

Appendix B

Flood Control Regulations

Appendix B-1

Agreement between LCRA and the
Federal Emergency Management Agency



Lower Colorado River Authority

Post Office Box 220 Austin, Texas 78767 • (512) 473-3200

2/9/90 for
signature - cr

March 26, 1990

John Matticks
Federal Emergency Management Agency (FEMA)
500 C Southwest, Room 423
Washington, DC 20472

Re: Operating Agreement

Dear Mr. Matticks:

By letter of March 2, 1990, two signed copies of the agreement by and between the Federal Emergency Management Agency and the Lower Colorado River Authority regarding revised operating procedures for Buchanan, Roy Inks, Alvin Wirtz, and Max Starcke Dams were forwarded to this office. Enclosed is one fully executed copy of the agreement, as you requested. The other copy has been retained for our files.

It is hoped that this will serve to facilitate the processing of FIS's for Burnet and Llano Counties. If you have any questions, please do not hesitate to contact Wes Birdwell of my staff at (512) 473-4060.

Sincerely,

Gene Richardson, P.E., Director
Water Resources Division

GR:WB:cr:021
Enclosures

AGREEMENT BY AND BETWEEN
LOWER COLORADO RIVER AUTHORITY
AND
FEDERAL EMERGENCY MANAGEMENT AGENCY

This Agreement made by and between the Lower Colorado River Authority, an agency of the State of Texas, hereinafter called LCRA, and the Federal Emergency Management Agency, an agency of the Federal Government, hereinafter called FEMA.

WHEREAS, FEMA is statutorily charged with and has a direct interest in reducing flood losses in the United States;

WHEREAS, FEMA is statutorily charged with delineating the areas of the United States containing special flood hazards;

WHEREAS, FEMA has, pursuant to its statutory mandate, defined areas of special flood hazards as those areas subject to a one-percent chance of inundation in any given year (100-year frequency flood);

WHEREAS, significant areas of Burnet and Llano Counties, Texas, have been delineated by FEMA as containing special flood hazards;

WHEREAS, operation by LCRA of Buchanan, Roy Inks, Alvin Wirtz, and Max Starcke Dams on the Colorado River, Texas, licensed to LCRA under Certificates of Adjudication issued by the Texas Water Commission, in a manner consistent with the terms contained herein will render many of the areas presently designated as special flood hazard areas as no longer subject to a one-percent chance of flooding in any given year;

WHEREAS, in those areas removed by FEMA from the special flood hazard area designation, the federal requirements to purchase flood insurance and to develop so as to protect against the 100-year frequency flood will no longer apply thus leaving property owners in those areas vulnerable to the 100-year flood unless LCRA performs in a manner consistent with the terms contained herein;

Now, therefore, the parties agree as follows:

1. To induce FEMA to enter into this agreement, LCRA has represented to FEMA that it will provide for the regulation of the flow of flood waters past Buchanan, Roy Inks, Alvin Wirtz, and Max Starcke Dams, on the Colorado River in Burnet and Llano Counties, Texas, by operating as follows:

a. Lake Buchanan Operations Procedure

- i) Flood flows into Lake Buchanan will be estimated utilizing the USGS gage station Colorado River near San Saba (USGS Gage Number 08147000). These will be continuously monitored by LCRA's Hydrometeorological Data Acquisition System and verified by LCRA personnel observation.
- ii) Lake Buchanan will be maintained at or below elevation 1018.00 feet ngvd during the flood season (May through October). During all other months, the water surface elevation will be maintained at or below the top of the defined conservation pool (1020.35 feet ngvd).
- iii) During flood season, releases will be made under the following guidelines:

RISING LIMB OF HYDROGRAPH

Gaged Inflow < 22,000 cfs Outflow < 22,000 cfs
Gaged Inflow > 22,000 cfs Outflow = .85 x (Gaged Inflow)

FALLING LIMB OF HYDROGRAPH

Outflow ≤ Maximum Outflow (until lake returns to the conservation pool)

After gage inflows exceed 22,000 cfs, at no time later shall the peak release during the event exceed the instantaneous peak discharge of the inflow hydrograph.

- iv) The total number of 33'x15.5' gates open shall be limited to 20 unless the forecast elevation for the lake exceeds 1021.3 feet ngvd. Should higher elevation be forecast, additional gates will then be opened as necessary.

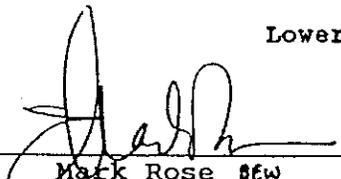
- b. Lake Inks Operations Procedure
 - i) As Inks Dam's primary discharge structure for a flood event is an uncontrolled spillway, no special operations apply.
 - c. Lake LBJ Operations Procedure
 - i) Flood flows into Lake LBJ will be estimated utilizing the USGS gage station Llano River at Llano (USGS Gage Number 08151500). These will be continuously monitored by LCRA's Hydrometeorological Data Acquisition System and verified by LCRA personnel observation.
 - ii) Lake LBJ will be maintained between 824.40 and 825.00 feet ngvd under normal operating conditions. When a potential exists for flood inflow, the lake will be maintained at elevation 824.70 feet ngvd. Thereafter, the lake will be maintained, as possible, between the elevations 822.00 and 825.00 feet ngvd.
 - iii) During passage of flood peaks equal to or smaller than the 100-year flood, the lake will not exceed elevation 828.00 feet ngvd.
 - d. Lake Marble Falls Operations Procedure
 - i) Lake Marble Falls will be maintained between 736.20 and 737.00 feet ngvd under normal operating conditions. When a potential exists for flood inflow, the lake will be maintained at elevation 736.20 feet ngvd. Thereafter, elevations will be maintained, as possible, below 737.00 feet ngvd.
2. LCRA shall continue to use this operating plan until modified by order of an appropriate regulatory agency. If a regulatory agency issues an order modifying this operating plan, FEMA will be notified and may, at the discretion of the Federal Insurance Administrator, modify the Flood Insurance Rate Maps for Burnet and Llano Counties, Texas, accordingly.

3. In consideration of the obligations and duties undertaken by LCRA pursuant to the terms of Section 1 of this agreement and in exchange therefor, FEMA shall modify its Flood Insurance Rate Maps for Burnet and Llano Counties, Texas, and any successor maps to reflect the flood protection afforded by LCRA's regulation of Buchanan, Roy Inks, Alvin Wirtz, and Max Starcke Dams on the Colorado River Reservoir system set out in Section 1 of this agreement.
4. It is recognized by and between the parties hereto that the terms of the agreement have been bargained for and given in exchange and as inducement for each other.

In Witness Whereof, the parties have executed this instrument on the dates noted below.

Lower Colorado River Authority

By: _____


Mark Rose DEW
Deputy General Manager

3-8-90

Date

Federal Emergency Management Agency

By: _____


Harold T. Duryee
Federal Insurance Administrator

2-28-90

Date

Appendix B-2

U.S. Army Corps of Engineers Flood Control Regulations
Governing Releases from Mansfield Dam

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

33 CFR Part 208

Flood Control Regulations, Marshall Ford Dam (Mansfield Dam and Lake Travis), Colorado River, Texas

AGENCY: U.S. Army Corps of Engineers, DoD.

ACTION: Final rule.

SUMMARY: The U.S. Army Corps of Engineers (Corps) is amending the rules regarding use and administration of Marshall Ford Dam (Mansfield Dam and Lake Travis), Colorado River, Texas. In 1997, the Lower Colorado River Authority (LCRA) completed repayment of the federal government's contribution for acquisition and construction costs related to Mansfield Dam. Subsequently, the United States Bureau of Reclamation (USBR) has relinquished all rights and obligations to the project. However, the U.S. Department of the Interior and the USBR are referenced as project stakeholders in the Flood Control Regulations. Amending the referenced regulations to update project ownership will eliminate the current discrepancy between the regulations and associated project documents. The Fort Worth District of the Corps and LCRA have finalized a revised water control plan for Lake Travis (Marshall Ford Dam, aka Mansfield Dam). There is no intent to publish the updated water control plan in the **Federal Register**. Amending the regulations to indicate that the water control plan has been superseded would eliminate the need to amend the regulations each time the water control plan is modified.

DATES: *Effective Date:* April 10, 2014.

ADDRESSES: U.S. Army Corps of Engineers, ATTN: CECW-SWD (Sandy Gore), 441 G Street NW., Washington, DC 20314-1000.

FOR FURTHER INFORMATION CONTACT: Sandy Gore at 202-761-5237 or by email at sandy.i.gore@usace.army.mil.

SUPPLEMENTARY INFORMATION:

Executive Summary

The purpose of this action is to amend the regulations to reflect changes in ownership and responsibilities of flood control management of Marshall Ford Dam (Mansfield Dam and Lake Travis) by the U.S. Army Corps of Engineers (USACE) and the Lower Colorado River Authority (LCRA) and to clarify that the published water control plan has been superseded. Specifically, 33 CFR part 208 is amended:

(A) A change in project ownership. The Corps is revising 33 CFR 208.11(e) List of Projects, and 33 CFR 208.19, to indicate that the LCRA, is the responsible party for operating Marshall Ford Dam in the interest of flood control above elevation 714.

(B) Revision of the Marshall Ford Dam (Mansfield Dam and Lake Travis) water control plan in 2012.

(C) USACE intention to henceforth forego publication of the Marshall Ford Dam (Mansfield Dam and Lake Travis) water control plan in the **Federal Register**.

(D) USACE and LCRA as sources for obtaining information regarding the most recently approved and therefore currently the effective water control plan.

Background

Mansfield Dam was funded, planned, and built by the United States Bureau of Reclamation (USBR) from February 1937 through September 1940. The Lower Colorado River Authority (LCRA) acquired the land for the project and paid for the majority of the costs related to the hydroelectric power facilities. The USBR was the project owner while LCRA was repaying the federal government contribution to the project. LCRA completed repayment in May 1997, and the USBR relinquished all rights and obligations to the project. USBR has formally requested USACE revise the water control manual (of which the water control plan is an integral part) and any other regulatory documents accordingly.

As a result of Section 7 of the Flood Control Act of 1944, the U.S. Army Corps of Engineers (USACE) is responsible for prescribing a formal water control plan for regulation of the Lake Travis storage space allocated for flood control (elevation 681.0 to elevation 714.0). As per ER 1110-2-241, *Use of Storage Allocated for Flood Control and Navigation at Non-Corps Projects* (24 May 1990), paragraph 6.d.—*Water Control Plan and Manual*, the Corps of Engineers is responsible for developing the formal flood control regulation/water control plan, documenting the plan in a water control manual, and furnishing a copy of the manual to the project owner. A water control plan for Lake Travis was published in the **Federal Register** (33 CFR 208.19) in May of 1951. Subsequently, 33 CFR 208 was amended in April 1976, and again in April 1979, by revising Section 208.19 to reflect revision of the water control plan. Each of these three respective water control plans, and Section 208.11, identifies the

U.S. Department of the Interior and/or the USBR as stakeholders in the project.

In 2012, based on results of a recent study, USACE—Fort Worth District and LCRA finalized a jointly supported revision of the water control plan for Lake Travis. There being no requirement for publication of the water control plan in the **Federal Register**, USACE plans to henceforth forego doing so. Also in 2012, USACE—Fort Worth District and LCRA agreed on a formal Letter of Understanding (LOU) and a Water Control Agreement (WCA) in accordance with ER 1110-2-241, *Use of Storage Allocated for Flood Control and Navigation at Non-Corps Projects* (24 May 1990). LCRA has agreed to sign the LOU and the WCA, and adopt the new water control plan, upon amendment of the CFR to indicate the last published water control plan (April 1979) has been superseded.

The Corps published the proposed rule in the **Federal Register** on 23 December 2013 (78 FR 77397). The Corps did not receive any comments in response to the proposed rule.

Administrative Requirements

Plain Language

In compliance with the principles in the President's memorandum of June 1, 1998, (63 FR 31855) regarding plain language, this preamble is written using plain language. The use of "we" in this notice refers to the U.S. Army Corps of Engineers. We have also used the active voice, short sentences, and common everyday terms except for necessary technical terms.

Paperwork Reduction Act

This final rule does not impose any new information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. Therefore, this action is not subject to the Paperwork Reduction Act.

Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice-and-comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the final rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations and small governmental jurisdictions.

For purposes of assessing the impacts of this final rule on small entities, a small entity is defined as: (1) A small

business based on Small Business Administration size standards; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; or (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final rule on small entities, we believe that this action will not have a significant economic impact on a substantial number of small entities. The final rule is consistent with current agency practice, does not impose new substantive requirements, and therefore would not have a significant economic impact on a substantial number of small entities.

Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as amended by the

Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a final rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. We will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States. This final rule is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 33 CFR Part 208

Dams, Flood control, Intergovernmental relations, Reservoirs.

For the reasons set out in the preamble, the Corps amends 33 CFR part 208 as follows:

PART 208—FLOOD CONTROL REGULATIONS

■ 1. The authority citation for 33 CFR part 208 continues to read as follows:

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

■ 2. Amend § 208.11(e) as follows:

■ a. Revise the entry for "Marshall Ford Dam & Res" on the "List of Projects" table; and

■ b. Revise footnote 4.

§ 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.

* * * * *
(e) * * *

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

Project name ¹ (1)	State (2)	County (3)	Stream ¹ (4)	Project purpose ² (5)	Storage 1000 AF (6)	Elev limits feet M.S.L.		Area in acres		Authorizing legis. ³ (11)	Proj. owner ⁴ (12)
						Upper (7)	Lower (8)	Upper (9)	Lower (10)		
Marshall Ford Dam & Res	TX	Travis	Colorado R.	F	779.8	714.0	681.0	29060	18955	PL 73-	LCRA
				NEIM	810.5	681.0	618.0	18955	8050	392. PL 78- 534.	

¹ Cr—Creek; CS—Control Structure; Div—Diversions; DS—Drainage Structure; FG—Floodgate; Fk—Fork; GIWW—Gulf Intercoastal Waterway; Lk—Lake; L&D—Lock & Dam; PS—Pump Station; R—River; Res—Reservoir.
² F—Flood Control; N—Navigation; P—Corps Hydropower; E—Non Corps Hydropower; I—Irrigation; M—Municipal and/or Industrial Water Supply; C—Fish and Wildlife Conservation; A—Low Flow Augmentation or Pollution Abatement; R—Recreation; Q—Water Quality or Silt Control.
³ FCA—Flood Control Act; FERC—Federal Energy Regulatory Comm; HD—House Document; PL—Public Law; PW—Public Works; RHA—River & Harbor Act; SD—Senate Document; WSA—Water Supply Act.
⁴ Appl Pwr—Appalachian Power; Chln PUD—Chelan Cnty PUD 1; CLPC—CT Light & Power Co; Dgls PUD—Douglas Cnty PUD 1; DWR—Department of Water Resources; EB—MUD—East Bay Municipal Utility Dist; GRD—Grand River Dam Auth; Grnt PUD—Grant Cnty PUD 2; Hnbl—city of Hannibal; LCRA—Lower Colorado River Authority; M&T Irr—Modesto & Turlock Irr; Mrcd Irr—Merced Irr; NEPC—New England Power Co; Pgmt P&L—Pugent Sound Power & Light; Ptmc Comm—Upper Potomac R Comm; Rclm B—Reclamation Board; Rkfd—city of Rockford; Sttl—city of Seattle; Tac—City of Tacoma; Vale USBR—50% Vale Irr 50% USBR; WF&CWID—City of Wichita Falls and Wichita Cnty Water Improvement District No. 2; WMEC—Western MA Electric Co; YCWA—Yuba City Water Auth; Yolo FC&W—Yolo Flood Control & Water Conserv Dist.

* * * * *
 ■ 3. Revise § 208.19 to read as follows:
§ 208.19 Marshall Ford Dam and Reservoir (Mansfield Dam and Lake Travis), Colorado River, Texas.

In the interest of flood control, the Lower Colorado River Authority (LCRA) shall operate the Marshall Ford Dam and Reservoir in accordance with the water control plan of regulation most recently approved by the U.S. Army Corps of Engineers (USACE), effective on the date specified in the approval. Information regarding the most recently approved water control plan of regulation may be obtained by contacting the LCRA offices in Austin, Texas, or the offices of the U.S. Army Corps of Engineers, Fort Worth Engineer District, in Fort Worth, Texas.

Dated March 6, 2014.
 Approved by:
James C. Dalton,
Chief of Engineering and Construction, U.S. Army Corps of Engineers.
 [FR Doc. 2014-05252 Filed 3-10-14; 8:45 am]
BILLING CODE 3720-58-P

ENVIRONMENTAL PROTECTION AGENCY
40 CFR Part 52
[EPA-R09-OAR-2013-0778; FRL-9907-56-Region 9]
Disapproval of State Implementation Plan Revisions; Clark County, Nevada
AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.
SUMMARY: The Environmental Protection Agency (EPA) is finalizing disapproval of revisions to the Clark County portion of the Nevada State Implementation Plan (SIP). This action concerns affirmative defense provisions applicable to violations related to excess emissions from sources during equipment startup, shutdown and malfunction (SSM) events. Under authority of the Clean Air Act (CAA or the Act), this action identifies deficiencies with these provisions preventing EPA's approval of them as SIP revisions.
DATES: This rule is effective on April 10, 2014.
ADDRESSES: EPA has established docket number EPA-R09-OAR-2013-0778 for

LETTER OF UNDERSTANDING

MANSFIELD DAM AND LAKE TRAVIS
(MARSHALL FORD DAM AND RESERVOIR)

The Corps of Engineers and the Lower Colorado River Authority, pursuant to Section 7 of the Flood Control Act of 1944, 33 U.S.C. § 709, hereby set forth this Letter of Understanding for the operation of the Mansfield Dam and Lake Travis.

WHEREAS, Mansfield Dam and Lake Travis (Marshall Ford Dam and Reservoir), located at river mile 318 on the Colorado River, Travis County, Texas, was authorized for a two stage construction by the Emergency Relief Appropriation Act of 1935 (49 Stat. 115), the Cooperative Agreement Between the United States and the Lower Colorado River Authority approved June 1, 1935, and the River and Harbor Act of 1937 (Public Law 75-392) and;

WHEREAS, the project was constructed by the Bureau of Reclamation, with 783,200 acre-feet of flood control storage which is regulated by the Corps of Engineers in accordance with Section 7 of the 1944 Flood Control Act, and;

WHEREAS, by contract between the Lower Colorado River Authority and the United States dated March 13, 1941 the Lower Colorado River Authority was designated as the agent to operate and maintain Mansfield Dam for regulating the flow of the Colorado River below the dam, and;

WHEREAS, Section 7 of the Flood Control Act of 1944, 33 U.S.C. 709, directs the Secretary of the Army 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, and;

WHEREAS, 33 CFR 208.11 further prescribes the policy and procedures for regulating the use of storage allocated for flood control or navigation purposes at all reservoirs capable of such regulation and constructed wholly or in part with Federal funds provided on the basis of such purposes;

NOW THEREFORE, in addition to the responsibilities of the Lower Colorado River Authority (hereinafter called the Authority) and the Corps of Engineers (hereinafter called the

Corps) spelled out in paragraph 33 C.F.R. 208.11, it is agreed or understood that:

The Water Control Manual for Mansfield Dam and Lake Travis will contain the Water Control Agreement and this Letter of Understanding. In addition, the manual will contain instructions for reporting data necessary for flood control regulation of the project and communications procedures between the Authority and the Corps. The manual contains instructions to be followed for flood control regulation. The manual will serve as a detailed guide to personnel involved in the flood control regulation of Mansfield Dam and Lake Travis during the life of the project. Portions of the manual will be updated as conditions warrant. Revisions to the Water Control Manual and all associated documents will be in writing and in accordance with the provisions of 33 CFR 208.11 (d) (10). Should there be any difference between this Letter of Understanding and the Water Control Manual, the Manual shall control.

WITNESS OUR HANDS in the capacities shown below and effective either on the date of the adoption of amendments to 33 C.F.R. § 208.19 consistent with the revised Water Control Manual or on the date of the last signature, whichever is later.



(Signature)

Thomas W. Kula
Brigadier General, U.S. Army
Commanding
Southwestern Division
Corps of Engineers



(Signature)

Rebecca S. Motal
General Manager
Lower Colorado River
Authority



Jan 27, 2014

(Date)

DEC. 9, 2013

(Date)

WATER CONTROL AGREEMENT

MANSFIELD DAM AND LAKE TRAVIS (MARSHALL FORD DAM AND RESERVOIR) COLORADO RIVER, TRAVIS COUNTY, TEXAS

Pursuant to section 7 of the Flood Control Act of 1944, 33 U.S.C. 709, and further prescribed in 33 CFR 208.11, the Corps of Engineers (hereinafter called the Corps) and the Lower Colorado River Authority (hereinafter called the Authority) hereby set forth this agreement to specify the roles and responsibilities of the respective organizations in the operation of Mansfield Dam and Lake Travis, Travis County, Texas.. The included water control release schedules will govern the use of the flood control storage space at Mansfield Dam and Lake Travis. It is agreed or understood that:

STORAGE AND RELEASE

a. The Authority is responsible for the physical operation of the flood control facilities and for directing real-time implementation of the Water Control Plan. Consultation and assistance will be provided by the Corps when appropriate and to the extent practicable.

b. The Authority is responsible for storing and releasing flood waters, in accordance with the Water Control Plan, when the lake level is between elevations 681.0 and 714.0 feet mean sea level (msl), the elevation limits of the flood control pool.

c. Appropriate consideration will be given for other authorized project functions.

d. The Authority is responsible for directing storage and release of all water when the lake level is above elevation 714.0 feet msl, the top of the flood control pool. The Corps may temporarily prescribe regulation of flood control storage space on a real-time basis without request of the Authority.

e. The Authority is responsible for directing storage and release of all waters when the lake level is in the conservation pool, below elevation 681.0 feet msl. The Authority will advise the Corps when inflow rates are anticipated which will raise the pool above elevation 681.0 feet msl at the dam.

f. The Water Control Manual, insofar as they govern the use of the flood control storage capacity between elevations 681.0 and 714.0 msl, are subject to temporary modification by the Corps in an emergency. The modification shall be communicated by the Corps to the representative of the Authority in immediate charge of operations at Mansfield Dam and Lake Travis by the best available means of communication. The modification shall

be confirmed in writing the same day by the Corps to the Authority.

g. The Authority may temporarily deviate from the flood control regulations for emergency reasons to protect the safety of the dam or to avoid other serious hazards. In the event an immediate short-term departure is deemed necessary, such action shall be immediately reported to the Corps by the fastest means of communication available. Actions shall be confirmed in writing the same day by the Authority to the Corps and shall include justification for the action. Continuation of the deviation will require the express approval of the Corps. Advance approval of the Corps will be acquired prior to any deviation from the plan of regulation prescribed or approved by the Corps in the interest of flood control and/or navigation except in the emergency situation mentioned above. When conditions appear to warrant a prolonged deviation from the approved plan, the Authority and the Corps will jointly investigate and evaluate the proposed deviation from the approved plan to insure that the overall integrity of the water control plan would not be unduly compromised. Approval of prolonged deviations will not be granted unless such investigations and evaluations have been conducted to the extent deemed necessary by the Corps to fully substantiate the deviation.

h. At any lake level, the Authority is responsible for directing releases as required to ensure dam safety and structural integrity. The Corps will provide technical assistance if the Authority requests it. Any such assistance provided by the Corps is to be used at the discretion of the Authority, and does not relieve the Authority of the responsibility for safety of the project.

i. Flood control regulation will not restrict municipal or industrial uses, or releases for authorized downstream users as determined by the Authority or others.

j. Releases made in accordance with these regulations are subject to the condition that releases will not be made at rates or in a manner that would be inconsistent with emergency requirements for protecting the dam and/or reservoir from major damage.

MAINTENANCE

k. The Authority is responsible for the operation and maintenance of the flood control facilities and for all dam safety aspects of the project. The Authority shall maintain capabilities of the flood control facilities in accordance with the construction specifications and the "as built" drawings.

1. The Authority shall develop, maintain and execute forecast models for Lake Travis. The Authority shall provide the Corps inflow and pool elevation forecasts for Lake Travis on a near real-time basis.

DATA AND COMMUNICATION

m. The Authority shall provide observations required by the Corps for flood control regulation of Mansfield Dam and Lake Travis. The Authority will record and make available to the Corps hydrometeorological, streamflow and lake data on a real-time basis and will furnish a daily report, electronically, to the Corps office in Fort Worth, Texas. Data missing from weekend and holiday reports will be furnished on Monday or the day following the holiday unless otherwise instructed by the Corps. These reports shall be provided to the Corps office in Fort Worth, Texas, by 8:30 a.m. each day. This report will include the headwater elevation at 4:00 p.m. and midnight of the previous day and 8:00 a.m. of the day of the report; the number of gates in operation with their respective openings and releases; the 24-hour average power discharge; measured pan evaporation data; and, precipitation in inches for the preceding 24-hour period. Whenever the lake rises to elevation 681.0 feet msl and releases for flood regulation are necessary or appear imminent, the Authority shall report at once to the Fort Worth District Engineer or his duly authorized representative by telephone all gate changes and the time the gate change was made. This confirmation will include the head water elevation, the time of the gate change, the number of gates in operation, and the release rate.

n. The Corps and the Authority shall provide warnings that will start immediately when a water condition is expected that could produce severe damage to property or be potentially dangerous to life. The following paragraphs identify the action to be taken by each agency:

(1) Corps. In the event the lake level is projected to exceed elevation 681.0 feet msl, the Authority shall furnish the Corps with basin hydrologic data including projected lake levels and releases. The Corps will review, and at its discretion, modify the Authority's projections and proposed operations for use in warning the public within and below the project. In the event communications are lost between the agencies, the Corps shall dispatch personnel to Mansfield Dam, for the purpose of maintaining communications, as required by the Authority.

(2) Authority. In the event the lake level is projected to exceed elevation 714.0 feet msl, the Authority shall continue

to furnish the Corps with hydrologic data including projected lake levels and releases. The Authority shall initiate its flood warning plan at its discretion. The Authority shall be responsible for alerting the necessary public officials and agencies of the current and forecasted conditions. The Authority shall release information furnished by the Corps to the public in the lake area and will advise the public below the dam. The Authority shall provide the Corps with a copy of all information releases made to the public and news media.

o. The Authority is responsible for keeping current all data contained in its public flood warning plan.

p. Regulation schedules are shown in tabular form for both Normal Flood Control Regulation (Table 1) and Emergency Flood Control Regulation (Table 2), and are attached hereto and incorporated herein in compliance with the regulations.

WITNESS OUR HANDS in the capacities shown below and effective either on the date of the adoption of amendments to 33 C.F.R. § 208.19 consistent with the revised Water Control Manual or on the date of the last signature, whichever is later.



(Signature)

Thomas W. Kula
Brigadier General, U.S. Army
Commanding
Southwestern Division
Corps of Engineers
Authorized Representative
of the Chief of Engineers



(Signature)

Rebecca S. Motal
General Manager
Lower Colorado River
Authority

Jan 27, 2014

(Date)

DEC. 9, 2013

(Date)

TABLE 1

Mansfield Dam and Lake Travis - Normal Flood Control Regulation Schedule

Condition	Reservoir Level [ft]	Release ¹ [cfs]	Controlling Stages and Discharges at Downstream Control Points
Pool Rising or Falling	Below 681	As Specified by the Authority	33.0 ft (30,000 cfs) at Austin - USGS Gage 08158500 27.2 ft (45,000 cfs) at Bastrop - USGS Gage 08159200 35.5 ft (50,000 cfs) at Columbus - USGS Gage 08161000
Pool Rising	Forecast: 681-683	3,000 ² to 7,500	33.0 ft (30,000 cfs) at Austin 27.2 ft (45,000 cfs) at Bastrop 35.5 ft (50,000 cfs) at Columbus
Pool Rising	Forecast: 683-685	5,000 to 30,000	33.0 ft (30,000 cfs) at Austin 27.2 ft (45,000 cfs) at Bastrop 35.5 ft (50,000 cfs) at Columbus
Pool Rising	Forecast: 685-691 (a) During January, February, March, April, July, August, November, December. (b) During May, June, September, October	5,000 to 30,000 30,000	33.0 ft (30,000 cfs) at Austin 27.2 ft (45,000 cfs) at Bastrop 35.5 ft (50,000 cfs) at Columbus
Pool Rising	Forecast: 691-710	30,000	33.0 ft (30,000 cfs) at Austin 27.2 ft (45,000 cfs) at Bastrop 35.5 ft (50,000 cfs) at Columbus
Pool Rising	Forecast: 710-714	50,000	No Stage Control (50,000 cfs) at Austin No Stage Control (50,000 cfs) at Bastrop No Stage Control (50,000 cfs) at Columbus

TABLE 1 (continued)
Mansfield Dam and Lake Travis - Normal Flood Control Regulation Schedule

Pool Rising	Forecast: 714-722 ³	90,000 ³	No controls. See footnote 3.
Pool Rising	Forecast: above 722		The Authority will specify and schedule releases as required to protect the safety of the structure.
Pool Falling	Above 722		The Authority will specify and schedule releases as required to protect the safety of the structure.
Pool Falling	722-714		The Authority will specify and schedule releases as required to protect the safety of the structure.
Pool Falling	714-710	50,000	No Stage Control (50,000 cfs) at Austin No Stage Control (50,000 cfs) at Bastrop No Stage Control (50,000 cfs) at Columbus
Pool Falling	710-691	30,000	33.0 ft (30,000 cfs) at Austin 27.2 ft (45,000 cfs) at Bastrop 35.5 ft (50,000 cfs) at Columbus
Pool Falling	691-685: (a) During May, June, September, October. (b) During January, February, March, April, July, August, November, December.	30,000	33.0 ft (30,000 cfs) at Austin 27.2 ft (45,000 cfs) at Bastrop 35.5 ft (50,000 cfs) at Columbus
Pool Falling	685-683	5,000 to 30,000	33.0 ft (30,000 cfs) at Austin 27.2 ft (45,000 cfs) at Bastrop 35.5 ft (50,000 cfs) at Columbus
Pool Falling	683-681	3,000 ² to 7,500	33.0 ft (30,000 cfs) at Austin 27.2 ft (45,000 cfs) at Bastrop 35.5 ft (50,000 cfs) at Columbus

¹ Subject to the specified controlling discharges at downstream control points. Releases from the dam, when combined with downstream inflows to the Colorado River, shall not contribute to an

exceedance of the specified controlling discharges. Normal hydroelectric turbine releases may be reduced only to prevent them from contributing to an exceedance of downstream control discharges. Control discharges will not be modified due to minor shifts in the respective control point stage-discharge relationships, but will be reassessed if significant shifts indicate the possibility of negative impacts.

² Minimum daily average release. Release need not be continuous throughout the day.

³ Release shall be the lesser of 90,000 cfs or the forecasted peak rate of reservoir inflow. As the reservoir level exceeds elevation 714 feet, **or is forecast to exceed elevation 722 feet**, the Authority will assume responsibility for specifying and scheduling releases as required to protect the safety of the structure **to the maximum extent practicable**.

TABLE 2
Mansfield Dam and Lake Travis - Emergency Flood Control Regulation Schedule

Pool Elevation [ft]	Pool Condition	Operations
Below 691	Rising, Standing, or Falling	If the Dam Tender has knowledge of significant rainfall or pending flood conditions on the Colorado River downstream of the dam, stop all releases. Otherwise, continue to make releases as previously instructed.
691 - 710	Rising	Release 5,000 cfs
	Standing or Falling	Release 3,000 cfs
710 - 714	Rising	Release 30,000 cfs
	Standing or Falling	Release 5,000 cfs
714 - 722	Rising, Standing, or Falling	Release 90,000 cfs
Above 722	Rising, Standing, or Falling	All conduit gates full open.

Instructions During Emergency Operations

1. A complete log of all conduit gate operations will be maintained at each conduit gate.
2. The conduit gates will be operated as follows:
 - a. Each conduit gate will be fully opened or closed.
 - b. Conduit gates will be opened or closed at a maximum rate of one gate per hour.
3. When the lake level is receding and approaching elevation 681.0 feet (top of conservation pool), reduce conduit gate releases in such manner that all conduit gates are closed when the pool falls to elevation 681.0 feet.
4. No curtailment of normal hydroelectric turbine releases will be required due to flood control operations.