

## TEXAS HIGHWAYS--L. TRAVIS SIDEBAR--MALLORY

### Fickle Finger of Flow

While scenic shores and clear, clean water makes Lake Travis a recreational haven, geography and climate make its Hill Country surroundings the most flood-prone area in the United States.

Breezes blow from the Gulf of Mexico, rising rapidly as they meet the highlands. When warm, moist Gulf air collides with cold Pacific or Canadian air, thunderstorms can bring localized, torrential downpours, usually in spring and fall. Any spot can get much of its annual rainfall (30 inches or so) in one deluge. Thin, rocky soils can't soak up such drenchings, so the Colorado and its steep-banked tributaries funnel water downstream at an alarming rate.

Most of the river's current, in fact, comes from floods. Between 1843 and 1938, 22 major floods swelled the river--most severely in 1869 when high water inundated Austin.

Old-timers still tell tales about this century's strongest surge. "I remember the big flood of 1935," recalls Edwin Rosenbusch of Liberty Hill, a teenager at the time, living on his family's 320-acre ranch in the community of Mud, now part of Pace Bend Park. "A mile of our riverfront had lots of old native pecans. I could hear those big trees cracking under the weight of the water."

Another flood in 1938 washed away the family's fences and crops. It also temporarily halted construction, begun a year earlier, of a dam being built by the Lower Colorado River Authority (LCRA) and the U.S. Bureau of Reclamation to help corral the Colorado.

Originally called Marshall Ford Dam, Mansfield Dam, completed in 1941, was renamed for project supporter and Texas Congressman J.J. Mansfield of Eagle Lake. It forms Lake Travis by backing up the Colorado for 64 miles from the historic low-water crossing of Marshall Ford to Max Starcke Dam at Lake Marble Falls. The 274-foot-high, 7,089-foot-long earth and concrete structure collects water from the Pedernales River and four Highland Lakes--Buchanan, Inks, LBJ, and Marble Falls. (The chain also includes Lake Austin, the stretch of river between Mansfield and Tom Miller dams.)

Like its sister lakes, Travis generates hydroelectricity and supplies water to communities and agricultural operations. But while the others stay at relatively constant levels (passing through as much water as they receive), Travis fluctuates almost daily. That's because it remains the LCRA's only flood-control lake. Mansfield Dam releases water depending on weather conditions and guidelines which meet water obligations while moderating the river's fickle flow.

The plan seems to work. The river still floods, as experienced in 1997 and 1991, when Lake Travis reached its historic high level of 710 feet above mean sea level (msl.), less than five feet below the top of the dam. But even that flood sent a tolerable 35,000 cubic feet per second (cfs.) of water through Austin. Compare that with the pre-dam 1935 flood when an astounding 481,000 cfs. swept through the Capital City.

Ironically, the area also suffers from periodic droughts, most recently in 1996, leaving boats stranded and normally submerged islands high and dry. A prolonged dry spell in the 1950s brought Travis to its historic low of 614 feet msl., only 28 percent of capacity. The drought ended in 1957, characteristically, with two major floods within six months.