



Austin/San Antonio Weather Forecast Office WEATHER EVENT SUMMARY

1987 Guadalupe River Flood

16 - 17 July 1987



1987 Guadalupe River Flood

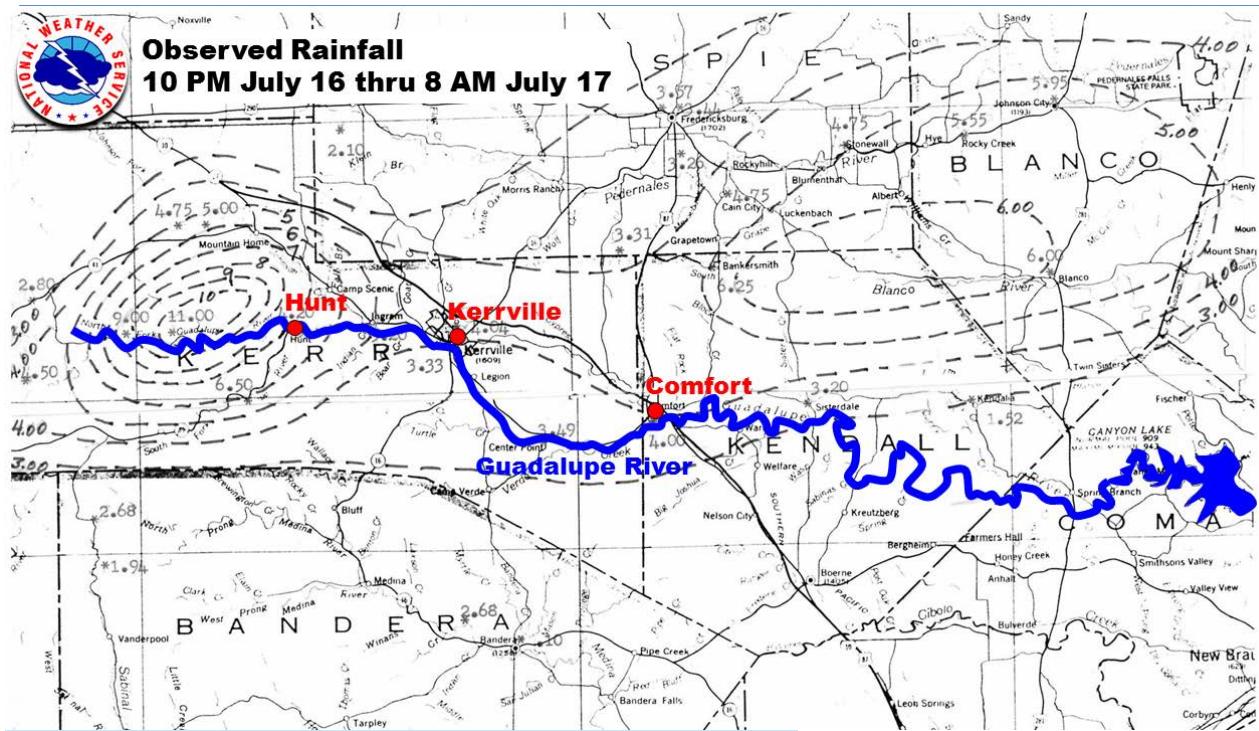
16 - 17 JULY 1987

Event Summary

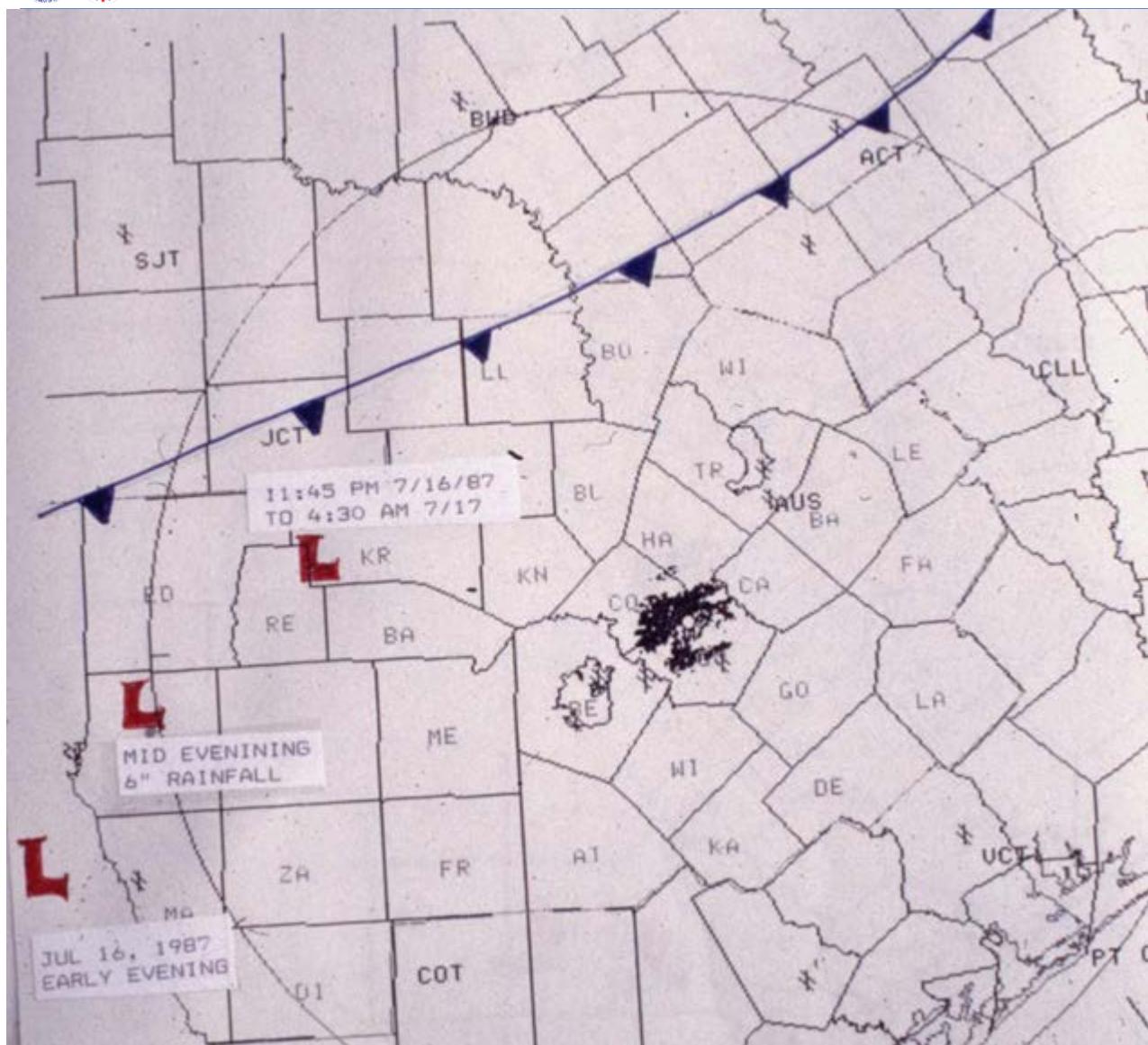
During the late evening of July 16th, 1987 and into the early morning of the 17th thunderstorms developed and moved slowly eastward through the Hill Country of South Central Texas. The storms produced a train-effect, one following another, and a large area of 5-10 inches of rain fell in the upper headwaters of the Guadalupe River basin. The heavy rainfall was triggered by a mid-level low interacting with a weak cold front and copious amounts of moisture from the Gulf of Mexico. As much as 11.50 inches of rain occurred 9 miles west of Hunt, Texas. This resulted in a massive flood wave that traveled down the Guadalupe River through Ingram, Kerrville, and eventually Comfort, Texas during morning hours of the 17th.

The Guadalupe River at Comfort rose 29 feet that morning and crested at 31.50 feet, the ninth highest crest in recorded history. Upstream at Kerrville and Hunt the river crested at its second highest crest on record and higher than the famous 1978 flood. At the peak of the flood the Guadalupe River was estimated to be two-thirds of a mile from its normal bank near Comfort, Texas.

Hundreds of other people along the Guadalupe River and its tributaries that night and morning had to be evacuated. The 1987 Guadalupe Flood is unfortunately known for the tragic loss of 10 teenagers' lives and 33 other injuries when a bus and van leaving a church camp encountered the flood waters (see below).



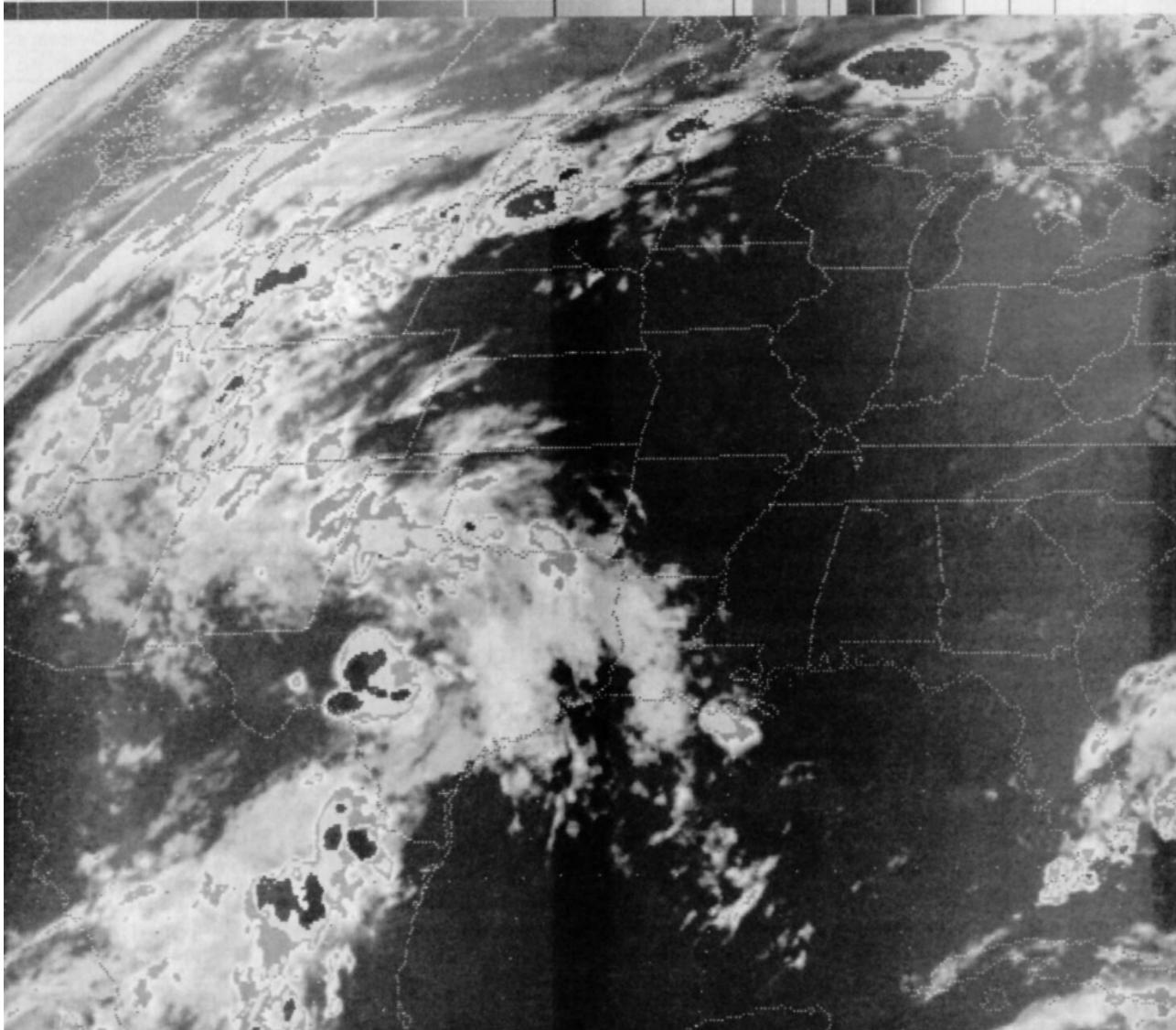
Observed rainfall. 11.50" fell in the headwaters of the Guadalupe River.



Analysis of surface cold front and position of mid level low the night of Jul 16 into the morning of Jul 17.



0401 17JL87 29E-2MB 01493 13181 EB2



(Bottom Right): Infrared satellite image taken at 11 PM CDT Jul 16 showing storms over the Hill Country of Texas.



Excerpts from Warnings and Statements

ATTACHMENT

Excerpts from Warnings & Statements by WSFO San Antonio

1. 101 AM - Flash Flood Warning issued by WSFO SAT til 5 AM for Kerr & Real Counties as 4"/hr rainfall rates were indicated based on radar and satellite data.

"..persons close to the Guadalupe River from Camp Stewart downstream past Hunt and Ingram to Kerrville should be alert for possible heavy rain and flash flooding the rest of this Friday morning. Campers should move to higher ground and away from the floodplain of these rivers..and their tributaries immediately...remember...deaths during flash flooding are frequently related to motorists driving into flooded low water crossings..."
2. 245 AM - Flood Warning for the Guadalupe River from Kerrville upstream. 4-6" past 3-4 hours; 15' rise in the river at Camp Mystic. Reports of people trapped in rising waters. "Remarks by old timers note the flooding taking place reminds them of the 1978 Hill Country Flood."
3. 345 AM - Flood Warning on the Guadalupe from the headwaters to below Spring Branch (in Comal County southeast of Comfort). Life-threatening flood. 9" of rain 11 W of Hunt, TX in Kerr County. 4' rise at Hunt in last 30 min to a stage of 24.26' (12' abv 12' FS). "This is a major life-threatening flood from the headwaters downstream to below Spring Branch through the day today."
4. 430 AM - Flash Flood Statement..5-10" of rain. 28.2' crest at Hunt (Flood Stage = 16') = 5' greater than 1978 flood. Residents along the Guadalupe from Canyon Dam upstream should move to higher ground. Life-threatening flood situation upstream from Kerrville. Motorists should avoid low-water crossings and roads close to the river and creeks. Officials at camps along the river and its tributaries should have everyone well away from the flood plain and to high ground already."
5. 435 AM - Flood Warning...the river will go well above flood stage this morning downstream as far as below Comfort, TX.



"The highest ever reported stage at Hunt was 36.6' in July 1932 but this is a very dangerous flood. Camp Mystic officials say they have polled camps in the area and all campers are accounted for. People should not attempt to cross low water crossings in the area today in the Guadalupe drainage above Canyon Lake today as this crest will move rapidly downstream with rises as far as below Spring Branch by late today. Unnecessary travel should be curtailed."

6. 455 AM - Flash Flood Warning til 9 AM for Kerr County.. specifically the Guadalupe River...a major life-threatening flood continues on the Guadalupe River in Kerr County. These flood waters will eventually flow downstream past Kerrville to Comfort and Spring Branch later in the day...then into Canyon Lake. 5 - 10" rainfall totals during the night..remember.. deaths during flash flooding are frequently related to motorists driving into flooded low-water crossings.

7. 530 AM - Flood Warning for the Upper Guadalupe. 11" total near Hunt, TX.

8. 600 AM - Flash Flood Statement...life-threatening FFW & FLW in effect.

"Although much of the rain has either ended or diminished...the great threat for flooding will continue through today."

"Within the past hour...a report of a flood crest between 30 and 35 feet was received west of Hunt... so the flood crest will be even higher (at Hunt) within hours. This water will eventually flow past Kerrville to Comfort and Spring Branch today."

"Motorists should avoid low-water crossings and roads close to the river and creeks. Officials at camps along the river and its tributaries should already have everyone well away from the floodplain and to high ground.

9. 830 AM - Bus & van washed away in rising waters near Comfort.

10. 900 AM - Flash Flood Statement...FFW expired..FLW continues; "Although the (FFW) for Kerr County has expired... flooding will continue along the Guadalupe River... residents along the River and its tributaries.. should move to higher ground away from the floodplain immediately."

11. 930 AM - Flood Warning for the upper Guadalupe; crest at Comfort around noon near 30' (FS = 26' .. now at 18.75' .. 1978 crest = 40.9').

Seagoville Road Baptist Church/Balch Springs Christian Academy Bus and Van Tragedy

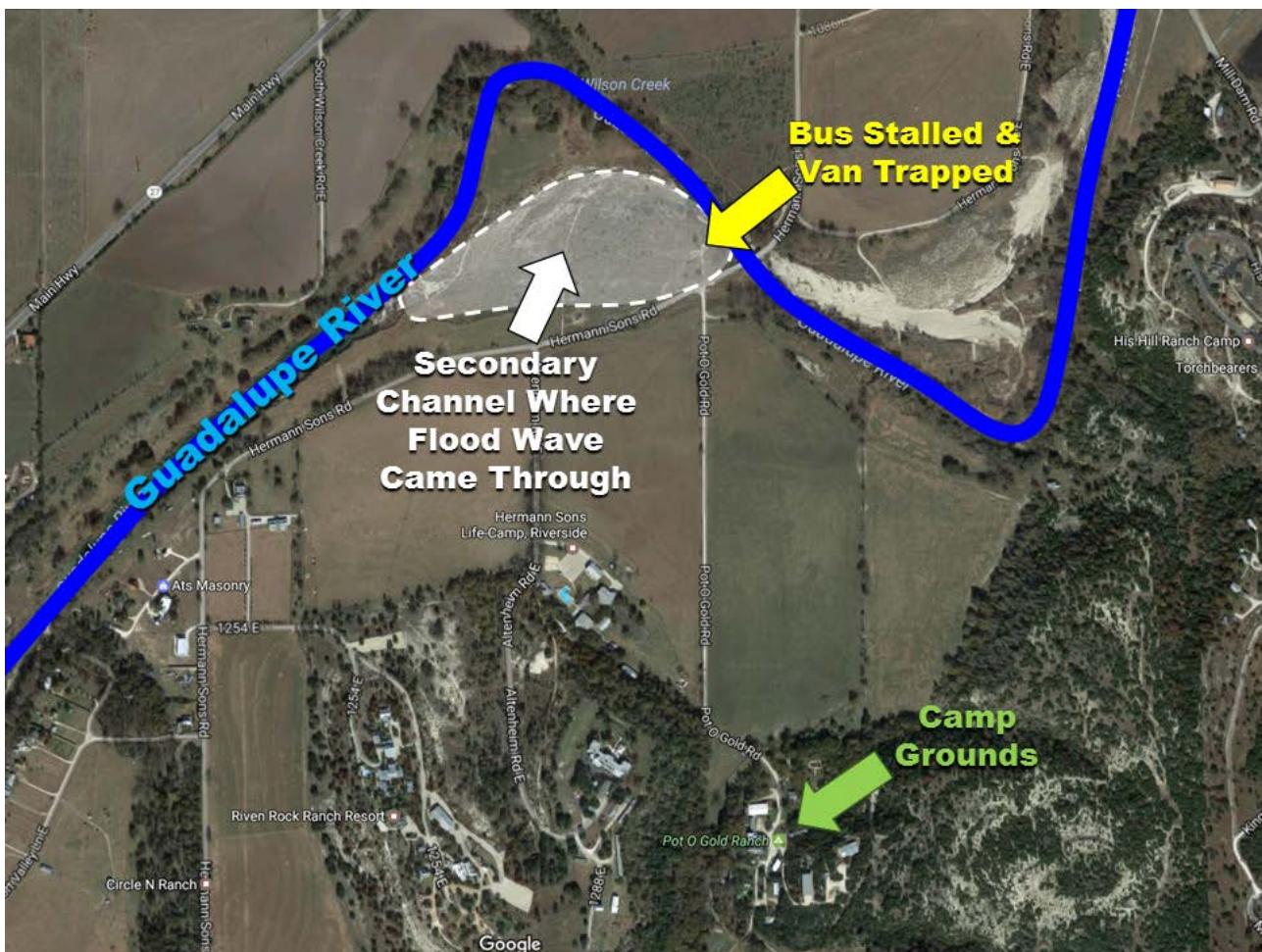
The week preceding the 1987 Guadalupe River Flood more than 300 children from various churches were attending a church camp at the Pot O' Gold Ranch, which is located about two miles southwest of Comfort, Texas. The camp was scheduled to end later in the day on the July 17th, 1987, the day of the Guadalupe River Flood.

Law enforcement officials notified the camp around 2 AM and again around 6 AM of the flood wave coming down the Guadalupe River and to not try and cross the river. A decision was made to evacuate the children early to avoid being trapped at the camp. Around 745 AM a caravan of buses and a van left the camp. The buses and van encountered a flooded low water crossing on the Guadalupe River just outside the camp gate and decided to turn away and try an alternate route. The lead buses in the caravan successfully made the sharp turn to head a different direction. However the rapidly rising water from the river, now out of its banks, and the backwash from the convoy caused the last bus to stall and a van behind it to become stranded.

An attempt was made to evacuate the children off the bus and van, however as they were wading back to dry ground a wall of water, estimated to be as much as half a mile wide, rushed upon the campers. Although they tried to reach safety by forming a human chain, the rushing water scattered them. 39 teenagers and 4 adults were swept into the flood waters. 10 of the teenagers tragically drowned. The remaining 33 children and adults survived as a result of a series of rescues, including dramatic helicopter rescues of several clinging to tree tops, conducted by Texas DPS, the US Army's 507th Medical Division, and a local television news station from San Antonio, Texas.



Seagoville Road Baptist Church bus swept into the Guadalupe River.



Map of the Pot O' Gold Campgrounds and location where bus stalled and van became trapped

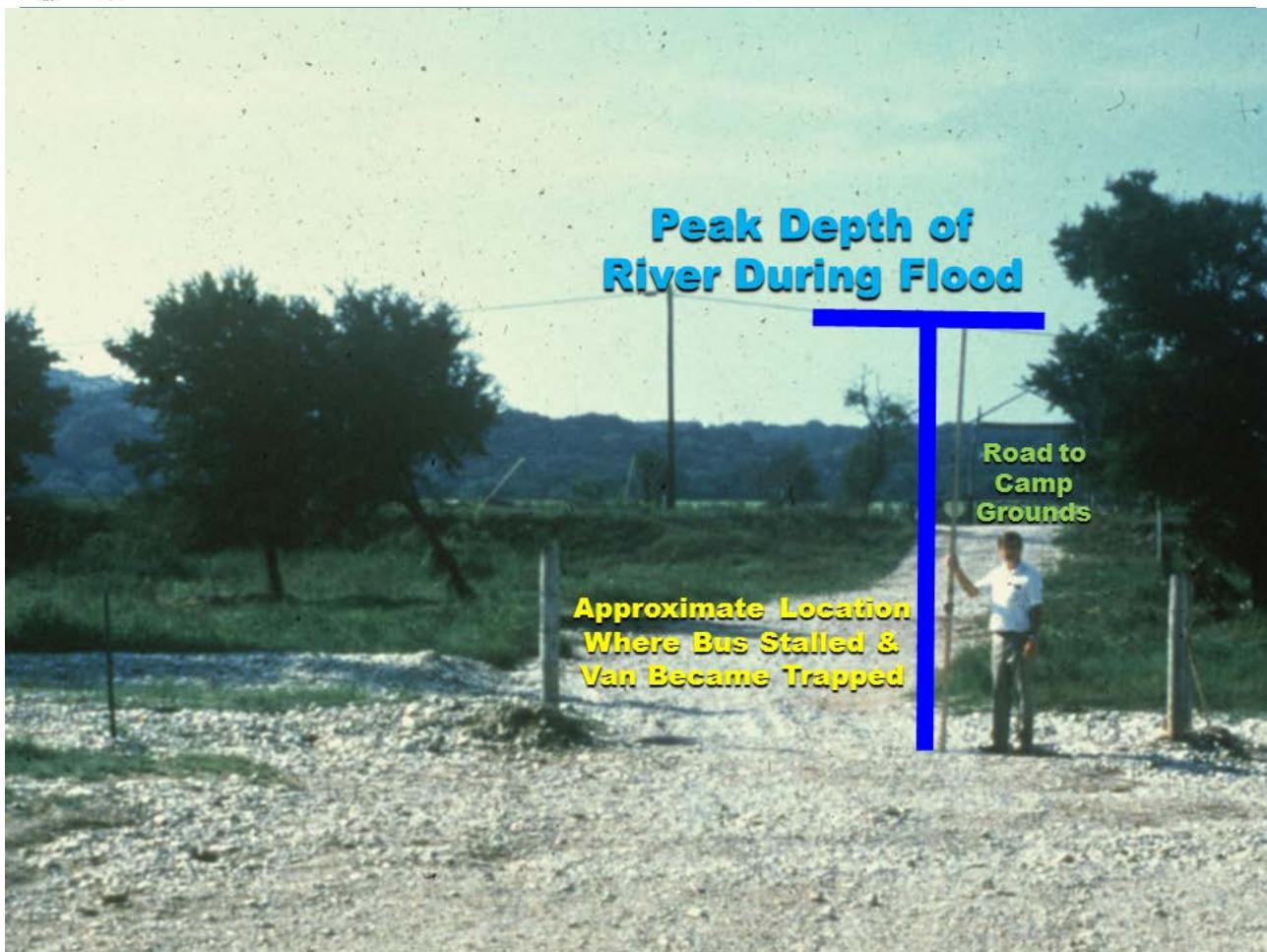


Compilation of rescues that took place July 17, 1987 (courtesy KENS 5 TV - San Antonio)

Survey Pictures



NWS survey picture of the Guadalupe River in flood on July 17, 1987.



NWS survey picture estimating how high the peak of the flood waters were near the point where the church bus stalled and van became trapped.



Memorial



Special Thanks

KENS 5 TV – San Antonio