



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