,322.5	1,307.4	660	315	PL 85-500.
Cedar Canyon Dam	SD Pennington	Deadman's Gulch	F	3.0	1,307.4	1,277.0	315	1	HD 396-84.
Chatfield Dam & Res	CO Douglas	S Platte	F	72.7	2,777.0	2,754.8	5,131	1,732	PL 87-874.
Cherry Cr Dam & Res	CO Arapahoe	Cherry Cr	F	15.5	2,754.8	2,740.0	1,732	565	HD 574-87.
Clinton Dam & Lk	KS Douglas	Wakarusa R	F	71.6	1,311.0	1,284.0	3,640	1,780	PL 85-500.
Cold Brook Dam & Res	SD Fall River	Cold Brook	F	26.0	1,284.0	1,250.0	1,780	0	HD 396-84.
Conestoga Lake & Dam 12	NE Lancaster	Holmes Cr Trib to Salt Cr	F	6.5	2,593.0	2,540.0	283	0	PL 78-534.
Cottonwood Springs Dam & Res	SD Fall River	Cottonwood Springs Cr	F	0.1	3,545.0	3,526.0	11	2	PL 80-858.
Fort Peck Dam & Res	MT Valley, Mc Cone Garfield	Missouri R	F	204.7	5,500.0	5,432.0	4,742	1,412	PL 81-516.
Fort Randall Dam, Lk Francis Case	SD Gregory Charles	Missouri R	F	26.7	5,432.0	5,385.0	1,412	12	HD 669-80.
Garrison Dam, Lk Sakakawea	ND Mercer McLean	Missouri R	F	80.0	5,598.0	5,550.0	2,637	852	PL 77-228.
Gavins Point Dam, Lewis & Clark Lk	SD Yankton	Missouri R	F	14.0	5,550.0	5,504.0	852	0	HD 426-76, PL 78-534
Glenn Cunningham Lk, Dam 11	NE Knox	Little Papillion Cr	F	267.8	903.4	875.5	12,891	7,006	PL 87-874.
Harlan County Lk	NE Harlan	Republican R	F	129.2	875.5	820.0	7,006	0	SD 122-87.
Harry S Truman Dam & Res	MO Benton	Osage R	F	6.7	3,651.4	3,585.0	198	36	PL 77-228.
Hillsdale Lk	KS Miami	Big Bull Cr	F	0.5	3,585.0	3,548.0	36	0	HD 655-76.
Holmes Park Lk & Dam 17	NE Lancaster	Antelope Cr Trib to Salt Cr	F	8.0	1,252.0	1,232.9	620	230	PL 85-500.
Kanopolis Lk	KS Ellsworth	Smoky Hill R	F	2.6	1,232.9	1,197.0	230	1	HD 396-84.
Kelly Road Dam	CO Arapahoe	Westerly Cr	F	7.7	3,936.0	3,875.0	214	44	PL 77-228.
Long Branch Lk	MO Randolph	Little East Fk Chariton R	F	0.2	3,875.0	3,868.0	44	30	HD 655-76.
Longview Lk	MO Jackson	Little Blue R	F	977.0	2,250.0	2,246.0	249,000	240,000	PL 73-409.
Melvern Lk	KS Osage	Marais des Cygnes R	F	13,649.0	2,246.0	2,160.0	240,000	92,000	PL 75-529, HD 238-73
			F	985.0	1,375.0	1,365.0	102,000	95,000	PL 78-534.
			F	3,021.0	1,365.0	1,320.0	95,000	41,000	SD 247-78.
			F	1,494.0	1,854.0	1,850.0	382,000	365,000	PL 78-534.
			F	17,440.0	1,850.0	1,775.0	365,000	129,000	SD 247-78.
			F	61.0	1,210.0	1,208.0	32,000	29,000	PL 78-534.
			F	95.0	1,208.0	1,204.5	29,000	25,000	SD 247-78.
			F	14.0	1,142.0	1,121.0	922	392	PL 90-483.
			F	3.9	1,121.0	1,085.0	392	0	HD 349-90.
			F	498.0	1,973.5	1,946.0	23,064	13,249	PL 77-228.
			F	342.6	1,946.0	1,875.0	13,249	0	HD 892-76, PL-78-534.
			F	4,005.9	739.6	706.0	209,300	55,600	PL 83-780.
			F	1,203.4	706.0	635.0	55,600	0	HD 549-81, PL 87-874.
			F	83.6	931.0	917.0	7,410	4,580	HD 578-87.
			F	76.3	917.0	852.4	4,580	0	PL 83-780.
			F	5.7	1,266.0	1,242.4	410	100	HD 642-81.
			F	0.8	1,242.4	1,218.0	100	3	PL 85-500.
			F	370.0	1,508.0	1,463.0	13,999	3,560	HD 396-84.
			F	55.8	1,463.0	1,425.0	3,560	0	PL 75-761.
			F	0.3	5,362.0	5,342.0	38	0	PL 78-534, HD 842-76.
			F	30.4	801.0	791.1	3,670	2,429	PL 80-858, PL 84-99.
			F	34.6	791.0	751.1	2,429	0	PL 89-298.
			F	24.8	909.0	891.0	1,960	930	HD 238-89.
			F	22.1	891.0	810.0	930	0	PL 90-483.
			F	208.4	1,057.0	1,036.0	13,948	6,928	HD 169-90.
			F						PL 83-780.

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
Milford Lk.....	KS Geary.....	Republican R.....	F FNMCAR	154.4 756.7 388.8	1,036.0 1,176.2 1,144.4	960.0 1,144.4 1,060.0	6,928 27,255 15,709	0 17,270 0	PL 75-761, HD 549-81. PL 83-780. HD 642-81, PL 75-761.
Oahe Dam & Lk.....	ND 4 Counties SD 8 Counties.....	Missouri R.....	F FNPMCAR	1,097.0 16,789.0	1,620.0 1,617.0 1,540.0	1,617.0 1,540.0	373,000 359,000	359,000 117,000	PL 78-534. SD 247-78. HD 396-84
Olive Cr Lk & Dam 2.....	NE Lancaster.....	Olive Br of Salt Cr.....	F FCR	4.0 1.5	1,350.0 1,335.0	1,335.0 1,314.0	355 174	174 4	PL 85-500 PL 90-483
Papio Dam Site #18 & Lk.....	NE Douglas.....	Boxelder Cr Papio Cr.....	F FCAR	7.1 3.4	1,128.2 1,110.0	1,110.0 1,060.5	595 255	255 0	HD 349-90. PL 90-483.
Papio Dam Site #20 & Lk.....	NE Sarpy.....	Trib South Branch Papio.....	F FCAR	6.1 2.7	1,113.1 1,096.0	1,096.0 1,069.0	493 246	10 246	HD 349-90. PL 85-500.
Pawnee Lk & Dam 14.....	NE Lancaster.....	No. Middle Cr of Salt Cr.....	F FCR	21.0 8.5	1,263.5 1,244.3	1,244.3 1,206.0	1,470 728	728 1	HD 396-84 PL 83-780.
Perry Lk.....	KS Jefferson.....	Delaware R.....	F FN	521.9 243.2	920.6 891.5	891.5 825.0	25,342 122	12,202 0	HD 642-81 PL 89-298.
Pipestem Dam & Res.....	ND Stutsman.....	Pipestem Cr.....	F FRC	137.0 9.6	1,496.3 1,442.4	1,442.4 1,415.0	4,754 885	885 62	PL 89-298. HD 266-89.
Pomme De Terre Lk.....	MO Polk.....	Pomme De Terre R.....	F FNPCAR	407.2 241.6	874.0 839.0	839.0 750.0	15,980 7,890	7,890 0	PL 75-761. HD 549-81, PL 83-780.
Pomona Lk.....	KS Osage.....	110 Mile Cr.....	F FNMAR	176.8 70.6	1,003.0 974.0	974.0 912.0	8,520 4,000	400 0	PL 83-780. HD 549-81.
Rathbun Lk.....	IA Appanoose.....	Chariton R.....	F FNM	346.3 205.4	926.0 904.0	904.0 844.0	20,948 11,013	11,013 0	PL 83-780. HD 561-81.
Smithville Lk.....	MO Clay.....	Little Platte R.....	F FMCAR	101.8 144.6	876.2 864.2	864.2 799.0	9,995 7,192	7,192 0	PL 89-298. HD 262-89.
Spring Gulch Imbankment.....	CO Douglas.....	Spring Gulch.....	F	1.8	5,600.00	5,535.0	88	0	PL 81-516, HD 669-80.
Stagecoach Lk & Dam 9.....	NE Lancaster.....	Hickman Br of Salt Cr.....	F FRC	4.7 1.9	1,285.0 1,271.1	1,271.1 1,246.0	490 196	196 0	PL 85-500. HD 396-84.
Standing Bear Lk & Dam 16.....	NE Douglas.....	Trib Big Papillion Cr.....	F FRC	3.7 1.5	1,121.0 1,104.0	1,104.0 1,060.0	302 137	137 0	PL 90-483. HD 349-90.
Stockton Lk.....	MO Cedar.....	Sac R.....	F FARPN	779.6 887.1	892.0 867.0	867.0 760.0	38,288 24,777	24,777 0	PL 83-780. HD 549-89
Tuttle Creek Lk.....	KS Riley.....	Big Blue R.....	F FN	1,937.4 177.1	1,136.0 1,075.0	1,075.0 1,061.0	54,179 14,875	14,875 0	PL 75-761. HD 842-76
Twin Lakes & Dam 13.....	NE Seward.....	Middle Cr Salt Cr.....	F CFR	5.3 2.8	1,355.0 1,341.0	1,341.0 1,306.0	505 255	255 1	PL 85-500. HD 396-84
Wagon Train Lk & Dam 8.....	NE Lancaster.....	Hickman Br of Salt Cr.....	F FCR	6.8 2.5	1,302.0 1,287.8	1,287.8 1,260.0	660 303	303 4	PL 85-500. HD 396-84
Wehrspann Lk & Dam 20.....	NE Sarpy.....	Trib South Branch Papio.....	F FCAR	6.1 2.7	1,113.1 1,096.0	1,096.0 1,069.0	493 246	246 10	HD 349-90. PL 90-483.
Wilson Lk.....	KS Russell.....	Saline R.....	F FRC	530.7 247.8	1,554.0 1,516.0	1,516.0 1,440.0	19,980 9,040	9,040 0	PL 78-534. SD 191-78, SD 247-78.
Yankee Hill Lk & Dam 10.....	NE Lancaster.....	Cardwell Br of Salt Cr.....	F FCR	5.6 2.0	1,262.0 1,244.9	1,244.9 1,218.0	475 208	208 0	PL 85-500. HD 396-84.
North Atlantic Division									
Almond Lake.....	NY Steuben.....	Canacadea Cr.....	F	14.6	1,300.0	1,255.0	489	124	PL 74-738.
Alvin R. Bush Dam.....	PA Clinton.....	Kettle Cr.....	F	73.4	937.0	840.0	1,430	160	FCA Sep 54
Arkport Dam.....	NY Steuben.....	Canisteo R.....	F	8.0	1,304.0	1,218.0	192	0	PL 74-738.
Aylesworth Cr Lk.....	PA Lackawanna.....	Aylesworth Cr.....	F	1.7	1,150.0	1,108.0	87	7	PL 87-874.
Beitzville Dam & Lk.....	PA Carbon, Monroe.....	Pohopoco Cr.....	F	27.0	651.0	628.0	1,411	947	PL 87-874.
Bloomington Lk.....	MD Garret.....	North Branch Potomac R.....	FMA	39.8	628.0	537.0	947	113	
Blue Marsh Dam & Lk.....	PA Lebanon Berks.....	Tulpehocken CR.....	F FMA	36.2 92.0	1,500.0 1,466.0	1,466.0 1,255.0	1,184 952	952 42	PL 87-874.
Cowanessque Lk.....	PA Tioga.....	Cowanessque R.....	F	27.1	307.0	290.0	2,159	1,147	
Curwensville Lk.....	PA Clearfield.....	West Branch Susquehanna R.....	F	19.9	290.0	261.0	1,147	323	
East Sidney Lk.....	NY Delaware.....	Ouleout Cr.....	F	82.0	1,117.0	1,045.0	2,060	410	PL 85-500
Foster Joseph Sayers Dam.....	PA Centre.....	Bald Eagle Cr.....	F	114.7	1,228.0	1,162.0	3,020	790	FCA Sep 54
Francis E. Walter Dam & Res.....	PA Carbon, Luzerne, Monroe.....	Lehigh R.....	F	30.2	1,203.0	1,150.0	1,100	210	PL 74-738.
Gathright Dam & Lk Moomaw.....	VA Alleghany, Bath.....	Jackson R.....	F AR	70.2 107.8	657.0 1,450.0	630.0 1,300.0	3,450 1,830	1,730 80	FCA Sept 54. PL 79-526.
General Edgar Jadwin Dam.....	PA Wayne.....	Dyberry Cr.....	F	79.9	1,610.0	1,582.0	3,160	2,530	PL 79-526.
Prompton Dam & Res.....	PA Wayne.....	W Br Lackawaxen R.....	F	60.7	1,582.0	1,554.0	2,530	1,780	
Raystown Lk.....	PA Huntingdon.....	Raystown Br.....	F FR	24.5 48.5	1,053.0 1,205.0	973.0 1,125.0	659 910	0 290	PL 80-858. PL 80-858.
Stillwater Lk.....	PA Susquehanna.....	Lackawanna R.....	F	248.0	812.0	786.0	10,800	8,300	PL 87-874.
Tioga-Hammond Lakes Hammond.....	PA Tioga.....	Crooked Cr.....	F	514.0	786.0	622.9	8,300	150	
Tioga-Hammond Lakes Tioga.....	PA Tioga.....	Tioga R.....	F	11.6	1,621.0	1,572.0	422	83	PL 77-228.
Whitney Piont Lk.....	NY Broome.....	Otselic R.....	F	54.2	1,131.0	1,086.0	1,770	680	PL 85-500.
York Indian Rock Dam.....	PA York.....	Codorus Cr.....	F	52.5	1,131.0	1,081.0	1,630	470	PL 85-500.
			F	66.5	1,010.0	973.0	3,340	1,200	PL 74-738.
			F	28.0	435.0	370.0	1,430	0	PL 74-738.
North Central Division									
Badhill Dam & Res.....	ND Barnes.....	Sheyenne R.....	FM	68.6	1,266.0	1,257.2	5,430	4,430	FCA Dec 44
Brandon Road L&D.....	IL Will.....	Illinois R.....	N	8.0	539.0	538.0	300	250	PL 71-126.
Cedars L&D.....	WI Outagamie.....	Fox R.....	N	1.8	703.6	698.7	255	140	RHA of 1882, 1885.
Coralville Dam & Res.....	IA Johnson.....	Iowa R.....	F	439.0	712.0	680.0	24,800	3,580	PL 75-761.
Depree L&D.....	WI Brown.....	Fox R.....	C	40.3	680.0	652.0	3,580	0	PL 75-761.
Dresden Island L&D.....	IL Grundy.....	Illinois R.....	N	9.4	591.0	586.7	926	0	PL 71-126.
Eau Galle Dam & Res.....	WI Pierce.....	Eau Galle R.....	FCR	1.0	505.0	504.0	1,690	1,550	FCA 1958.
				1.6	940.0	938.5	1,500	1,350	PL 78-534.

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ¹
					Upper	Lower	Upper	Lower	
Farmdale Dam	IL Tazwell	Farm Cr	F	11.3	616.0	551.0	385	0	PL 78-534.
Fondulac Dam	IL Tazwell	Fondulac Cr	F	2.3	579.0	530.0	97	0	PL 78-534.
Gull Lk Dam & Res.	MN Cass	Gull R	N	70.4	1,194.0	1,192.7	13,100	12,700	RHA 1899.
Highway 75 Dam & Res.	MN Bigstone, Lacqui, Parle	Minnesota R	FC	11.1	952.3	947.3	2,790	910	FCA Oct 65.
Homme Dam & Res.	ND Walsh	Park R	FM	3.7	1,080.0	1,074.0	190	176	FCA of 22 Dec 44.
L&D 1	MN Hennepin, Ramsey	Mississippi R	N	13.0	725.1	722.8	5,800	5,500	RHA 1910.
L&D 2	MN Dakota, Wash	Mississippi R	N	8.0	687.2	686.5	11,810	11,000	RHA 1927.
L&D 3	MN Goodhue, Pierce	Mississippi R	N	17.8	675.0	674.0	17,950	17,650	RHA 1930.
L&D 4	WI Wabasha, Buffalo	Mississippi R	N	18.0	667.0	666.5	38,820	36,600	RHA 1930.
L&D 5	MN Winona, Buffalo	Mississippi R	N	6.2	660.0	659.5	12,680	12,000	RHA 1930.
L&D 5A	MN Winona, Buffalo	Mississippi R	N	7.2	651.0	650.0	7,500	7,000	RHA 1930.
L&D 6	MN Winona	Mississippi R	N	8.4	645.5	644.5	8,870	8,000	RHA 1930.
L&D 7	MN Winona	Mississippi R	N	2.6	639.0	639.0	13,440	13,400	RHA 1930.
L&D 8	WI LaCrosse	Mississippi R	N	20.4	631.0	630.0	20,800	20,000	RHA 1930.
L&D 9	WI Vernon	Mississippi R	N	28.7	620.0	619.0	29,125	28,300	RHA 1930.
L&D 10	WI Crawford	Mississippi R	N	16.8	611.0	610.0	17,070	16,500	RHA 1930.
L&D 11	IA Allamakee	Mississippi R	N	19.1	603.1	602.0	21,100	20,000	PL 71-520.
L&D 12	IA Jackson	Mississippi R	N	12.2	592.1	591.0	13,000	12,400	PL 71-520.
L&D 13	IL Whiteside	Mississippi R	N	24.2	583.1	582.0	30,000	28,500	PL 71-520.
L&D 14	IA Scott	Mississippi R	N	9.0	572.1	571.0	10,500	9,980	PL 71-520.
L&D 15	IL Rock Island	Mississippi R	N	5.5	561.1	559.0	3,725	3,540	PL 71-520.
L&D 16	IL Rock Island	Mississippi R	N	12.1	545.1	544.0	13,000	12,400	PL 71-520.
L&D 17	IL Mercer	Mississippi R	N	7.5	537.1	536.0	7,580	7,200	PL 71-520.
L&D 18	IL Henderson	Mississippi R	N	11.0	529.1	528.0	13,300	12,600	PL 71-520.
L&D 19	IA Lake	Mississippi R	N	55.0	518.2	517.2	33,500	31,800	PL 71-520.
L&D 20	MO Lewis	Mississippi R	N	5.8	481.5	476.5	7,960	7,550	PL 71-520.
L&D 21	IL Adams	Mississippi R	N	8.6	470.1	469.6	9,390	8,910	PL 71-520.
L&D 22	MO Polke	Mississippi R	N	8.4	459.6	459.1	8,660	8,230	PL 71-520.
Lac qui Parle Dam & Res	MN Chippewa Swift	Minnesota R	FC	119.3	941.1	931.2	13,500	6,400	FCA of 22 Jun 36.
Lagrange L&D	IL Brown	Illinois R	N	0.0	429.0	429.0	10,500	10,500	PL 73-184.
Leech Lake Dam & Res.	MN Cass	Leech R	N	300.2	1,295.7	1,293.2	139,000	107,200	RHA of 1882 1895.
Little Kaukauna L&D	WI Brown	Fox R	N	3.6	601.0	592.8	447	42.0	RHA of 1882 1885.
Little Chute L&D	WI Outagamie	Fox R	N	0.4	694.2	688.9	74	67	RHA of 1882 1885.
Lockport Lock	IL Will	Chicago San Ship Canal	FNP	2.7	579.0	577.5	1,850	1,800	RHA 1930.
Lower Appleton L&D	WI Outagamie	Fox R	N	0.2	710.9	706.3	43	40	RHA of 1882 1895.
Marseilles Lk & Dam	IL LaSalle	Illinois R	N	0.7	483.0	482.8	1,400	1,320	PL 71-126.
Marsh Lake Dam & Res	MN Swift, Lacqui, Parle	Minnesota R	FC	23.9	941.1	937.6	8,650	5,150	FCA Jun 36.
Menasha Dam Lk Winnebago	WI Winnebago	Fox R	FN	452.0	746.8	743.5	181,120	168,500	
Mount Morris Dam	NY Livingston	Genesee R	F	337.4	760.0	585.0	3,300	0	PL 74-738.
O'Brien L&D	IL Cook	Calumet	N	0.3	581.9	578.2	50	50	RHA of 1946.
Peoria L&D	IL Peoria	Illinois R	N	0.0	440.0	440.0	27,800	27,800	PL 73-184.
Pine Dam & Res.	MN Crow Wing	Pine R	N	40.4	1,230.3	1,227.3	13,900	13,000	RHA of 1899.
Pokegama Dam & Res	MN Itasca	Mississippi R	N	52.4	1,274.4	1,270.3	13,700	12,000	RHA of 1899.
Rapid Croche L&D	WI Outagamie	Fox R	N	3.4	608.5	602.1	568	0	RHA 1885.
Red Lake Dam & Res	MN Clearwater	Red Lake R	FA	1,810.0	1,174.0	1,173.5	288,800	287,300	FCA Dec 44.
Red Rock Dam & Res	IA Marion	Des Moines R	F	1,670.0	780.0	728.0	65,400	8,000	PL 75-761.
Reservation Control Res	MN Traverse		FC	58.8	981.0	976.0	12,400	10,950	FCA 1936.
Sandy Lake Dam & Res.	SD Roberts								
Saylorville Dam & Res	MN Aitkin	Sandy R	N	37.5	1,218.3	1,214.3	10,600	8,200	RHA of 1899.
St Anthony Falls Lwr L&D	IA Polk	Des Moines R	F	586.0	890.0	836.0	16,700	5,950	FCA 1936.
St Anthony Falls Upr L&D			P	90.0	836.0	810.0	5,950	0	FCA.
Starved Rock L&D	MN Hennepin	Mississippi R	N	0.0	750.0	750.0	50	50	RHA of 1937 1945.
Upper Appleton L&D	MN Hennepin	Mississippi R	N	17.4	801.0	799.0	8,800	8,600	RHA of 1937 1945.
Upper Kaukauna L&D	IL LaSalle	Illinois R	N	1.0	459.0	458.0	1,155	1,020	PL 69-100.
White Rock Dam & Res	WI Outagamie	Fox R	N	7.4	738.7	735.4	1,171	1,040	RHA of 1882 1885.
Winnibigoshish Dam & Res	WI Outagamie	Fox R	N	1.1	656.8	652.8	134	115	RHA of 1882 1885.
	MN Traverse	Bois De Souix	FC	78.6	981.0	972.0	10,500	4,000	FCA 1936.
	SD Roberts								
	MN Cass Itasca	Mississippi R	N	98.7	1,300.9	1,296.9	98,700	62,000	RHA of 1899.

New England Division

Ball Mountain Lk	VT Windham	West R	F	52.4	1,017.0	830.5	810	20	PL 78-534, 83-780.
Barre Falls Dam	MA Worcester	Ware R	F	24.0	807.0	761.0	1,400	0	PL 78-228.
Birch Hill Dam	MA Worcester	Millers R	F	49.9	852.0	815.0	3,200	0	PL 75-761.
Black Rock Lk	CT Litchfield	Branch Brook	F	8.5	520.0	437.0	190	21	PL 86-45.
Blackwater Dam	NH Merrimack	Blackwater R	F	46.0	566.0	515.0	3,280	0	PL 75-111.
Buffumville Lk	MA Worcester	Little R	F	11.3	524.0	492.5	530	200	PL 77-228.
Colebrook River Lk	CT Litchfield	West Branch	F	50.2	761.0	708.0	1,185	750	PL 86-645.
Conant Brook Dam	MA Berkshire	Farmington R	F						
East Brimfield Lk	MA Hampden	Conant Brook	F	3.7	757.0	694.0	158	0	PL 86-645.
Edward MacDowell Lk	MA Hampden, Worcester	Quinebaug R	F	29.9	653.0	632.0	2,300	360	PL 77-228.
Everett Lk	NH Hillsboro	Nubanusit Brook	F	12.8	946.0	911.0	840	165	PL 75-111.
Franklin Falls Dam	NH Hillsboro, Merrimack	Piscataquog R	F	91.5	418.0	340.0	2,900	130	PL 75-761.
Hancock Brook Lk	NH Belknap, Merrimack	Pemigewasset R	F	150.6	389.0	307.0	2,800	440	PL 75-111.
Hodges Village Dam	CT Litchfield	Hancock Brook	F	3.9	484.0	460.0	266	40	PL 86-645.
Hop Brook Lk	MA Worcester	French R	F	13.3	501.0	465.5	740	0	PL 77-228.
Hopkinton Lk	CT New Haven	Hop Brook	F	6.9	364.0	310.0	270	21	PL 86-645.
Knightville Dam	NH Merrimack	Contoocook R	F	70.1	416.0	380.0	3,700	220	PL 75-761.
Littleville Lk	MA Hampshire	Westfield R	F	49.0	610.0	480.0	960	0	PL 75-761.
Mansfield Hollow Lk	MA Hampden, Hampshire	Middle Br, Westfield R	F	23.0	576.0	518.0	510	275	PL 85-500.
New Bedford-Fairhaven Hurr Bar-rier	CT Tolland	Natchaug R	F	49.2	257.0	205.5	1,880	200	PL 77-228.
	MA Bristol		F	0.0	0.0	0.0	0	0	PL 85-500.

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
North Hartland Lk	VT Windsor	Ottawaquechee R	F	68.8	546.5	425.0	1,100	215	PL 75-761.
North Springfield Lk	VT Windsor	Black R	F	50.0	545.5	467.0	1,200	100	PL 75-761.
Northfield Br Lk	CT Litchfield	Northfield Br	F	2.4	576.0	500.0	67	7	PL 86-645.
Otter Br Lk	NH Cheshire	Otter Brook	F	17.6	781.0	701.0	374	70	PL 83-780.
Stamford Hurr Barrier	CT Fairfield		F	0.0	0.0	0.0	0	0	PL 86-645.
Surry Mountain Lk	NH Cheshire	Ashuelot R	F	31.7	550.0	500.0	970	260	PL 75-761.
Thomaston Dam	CT Litchfield	Naugatuck R	F	42.0	494.0	380.0	960	0	PL 78-534.
Townshend Lk	VT Windham	West R	F	32.9	553.0	478.0	735	95	PL 78-534, PL 83-780.
Tully Lk	MA Worcester	East Br Tully R	F	20.5	668.0	636.0	1,130	78	PL 75-761.
Union Village Dam	VT Orange	Ompompanoosuc R	F	38.0	564.0	420.0	740	0	PL 74-738.
West Hill Dam	MA Worcester	West R	F	12.4	264.0	234.0	1,025	0	PL 78-534.
West Thompspon	CT Windham	Quinebaug R	F	25.6	342.5	305.0	1,250	200	PL 86-645.
Westville Lake	MA Worcester	Quinebaug R	F	11.0	572.0	525.0	913	23	PL 77-228.

North Pacific Division

Albeni Falls Dam, Lk Pend, Oreille	ID Bonner	Pend Oreille R	FNP	1,155.0	2,062.5	2,049.7	95,000	86,000	PL 81-516
Applegate Lk	OR Jackson	Applegate R	FIR	75.2	1,987.0	1,854.0	988	221	FCA 1962, PL 87-874, PL 87-874.
Big Cliff Dam	OR Marion, Linn	N Santiam R	P	3.5	1,206.0	1,182.0	130	98	HD 544, PL 75-761, PL 87-874.
Blue River Lk	OR Lane	Blue R	F	6.5	1,357.0	1,350.0	975	940	HD 531.
Bonneville L&D Lk	WA Skamania	Columbia R	FNI	78.8	1,350.0	1,180.0	940	133	PL 81-516.
Chena River Lakes	AK North Star Borough	Chena R	NP	138.0	77.0	70.0	20,800	19,850	RHA 1935.
Chief Joseph Dam Rufus Woods Lk	WA Douglas, Okanogan	Columbia R	F	34.0	506.7	490.0	5,400	400	PL 90-483.
Cottage Grove Lk	OR Lane	Coast Fk, Willamette R	P	192.3	956.0	930.0	8,400	6,800	HD 693, PL 79-525.
Cougar Lk	OR Lane	South Fk	F	29.8	791.0	750.0	1,155	295	HD 544, PL 75-761.
			F	11.3	1,699.0	1,690.0	1,280	1,235	HD 531.
			FNPI	143.9	1,690.0	1,532.0	1,235	635	PL 81-516.
			P	9.9	1,532.0	1,516.0	635	602	PL 83-870.
			F	19.1	1,569.0	1,563.0	3,490	3,455	HD 544, PL 75-761.
			FNPI	281.6	1,563.5	1,450.0	3,455	1,725	
			P	40.3	1,450.0	1,425.0	1,725	1,415	
			FNPI	4.8	695.0	690.0	990	940	HD 544, PL 75-761.
			F	5.5	835.0	832.0	1,885	1,815	HD 544
			FNI	65.0	832.0	770.5	1,815	520	PL 75-761.
			FNP	2,016.0	1,600.0	1,445.0	17,090	9,050	HD 403, PL 87-874.
			F	7.5	834.0	830.0	1,865	1,760	HD 531.
			FNI	107.5	830.0	728.0	1,760	460	PL 81-516
			F	15.7	375.1	373.5	10,305	9,340	HD 544.
			FNI	93.9	373.5	353.0	9,340	1,515	PL 75-761
			F	4.9	641.0	637.0	1,260	1,195	HD 544
			FNPI	24.9	637.0	613.0	1,195	895	PL 86-645
			F	18.3	1,015.0	1,010.0	3,705	3,605	HD 531.
			FNPI	249.9	1,010.0	992.0	3,605	2,072	PL 81-516, PL 83-780.
			F	5.6	1,543.0	1,541.0	2,850	2,710	HD 531.
			FNPI	194.6	1,541.0	1,448.0	2,710	1,575	PL 81-516.
			F	80.0	1,206.0	1,141.0	1,750	763	HD 531.
			FA	25.6	1,141.0	1,040.0	763	13	PL 81-516.
			NP	24.9	440.0	437.0	8,370	8,210	HD 704, PL 79-14.
			F	158.0	268.0	265.0	55,000	52,000	HD 531.
			FNP	150.0	265.0	262.0	52,000	49,000	PL 81-516.
			F	192.0	262.0	257.0	49,000	42,000	
			FP	4,979.5	2,459.0	2,287.0	46,365	14,391	HD 531, PL 81-516.
			PN	49.0	638.0	633.0	10,030	9,620	HD 704, PL 79-14.
			P	12.2	825.0	819.0	2,090	1,860	HD 544.
			FNPI	324.2	926.0	825.0	4,255	2,090	PL 75-761
			FP	315.0	1,872.0	1,751.0	3,430	1,800	HD 566, PL 87-874.
			NPI	43.6	738.0	733.0	8,900	8,540	HD 704, PL 79-14.
			F	13.9	3,060.0	3,055.0	2,817	2,745	PL 79-526.
			FI	264.4	3,055.0	2,905.0	2,817	802	
			NP	20.0	540.0	537.0	6,700	6,550	HD 704, PL 79-14.
			NP	185.0	340.0	335.0	38,800	36,000	HD 704, PL 79-14.
			F	7.5	1,265.0	1,205.0	225	53	HD 578, PL 75-761.
			F	106.3	1,215.0	895.0	963	0	PL 74-738.
			NP	52.5	160.0	155.0	11,200	10,350	HD 531, PL 81-516.
			F	11.6	2,113.5	2,047.0	269	96	PL 89-298.
			FMCA	65.4	800.0	700.0	1,170	193	HD 601, PL 93-251.

Ohio River Division

Allegheny L&D 2	PA Allegheny	Allegheny R	N	0.0	721.0	710.0	0	0	RHA 1935.
Allegheny L&D 3	PA Allegheny	Allegheny R	N	0.0	734.5	721.0	0	0	RHA 1935.
Allegheny L&D 4	PA Allegheny Westmoreland	Allegheny R	N	0.0	745.0	734.5	0	0	RHA 1912.
Allegheny L&D 5	PA Armstrong	Allegheny R	N	0.0	756.8	745.0	0	0	RHA 1912.
Allegheny L&D 6	PA Armstrong	Allegheny R	N	0.0	769.0	756.8	0	0	RHA 1912.
Allegheny L&D 7	PA Armstrong	Allegheny R	N	0.0	782.1	769.0	0	0	RHA 1912.
Allegheny L&D 8	PA Armstrong	Allegheny R	N	0.0	800.0	782.1	0	0	RHA 1912, 1935.
Allegheny L&D 9	PA Armstrong	Allegheny R	N	0.0	822.0	800.0	0	0	RHA 1935.
Allegheny Res Kinzua Dam	PA Warren	Allegheny R	F	607.0	1,365.0	1,328.0	21,180	12,080	PL 74-738.
			FPCAR	549.0	1,328.0	1,240.0	12,080	1,900	
			F	53.1	901.0	888.0	4,852	3,387	PL 87-874.
			FMCR	79.2	888.0	885.0	3,387	3,105	
			F	26.1	941.0	928.0	2,460	1,540	PW 1933.

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
Barkley Dam Lk Barkley.....	Ky Lyon, Livgst.....	Cumberland R.....	FCR F FP N	7.6 1,213.0 259.0 610.0	928.0 375.0 359.0 354.0	922.5 359.0 354.0 233.0	1,540 93,430 57,920 45,210	1,250 57,920 45,210 0	PL 79-525.
Barren River Lk.....	KY Allen, Barren.....	Barren R.....	F FMR	558.8 190.3	590.0 552.0	552.0 525.0	20,150 10,000	10,000 4,340	PL 75-261.
Beach City Lk.....	OH Tuscarawas.....	Sugar Cr.....	F FCR	69.9 0.0	976.5 0.0	948.0 0.0	6,150 0	420 420	PW 1933.
Beech Fk Lk.....	WV Wayne.....	Beech Fk Cr.....	F FCR	28.3 5.0	614.5 592.0	592.0 583.5	1,847 725	725 460	PL 87-874.
Belleville L&D.....	WV Wood..... OH Meigs.....	Ohio R.....	N	0.0	582.0	560.0	0	0	RHA 1909.
Berlin Lk.....	OH Mahoning, Portage.....	Mahoning R.....	F FMCAR	38.3 56.6	1,032.0 1,024.7	1,024.7 1,016.5	5,500 3,590	3,590 2,200	PL 75-761.
Bluestone Lk.....	WV Summers.....	New R.....	F FCR	592.6 7.5	1,520.0 1,410.0	1,410.0 1,406.0	9,180 2,040	2,040 1,800	PL 74-738. PL 75-761.
Bolivar Dam.....	OH Stark, Tuscarawas.....	Sandy Cr.....	F	149.6	962.0	895.0	6,500	0	PW 1933.
Brookville Lk.....	IN Franklin.....	E Fork of Whitewater R.....	FMR	128.4	748.0	713.0	5,260	2,430	PL 75-761.
Buckhorn Lk.....	KY Leslie.....	Middle Fk of Kentucky R.....	F FR	135.8 21.8	840.0 782.0	782.0 757.0	3,610 1,230	1,230 550	PL 75-761.
Burnsville Lk.....	WV Braxton.....	L Kanawha R.....	F FCAR	51.5 10.2	825.0 789.0	789.0 776.0	1,902 965	965 553	PL 75-761.
CJ Brown Dam & Res.....	OH Clark.....	Buck Cr.....	F	26.8	1,023.0	1,012.0	2,720	2,120	PL 87-874.
CM Harden Lk.....	IN Parke.....	Raccoon Cr.....	F FAR	83.5 33.1	690.0 661.0	661.0 640.0	3,910 2,060	2,060 1,100	PL 75-761.
Caesar Cr Lk.....	OH Warren.....	Caesar Cr.....	F FMAR	140.2 88.7	883.0 849.0	849.0 800.0	6,110 2,830	2,830 700	PL 75-761.
Cagles Mill Lk.....	IN Putman.....	Mill Cr.....	F	201.0	704.0	636.0	4,840	1,400	PL 75-761.
Cannelton L&D.....	KY Hancock..... IN Pery.....	Ohio R.....	N	0.0	383.0	358.0	0	0	RHA 1909
Carr Fk Lk.....	KY Knott.....	Carr Cr.....	F FAR	25.1 10.8	1,055.0 1,027.0	1,027.0 1,009.0	1,120 710	710 530	PL 87-874.
Cave Run Lk.....	KY Rowan.....	Licking R.....	F FAR	391.5 75.3	765.0 730.0	730.0 720.0	14,870 8,270	8,270 6,790	PL 74-738
Center Hill Lk.....	TN Dekalb.....	Caney FK.....	F P	762.0 492.0	685.0 648.0	648.0 618.0	23,060 18,220	18,220 14,590	PL 75-761.
Charles Mill Lk.....	OH Ashland.....	Black Fk.....	F FCR	80.6 4.5	1,020.0 997.0	997.0 993.0	6,050 1,350	1,350 827	PW 1933.
Cheatham L&D.....	TN Cheatham.....	Cumberland R.....	P N	19.8 84.2	385.0 382.0	382.0 345.0	7,450 5,630	5,630 0	RHA 1946, PL 396. PL 396.
Clendening Lk.....	OH Harrison.....	Brush Fk.....	F FCR	27.5 8.0	910.5 898.0	898.0 893.0	2,620 1,800	1,800 1,430	PW 1933.
Conemaugh River Lk.....	PA Indiana, Westmoreland.....	Conemaugh R.....	F	270.0	975.0	880.0	6,820	300	PL 74-738, PL 75-761.
Cordell Hull Dam & Res.....	TN Smith.....	Cumberland R.....	PR NR	17.8 0.0	504.5 499.0	499.0 424.0	12,200 9,820	9,820 0	RHA 1946.
Crooked Cr Lk.....	PA Armstrong.....	Crooked Cr.....	F	89.4	920.0	840.0	1,940	350	PL 74-738, PL 75-761.
Dale Hollow Lk.....	TN Clay.....	Obey R.....	F P	353.0 496.0	663.0 651.0	651.0 631.0	30,990 27,700	27,700 21,880	PL 75-761.
Dashields L&D.....	PA Allegheny.....	Ohio R.....	N	0.0	692.0	682.0	0	0	RHA 1909.
Deer Cr Lk.....	OH Pickaway.....	Deer Cr.....	F FCR	81.5 14.6	844.0 810.0	810.0 796.0	4,046 1,277	1,277 727	PL 75-761.
Delaware Lk.....	OH Delaware.....	Olentangy R.....	F FCAR	118.0 5.6	947.0 915.0	915.0 910.0	8,550 1,270	1,270 950	PL 75-761
Dewey Lk.....	KY Floyd.....	Johns Cr.....	F FCR	76.1 4.9	686.0 650.0	650.0 645.0	3,340 1,100	1,100 880	PL 75-761
Dillon Lk.....	OH Muskingum.....	Licking R.....	F FCR	256.5 4.4	790.0 737.0	737.0 734.0	10,280 1,560	1,560 1,330	PL 75-761.
Dover Dam.....	OH Tuscarawas.....	Tuscarawas R.....	F	203.0	916.0	858.0	10,100	0	PW 1933.
E Br Clarion River Lake.....	PA Elk.....	E Br Clarion R.....	F FCAR	19.0 19.8	1,685.0 1,670.0	1,670.0 1,651.0	1,370 1,160	1,160 920	PL 78-526.
E Fk Res Wm H Harsha Lk.....	OH Clermont.....	E Fk Little Miami R.....	F FMCAR	202.2 73.6	795.0 733.0	733.0 683.0	4,600 2,160	2,160 820	PL 75-761.
East Lynn Lk.....	WV Wayne.....	E Fk Twelvepole.....	F FCR	65.3 5.5	701.0 662.0	662.0 656.0	2,351 1,005	1,005 823	PL 75-761.
Emsworth L&D.....	PA Allegheny.....	Ohio R.....	N	0.0	710.0	692.0	0	0	RHA 1909.
Fishtrap Lk.....	KY Pike.....	Levisa Fk.....	F FCAR	126.7 27.2	825.0 757.0	757.0 725.0	2,681 1,131	1,131 569	PL 75-761.
Gallipolis L&D.....	WV Mason..... OH Gallia.....	Ohio R.....	N	0.0	538.0	515.0	0	0	RHA 1935.
Grayson Lk.....	KY Carter.....	L Sandy R.....	F FCAR	89.6 10.7	681.0 645.0	645.0 637.0	3,633 1,509	1,509 1,159	PL 86-645.
Green R L&D 1.....	KY Henderson.....	Green R.....	N	0.0	349.1	337.3	0	0	RHA 1888
Green R L&D 2.....	KY McLean.....	Green R.....	N	0.0	363.4	349.1	0	0	RHA 1888
Green River Lk.....	KY Taylor.....	Green R.....	F FAR	479.1 81.5	713.0 675.0	675.0 664.0	19,100 8,210	8,210 6,650	PL 75-761.
Greenup L&D 3.....	KY Greenup..... OH Scioto.....	Ohio R.....	N	0.0	515.0	485.0	0	0	RHA 1909
Hannibal L&D.....	WV Wetzel..... OH Monroe.....	Ohio R.....	N	0.0	623.0	602.0	0	0	RHA 1909.
Hidebrand L&D.....	WV Monongalia.....	Monongahela.....	N	0.0	835.0	814.0	0	0	RHA 1950.
Huntington Lk.....	IN Hunt.....	Wabash R.....	F FR	140.6 8.4	798.0 749.0	749.0 737.0	7,900 900	900 500	PL 85-500.
J Percy Priest Dam & Res.....	TN Davidson.....	Stones R.....	F FP FPR PR	252.0 15.0 0.0 0.0	504.5 490.5 489.5 483.0	490.5 489.5 483.0 480.0	22,720 14,400 14,000 11,630	14,400 14,000 11,630 10,570	PL 75-761.
JW Flannagan Dam & Res.....	VA Dickenson.....	Pound R.....	F	78.6	1,446.0	1,396.0	2,098	1,143	PL 75-761.

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
Kentucky R L&D 1	KY Carroll	Kentucky R	FMCN	16.5	1,396.0	1,380.0	1,143	310	
Kentucky R L&D 2	KY Henry Owen	Kentucky R	N	0.0	430.0	421.8	0	0	RHA 1879
Kentucky R L&D 3	KY Henry Owen	Kentucky R	N	0.0	444.0	430.0	0	0	RHA 1879
Kentucky R L&D 4	KY Franklin	Kentucky R	N	0.0	457.1	444.0	0	0	RHA 1879
Laurel River Lk	KY Laurel, Whitley	Laurel R	N	0.0	470.4	457.1	0	0	RHA 1879
			P	185.0	1,018.5	982.0	6,060	4,200	PL 86-645
			R	250.6	982.0	760.0	4,200	0	
Leesville Lake	OH Carroll	McGuire Cr	F	17.9	977.5	963.0	1,470	1,000	PW 1933
			FCR	5.5	963.0	957.0	1,000	829	
London L&D	WV Kanawha	Kanawha R	N	0.0	614.0	590.0	0	0	RHA 1930
Loyalhanna Lk	PA Westmoreland	Loyalhanna Cr	F	93.3	975.0	910.0	3,280	210	PL 74-738
			F	0.0	0.0	0.0	0	0	PL 75-761
M J Kirwan Dam & Res	OH Portage	W. Br Mahoning R	F	22.0	993.0	985.5	3,240	2,650	PL-74-738
			FCAR	52.9	985.5	951.0	2,650	570	PL 75-761
Mahoning Cr Lk	PA Armstrong	Mahoning Cr	F	64.7	1,162.0	1,098.0	2,370	280	PL 74-738
			FRC	5.1	1,098.0	1,075.0	280	170	PL 75-761
Markland L&D	IN Switzerland	Ohio R	N	0.0	455.0	420.0	0	0	RHA 1909
	KY Gallatin								
Marmet L&D	WV Kanawha R	Kanawha	N	0.0	590.0	566.0	0	0	RHA 1930
Martins Fk Lk	KY Harlan	Martins Fk of Clover R	F	14.3	1,341.0	1,310.0	578	340	PL 89-298
			FAR	3.1	1,310.0	1,300.0	340	274	
			R	3.7	1,300.0	1,265.0	274	0	
Maxwell L&D	PA Fayette Washington	Monongahela R	N	0.0	763.0	743.5	0	0	RHA 1909
McAlpine L&D	KY Jefferson	Ohio R	N	0.0	420.0	383.0	0	0	RHA 1909
	IN Clark								
Meldahl L&D	KY Bracken	Ohio R	N	0.0	485.0	455.0	0	0	RHA 1909
	OH Clermont								
Mississinewa Lk	IN Miami	Mississinewa R	F	293.2	779.0	737.0	12,830	3,180	PL 85-500
			FR	51.9	737.0	712.0	3,180	1,280	
Mohawk Dam	OH Coshocton	Walhonding R	F	285.0	890.0	799.2	7,950	0	PW 1933
Mohicanville Dam	OH Ashland	Lk Fork	F	102.0	963.0	932.0	8,800	0	PW 1933
Monongahela R L&D 2	PA Allegheny	Monongahela R	N	0.0	718.7	710.0	0	0	RHA 1902
Monongahela R L&D 3	PA Allegheny	Monongahela R	N	0.0	726.9	718.7	0	0	RHA 1905
Monongahela R L&R 4	PA Washington Westmoreland	Monongahela R	N	0.0	743.5	726.9	0	0	RHA 1909
Monongahela R L&D 7	PA Greene, Fayette	Monongahela R	N	0.0	778.0	763.0	0	0	RHA 1922
Monongahela R L&D 8	PA Greene, Fayette	Monongahela R	N	0.0	797.0	778.0	0	0	RHA 1922, 1950, 1973
Monroe Lk	IN Monroe	Salt Cr	F	258.8	556.0	538.0	18,450	10,750	FCA 1958
			FMA	159.9	538.0	515.0	10,750	3,280	
Montgomery Island L&D	PA Beaver	Ohio R	N	0.0	682.0	664.5	0	0	RHA 1909
Morgantown L&D	WV Monongalia Monongahela R	N	0.0	814.0	797.0	0	0	RHA 1909	
Mosquito Cr Lk	OH Trumbull	Mosquito Cr	F	21.7	904.0	901.4	8,900	7,850	PL 75-761
			FMCAR	80.4	901.4	899.9	7,850	7,220	
N Br Kokosing River Lk	OH Knox	North Br of Kokosing R	F	13.9	1,146.0	1,121.0	1,140	154	PL 87-874
N Fk Pound Lk	VA Wise	N Fk Pound R	F	8.0	1,644.0	1,611.0	349	154	PL 86-645
			FMCN	1.3	1,611.0	1,601.0	154	106	
New Cumberland L&D	WV Hancock	Ohio R	N	0.0	664.5	644.0	0	0	RHA 1909
	OH Jefferson								
Newburgh L&D	KY Henderson	Ohio R	N	0.0	358.0	342.0	0	0	RHA 1909
	IN Warrick								
Nolin Lk	KY Edmonson	Nolin R	F	439.2	560.0	515.0	14,530	5,790	PL 75-761
			FR	106.4	515.0	490.0	5,790	2,890	
Ohio R L&D 52	KY McCracken	Ohio R	N	0.0	302.0	290.0	0	0	RHA 1909, 1910, 1918
	IL Massac								
Ohio R L&D 53	KY Ballard	Ohio R	N	0.0	290.0	276.6	0	0	RHA 1909, 1910, 1918
	IL Pulaski								
Old Hickory L&D	TN Davidson Sumner	Cumberland R	P	63.0	445.0	442.0	22,500	19,550	RHA 1946
			N	357.0	442.0	375.0	19,550	0	
Opekiska L&D	WV Monongahela	Monongahela R	N	0.0	857.0	835.0	0	0	RHA 1950
Paint Cr Lk	OH Ross, Highland	Paint Cr	F	124.7	845.0	798.0	4,761	1,190	PL 75-761
			FMCAR	11.4	798.0	787.5	1,190	770	
Paintsville Lk	KY Johnson	Paint Cr	F	32.8	731.0	709.0	1,867	1,139	PL 89-298
			FCAR	36.3	709.0	650.0	1,139	261	
Patoka Lk	IN DuBois	Patoka R	F	121.1	548.0	536.0	11,300	8,880	PL 89-298
			FMCAR	167.3	536.0	506.0	8,880	2,010	
Piedmont Lk	OH Harrison	Stillwater Cr	F	32.2	924.6	913.0	3,170	2,310	PW 1933
			FCR	8.6	913.0	909.0	2,310	1,987	
Pike Island L&D	WV Ohio	Ohio R	N	0.0	644.0	623.0	0	0	RHA 1909
	OH Belmont								
Pleasant Hill Lk	OH Ashland	Clear Fk	F	74.2	1,065.0	1,020.0	2,600	850	PW 1933
			FCR	5.5	1,020.0	1,012.5	850	627	
R D Bailey Lk	WV Mingo, Wyoming	Guyandot R	F	169.5	1,155.0	1,035.0	2,850	630	PL 87-874
			FCAR	12.2	1,035.0	1,012.0	630	440	
Racine L&D	WV Mason	Ohio R	N	0.0	560.0	538.0	0	0	RHA 1909
	OH Meigs								
Rough River Lk	Grayson, Breckinridge	Rough R	F	214.4	524.0	495.0	10,260	5,100	PL 75-761
	Ridge		FMR	90.2	495.0	470.0	5,100	2,180	
Salamonie Lk	IN Wabash	Salamonie R	F	202.9	793.0	755.0	9,340	2,860	PL 85-500
			FR	47.6	755.0	730.0	2,860	976	
Senecaville Lk	OH Guernsey	Seneca Fk	F	45.1	842.5	832.2	5,170	3,550	PW 1933
			FCR	12.8	832.2	828.2	3,550	2,912	
Shenango River Lk	PA Mercer	Shenango R	F	151.0	919.0	896.0	11,090	3,560	PL 75-761
			FCAR	29.9	896.0	885.0	3,560	1,910	
Smithland L&D	KY Livingston	Ohio R	N	0.0	324.0	302.0	0	0	RHA 1909
	IL Pope								

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
Summersville Lk.....	WV Nicholas.....	Gauley R.....	F	221.9	1,710.0	1,1652.0	4,913	2,790	PL 75-761.
Sutton Lk.....	WV Braxton.....	Elk R.....	FRCA	161.8	1,652.0	1,535.0	2,790	514	
Tappan Lk.....	OH Harrison.....	L Stillwater Cr.....	F	60.0	925.0	850.0	1,520	270	PL 75-761.
			F	26.5	909.0	899.3	3,100	2,350	PW 1933.
			F	11.4	899.3	894.0	2,350	1,960	
Tionesta Lk.....	PA Forest.....	Tionesta Cr.....	F	125.6	1,170.0	1,085.0	2,770	480	PL 74-738 PL 75-761.
Tom Jenkins Dam, Burr Oak, Lk.....	OH Athens.....	E Br Sandy Cr.....	F	17.6	740.0	721.0	1,192	664	FCA 1944.
			FRM	5.8	721.0	710.0	664	394	PL 78-534.
Tygart Lake.....	WV Taylor.....	Tygart R.....	F	178.1	1,167.0	1,094.0	3,430	1,740	PWA 1934.
			F	99.9	1,094.0	1,010.0	1,740	620	
			F	47.6	1,278.0	1,210.0	2,290	0	PL 87-874.
Union City Res.....	PA Erie.....	French Cr.....	N	0.0	342.0	324.0	0	0	RHA 1909.
Uniontown L&D.....	KY Union.....	Ohio R.....	N	0.0	342.0	324.0	0	0	
	IN Posey.....		N	0.0	342.0	324.0	0	0	
W FK of Mill Cr Winton Woods Lk.....	OH Hamilton.....	W Fk Mill Cr.....	F	9.8	702.0	675.0	557	183	PL 79-526.
Willow Island L&D.....	WV Pleasants.....	Ohio R.....	N	0.0	602.0	582.0	0	0	RHA 1909.
	OH Washington.....		N	0.0	602.0	582.0	0	0	
Wills Cr Lk.....	OH Coshockton Wills Cr, Muskingum.....		F	190.0	779.0	742.0	11,450	900	PW 1933.
			CR	0.0	0.0	0.0	0	0	
Winfield L&D.....	WV Putnam.....	Kanawha R.....	N	0.0	566.0	538.0	0	0	RHA 1935.
Wolf Cr Dam, Lk Cumberland.....	KY Russell.....	Cumberland R.....	P	2,142.0	723.0	673.0	50,250	35,820	
			F	2,094.0	760.0	723.0	63,530	50,250	PL 75-761.
			F	15.0	1,209.0	1,181.0	775	325	FCA 1962.
Woodcock Cr Lk.....	PA Crawford.....	Woodcock Cr.....	F	5.0	1,181.0	1,162.5	325	100	
			FCAR	99.5	1,470.0	1,439.0	3,570	2,840	FCA 1938.
Youghiogheny R Lk.....	PA Fayette.....	Youghiogheny R.....	F	149.3	1,439.0	1,419.0	2,840	2,300	

South Atlantic Division

Aberdeen L&D and Res.....	MS Monroe.....	Tombigbee R.....	N	3.9	190.5	189.5	4,359	3,883	PL 79-525.
Aliceville Lock Dam & Res.....	AL Pickens.....	Tombigbee R.....	N	7.6	136.5	135.5	8,655	7,945	PL 79-525.
Allatoona Dam & Res.....	GA Bartow.....	Etowah R.....	F	302.6	860.0	840.0	19,201	11,862	PL 77-228.
			PMAR	284.6	840.0	800.0	11,862	3,251	
B Everett Jordan Dam & Lk.....	NC Chatham.....	Haw R.....	F	538.4	240.0	216.0	31,811	13,942	PL 88-253.
			FMCAR	140.4	216.0	202.0	13,942	6,658	
Bay Springs Lock Dam & Res.....	MS Tishomingo.....	Tombigbee R.....	N	37.0	414.0	408.0	6,700	5,740	PL 79-525.
Buford Dam Lk, Sidney Lanier.....	GA Forsyth, Gwinnett.....	Chattahoochee R.....	F	598.8	1,085.0	1,071.0	47,182	38,542	PL 79-14.
			PNMR	1,087.6	1,071.0	1,035.0	38,542	22,442	
Carters Dam & Res.....	GA Murray.....	Coosawattee R.....	F	89.2	1,099.0	1,074.0	3,880	3,275	PL 79-14.
			PRA	41.4	1,074.0	1,022.0	3,275	2,196	
Claiborne Lock Dam & Res.....	AL Monroe.....	Alabama R.....	N	16.6	35.0	32.0	5,930	5,210	PL 79-14.
Clarks Hill Dam & Lk.....	GA Columbia.....	Savannah R.....	F	390.0	335.0	330.0	78,500	71,100	PL 78-534.
	SC McCormick.....		FP	1,045.0	330.0	312.0	71,100	45,000	
Coffeeville Lock Dam & Res.....	AL Clark, Choctaw.....	Tombigbee R.....	N	19.9	32.5	30.0	8,500	7,500	PL 60-317.
Columbus Lock Dam & Res.....	MS Lowndes.....	Tombigbee R.....	N	8.5	163.5	162.5	9,400	8,500	PL 79-525.
Demopolis Lock Dam & Res.....	AL Sumter, Marengo.....	Tombigbee R.....	N	0.0	73.0	73.0	10,000	10,000	PL 60-317.
Falls Dam & Lk.....	NC Wake.....	Neuse R.....	F	220.9	264.0	250.1	20,810	11,310	PL 89-298.
			FMCAR	89.7	250.1	236.5	11,310	2,600	
G W Andrews L&D and Res.....	AL Houston.....	Chattahoochee R.....	N	8.2	102.0	96.0	1,540	1,190	PL 79-14.
	GA Early.....		N	8.2	102.0	96.0	1,540	1,190	
Gainesville L&D and Res.....	AL Sumter, Greene.....	Tombigbee R.....	N	5.8	109.5	108.5	6,920	5,900	PL 79-525.
Hartwell Dam & Lk.....	GA Hart.....	Savannah R.....	F	293.0	665.0	660.0	61,400	55,950	PL 81-516.
	SC Anderson.....		FP	1,416.0	660.0	625.0	55,950	27,650	
Holt Lock Dam & Res.....	AL Tuscaloosa.....	Black-Warrior R.....	NP	3.3	187.0	186.0	3,296	3,252	PL 60-317.
Inglis Dam Lk Rousseau.....	FL Levy, Marion, Citrus.....	Cross FL Barge Canal.....	N	13.0	27.5	24.0	4,030	2,040	PL 77-675.
Jim Woodruff L&D.....	FL Gadsden, Jackson.....	Apalachicola R.....	NP	20.0	77.5	76.5	38,950	36,000	PL 79-14.
John H Kerr Dam & Res.....	VA Mecklenburg.....	Roanoke R.....	F	1,281.4	320.0	300.0	83,200	48,900	PL 78-534.
			FP	1,027.0	300.0	268.0	48,900	19,700	
John Hollis Bankhead L&D and Res.....	AL Tuscaloosa.....	Black-Warrior R.....	NP	27.1	255.0	252.0	9,245	8,730	PL 60-168.
Lk Okeechobee.....	FL Okeechobee, Glades, Hendry, Palm Beach, Martin.....	Central and Southern FL.....	FNIMC	2,859.0	17.5	10.5	454,900	326,000	PL 71-520, PL 75-392, PL 79-14, PL 80-858, PL 83-780, PL 90.
Lock A.....	MS Monroe.....	Tombigbee R.....	N	0.9	220.5	219.5	980	850	PL 79-525.
Lock B.....	MS Monroe.....	Tombigbee R.....	N	2.7	245.5	244.5	2,841	2,615	PL 79-525.
Lock C.....	MS Itawamba.....	Tombigbee R.....	N	1.6	270.5	269.5	1,699	1,586	PL 79-525.
Lock D.....	MS Itawamba.....	Tombigbee R.....	N	2.0	300.5	299.5	2,021	1,959	PL 79-525.
Lock E.....	MS Itawamba, Prentiss.....	Tombigbee R.....	N	0.9	330.5	329.5	889	821	PL 79-525.
Millers Ferry L&D.....	AL Wilcox.....	Alabama R.....	NP	16.7	80.0	79.0	17,201	16,160	PL 79-14.
Okatibbee Dam & Res.....	MS Lauderdale.....	Okatibbee Cr.....	F	46.5	352.0	343.0	6,580	3,800	PL 87-874.
		Chickasawbay R.....	RMA	34.3	343.0	328.0	3,800	1,275	
Philpott Dam & Lk.....	VA Henry.....	Smith R.....	F	34.2	985.0	974.0	3,370	2,880	PL 78-534.
			FP	111.2	974.0	920.0	2,880	1,350	
R B Russell Dam and Lk.....	GA Elbert.....	Savannah R.....	F	140.0	480.0	475.0	29,340	26,653	PL 89-789.
	SC Abbeville.....		FP	126.8	475.0	470.0	26,653	24,117	
Robert F Henry Lock Dam & Res.....	AL Autauga, Lowndes.....	Alabama R.....	NP	44.6	125.0	124.0	13,300	10,470	PL 79-14.
Rodman Dam & Lk Ocklawaha.....	FL Putman & Marion.....	Cross FL Barge Canal.....	N	48.0	23.2	20.0	17,350	12,950	PL 77-675.
S-10 & Water Cons Area 1.....	FL Palm Beach.....	Central and Southern FL.....	F	181.9	18.3	17.0	141,250	141,250	PL 80-858.
			FIMC	273.2	17.0	14.0	141,250	26.00	
S-11 & Water Cons Area 2A.....	FL Palm Beach Broward.....	Central and Southern FL.....	F	236.3	16.6	14.5	110,500	110,500	PL 80-858.
			FIMC	165.0	14.5	13.0	110,500	107,500	PL 83-780.
S-12 & Water Cons Area 3A.....	FL Broward & Dade.....	Central and Southern FL.....	F	1,661.0	14.5	10.5	487,200	385,000	PL 80-858.
			FIMC	465.0	10.5	9.5	385,000	316,000	PL 83-780.
Seiden Lock and Res.....	AL Hale, Greene.....	Black-Warrior R.....	N	9.1	95.5	94.0	8,200	6,900	PL 60-317.
W Kerr Scott Dam & Res.....	NC Wilkes.....	Yadkin R.....	F	112.0	1,075.0	1,030.0	4,000	1,475	PL 79-526.
			FM	33.0	1,030.0	1,000.0	1,475	675	
Walter F George L&D.....	GA Clay.....	Chattahoochee R.....	NP	244.0	190.0	184.0	45,181	36,375	PL 81-516.

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
West Point Dam & Res	AL Henry	Chattahoochee R	NPMAR	306.1	635.0	620.0	25,864	15,512	PL 87-874.
William Bacon Oliver L&D and Res.	GA Troup	Black Warrior R	N	0	122.9	122.9	790	790	PL 60-317.
South Pacific Division									
Alamo Dam & Lk	AZ Mohave, Yuma	Bill Williams R	F	1,046.2	1,235.0	1,174.0	13,307	7,045	PL 78-534.
Bear Dam	CA Mariposa	Bear Cr	F	7.7	413.5	344.0	265	0	PL 78-534.
Black Butte Lk	CA Tehama	Stony Cr	FI	137.1	473.5	414.6	4,453	577	PL 78-534.
Brea Dam & Res	CA Orange	Brea Cr	F	4.0	279.0	208.0	163	0	FCA 1936.
Buchanan Dam H.V. Eastman Lk	CA Madera	Chowchilla R	F	45.0	587.0	559.0	1,785	1,482	PL 78-874.
			FI	140.0	587.0	466.0	1,785	484	
Burns Dam	CA Merced	Burns Cr	F	6.8	300.0	266.0	662	0	PL 78-534.
Carbon Canyon Dam & Res	CA Orange	Carbon Cr	F	6.6	475.0	403.0	225	0	PL 74-738.
Coyote Valley Dam Lk Mendocino	CA Mendocino	East Fork, Russian R	F	50.1	764.8	737.5	1,922	1,740	PL 75-761.
			IM	72.3	737.5	637.0	1,740	20	
Dry Cr (Warm Springs) Lk & Channel	CA Sonoma	Dry Cr	F	136.0	495.0	451.1	3,600	2,600	PL 87-874.
			MR	225.0	451.1	291.0	2,600	500	
Farrington Dam	CA San Joaquin, Stanislaus	Littlejohn Cr	F	52.0	156.5	120.0	4,107	0	PL 78-534.
Fullerton Dam & Res	CA Orange	Fullerton Cr	F	0.8	290.0	261.0	62	0	FCA 1936.
Hansen Dam Res	CA Los Angeles	Tujunga Wash	F	25.4	1,060.0	990.0	781	0	FCA 1936.
Hidden Dam Hensley Lk	CA Madera	Fresno R	F	65.0	540.0	485.8	1,567	811	PL 87-874.
			FI	85.0	540.0	448.0	1,567	280	
Isabella Lk	CA Kern	Kern R	FI	568.1	2,605.5	2,470.0	11,454	26	PL 78-534.
Lopez Dam Res	CA Los Angeles	Pocima Wash	F	0.4	1,272.9	1,253.7	40	0	FCA 1936.
Mariposa Dam	CA Mariposa	Mariposa Cr	F	15.0	439.5	370.0	512	0	PL 78-534.
Martis Cr Lk	CA Nevada	Martis Cr	F	19.6	5,838.0	5,780.0	762	61	PL 87-874.
Mathews Canyon Dam & Res	NV Lincoln	Mathews Canyon	F	6.3	5,461.0	5,420.0	300	0	PL 81-516.
Mojave River Dam & Res	CA San Bernardino	Mojave R	F	89.7	3,134.0	2,988.0	1,978	0	PL 86-645.
New Hogan Lk	CA Calaveras	Calaveras R	F	165.0	713.0	666.2	4,333	2,818	PL 78-534.
			FI	302.2	713.0	586.0	4,333	702	
Owens Dam	CA Mariposa	Owens Cr	F	3.6	407.5	347.0	174	0	PL 78-534.
Painted Roc Dam & Res	AZ Maricopa	Gila R	F	2,491.5	661.0	524.0	53,200	0	PL 81-516.
Pine Canyon Dam & Res	NV Lincoln	Pine Canyon	F	7.8	5,675.0	5,604.0	254	0	PL 81-516.
Pine Flat Lk Kings R	CA Fresno	Kings R	F	1,000.0	951.5	565.5	5,956	0	PL 78-534.
Prado Dam & Res	CA Riverside	Santa Ana R	F	196.2	543.0	460.0	6,630	0	FCA 1936.
San Antonio Dam & Res	CA Los Angeles	San Antonio Cr	F	7.7	2,238.0	2,125.0	145	0	FCA 1936.
Santa Fe Dam & Res	CA Los Angeles	San Gabriel R	F	32.1	496.0	421.0	1,084	0	FCA 1936, 1941.
Sepolveda Dam & Res	CA Los Angeles	Los Angeles R	F	17.4	710.0	668.0	1,335	0	FCA 1936.
Success Lk	CA Tulare	Tule R	FI	75.0	652.5	588.9	2,477	409	PL 78-534.
Terminus Dam Lk Kaweah	CA Tulare	Kaweah R	FI	136.1	694.0	570.0	1,913	276	PL 78-534.
Whitlow Ranch Dam & Res	AZ Pinal	Queen Cr	F	35.6	2,166.0	2,056.0	828	0	PL 79-526.
Whittier Marrows Dam & Res	CA Los Angeles	San Gabriel Rio Hondo R	F	34.9	228.5	184.0	2,411	0	FCA 1936.
Southwestern Division									
Abiquiu Dam	NM Rio Arriba	Rio Chama	F	572.2	6,283.5	6,220.0	7,469	4,120	PL 80-858.
			FM	191.3	6,220.0	6,060.0	4,120	0	
Addicks Res	TX Harris	Buffalo Bayou	F	200.8	112.0	71.1	16,423	0	HD250-83-2.
Aquila Lk	TX Hill	Aquila Cr	F	161.4	564.5	537.5	8,990	3,280	PL 90-483.
			MR	93.6	537.5	478.6	3,280	26	
Arcadia Lk	OK Oklahoma	Deep Fork R	F	64.4	1,029.5	1,006.0	3,820	1,820	PL 91-611.
			FMCR	27.4	1,006.0	970.0	1,820	20	
B A Steinhagen Lk	TX Taylor, Jasper	Neches R	F	24.5	83.0	81.0	13,700	10,950	SD98-76-1.
Bardwell Lk	TX Ellis	Waxahachie Cr	F	79.6	439.0	421.0	6,040	3,570	PL 86-399.
			M	42.8	421.0	372.6	3,570	0	
Barker Res	TX Harris Ft Bend	Buffalo Bayou	F	209.0	106.0	73.2	16,734	0	HD250-83-2, RHA 1938.
Beaver Lk	AR Carrol, Benton, Washing-ton	White R	F	299.6	1,130.0	1,120.0	31,700	28,220	PL 83-780.
			FPM	925.1	1,120.0	1,077.0	28,220	15,540	PL 85-500.
Belton Lk	TX Bell	Leon R	F	640.0	631.0	594.0	23,600	12,400	PL 79-526.
			MI	372.7	594.0	470.0	12,400	42	HD88-81-1.
Benbrook Lk	TX Tarrant, Parker	Clear Fk Trinity R	F	170.4	724.0	694.0	7,630	3,770	HD103-771.
			NM	72.5	694.0	656.0	3,770	730	
Big Hill Lk	KN Labette	Big Hill Cr	F	13.1	867.5	858.0	1,520	1,240	PL 87-874.
			FMR	27.2	858.0	814.0	1,240	70	HD572-87-2.
Birch Lk	OK Osage	Birch Cr	F	39.0	774.0	750.5	2,340	1,140	PL 87-874.
			FMCAR	15.8	750.5	730.0	1,140	384	HD563-87-2.
Blue Mountain Lk	AR Yell, Logan	Petit Jean R	F	233.3	419.0	384.0	11,000	2,910	PA 75-761.
Broken Bow Lk	OK McCurtain	Mountain Fk R	F	450.2	627.5	599.5	18,000	14,200	PL 85-500.
			FRPMAC	469.8	599.5	559.5	14,200	9,200	
Bull Shoals Lk	AR Baxter, Marion, Boone	White R	F	2,360.0	695.0	654.0	71,240	45,440	PL 77-228.
	MO Ozark, Taney		PF	1,003.0	654.0	628.5	45,440	33,800	
Canton Lk	OK Blain	N Canadian R	F	265.8	1,638.0	1,615.4	15,710	7,910	PL 75-761.
			FMI	97.2	1,615.4	1,596.5	7,910	2,710	HD56-775-3.
Canyon Lk	TX Comal	Guadalupe R	F	346.4	934.0	909.0	12,890	8,240	PL 79-14.
			M	366.4	909.0	75.0	8,240	0	
Clearwater Lk	MO Reynolds, Wayne	Black R	F	391.8	567.0	494.0	10,400	1,630	PL 75-761.
Cochiti Lk	NM Sandoval, Sante Fe, Los Alamos	Rio Grande	F	545.0	5,460.5	5,356.6	9,361	1,200	PL 86-645.
			FRC	43.0	5,356.6	5,300.0	1,200	0	
Conchas Lk	NM San Miguel	Candian R	F	198.8	4,218.0	4,201.0	13,664	9,692	HD 308-74.
			FI	259.6	4,201.0	4,155.0	9,692	3,000	
Copan Lk	OK Washington	L Caney R	F	184.3	732.0	710.0	13,380	4,850	PL 87-874.
	KS Chautauqua		FMCA	42.8	710.0	687.5	4,850	110	HD563-87-2.
Council Grove Lk	KS Morris	Neosho R	F	63.8	1,289.0	1,274.0	5,400	3,230	PL 81-516.
			FMAR	48.5	1,274.0	1,240.0	3,230	42	

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
DeQueen Lk.....	AR Sevier.....	Rolling Fork R.....	F	101.3	473.5	437.0	4,050	1,680	PL 85-500.
			FMCRO	25.5	437.0	415.0	1,680	710	
Dierks Lk.....	AR Sevier, Howard.....	Saline R.....	F	67.1	557.5	526.0	2,970	1,360	PL 85-500.
			FMCRC	15.1	526.0	512.0	1,360	810	
Eldorado Lk.....	KS Butler.....	Walnut R.....	F	79.2	1,347.5	1,339.0	10,740	8,000	PL 89-298.
			FMAR	154.0	1,339.0	1,296.0	8,000	420	HD232-89-1.
Elk City Lk.....	KS Montgomery.....	Elk R.....	F	239.5	825.0	796.0	13,150	4,450	HD440-76-1.
			FMA	44.8	796.0	764.0	4,450	64	
Eufaula Lk.....	OK McIntosh, Pittsburg, Haskell.....	Candian R.....	F	1,510.9	597.0	585.0	147,960	105,480	PL 79-525.
			FNPM	1,463.0	585.0	565.0	105,480	46,120	
Fall River Lk.....	KS Greenwood.....	Fall R.....	F	234.5	987.5	948.5	10,400	2,350	HD440-76-1.
			FA	15.0	948.5	940.0	2,350	1,170	
Fort Gibson Lk.....	OK Wagoner.....	Neosho (Grand) R.....	F	919.2	582.0	554.0	51,000	19,900	FEC 1941.
			FP	53.9	554.0	551.0	19,100	16,950	RHA 1946.
Fort Supply Lk.....	OK Woodward.....	Wolf Cr.....	F	86.8	2,028.0	2,004.0	5,690	1,820	PL 74-738.
			FM	13.9	2,004.0	1,988.0	1,820	0	
Galisteo Dam.....	NM Santa Fe.....	Galisteo Cr.....	F	79.4	5,608.0	5,496.0	2,060	0	PL 86-645.
Georgetown Lk.....	TX Williamson.....	N.F. San Gabriel R.....	F	87.6	834.0	791.0	3,220	1,310	PL 87-874.
			MC	29.2	791.0	699.0	1,310	0	HD 591-82-2.
Gillham Lk.....	AR Howard, Polk.....	Cossatot R.....	F	188.7	569.0	502.0	4,680	1,370	PL 85-500.
			FMCQ	29.3	502.0	464.5	1,370	310	
Granger Lk.....	TX Williamson.....	San Gabriel R.....	F	162.2	528.0	504.0	11,040	4,400	PL 87-874.
			M	37.9	504.0	440.0	4,400	0	
Grapevine Lk.....	TX Denton, Tarrant.....	Denton Cr.....	F	243.1	560.0	535.0	12,710	7,280	HD103-77-1.
			M	154.3	535.0	451.0	7,380	41	
Great Salt Plains Lk.....	OK Alfalfa.....	Salt Fk.....	F	240.0	1,138.5	1,125.0	27,730	8,693	PL 74-738.
		Arkansas R.....	FC	31.4	1,125.0	1,115.0	8,690	0	
Greers Ferry Lk.....	AR Cleburne, Van Buren.....	Little Red R.....	F	934.0	487.0	461.0	40,480	31,460	PL 75-761.
			FP	716.5	461.0	435.0	31,460	23,740	PL 83-780.
Heyburn Lk.....	OK Creek.....	Polecat Cr.....	F	48.4	784.0	761.5	3,700	917	PL 79-526.
			FM	3.8	761.5	55.5	917	394	
Hords Cr Lk.....	TX Coleman.....	Hords Cr.....	F	16.7	1,920.0	1,900.0	1,260	510	PL 77-228.
			M	5.8	1,900.0	1,848.0	510	0	
Hugo Lk.....	OK Choctaw.....	Kiamichi R.....	F	809.1	437.5	404.5	34,490	13,250	PL 79-526.
			FMCAR	127.2	404.5	390.0	13,250	4,500	
Hulah Lk.....	OK Osage.....	Caney R.....	F	257.9	765.0	733.0	13,000	3,570	PL 74-738.
	KS Chautaugua.....		FMA	31.1	733.0	710.0	3,570	0	PL 84-843.
Jemez Canyon Dam.....	NM Sandoval.....	Jemez R.....	F	73.0	5,232.0	5,196.1	2,877	1,370	PL 80-858
									PL 81-516.
Joe Pool Lk.....	TX Dalla, Ellis, Tarrant.....	Mountain Cr.....	F	1,238.0	536.0	522.0	10,940	7,470	PL 89-298.
			M	176.9	522.0	456.0	7,470	10	
John Martin Res.....	CO Bent.....	Arkansas R.....	F	270.3	3,870.0	3,851.0	17,630	11,655	PL 74-738.
			FRC	350.9	3,851.0	0.0	11,655	0	
John Redmond Dam & Res.....	KS Coffee.....	Neosho R.....	F	559.0	1,068.0	1,039.0	31,700	9,300	PL 81-516.
			FMAR	70.8	1,039.0	1,020.0	9,300	108	
Kaw Lk.....	OK Kay, Osage.....	Arkansas R.....	F	919.4	1,044.5	1,010.0	38,020	17,040	PL 87-874.
	KS Cowley.....		FMARC	343.5	1,010.0	978.0	17,040	5,590	
Keystone Lk.....	OK Tulsa.....	Arkansas R.....	F	1,180.0	754.0	723.0	54,300	23,600	PL 81-516.
			FNPMC	296.7	723.0	706.0	23,600	13,300	
L&D 01, Norrell.....	AR Arkansas.....	Arkansas Post Canal.....	N	0.0	142.0	142.0	140	140	HD 758-79, RHA 1946.
L&D 02, Wilbur D. Mills Dam.....	AR Desha, Arkansas.....	Arkansas R.....	N	18.7	162.3	160.5	10,700	9,400	HD 758-79, RHA 1946.
L&D 03.....	AR Jefferson, Lincoln.....	Arkansas R.....	N	8.3	182.3	180.0	3,750	3,180	HD 758-79, RHA 1946.
L&D 04.....	AR Jefferson.....	Arkansas R.....	N	12.9	196.3	194.0	5,820	5,200	HD 758-79, RHA 1946.
L&D 05.....	AR Jefferson.....	Arkansas R.....	N	14.4	213.3	211.0	6,900	5,550	HD 758-79, RHA 1946.
L&D 06, David D. Terry.....	AR Pulaski.....	Arkansas R.....	N	9.6	231.3	229.0	4,830	4,130	RHA 758-79.
L&D 07, Murray.....	AR Pulaski.....	Arkansas R.....	N	24.7	249.7	247.0	10,350	8,100	RHA 1946.
L&D 08, Toad Suck Ferry.....	AR Faulkner, Perry.....	Arkansas R.....	N	8.7	265.3	263.0	4,130	3,600	RHA 1946.
L&D 09, Arthur V. Ormond L&D, W. Rockefeller Lk.....	AR Conway.....	Arkansas R.....	N	15.8	287.0	284.0	5,660	4,910	HD 758-79.
L&D 10, Lk Dardanelle.....	AR Pope Yell.....	Arkansas R.....	NP	72.3	338.2	336.0	34,700	31,140	HD 758-79, RHA 1946.
L&D 11, Ozark-Jetta Taylor.....	AR Franklin.....	Arkansas.....	NPR	25.3	372.5	370.0	11,100	8,800	RHA 1946, HD 758-79.
L&D 13, James W. Trimble.....	AR Sebastian, Crawford.....	Arkansas R.....	N	18.1	392.0	389.0	6,820	5,200	RHA 1946.
L&D 14, W. D. Mayo.....	OK Sequoyah, Leflore.....	Arkansas R.....	N	0.0	413.0	0.0	1,600	0	PL 79-525.
L&D 15, Robert S. Kerr Res.....	OK Leflore, Sequoyah.....	Arkansas R.....	NP	84.7	460.0	458.0	43,800	40,760	PL 79-525.
L&D 16, Webbers Falls Res.....	OK Muskogee.....	Arkansas R.....	NP	32.4	490.0	487.0	10,900	9,300	PL 79-525.
L&D 17, Chouteau.....	OK Wagoner.....	Verdigris R.....	N	0.0	511.0	511.0	2,270	2,270	PL 79-525, HD 758-79-2.
L&D 18, Newt Graham.....	OK Wagoner.....	Verdigris R.....	N	0.0	532.0	532.0	1,490	1,490	PL 97-525.
Lake O' The Pines.....	TX Marion.....	Cypress Cr.....	F	579.5	249.5	228.5	38,200	18,700	PL 79-526.
			M	250.0	228.5	201.0	18,700	1,100	
Lavon Lk.....	TX Collin.....	East Fork, Trinity R.....	F	275.6	503.5	492.0	29,450	21,400	HD 533-78-2.
			M	380.0	492.0	433.0	21,400	2,870	
Lewisville Lk Garza-Little Elm Dam.....	TX Denton.....	Elm Fork Trinity R.....	F	525.2	532.0	515.0	39,080	23,280	HD 403-77-1.
			F	436.0	515.0	433.0	23,280	12	
Marion Lk.....	KS Marion.....	Cottonwood R.....	F	60.2	1,358.5	1,350.5	9,050	6,200	PL 81-516.
			FMAR	83.3	1,350.5	1,320.0	6,200	170	
Millwood Lk.....	AR Little R Hempstead.....	Little R.....	F	1,650.0	287.0	259.2	95,200	29,200	PL 79-526.
			FMC	153.3	259.2	252.0	29,200	13,100	HD 785-79.
Navarro Mills Lk.....	TX Navarro Hill.....	Richland Cr.....	F	143.2	443.0	424.5	11,700	5,070	HD 498-83-2.
			M	53.2	424.5	375.3	5,070	0	
Nimrod Lk.....	AR Perry, Yell.....	Fourche La Fave R.....	F	307.0	373.0	342.0	18,300	3,550	FCA 1938.

APPENDIX E—LIST OF PROJECTS—Continued

Project name ¹	State/county	Stream ¹	Project purpose ²	Storage 1,000 AF	Elev limits feet M.S.L.		Area in acres		Auth legis ³
					Upper	Lower	Upper	Lower	
Norfork Lk	AR Baxter, Fulton	North Fork R	F	731.8	580.0	552.0	30,700	21,990	PL 75-761
	MO Ozark		FP	707.0	552.0	510.0	21,990	12,320	FCA 1941
North Fork Lk	TX Williamson	N.F. San Gabriel R	F	87.6	834.0	791.0	3,220	1,310	PL 87-874
			MC	29.2	791.0	699.0	1,310	0	HD 591-82-2
O. C. Fisher Lk	TX Tom Green	N. Concho R	F	277.2	1,938.5	1,908.0	12,700	5,440	PL 77-228
			M	80.4	1,908.0	1,836.0	5,440	3	
Oologah Lk	OK Rogers	Verdigris R	F	965.6	661.0	638.0	56,800	29,460	PL 75-761
			FMN	544.1	638.0	592.0	29,460	1,120	
Optima Lk	OK Texas	N. Candian R	F	100.5	2,779.0	2,763.5	7,640	5,340	PL 74-738
			FMRC	117.7	2,763.5	2,726.0	5,340	1,335	
Pat Mayse Lk	TX Lamar	Sanders Cr	F	64.6	460.5	451.0	7,680	5,993	PL 87-874
			FMCR	119.9	451.0	415.0	5,993	996	HD 88-71
Pine Cr	OK McCurtain	Little R	F	388.1	480.0	443.5	17,230	4,980	PL 85-500
			FMAC	77.6	443.5	414.0	4,980	700	HD 170-85-1
Proctor Lk	TX Comanche	Leon R	F	310.1	1,197.0	1,162.0	14,010	4,610	PL 83-780, HD 535-81-2
Sam Rayburn Res	TX Jasper, San Augustine, Angelina	Angelina R	F	1,099.4	173.0	164.4	142,700	114,500	HD 981-76-1
			PMC	1,446.2	164.4	149.0	114,500	74,040	
Santa Rosa	NM Guadalupe	Pecos R	F	340.0	4,746.2	4,776.5	10,740	3,823	PL 83-780
			FI	160.0	4,776.5	4,746.2	7,115	3,823	
Sardis	OK Pushmataha	Jackfork Cr	F	122.6	607.0	599.0	16,960	13,610	HD 602-79-2
			FMR	274.2	599.0	542.0	13,610	40	
Somerville Lk	TX Washington, Lee, Burleson	Yegua Cr	F	337.7	258.0	238.0	24,400	11,460	PL 83-780
			M	143.9	238.0	200.0	11,460	0	
Stalook	OK Osage	Hominy Cr	F	178.0	729.0	714.0	13,690	10,190	HD 563-87
			FMARC	311.6	714.0	657.0	10,190	1,430	
Stillhouse H. Lk	TX Bell	Lampasas R	F	390.6	666.0	622.0	11,830	6,430	PL 83-780
			M	204.9	622.0	498.0	6,430	0	
Table Rock Lk	MO Taney, Stone, Barry	White R	F	760.0	931.0	915.0	52,250	43,070	PL 77-228
	AR Carroll, Boone		FP	1,181.50	915.0	881.0	43,070	27,300	FCA 1938
Tenkiller Ferry Lk	OK Cherokee, Sequoyah	Illinois R	F	576.7	667.0	632.0	20,800	12,900	RHA 1946
			FP	371.0	632.0	594.5	12,900	7,370	
Texoma Lk, Denison Dam	TX Marshall	Red R	F	2,669.0	640.0	617.0	144,000	88,000	PL 75-761
	OK Bryan, Cook, Grayson		FPM	1,612.0	617.0	590.0	88,000	41,000	
Toronto Lk	KS Woodson	Verdigris R	F	179.8	931.0	901.5	11,740	2,660	HD 440-76-1
			FMA	10.7	901.5	896.7	2,660	1,720	
Trinidad Lk	CO Las Animas	Purgatorie R	F	58.0	6,260.0	6,230.0	2,107	1,453	PL 85-500
			FI	20.0	6,230.0	0.0	1,453	0	
Two Rivers Dam	NM Chaves	Rio Hondo R	F	150.0	4,032.0	3,945.0	4,806	0	PL 83-780
Waco Lk	TX McLennan	Bosque R	F	3.3	500.0	455.0	19,440	7,270	PL 83-780
			M	100.8	455.0	370.0	7,240	0	HD 535-81-2
Waurika Lk	OK Jefferson	Beaver Cr	F	140.4	962.5	951.4	15,000	10,100	PL 88-253
			FMCAR	199.7	951.4	910.0	10,100	830	
Whitney Lk	TX Hill, Bosque	Brazos R	F	1,372.0	571.0	533.0	49,820	23,560	PL 77-228
			PM	381.9	533.0	425.0	23,560	475	HD 390-76-1
Wister Lk	OK LeFlore	Pouteau R	F	387.0	502.5	474.6	23,070	5,000	PL 75-761
Wright Patman Lk	TX Bowie, Cass	Sulphur R	F	2,363.7	259.5	220.0	119,700	20,300	PL 79-526
			FM	142.7	220.0	180.0	20,300	0	

¹ Res—Reservoir; Lk—Lake; Div—Diversion; R—River; Cr—Creek; Fk—Fork; L&D—Lock & Dam; GIWW—Gulf Intercoastal Waterway; FG—Floodgate; CS—Control Structure; DS—Drainage Structure; PS—Pump Station.

² F—Flood Control; N—Navigation; P—Hydropower; I—Irrigation; M—Municipal and/or Industrial Water/Supply; C—Fish and Wildlife Conservation; R—Recreation; A—Low Flow Augmentation or Pollution Abatement; Q—Quality or Silt Control.

³ PL—Public Law; HD—House Document; RHA—River & Harbor Act; PW—Public Works; FCA—Flood Control Act; WSA—Water Supply Act.

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