The floods of 2015 did a number on the Fort Worth Nature Center & Refuge. Weeks of floodwaters turned trails into muddy messes, were the last straw for the Lotus Marsh Boardwalk, and signed the death certificate on the Cross Timbers Levee. After the water receded, the trails slowly dried out...
and were reopened, phase one of the Lotus Marsh Boardwalk was rebuilt and opened this past spring, and, finally, the Cross Timbers Levee has been renovated and reopened!

The Cross Timbers Levee saga begins in the 1940s when Eagle Mountain Lake was being constructed. Using 1940s theories of flood control wherein the goal was to move as much water as fast as possible out of the area, the West Fork of the Trinity River was channelized along a stretch running from just north of Todd Island (AKA the Cross Timbers) to the southern end of what is now called Lotus Marsh. In constructing the channel, the barrow material was piled on the western shore, creating the Cross Timbers Levee. Back in the day, the levee served as a narrow public road leading from Shoreline Drive northward to Ten Mile Bridge Road. The road was closed sometime in the 1970s, and vegetation was allowed to encroach along the shoulders, soon turning the gravel road into a comfortable walking trail.

Life was good for the Cross Timbers Levee until 1990 when extreme rainfall led to record-setting floods on the Refuge. I happened to visit the Refuge for the first time in the summer of 1990 and witnessed the beginning of the end for the levee. The 1990 floods created the first break in the levee, a break that wasn’t destined to be repaired until 2004.

In 2004, our friends at Tarrant Regional Water District (TRWD) performed the first patch on the levee, but over the decades, upstream development that had occurred had significantly changed the hydrology of the area. Basically, development had reduced the land’s ability to absorb rainfall and led to vastly increased amounts of surface runoff, leading to more frequent flooding.

Two spillways allow water to exit Eagle Mountain Lake. The primary spillway feeds the channel of the West Fork; the secondary feeds Lotus Marsh. Despite best efforts, releasing flood waters from Eagle Mountain led to unequal water levels on opposing sides of the Cross Timbers Levee, causing water to flow either east or west (depending on whether the marsh or the river was higher) over the levee and creating significant erosive forces, which generated multiple breaks in the levee. Over the next decade, patch after patch was eroded away by flood waters.
Finally, in 2014, the old adage of “if you can’t beat ‘em, join ‘em” came to light, and the idea of reconnecting the marsh and river came to the forefront. This concept, intentionally creating a break in the levee to, in essence, permanently reconnect the marsh and river serves to put the West Fork of the Trinity River back into its original channel. The reduced hydrologic pressure resulting from connecting the two water bodies will significantly reduce the impacts of flooding.

Cutting a hole in the levee was the easy part, and once again, we turned to our friends at TRWD for assistance as they designed and built an 80-foot bridge to span the newly created levee gap so that our visitors could access Todd Island via the Cross Timbers Trail for the first time in many years.

Putting the bridge in place proved to be a challenge since the 80-foot steel structure weighed more than 21,000 pounds, but the Fain Group, resilient contractors responsible for constructing both the new Lotus Marsh Boardwalk and the Cross Timbers Levee, managed to wrangle a huge crane out onto the levee to gently place the massive bridge between the concrete abutments.

As of this writing (mid-August), finishing touches are being completed on the Cross Timbers Trail and the adjacent Cross Timbers Levee parking area prior to a planned reopening in September when you will be able to once again stroll across to visit one of the best examples of Western Cross Timbers left in the country.