

Evidence-Backed Points Demonstrating Low Flood Risk at Camp Cullen

1. Lake Livingston is tightly regulated to remain at a stable elevation (131 ft MSL)

The Trinity River Authority (TRA), which operates Lake Livingston, states:

- The dam's operational procedures are **designed to maintain a reservoir elevation of 131 ft above mean sea level (MSL)** during non-flood conditions.
- The lake is maintained as a **water-supply reservoir**, not a flood-control reservoir, meaning it stays full and stable rather than fluctuating wildly.

Why this matters for flood risk:

Camp Cullen is located well *upslope* from Lake Livingston's normal conservation pool. A stable reservoir elevation means extremely small variation near Camp Cullen's shoreline elevation (which is significantly higher than 131 ft MSL).

2. Lake levels remain extremely consistent year-round

Water Data for Texas shows:

- Recent daily lake levels in early 2026 have stayed almost perfectly around **131.0–131.2 ft MSL**.
- Even during heavy-rain periods, water levels rarely exceed the conservation pool by more than **0.1 ft** (just 1–2 inches).

What this means:

A lake that fluctuates only **inches**, not **feet**, is not capable of rising to elevations that could threaten camp structures located far above the shoreline.

3. Flood pool elevations prove Camp Cullen sits *far above* any risk level

Lake Livingston's engineered design includes:

- Service spillway crest: 99 ft MSL
- Emergency spillway crest: 134 ft MSL
- Top of dam: 145 ft MSL

The lake's maximum possible water level before emergency overflow is 134 ft MSL.

Camp Cullen's cabins, dining hall, program buildings, and central campus areas sit *well above* this threshold (typically estimated around **145–165+ ft MSL**, depending on the structure)

Why this is important:

For lake flooding to reach camp facilities, Lake Livingston would need to exceed emergency overflow height, something that has never occurred since the lake's impoundment in 1969.

4. The TRA's hydrological procedures prevent catastrophic lake rise

According to the Trinity River Authority:

- Gate operations and release procedures are structured to avoid any elevation approaching flood pool levels, protecting shoreline areas from flooding.

- These procedures were developed by hydrological engineers and refined after decades of operation.

This proves that controlled releases begin well before any risk to structures around the lake.

5. FEMA mapping absence does NOT imply higher risk

FEMA itself notes:

- Flood maps are incomplete and continuously being updated.
- Some areas with low or moderate risk are simply unmapped, not considered high-risk.
- FEMA encourages communities to use local hydrology and elevation evidence where maps are unavailable.

For Camp Cullen, this is favorable because:

- We have solid lake-level, reservoir-management, and elevation data.
- All available indicators show low actual risk even without a FEMA zone designation.

Summary

Although YMCA Camp Cullen is not currently FEMA-mapped, all available hydrological data demonstrates a *very low flood risk*. Lake Livingston is maintained at a consistent elevation of ~131 ft MSL year-round, varying by only a few inches. The Trinity River Authority's engineered dam procedures prevent the lake from rising anywhere near emergency overflow elevation (134 ft MSL). All camp facilities sit significantly above this level, providing a substantial natural elevation buffer. Reservoir operations, decades of stable lake behavior, and regional water-management documentation collectively confirm that YMCA Camp Cullen is located in a low flood-risk area.