

JULY 4, 2025 FLOOD

For many, the July 4 Flood was unprecedented; others argue the tragedy was preventable. The truth is complex, with no simple answer for those seeking to understand a disaster that left 119 dead in Kerr County.

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THE KERR COUNTY LEAD.

For generations of Texans, the allure of the Guadalupe River makes it one of the most inviting places to rest and reset. It was practically irresistible on a long and lazy Fourth of July weekend in Kerr County. A perfect weekend may be sitting in a chair with feet dangling in the cool, and frequently calm, waters of the river. If you get to a spot on the river early enough, you may be able to claim one of the many shady stretches under the canopy of ancient cypress trees that line the river from Comfort in Kendall County to west of Hunt.

For many of the 119 who died on July 4, 2025, the Guadalupe wasn't just a getaway. It was woven into the fabric of their lives.

Mollie Schaffer spent her final waking moments sitting on the dock at the River Inn with her husband Randy and their friends, showing videos of a gourmet meal their 12-year-old grandson had cooked. Off in the distance, lightning illuminated the horizon and thunder slowly rolled. The group had reunited at this Hunt lodge every summer since 1980. That weekend marked their 46th gathering—and their last.

"It is ironic that Mollie drew her last breath in a place that had brought her so much joy for almost 50 years," her obituary noted.

Just downriver, Camp Mystic was filled with girls who





had returned to what many called their “happy place.” For nearly a century, the all-girls Christian camp on the banks of the Guadalupe had been shaping young women through summers of swimming, singing, and sisterhood.

Alyson Crouch Hardin had fallen in love with Camp Mystic as a child in Houston, eventually becoming a counselor herself. Her daughter Josephine carried on the tradition, attending for nine summers as a camper and serving as a counselor for four more. Both mother and daughter embodied the camp’s philosophy: “Love in your heart is not put there to stay. Love is not love until you give it away.”

Katherine Ferruzzo considered being elected Kiowa Tribe Captain in summer 2024 her biggest accomplishment—until she was accepted to The University of Texas. Having been the first to submit her application, she was thrilled to return to Mystic this summer as a first-time counselor. She was eager to give back to the place that had given her so much. Katherine was assigned to counsel at the Bubble Inn cabin alongside Chloe Childress, another UT-bound counselor.

Chloe was a fourth-generation Camp Mystic camper who had attend-



ed from third grade through 12th. “She was overjoyed to return as a counselor this summer,” her obituary read. “Her passion for guiding younger generations stemmed from her deep faith and genuine love for others.”

In the Bubble Inn cabin, their young campers were living their best lives—singing songs, forming special friendships, and dancing with cabin mates. Among them was Lainey Landry, who “could not wait to go to Camp Mystic with her cousins and friends.” An Ever Loyal Kiowa, she was a natural leader

during the camp’s spirited scavenger hunt, where her smile radiated as brightly as her costume.

Greta Toranzo was thrilled to return for her third summer, overjoyed to be reunited with her camp friends and counselors, eager for weeks filled with the deep bonds of sisterhood she treasured. Blue, the color of the Kiowas, was also Greta’s favorite color.

The Guadalupe River had been a sanctuary for generations. On July 4, 2025, it became something else entirely.



CHAPTER 1

A TYPICAL SITUATION THAT BECAME SOMETHING ELSE

As the wall of water tore through Hunt, Ingram, Kerrville, Center Point, Comfort and beyond, ravaging everything in its path, there was little time to do more than react. Emergency responders arrived in droves as word went out but in the very beginning, average citizens also ran door to door, warning neighbors and rescuing people trapped by floodwaters. As the long hours of July 4 passed, the response to the emergency in progress became more organized as locations for family reunification and evacuees were identified and communicated and volunteers mobilized.

It was becoming increasingly clear — this was going to be a catastrophic event with far-reaching consequences. When word of missing campers and counselors began to spread, so did questions. Initially, little was known about the devastation wreaked on the camps or the HTR TX Hill Country Campground, other than many people were missing. For the parents looking for children and others looking for friends and family, the lack of information was agonizing. For the parents of Cile Steward and family of Jeffrey Ramsey, that agony of the unknown continues.

Questions about the flood, the warnings, the response and so much

more would plague those impacted from that day forward. Little was known at the time and even now, nearly six months later, questions remain. Even so, a clearer understanding is slowly coming into focus.

In Kerr County, people spend a lot of time outdoors, hunting, fishing, hiking and swimming. Many take full advantage of the region's unique ecology that includes desert vegetation, woody marshes, prairie lands and canyonlands. The miles of river trail in Kerrville draws locals and visitors alike, and usually has a steady stream of people walking, running and biking throughout the day, rain or shine. On a Fourth of July weekend, even with rain in the forecast, many were looking forward to fireworks and the annual Fourth on the River Concert and fireworks at Louise Hays Park. The concert featured the return of hometown favorite Robert Earl Keen.

They also know how temperamental Texas weather can be. After all, less than four months earlier, parts of Kerrville got softball-sized hail that caused significant damage to vehicles and homes. In late July of last year, heavy rainfall pushed the Guadalupe well beyond its banks, submerging large portions of Louise Hays Park for a period and flooding multiple low water crossings in the region.

Many Kerr County residents have been here for multiple generations, and they can tell you all about past floods and other weather events. They know the region's weather and are usually prepared for most emergencies with generators, bottled water and other emergency supplies. They respect the power of the river and know its beauty and warmth can change in the blink of an eye.

Despite a wealth of generational knowledge about and experience with the unpredictability of the region's weather and flash flood tendencies, the July 4 flood took just about everyone by surprise. Was it complacency or hubris? Perhaps, this knowledge created a sense of invulnerability.

In months that followed, many tried to identify the root causes of the tragedy. Within hours of the flood's rampage, those first aspersions of accountability were cast. Beyond the accusations of officials asleep at the wheel and lack of flood warning and preparations, some began looking at the culpability of the camps, at locations where buildings and recreational vehicles were located in known floodways and at the region's long history of land management practices.

In reality, the disaster was likely shaped by many factors, some that began more than a century ago and some

that will be identified in the courts.

The first lawsuits related to the flood were filed by several families of flood victims against HTR TX Hill Country Campground, where more than 30 people died. In November, four lawsuits were filed against Camp Mystic, where 25 campers, two counselors, and the camp director, Dick Eastland, died. The lawsuits represent 20 of Heaven's 27 families, who also came together to advocate for the passage of Senate Bill 1, the "Heaven's 27 Camp Safety Act."

Matthew Childress, whose 18-year-old daughter and counselor Chloe Childress died trying to save campers in Bubble Inn, described the event as "100% preventable" — a result of systemic failures, complacency and inadequate preparation rather than an unprecedented act of nature.

The accountability battle is now making its way through the courts. The lawsuits were filed in Travis County, a strategic move reflecting their concerns about the fairness of a trial in Kerr County.

"Those that stayed in place are the ones who perished," Childress testified Aug. 20 before the Senate Select Committee on Disaster Preparedness & Flooding. His daughter died following the camp's training instruction, which he said amounted to essentially one sentence: "to stay in place."

The parents group, known as Heavens 27, led a remarkably fast effort to reform rules surrounding the summer camp industry. Still, unintended consequences for the camps — especially Mystic and Heart of the Hills — could mean closure. Heart of the Hills announced it would reopen at a new location along the north fork of the river, well above the floodplain.

Childress argued that the event was not unprecedented, that the Eastlands were well aware of the dangers of positioning the camp so close to the river. The lawsuits also suggest that the Eastlands had successfully removed large portions of the camp out of the flood plain maps, even though Federal Emergency Management Agency maps showed most of the camp's structures were in the regulatory floodway — the most dangerous part of the floodplain.

Initial defense claims have centered around the flood as an "unprecedented event" and blamed inadequate warning systems.

"First, no cabins were located within FEMA's 100-year floodplain," wrote attorney Mikal Watts, who represents Camp Mystic. "Though some Camp Mystic buildings had been included in the 2011 flood-plain map, those maps

were corrected and amended in 2013 through a process known as a Letter of Map Amendment to recognize that finished floor elevations of those buildings are above the 100-year base flood elevation.

"The cabins where the campers and counselors perished were more than 8.5 feet above the elevation of FEMA's 100-year flood plain, yet the surge left a water mark eight feet above the floor of their cabins.

"Second, the water level was unprecedented. We know the water levels reached during the 1932 flood, the 1978 flood and the 1987 flood. Those levels were nowhere close to the water levels experienced on July 4, 2025. Several local officials have called it "a thousand-year flood event."

Whether the flood was a thousand-year event or something else will be debated by scientists for years to come. Kerrville-based meteorologist Richard McAlister described the July 4 flood as not unprecedented in its volume, but unprecedented in its location at the headwaters of the south fork of the Guadalupe River. Some scientists argue that climate change has supercharged the environment with more moisture, leading to an increase in precipitation numbers.

For comparison, the USGS survey on the 1932 flood showed rainfall "amounted to over 35 inches in about 36 hours at the State Fish Hatchery above Ingram." At 4:20 a.m. on July 4, the NWS in Austin-San Antonio posted an urgent flash flood emergency statement to social media noting that "5-10 inches of rainfall had been estimated in the last 3-6 hours across south-central Kerr County. 6.5 inches has been measured at Hunt. 7.85 inches has been measured just upstream of Hunt."

A table in the USGS 1932 flood report notes that at the north fork near Hunt, 982 cubic feet of water per second discharged during peak flow and at the south fork, 1,290 cubic feet of water per second was discharged. On July 4, a USGS gauge recorded 810 cubic feet per second. During the July 4 flood, the Hunt flood gauge showed a crest of 37.53 feet, compared to the 1932 crest of 36.6 feet.

Early on, a former Kerr County IT manager made headlines by angrily suggesting the county had failed to issue a Code Red text message alert to residents of the peril, and the national media grabbed onto the sensational story of the small county's failure. Lt. Gov. Dan Patrick continued to garble the message of local response by suggesting that county and city officials were alerted by phone about the

storm's power, a claim unsupported by any evidence. The Texas Department of Emergency Management said it had resources deployed in anticipation of the storm. Most reports say they were staged in the San Antonio area.

The facts of the morning are this: there were no Department of Public Safety state troopers in West Kerr County to alert residents. There was no indication that TDEM had any assets staged in West Kerr. Hunt was quickly cut off by the floods and the only emergency services personnel in the area were Hunt volunteer firefighters, a pair of off-duty Kerrville Police Department officers and an emergency room doctor vacationing in Hunt.

While TDEM held briefings ahead of the flood and the National Weather Service office that covers Central Texas issued watches and warnings ahead of the flood, these actions were not unusual and typically, would not have elicited an "all-hands-on-deck response" that some media and politicians decried as failure from officials and the community at large.

Two things can simultaneously be true: the NWS did its due diligence tracking the storm and issuing watches and warnings across appropriate channels and the community's lack of response to those messages isn't unusual. The messages didn't convey the sense of urgency matching the magnitude of the conditions — at least not until it was already too late for some flood victims — but that's not unusual either.

A meteorologist would look at the text, recognize the conditions, and perceive the level of urgency. The average layman would not. And, in an area prone to temperamental weather conditions, most have grown accustomed to or even weary of these alerts and often dismiss all but the most urgent.

Consider this: from 2020-2025, the broader region experienced 607 weather events including 261 warnings and 137 flood-related alerts. Despite this high regional activity, 2025 was the most active year on record, with 132 weather-related events. Yet Kerr County usually seemed to miss the worst of these warnings, as if in a weather bubble that received the watch and warning notifications but rarely saw the severe consequences that affected surrounding areas.

As the horror of July 4 unfolded and the world watched, the Texas Legislature announced a bipartisan select committee would investigate the flood to find answers. Initially, the focus was on the Code Red alert system but with the select committee gathered, the focus soon shifted the blame to

the Upper Guadalupe River Authority and Kerr County officials as committee members cited a Houston Chronicle article that published the morning of the first hearing that claimed UGRA failed in their duty to enact a flood warning system.

A quick scan of the UGRA history, published on their website, would have clarified that UGRA's role shifted from that of flood warning to water safety and conservation 25 years ago. UGRA had built a flood warning system but after the agency divested much of its infrastructure assets after settling a lawsuit with the city of Kerrville over a dam collapse during a 1984 flood. The warning system, constructed after the deadly 1987 flood, fell into obsolescence.

Along with UGRA, the county's efforts were in the spotlight. In the first hearing, held in Austin on July 24, State Sen. Jose Mendez, a Democrat from San Antonio, leveled the first charge: "Who was behind the wheel in the middle of the night in Kerr County that should have been the person that was up being prepared to sound the alarm?"

UGRA General Manager Tara Bushnoe was the only Kerr County official to testify that day. She wasn't even

included in the initial flood response until emergency managers realized the river could be a toxic disaster due to debris that included oil, gas and other chemicals from automobiles, homes and businesses.

Doing her best to respond, Bushnoe faced a withering barrage from legislators, whose only context was the thinly reported Houston Chronicle article that focused on the UGRA's previous role as water infrastructure provider. State legislators didn't seem to understand how the river authority worked, or that Gov. Greg Abbott appointed the board of directors.

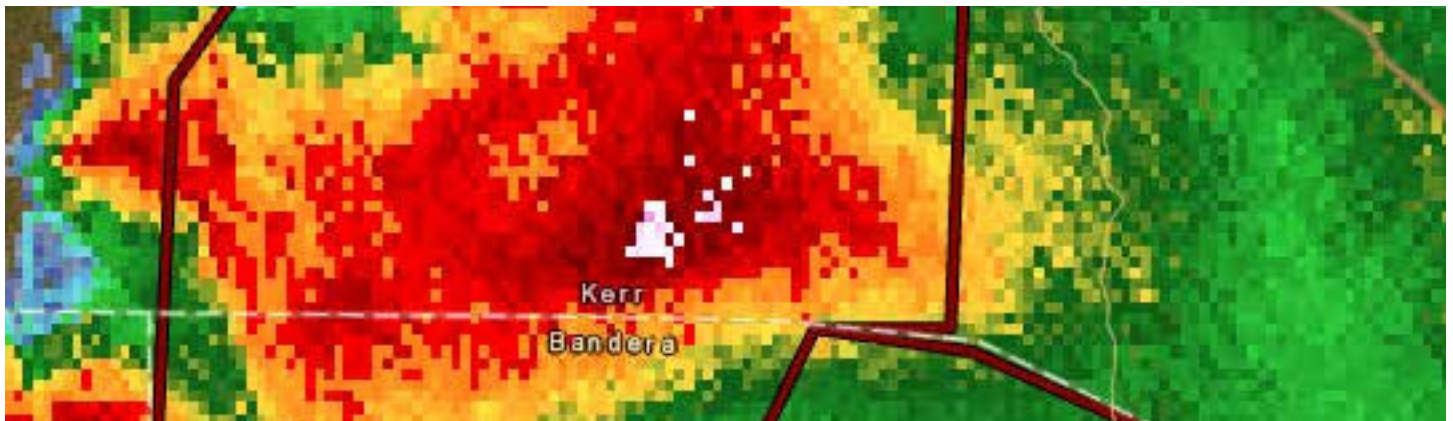
On the first long day of testimony, the legislators heard from a variety of water board officials and state first responders. No testimony from meteorological experts was heard until the July 31 hearing and that was after nearly 20 hours of testimony.

Legislators questioned Bushnoe and later UGRA Board President William Rector, Kerr County Judge Rob Kelly, Kerrville Mayor Joe Herring, Kerr County Sheriff Larry Leitha, and Emergency Management Coordinator Dub Thomas, sometimes stating judgments rather than asking questions, and yet, no one questioned the Texas Department of Transportation about

the viability of Highway 39 to safely handle a mass evacuation at night, with large stretches of the roadway in the regulatory roadway, again, the most dangerous part of any flash flood.

In the first 27 days of the disaster, legislators blamed Kerr County and Kerrville officials for being asleep. Kerrville and Kerr County officials gave conflicting timelines and ultimately failed to offer a comprehensive timeline of emergency response. While residents who witnessed the flood were given time to talk, little time or attention was devoted to weather, terrain, and hydrogeology experts who could offer important insights into the weather conditions that led to the event, their prevalence in the region, the hydrogeological elements of the landscape, how they interact in a flash flood event, and the condition of the upper Guadalupe River watershed.

TDEM Chief Nim Kidd, who President Donald Trump wants to take over the Federal Emergency Management Agency (FEMA), was asked what TDEM knew ahead of time. His response was: "We didn't know anything that nobody else knew," stating that the science of forecasting the event was "just not there yet."



CHAPTER 2

THE METEOROLOGY BEHIND A DEADLY FLASH FLOOD

As it turns out, meteorologists had a pretty good idea that conditions for flash floods were ripe in the Hill Country, especially in South Central Texas. Heavy moisture from Tropical Storm Barry and a low-pressure storm system was a combination they knew to watch closely. While they couldn't pinpoint the exact location heavy

rain might fall far ahead of time, they could send watches to areas of concern and closely watch radar for updates.

Questions remain about the impact of Elon Musk's DOGE cuts and whether they hampered the NWS' ability to make the most urgent flash flood warnings in time. The known facts are that the first indication of weather was a storm brewing off the coast of Belize and the Yucatan Peninsula which would gather strength and earn the name Tropical



Storm Barry.

Longtime San Antonio meteorologist Alex Garcia described it as “barely a tropical storm” but noted another weather system in the area was also on their radar.

“In the forecasts, we noticed early signs indicating that a significant rain event was on the way,” said Garcia, the chief meteorologist at San Antonio’s KABB Ch. 29, who has witnessed his share of extreme weather. “While we couldn’t pinpoint the timing exactly, as we were still a bit far out using long-range models, the signals were clear. Tropical moisture was moving in, and we observed an upper-level system approaching. When both of these factors align correctly in the same area, it typically results in a lot of rainfall. We have seen this pattern before, particularly over the Hill Country. In the days leading up to the event, we monitored these conditions closely and communicated the message, urging people to pay attention because it appeared likely that substantial rain would occur over the Hill Country.”

While Tropical Storm Barry lost its intensity as it made landfall in north-

east Mexico, the storm still carried billions of gallons of moisture that pummeled Mexico, causing millions in damage and killing several people.

Flash flood prediction remains one of meteorology’s most complex challenges because it requires both meteorological and hydrological factors to align perfectly.

“You have to have the right rainfall, and then it has to fall in the right place,” explained Alan Gerard, a retired meteorologist from the National Oceanic and Atmospheric Administration. Gerard noted that flash flooding represents a combined hazard, requiring specific rainfall amounts to fall in vulnerable locations to trigger dangerous water flows.

The region’s limited weather balloon network may have complicated forecasting efforts. With launch sites only in Del Rio, Corpus Christi and Lake Charles, Louisiana, it’s possible meteorologists lacked granular data for Central Texas.

Texas State Climatologist John Nielsen-Gammon said the weather balloon launched the morning of July 3 provided the “key tip off” about

heavy rain potential before the flood. But he noted Del Rio operates the only upper-air station along more than 700 miles of the Texas border between El Paso and Brownsville.

“The air causing extreme rainfall often enters Texas from over the Gulf or northern Mexico, where observations are scarce or of lower quality,” Nielsen-Gammon testified.

Weather balloon data is one of several meteorological data types collected by the National Weather Service and NOAA, along with satellite, radar and surface observations.

Weather balloons offer detailed atmospheric snapshots from ground level to approximately 100,000 feet, satellites provide broad atmospheric views, tracking cloud formations, temperature patterns, water vapor and the movement of weather systems and radar reveals precipitation location, intensity and wind movements within storms.

Computer models from NOAA, private companies and foreign weather services use this data, which teams like those at the Texas Division of Emergency Management analyze to inform operational decisions.

THE WARNING: A LANDSCAPE SHAPED BY A CENTURY OF HUMAN CHOICES

With the Guadalupe River headwaters located just west of Hunt, Kerr County lies within the Edwards Plateau, a karst terrain characterized by limestone, numerous springs, hills terrain and sharp bluffs, a terrain that also contributes to the region's moniker of "flash flood alley."

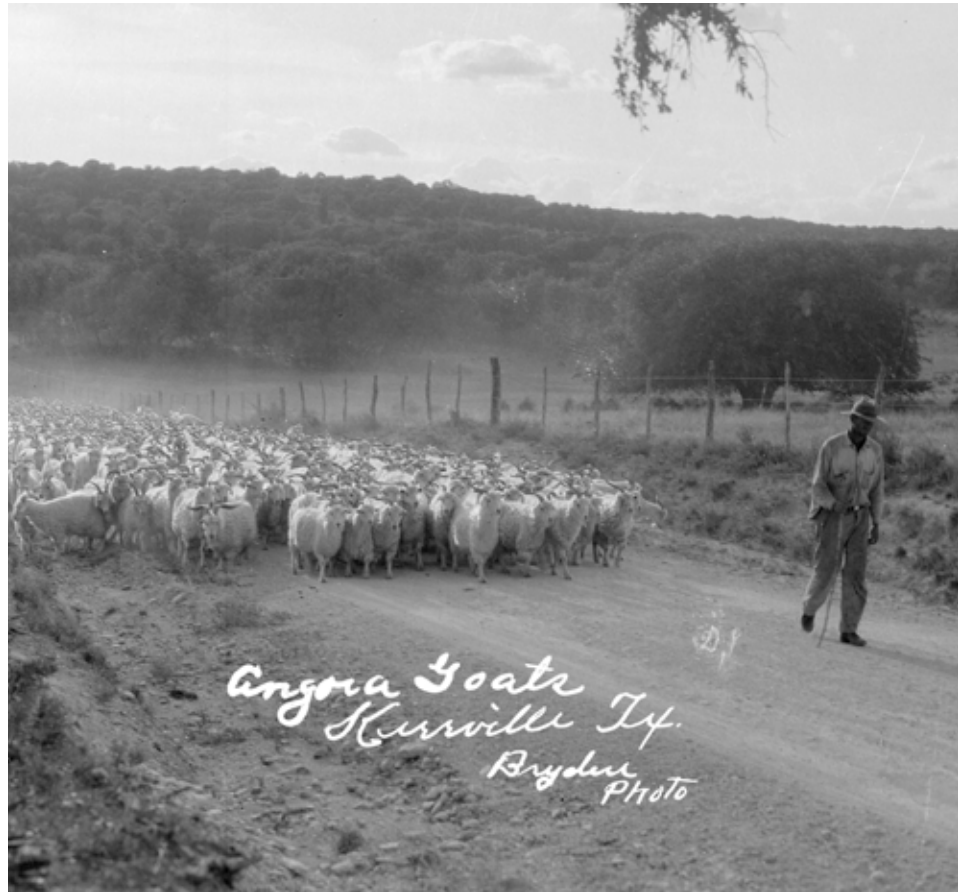
"Karst terrains typically have thin soils and steep slopes, both of which amplify flooding," said Robert Mace, executive director of The Meadows Center for Water and the Environment at Texas State University. "With thin soils, it doesn't take as much rain to saturate those soils. Once saturated, water runs off the landscape and into drainages, streams and rivers. The steep slopes add speed to the runoff, hence the flash flooding we see."

These natural vulnerabilities have been compounded by more than a century of land use practices that further degraded the landscape's ability to absorb rainfall — a pattern of environmental degradation that experts identified and warned about as early as the 1920s.

Flood prevention in karst systems like that of the Hill Country differ from other regions, as both surface water and groundwater features matter. Karst features like caves and sinkholes play important roles in stormwater management, as do woody and other vegetation management practices in and throughout watershed areas and riparian locations along rivers, tributaries and streams.

There are concerns with the degraded condition of the watershed directly upstream from Camp Mystic, where deforestation and vegetation removal have reduced the landscape's water absorption capacity. While these are issues karst system experts would like to see addressed, they likely wouldn't have impacted the July 4 flash flood conditions enough.

"The kind of rainfall received recently can be likened to other natural disasters such as hurricanes, tornadoes, extreme drought, or extreme freezes/ice storms," said Steve Nelle, natural



Angora goats helped Kerr County become one of the nation's leading producers of wool and mohair. Photo from the collection of Joe Herring Jr.

resource specialist, wildlife biologist and Project Bedrock advisor. "There is nothing man can do to prevent or lessen these natural events."

Nelle and other experts agreed that there are some longtime land mismanagement practices that could mitigate lesser flood events in the future and that they are events that will continue to happen. Their work is rooted in the historic research and observation of a pioneering forester who came to Texas in the 1920s, and whose work would lead to the naming of one of the Hill Country's iconic trees—the Ashe juniper.

THE 1921 WARNING

More than a century before the July 4, 2025 flood devastated Kerr County,

federal forester W.W. Ashe warned that the Guadalupe River watershed was vulnerable to catastrophic flooding due to human alterations of the landscape—warnings that went largely unheeded.

In late August 1921, Ashe traveled to Texas to spend two weeks evaluating the rivers that rise out of the Edwards Plateau, cut through the Balcones Escarpment, and sweep past cities and towns along what geographer James F. Petersen has called the "Texas Spring Line."

While there, Ashe would witness the big floods of 1921, leading him to advocate strongly for reforestation of the heavily logged areas of the Edwards Plateau and rigorous regulation of the Hill Country's over-grazed rangelands.



Ashe had been studying the relationship between high country watersheds and their dependent valley communities since the 1890s for the North Carolina Geological Survey. He published his findings, which detailed the ways deforestation and overgrazing contributed to increased frequency and intensity of floods in the Appalachian Mountains in a volume co-authored with Gifford Pinchot, the U.S. Forest Service's first chief, who would later bring Ashe on as a scientist and researcher for the federal agency.

Working with the National Forest Reservation Commission, a Weeks Act program that enabled the government to purchase denuded land from willing sellers to repair, Ashe arrived in Texas at the request of the Texas State Board of Water Engineers to speak with the agency about the potential of flood control and hydroelectric power on the Colorado and Guadalupe Rivers, and whether federal management of these rivers' headwaters might be possible.

Upon arrival, Ashe found similarities between Texas waterway behaviors and those he studied along the Appalachian Mountains.

"The streams of Texas are erratic and exhibit the same character of flow as those at the southern end of the Appalachian Mountains in the Carolinas, Georgia, and Alabama due to the enormous heavy rainfall at irregular intervals and rapid run-off on account of steep slopes," Ashe told the San Antonio Express in a September 16, 1921 interview.

The human impact worsened the region's natural geographical tendencies for rapid rainfall runoff, with Ashe noting "greed for land" had pushed levees and other flood-control infrastructure so close to streambeds that it robbed the floodplains' ability to act as a sponge, thereby intensifying downstream damage.

Upstream, the problem was even worse as excessive grazing had compacted the ground and stripped it of vegetation so that even modest storms could generate major floods. The problem had intensified dramatically during World War

I when government incentives and skyrocketing prices for wool and mohair led to massive increases in livestock populations across the Hill Country.

Kerr County, known as the mohair capital of the United States, was particularly affected. Wool prices nearly doubled during the war years, rising from pre-war prices of \$0.25-\$0.30 per pound to \$0.40-\$0.50 per pound for common wool and \$0.50-\$0.80 per pound for merino wool. Mohair, prized for its elasticity and crease resistance in military and luxury textile applications, commanded even higher prices as a luxury fiber. The economic incentive to maximize livestock was overwhelming.

The earliest example of the Hill Country's degraded landscape may have come in 1900 when a dam failed in Austin. In the 1890s, a University of Texas engineering professor had already calculated the reservoir had lost more than 40% of water capacity due to silting.

The immediate response to the floods of 1921 was calls for more infrastructure, and that flood would lead to the construction of the Olmos Dam. However, Ashe was blunt in his prediction that the dam alone would not solve San Antonio's flood problem, or other flooding of the Hill Country.

He condemned the developments that "now infringe too closely upon stream channels" and advocated for strong policies to address the underlying cause of the flood — soil erosion.

This required management at a landscape scale as had been demonstrated through the Forest Service's watershed management through protection of the forest cover. To achieve this, he advised reforestation of heavily logged areas and vigorous regulation of overworked rangelands.

Despite the front-page coverage of Ashe's warnings in the San Antonio Express, his recommendations had little immediate impact on public policy in Central Texas. The focus remained on dam construction for the security of cities rather than watershed management. The creation of

THOSE LOST ON JULY 4, 2025

CAROL ANDREWS, 65, ATHENS, TEXAS ❖ JOYCE BADON, 21, BEAUMONT, TEXAS ❖ MARY BAKER, 8, BEAUMONT, TEXAS ❖ LINDA BASON, 78, SAN ANTONIO, TEXAS ❖ ANNA BELLOWS, 8, HOUSTON, TEXAS ❖ LILA BONNER, 9, AUSTIN, TEXAS ❖ ROBERT BRAKE, 67, ABILENE, TEXAS ❖ JONI BRAKE, 66, ABILENE, TEXAS ❖ ELIZABETH BRYAN, 61, SAN ANTONIO, TEXAS ❖ JAMES BRYAN, 62, SAN ANTONIO, TEXAS ❖ JOHN BURGESS, 39, LIBERTY, TEXAS ❖ JULIA BURGESS, 39, LIBERTY, TEXAS ❖ JAMES BURGESS, 1, LIBERTY, TEXAS ❖ JOHN BURGESS V, 5, LIBERTY, TEXAS ❖ ELLA CAHILL, 21, BEAUMONT, TEXAS ❖ BRIAN CARPENTER, 36, AUSTIN, TEXAS ❖ BLAKE CARPENTER, 3, AUSTIN, TEXAS ❖ CHLOE CHILDRESS, 18, HOUSTON, TEXAS ❖ MARTHA CRAWFORD, 61, HOUSTON, TEXAS ❖ MICHELLE CROSSLAND, 50, MIDLAND, TEXAS ❖ CODY CROSSLAND, 45, MIDLAND, TEXAS ❖ MOLLY DEWITT, 9, HOUSTON, TEXAS ❖ LUCY DILLON, 8, HOUSTON, TEXAS ❖ RONALD DUKE, 80, HUNT, TEXAS ❖ RICHARD DUNLAP, 73, ANDREWS, TEXAS ❖ JOSEPHINE DUNLAP, 68, ANDREWS, TEXAS ❖ KATHERYN EADS, 52, CIBOLO, TEXAS ❖ RICHARD EASTLAND, 70, AUSTIN, TEXAS ❖ STEVE EDWARDS, 72, SAN ANGELO, TEXAS ❖ PENNY FERGUSON, 76, ODESSA, TEXAS ❖ WILLIAM FERGUSON III, 82, ODESSA, TEXAS ❖ KATHERINE FERRUZZO, 19, HOUSTON, TEXAS ❖ JAYDA FLOYD, 22, ODESSA, TEXAS ❖ MIRIAM FRIZZELL, 72, ABILENE, TEXAS ❖ ELLEN GETTEN, 9, HOUSTON, TEXAS ❖ SALLY GRAVES, 91, INGRAM, TEXAS ❖ HADLEY HANNA, 8, UNIVERSITY PARK, TEXAS ❖ BLAIR HARBER, 13, DALLAS, TEXAS ❖ WILLIAM HARBER, 76, DALLAS, TEXAS ❖ CHARLENE HARBER, 74, DALLAS, TEXAS ❖ BROOKE HARBER, 11, DALLAS, TEXAS ❖ JOSEPHINE HARDIN, 28, WESTON, FLORIDA ❖ ALYSON HARDIN, 64, WESTON, FLORIDA ❖ AIDAN HEARTFIELD, 22, BEAUMONT, TEXAS ❖ DEANA HILLOCK, 57, SAN ANTONIO, TEXAS ❖ VIRGINIA HOLLIS, 8, BELLVILLE, TEXAS ❖ CHARLOTTE HUFF, 55, KERRVILLE, TEXAS ❖ JANIE HUNT, 9, DALLAS, TEXAS ❖ WILLIAM HUSTON, 61, SHERMAN, TEXAS ❖ AL IORIO, 66, SAN ANTONIO, TEXAS ❖ MARY KATE JACOBE, 8, HOUSTON, TEXAS ❖ MADELYN JEFFREY, 11, SAN ANTONIO, TEXAS ❖ PENELOPE JEFFREY, 70, SAN ANTONIO, TEXAS ❖ EMLYN JEFFREY, 70, SAN ANTONIO, TEXAS ❖ ROBERT KAMIN, 50, HUMBLE, TEXAS ❖ MELISSA KAMIN, 45, HUMBLE, TEXAS ❖ DEE ANN KNETSCH, 66, CANYON LAKE, TEXAS ❖ GARY KNETSCH, 60, CANYON LAKE, TEXAS ❖ LAINEY LANDRY, 9, HOUSTON, TEXAS ❖ REBECCA LAWRENCE, 8, DALLAS, TEXAS ❖ HANNA LAWRENCE, 8, DALLAS, TEXAS ❖ KELLYANNE LYTAL, 8, SAN ANTONIO, TEXAS ❖ TIANNA MABEY, 66, OVILLA, TEXAS ❖ CLAIRE MANCHACA, 21, CONROE, TEXAS ❖ SARAH MARSH, 8, BIRMINGHAM, ALABAMA ❖ BAILEY MARTIN, 23, ODESSA, TEXAS ❖ AMANDA MARTIN, 44, ODESSA, TEXAS ❖ ROBERT MARTIN, 46, ODESSA, TEXAS ❖ LINNIE MCCOWN, 8, AUSTIN, TEXAS ❖ BLAKELY MCCRORY, 8, BELLAIRE, TEXAS ❖ CLAYTON MEADOWS, 29, HAMILTON, TEXAS ❖ HARLEY MOELLER, 6, NEW BRAUNFELS, TEXAS ❖ MEGAN MOELLER, 33, NEW BRAUNFELS, TEXAS ❖ JAKE MOELLER, 38, NEW BRAUNFELS, TEXAS ❖ VIRGINIA NAYLOR, 8, DALLAS, TEXAS ❖ JOSE OLVERA, 70, HUNT, TEXAS ❖ ALICIA OLVERA, 67, HUNT, TEXAS ❖ RICHARD PAGARD, 71, KERRVILLE, TEXAS ❖ CLAY PARISHER, 1, AUSTIN, TEXAS ❖ ELOISE PECK, 8, DALLAS, TEXAS ❖ BRADLEY PERRY, 49, LEAGUE CITY, TEXAS ❖ ABBY POHL, 8, AUSTIN, TEXAS ❖ JANE RAGSDALE, 68, HUNT, TEXAS ❖ JOEL RAMOS, 43, MIDLAND, TEXAS ❖ TASHA RAMOS, 48, MIDLAND, TEXAS ❖ KYNDALL RAMOS, 17, MIDLAND, TEXAS ❖ TANYA RAMSEY, 46, LEWISVILLE, TEXAS ❖ CARLOS ROMERO, 1, KERRVILLE, TEXAS ❖ LEONARDO ROMERO, 42, KERRVILLE, TEXAS ❖ JAMES RUSHING, 64, SULPHUR SPRINGS, TEXAS ❖ CYNTHIA RUSHING, 53, SULPHUR SPRINGS, TEXAS ❖ JULIAN RYAN, 27, INGRAM, TEXAS ❖ ILEANA SANTANA, 66, MOBILE, ALABAMA ❖ MILA SANTANA, 5, WICHITA FALLS, TEXAS ❖ CAMILLE SANTANA, 38, WICHITA FALLS, TEXAS ❖ EDDIE SANTANA NEGRON SR., 69, MOBILE, ALABAMA ❖ MOLLIE SCHAFFER, 76, HOUSTON, TEXAS ❖ SHON SCOTT, 53, ANDREWS, TEXAS ❖ MARGARET SHEEDY, 8, HOUSTON, TEXAS ❖ ALVARO SIGALA MIRANDA, 69, SAN ANTONIO, TEXAS ❖ RENEE SMAJSTRLA, 8, INGRAM, TEXAS ❖ MICHAEL SMITH, 67, DRIPPING SPRINGS, TEXAS ❖ PAMELA SMITH, 64, DRIPPING SPRINGS, TEXAS ❖ MARY STEVENS, 8, AUSTIN, TEXAS ❖ GRETA TORANZO, 10, HOUSTON, TEXAS ❖ NATALIA VENZOR, 24, KERRVILLE, TEXAS ❖ ROY WALKER, 63, HUNT, TEXAS ❖ MARK WALKER, 51, KENTFIELD, CALIFORNIA ❖ JOHN WALKER, 14, KENTFIELD, CALIFORNIA ❖ SARA WALKER, 50, KENTFIELD, CALIFORNIA ❖ JEFFREY WILSON, 55, COLDSRING, TEXAS ❖ AMBER WILSON, 45, COLDSRING, TEXAS ❖ SHILOH WILSON, 12, COLDSRING, TEXAS ❖ REECE ZUNKER, 36, KERRVILLE, TEXAS ❖ HOLLAND ZUNKER, 3, KERRVILLE, TEXAS ❖ LYLE ZUNKER, 7, KERRVILLE, TEXAS ❖ PAULA ZUNKER, 35, KERRVILLE, TEXAS



THOSE WHO REMAIN MISSING

❖ JEFFREY RAMSEY, 63, LEWISVILLE, TEXAS ❖
❖ CECILIA STEWARD, 8, AUSTIN, TEXAS ❖



new national forests on the Edwards Plateau, which Ashe advocated, never materialized as the Texas legislature did not authorize it.

Perhaps the most lasting contribution from Ashe's work was not his policy recommendations but his identification of the region's most distinctive trees—the evergreen whose unique characteristics he was credited with first identifying. Known locally as “cedar,” it is actually Ashe juniper, which bears the botanical name *Juniperus ashei* in his honor.

A WARNING IGNORED

Five years after Ashe's front-page interview in the San Antonio Express, University of Texas coach “Doc” Stewart established Camp Mystic in 1926. The site he chose sat in a location that embodied Ashe's warnings: nestled at the confluence of the Guadalupe River, Cypress Creek, and Edmundson Creek—exactly the kind of gorge and floodplain location where Ashe had urged protection of forest cover rather than development.

There were no flood discussions. The site was chosen for its natural beauty and river access, assets that

made it ideal for a summer camp. The economic pressure to use the land was building—this was still the era when the Hill Country seemed capable of supporting unlimited growth, when ranchers were running thousands of head of livestock and the environmental consequences were only beginning to show.

From 1926 until 1942, Camp Mystic ran one eight-week session each summer. In 1932, heavy rainfall from June 30 to July 2 triggered flash floods in Hunt and downriver. According to the book, *Flash Floods in Texas*, by Jonathan Burnett, the flooding washed cabins away at Camp Mystic, Camp Rio Vista and Camp Stewart, and damaged the dining halls at Camp Waldemar.

A U.S. Department of the Interior geological survey report of major Texas floods of 1936 includes a description of the 1932 floods as well, described as 35 inches of rain that fell during 36 hours over the upper Guadalupe River Basin, west of Kerrville. Concern for the boys and girls camps is also described: “There was much apprehension for the safety of the people in these camps, especially for the younger boys and girls, but fortunately

all were safe. The fact that the flood occurred in the day rather than at night no doubt accounts for no loss of life in the camps.”

After World War II, Camp Mystic expanded to two sessions, and in 1983 added a third two-week session. Another flood struck in 1978, four years after Richard and Willetta Eastland began working at the camp. According to the U.S. Geological Survey, *Floods in Central Texas*, August 1978, the remnants of tropical storm Amelia produced intense rainfall, leading to flash flooding in Central Texas that led to 33 deaths. On August 2, a storm cell just west of Kerrville produced flash flooding on the Guadalupe River and its tributaries. The most severe flooding occurred in Comfort but flooding began in Hunt where floodwaters rose nearly to the top of the dining hall stairs, causing more than 100 campers to relocate to higher ground. No campers were injured.

Again in 1987, flash flooding resulted from heavy rainfall in the upper headwaters of the Guadalupe River basin, with as much as 11.50 inches of rain occurring 9 miles west of Hunt, according to the National Weather

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Service. Flash flooding traveled down the river in the morning hours of July 17, eventually rising 29 feet and cresting at 31.50 feet in Comfort. Upstream in Kerrville and Hunt, the river crested at its second highest on record at the time. At Camp Mystic, campers were evacuated from the Bubble Inn cabin, along with hundreds of other evacuations along the river.

Ten children died in Comfort while evacuating from the Pot O' Gold Ranch. The church bus and van carrying campers became stranded at a low-water crossing when the wave of water hit, sweeping the vehicles and campers into raging floodwaters. In the end, 10 teenagers died and 33 others were injured. This is an example of the perils of evacuating during a flash flood event.

Despite some flooding that caused some damage and a few evacuations to higher ground, Camp Mystic managed nearly 100 years of operation relatively unscathed, despite its flood prone location.

Generations of girls grew up swimming in the Guadalupe, hiking along Cypress Creek, and sleeping in cabins along the riverbank.

The location that Ashe might have identified as vulnerable in 1921 may have seemed an exception as decades passed, or at least, flooding that did occur was manageable as long as operations stayed vigilant. The camp's longevity appeared to validate the choice. By 2025, Camp Mystic had become a cherished institution, its riverfront location not a warning sign but a selling point.

Until July 4, 2025, when more than 745,000 gallons of water per second converged on the site from three directions—the Guadalupe River carrying 624,000 gallons per second, Cypress Creek contributing 109,700 gallons per second, and Edmundson Creek adding 11,438 gallons per second. In 30 minutes, the Guadalupe River alone moved 1.12 billion gallons past the camp—enough water to fill 56,160 swimming pools.

The century of safety had made Ashe's warning seem quaint. Until it didn't.

THE COLLAPSE AT THE HEADWATERS

While Camp Mystic flourished, the land upstream was failing. The degrad-

ed conditions Ashe had observed in 1921 continued to worsen throughout the 1920s and 1930s, and by the 1940s, the consequences became undeniable.

On September 25, 2025, three months after the flood, wildlife biologist Ryan Reitz stood before the Kerr County Historical Commission with a presentation about the land where the flood began. Reitz, the project leader of the state-owned Kerr Wildlife Management Area (WMA), had come to discuss 75 years of ecosystem management at the 6,493-acre property located at the headwaters of the North Fork of the Guadalupe River. His presentation traced a century-long arc of environmental degradation and painstaking restoration — a story that illuminated how dramatically the watershed had changed since settlement.

He didn't mention the July 4 flood. He didn't need to.

Prior to 1840, Reitz explained, the region was an oak savanna, primarily grassland with scattered trees, and was home to buffalo, antelope, and prairie chickens. Early settlers described a landscape of abundance. In 1897, Sam Tomlin reported the area "was an open grassland" with "cattle get[ting] fat"

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in grasses that stood 4 to 6 feet tall. Cedar growth was so limited that in 1882, Thomas Moore expressed urgency about constructing a cedar log home because “in six months we’re going to run out of that cedar.”

By the late 1800s, the region was described as a livestock “paradise” for stocking and growing animals. The sensitive ecosystem of the Edwards Plateau seemed capable of supporting unlimited growth.

It wasn’t.

The massive increase in livestock began to overwhelm the land. By 1924, owner Robert Real was running around 5,000 head of cattle, sheep, and goats in the area that would become the WMA—right at the peak of the wartime economic boom that Ashe had witnessed. The economic incentives were powerful, and the consequences were building.

But as early as the 1920s, Reitz said, things started to “change pretty dramatically” as high numbers of livestock consumed the forage. Quotes from the era described people who “failed to succeed in the ranching business” and observed that “tall bunch grasses were becoming greatly reduced.”

When the state of Texas purchased

the property in 1950 to establish the wildlife management area, the livestock industry was no longer profitable. Bill Armstrong, associated with the WMA, would later describe it as “a well-used piece of land”—a Texas understatement for devastated.

The land that had been an oak savanna with four to six foot tall grasses was now compacted, eroded, and overrun with cedar. The natural sponge that had absorbed rainfall for millennia had been compressed into hardpan that shed water like concrete. This was the condition of the land at the headwaters of the Guadalupe River—the land onto which estimates of 10-12 inches of rain would fall in just a few hours.

THE LONG ROAD TO RECOVERY

The WMA’s founding philosophy, Reitz emphasized, was understanding that ecosystems are “not only more complex than we think, they’re more complex than we can think.”

The history of heavy livestock grazing and simultaneous suppression of natural wildfires had left land managers in the 1950s and 1960s “dealing with the product of their management

system.” The most notable impact was widespread encroachment of Ashe juniper—the native cedar that had been so scarce in 1882. Because “nothing really likes to eat it” and fires had been suppressed, it flourished across the degraded landscape.

The woody plant encroachment has altered many rangelands, creating a cycle of juniper encroachment and then dieback.

The WMA began implementing strategies to reverse the deterioration, but recovery was measured in decades, including introducing fire, simulating a grazing system similar to how the bison used the area and keeping the deer out.

These changes led to significant improvements in land health over subsequent decades, evidenced by increases in browse, grass, and for plant species, which in turn improved the health and quality of the whitetail deer population.

But the WMA represents just 6,493 acres of careful, science-based restoration. The Guadalupe River watershed encompasses more than 3,000 square miles. If it took 75 years of intensive management to restore a small fraction of the watershed, the condition of



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the rest remains an open question.

MODERN SOLUTIONS TO HISTORIC PROBLEMS

Fast forward to today, and a century after Ashe's warnings, Project Bedrock—an Austin-based nonprofit organization dedicated to teaching landowners nature-based solutions to managing healthy vegetation within Texas karst country—is working in partnership with The Watershed Association and with advisors from Texas A&M, Texas State University and a variety of government and nonprofit organizations to promote these solutions and educate the public.

Project Bedrock's mission focuses on two basic nature-based solutions: The first is to use dense vegetation and/or constructed hillside terraces built on contour, and the second is to open up sinkholes and caves. The nonprofit's collective of experts are working to share karst country best management practices with landowners and government agencies. There is pushback against some of these suggestions, including from the Texas Commission on Environmental Quality, which argues that opening sinkholes could compromise groundwater quality.

"Well-vegetated hillsides can serve as the first line of defense to help slow rains," said Elizabeth McGreevy, the nonprofit's founder and program director. Specializing in vegetation management, she stressed that vegetation should form a dense, continuous blanket. Yet many watershed areas, including the one above Camp Mystic, show degraded conditions.

"Many landowners continue to clearcut and overgraze these lands because they have not received proper guidance on karst country best management practices," McGreevy said. "They have been taught by agencies, the media, real estate agents, and their neighbors, that woody vegetation, especially mountain cedars, are bad. So they clear hillsides with shallow soils, exposing them to our hot sun and flooding rains."

The irony is striking: The very tree that bears Ashe's name—*Juniperus ashei*—has become the scapegoat, blamed for problems that actually stem from the broader loss of diverse vegetation cover and healthy soil structure that Ashe warned about. The cedar is native and, in a balanced ecosystem, plays an important role. But in degraded landscapes where competi-

tive grasses and other vegetation have been eliminated, it becomes dominant, not because it's invasive, but because it's one of the few species that can survive on compacted, eroded soil.

Karst soils are very shallow, but when left exposed, they erode and develop a hard crust that reduces infiltration. Despite this, many watersheds, including those around the Guadalupe River, were cleared of their dense, woody vegetation between 1995 and 2005, McGreevy said, adding that for decades, the USDA's Natural Resources Conservation Service (NRCS) paid landowners to clear their cedars.

The Wilcox Ecohydrology Lab at Texas A&M proved that significantly more rain infiltrates beneath woody vegetation than under the sparse grass now commonly found on watershed hillsides, she added. "Their research also proved 20 times more subsurface waters move under the trees than under the grass."

Because the woody plant encroachment of cedar has altered rangelands, creating a cycle of juniper encroachment and then dieback, the Wilcox Ecohydrology Lab also studied the impact of dead trees on soils. Published in November, the study found



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even 10 years after death, juniper trees' positive influence on soil properties continues.

THE HIDDEN INFRASTRUCTURE: SINKHOLES AND CAVES

Nico Hauwert, a former city of Austin geohydrologist, emphasized two ways ranching and historic land management practices have increased flooding potential is by plugging sinkholes and widespread clearing to make grassland for livestock.

"Every ranch I've assessed on the Edwards Aquifer recharge zone (and some further west on other limestones) had stock ponds created from plugging the bottom of sinkholes (sky-light entrances into caves)," Hauwert said. "These stockponds in sinkholes are like plugging a bathtub, but some of the stockponds I've unplugged drain 200 acres or more. No agency that I know seems to be active in unplugging the thousands of plugged sinkholes that no longer support livestock."

The practice was widespread. Every sinkhole plugged was one less natural drainage point for the watershed, one more place where water that should infiltrate underground instead runs off the surface and into streams and rivers. The cumulative effect across thousands of plugged features fundamentally altered the hydrology of the Hill Country.

Caves were also filled to dispose of trash, to eliminate fall hazards, and for urbanization. Many were later converted to water quality ponds for urban areas, and San Antonio's River Walk is a well-known example of an urban flood control solution built as a concrete floodway.

The Texas Speleological Survey (TSS), serving as the official National Speleological Society study group since 1961, maintains a comprehensive karst inventory for Texas. Their 2020

database documents 227 karst features in Kerr County, including 108 caves, 15 sinkholes/cavities, 103 springs, and 1 other/undefined feature.

No public data could be found on plugged karst features in the area, but the practice is common throughout the Hill Country.

Hauwert shared the example of a landowner who plugged a large cave in the Blanco River at the mouth of Halifax Creek in the 1890s. This action was taken to better power a mill located in Kyle by increasing the river's flow.

"While the historic management practice was to keep water at the surface in cavernous areas, now that is not ideal practice," he said. "Instead, having water infiltrate into the soil reservoir and aquifer is best for many reasons."

Additionally, Hauwert reiterated the fallout that resulted from widespread tree clearing of the 1800s and beyond, pointing out that studies have repeatedly shown that trees greatly reduce runoff and flooding as their roots channel water underground, they help keep soil in place and during wet periods, they create their own reservoirs and they help delay rain from reaching the ground, slowing runoff and erosion.

THE COMPOUND EFFECT

What emerges from this history is a picture of compounded vulnerabilities. In an area characterized by extreme weather, including sudden and heavy rainfall, with a karst terrain of thin soils, steep slopes and porous limestone, more than a century of human activity has additionally degraded the natural mechanisms that help mitigate flash flooding.

Decades of overgrazing removed many of the tall grasses that once absorbed rainfall, cutting and clearing eliminated deep root systems that helped channel waters underground, along with sinkholes and other karst

features that were plugged over the years. The practices surely seem beneficial at the time — maximize livestock to capitalize on wartime prices, clear cedar to improve grazing, suppress fires to protect property — but over time, the damage may have outweighed the benefits if the cumulative effect transforms the landscape from a sponge to a chute.

Ashe saw it happening in 1921 and warned about it. The ranching collapse of the 1940s proved him right. The Wildlife Management Area 75-year restoration effort shows that recovery is possible, but requires generations of intensive, science-based management.

And on July 4, 2025, 104 years after Ashe's warning and 99 years after Camp Mystic was established in the location he might have urged be protected, the accumulated consequences of a century of choices converged in less than an hour.

The experts are clear: Better land management wouldn't have stopped the July 4 flood. The rainfall was too extreme, too concentrated, too overwhelming. However, the idea that the storm and flash flooding that followed was unprecedented is a dangerous one. The storm itself wasn't uncommon to the area. It simply fell in a terrible location. But even the location has seen similar storm systems.

Ultimately, the land, vegetation, hydrogeology, and meteorology experts agree on one thing: Planning and preparation are ultimately what saves the most lives. By acknowledging that the landscape's capacity to absorb water had been fundamentally compromised by decades of decisions that prioritized short-term economic use over long-term ecological health, landowners and lawmakers can focus on changing the patterns of the past.

The question now is whether another century will pass before those lessons are fully learned.



CHAPTER 4

THE 911 LOGS SHOW THAT KERR COUNTY RESPONDED

During legislative hearings examining the July 4 flood, state lawmakers focused their criticism on three elected officials who were absent during the disaster's critical first hours.

"The three guys in Kerr County who were responsible for sounding the alarm were effectively unavailable," Rep. Ann Johnson said, aiming her criticism at County Judge Rob Kelly, Sheriff Larry Leitha and Emergency Management Coordinator William "Dub" Thomas.

The narrative that emerged from two days of testimony painted Kerr County officials as asleep while residents drowned.

Kelly was at his Lake Travis lake house. Thomas was home sick. Leitha wasn't notified until 4:20 a.m., long after the disaster began. Yet, these details and those of the Kerrville Police Department's 911 call logs, through which all Kerr County emergency calls are routed, weren't discussed.

But the 911 call logs, legal filings, witness accounts and flood modeling data obtained by The Lead now reveal a more complex story — one that shows Kerr County's professional emergency apparatus responding from the disaster's first moments, even as the scale of the catastrophe outpaced any possible response.

Between 1:14 a.m., when the National Weather Service issued its first flash flood warning, and 5:01 a.m., when Kerr County finally issued its Code Red alert — a gap of 3 hours and 47 minutes — 119 people died in a disaster that unfolded faster than warnings could be issued, faster than rescuers could respond, faster than anyone could fully comprehend.

The National Weather Service issued its first flood watch for Kerr County at 1:18 p.m. on July 3, predicting 1 to 3 inches of rain with isolated amounts reaching 5 to 7 inches through Friday morning.

At Camp Mystic in Hunt, counselors and campers settled in for the night, and at River Inn resort nearby, Karen Blackburn and her two daughters prepared for bed.

"I went to bed and the river sounded normal," Blackburn later recalled. "It was just the gentle sound it always makes."

By 11:05 p.m., weather radar showed heavy precipitation developing over the watershed above Camp Mystic. Red and orange colors on Doppler images indicated intense rainfall rates building upstream. The storm had parked itself over the Divide, west of River Inn, and pummeled the region with rain, where there was no way to measure the amount of rainfall or the river's flow.

FIRST WARNINGS

KABB meteorologist Alex Garcia and his colleagues across San Antonio television stations began raising red flags 2.5 days before the flood.

"The urgency was already up there," Garcia later recalled. "We had designated this as an important alert day for us, an

alert day for the Hill Country, and that was two days out, 2.5 days out. We had kind of raised the red flag on air and online saying that you know, you gotta pay attention. This one's looking like a really big rain event."

The meteorological community saw it coming. What they couldn't see was exactly where it would hit hardest.

JAM Radio owner Justin McClure's organization began broadcasting Emergency Alert System warnings at midnight on July 3. Between JAM Radio and the Ranch Radio group, stations sent out 24 or 25 alerts that evening and into the early morning hours.

At 1:14 a.m. on July 4, the NWS for Austin/San Antonio issued a flash flood warning for Northwestern Bander County and Central Kerr County. Here's an excerpt:

"At 1:14 AM CDT, Doppler radar indicated thunderstorms producing heavy rain across the warned area. Between 1 and 2 inches of rain have fallen. The expected rainfall rate is 2 to 3 inches in 1 hour. Additional rainfall amounts of 1 to 3 inches are possible in the warned area. Flash flooding is ongoing or expected to begin shortly. HAZARD...Life threatening flash flooding. Thunder-

storms producing flash flooding.

SOURCE...Radar. IMPACT...Life threatening flash flooding of creeks and streams, urban areas, highways, streets and underpasses.* Some locations that will experience flash flooding include... Kerrville, Ingram, Hunt, Waltonia, Kerr Wildlife Management Area and Lost Maples State Natural Area.

FLASH FLOOD...RADAR INDICATED

FLASH FLOOD DAMAGE THREAT... CONSIDERABLE

EXPECTED RAINFALL RATE...2-3 INCHES IN 1 HOUR"

The "considerable" tag means NWS considers the warning a high-damage threat and it automatically triggers Wireless Emergency Alerts (WEAs) on mobile devices in the area

It is the 1:14 a.m. alert where forecasters used the phrase "life-threatening flash flooding" for the first time. However, in an area with limited cell phone coverage and in the middle of the night, it's unclear how many actually heeded those warnings.

The failure of the emergency alert system during the flood, particularly for residents downriver from Hunt, remains a key unknown. The system

designed to reach people via phone is operated by the Federal Emergency Management Agency.

In the flood's aftermath, confusion arose between alerts from the National Weather Service (NWS) and FEMA, and those from the county's CODE RED, which is an optional text-message system, not a broadcast tool.

The NWS uses WarnGen software to manually draw polygon boundaries for flood warnings. The 1:14 a.m. warning included Kerrville, Ingram, Hunt, Waltonia, the Kerr Wildlife Management Area and Lost Maples State Natural Area. The "flash flood damage threat... considerable" tag automatically triggers broader alert distribution.

When the NWS tags a flash flood warning as "considerable" or "catastrophic," FEMA's Integrated Public Alert and Warning System (IPAWS) immediately processes and distributes it through multiple channels. IPAWS automatically pushes the warning to the Wireless Emergency Alert (WEA) system, which uses the polygon coordinates to determine which cell towers broadcast alerts. Towers with coverage overlapping the polygon send alerts to all connected phones, often resulting in over-warning.

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Kerrville's Community Center

Emergency Management Coordinator Dub Thomas confirmed the NWS automatically issued more than a dozen IPAWS-triggered alerts during the July 4 incident. He believed this provided sufficient coverage and led him not to manually issue additional alerts.

However, the automatic system failed to reach many residents, particularly in Hunt, likely due to severe infrastructure limitations. Hunt has only one cell tower in roughly 79 square miles of limited cellular coverage, and the Hill Country's terrain creates dead zones.

The WEA system requires phones to be actively connected to a participating carrier's cell tower. In Hunt and surrounding rural areas, service was minimal. Even phones that appeared to have service may have been too weakly connected to receive the broadcast signals, especially as heavy storms degraded already-marginal coverage. The infrastructure gap meant that despite the NWS issuing technically correct warnings that triggered IPAWS, the alerts could not reach phones where cell towers were absent, signals were blocked by terrain, or service was disrupted by weather.

In his July 31 testimony, Thomas said he did not manually alert residents through IPAWS because the NWS had already triggered over a dozen automatic alerts. Both Kerr County and Kerrville have access to IPAWS. These NWS alerts provided a similar forecast, warning people to "be aware of the potential for isolated flash flooding" and to "anticipate rain in the range of between 1 and 3 in, possibly as much as 7 in." Thomas emphasized that anyone whose phone was on and had not disabled government alerts would have received them.

Hundreds of residents shared messages with The Lead,



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Frequently lost in the narrative of July 4 is what happened at the HTR TX Campground in Ingram, where more than 30 died.





Helicopters were a persistent presence in Kerr County in the hours and days after the flood. On the opposing page, the instructions to Camp Mystic counselors about handling a flood.

showing that some received all of the IPAWS alerts, while others received none. Camp La Junta's owners testified they received no alerts at their camp in Hunt.

One challenge of flash flood emergencies is their deceptive nature. The real danger lies unseen upstream.

Meteorologist Alan Gerard referenced the actions of Richard and Edward Eastland at Camp Mystic, as described by Edward Eastland in a New York Times interview.

"He was saying they were looking at their apps, trying to see when the rain was going to quit and they were looking at their rain gauge," Gerard said. "That's not really helpful. They were trying to be meteorologists and hydrologists and predict what was going to happen rather than reacting to what was happening."

This fundamental misunderstanding of flash flood dynamics proves particularly dangerous in the Hill Country terrain where water accumulates rapidly from upstream sources. Local rainfall provides little indication of approaching danger when the real threat originates miles away.

"That's part of the complicating factor with flash flooding: It's not what's happening at your spot; it's what is happening upriver," Gerard stressed.

At Camp Mystic, the timeline of what happened next is documented in legal filings and New York Times reporting, though some details remain in dispute.

Around 1:45 a.m., Dick Eastland radioed his son Edward: "We've gotten about two inches of rain in the last

hour and we need to move the water-front equipment," according to Edward's account to The New York Times. Grounds crew began pulling smaller canoes to higher ground near cabins.

Between 2:10 and 2:20 a.m., counselors from Bug House, the cabin closest to the river, ran to the office and reported water coming into their cabin. Legal filings say they were told to return to the cabin and shelter in place. Edward Eastland told The New York Times he and his father drove the counselors back and "tried to reassure them" ... "at that point, it was a normal flood."

At 2:21 a.m., Edward texted his wife: "Bubble Gum Creek is bad. Look at the radar."

She responded: "Looks short tho" — believing the heavy rain would pass soon.

Less than two hours later, at 4:09 a.m., Edward Eastland's Apple Watch would register as submerged in water.

Around 2:25 a.m., according to legal filings, Edward received a frantic radio call from gatekeeper Francis Blackwell saying the gatehouse was filling with water. The call cut off as she was washed away. She survived by clinging to a tree.

At 2:57 a.m., Glenn Juenke, the night watchman at Camp Mystic, called Hunt Volunteer Fire Department Chief Lee Pool directly, bypassing the 911 system. Juenke asked if Pool was up. Pool got up and started to respond. The call was ultimately cut off.

This direct call — 37 minutes before the first flood call would hit Kerrville's 911 center — suggests locals knew the

formal system might be too slow or already understood the magnitude of what was developing.

THE SYSTEM ACTIVATES

At 3:30 a.m., Kerrville Police Sgt. Ben Ledesma was checking low-water crossings in the city, though officials didn't yet understand the scope of the situation in West Kerr County, especially in areas west of River Inn. About 30 minutes earlier, Kerrville City Manager Dalton Rice was running along the Kerrville River Trail in Louise Hays Park and observed a relatively calm river.

At 3:33 a.m., Kerrville Police Department dispatcher Riley Gordon logged the first emergency call for water rescue teams to position in the Ingram and Hunt areas.

One minute later, at 3:34 a.m., the first desperate flood calls began hitting Kerrville's 911 center.

At 3:34 a.m., a caller reported: "4 PEOPLE ALL ON THE ROOF."

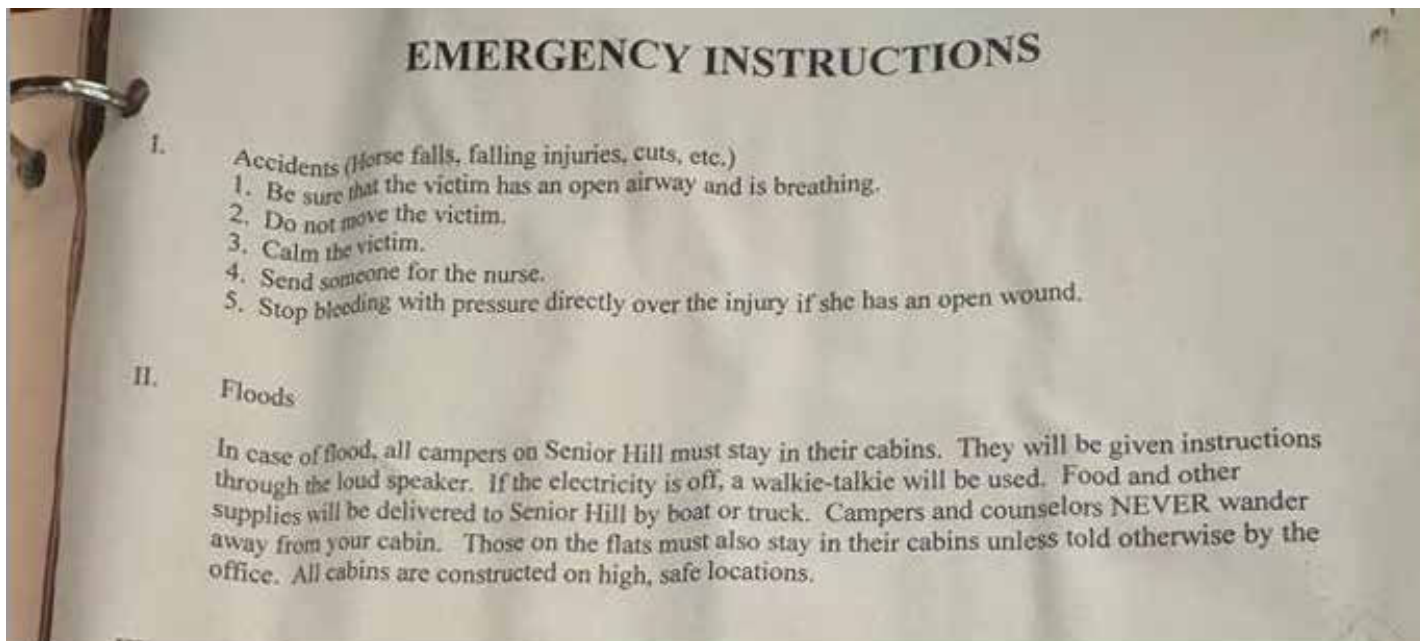
Three seconds later: "CARS ARE GONE AND HOUSE IS FLOODED."

Another call: "5 PEOPLE."

The entries come in fragments, the typos and abbreviations revealing dispatchers typing as fast as they could while phones rang continuously.

At River Inn Resort, flooding had reached crisis levels. Guests attempted desperate evacuations, but the deafening thunderstorm that had raged through the night continued to drown out the sound of catastrophic rainfall, preventing people from fully grasping the severity of their situation.

At 3:35 a.m., Mollie Schaffer became



the first confirmed victim of the flood. She and her husband were attempting to reach higher ground near River Inn in their BMW SUV when the vehicle was swept away by rising waters. Her husband, who was the passenger, escaped. Schaffer had been following behind Karen Blackburn, who turned around when she encountered rapid floodwaters blocking both Highway 39 and the entrance to Marymeade Drive, which would have been access to higher ground. The only other exit to the east was also blocked by flooding from Buffalo Creek. There was no escape route left.

Between Camp Mystic and River Inn, Valerie Tucker and her husband made a successful dash across Highway 39 to reach higher ground in the Panther Creek area. Their escape represented one of the final opportunities to cross the highway before flood waters made the route completely impassable.

Tucker's home sat 36 feet above the normal Guadalupe River level and was built on piers, elevated above the floodway. It had never flooded in previous Hill Country storms. The water moved the home.

At 3:40 a.m., Riley Gordon, a city of Kerrville dispatcher working for Police Chief Chris McCall, made a critical decision that would save lives. Gordon contacted the South Texas Regional Advisory Council, activating mass casualty protocols that would alert trauma centers across 22 counties to prepare for an influx of patients. This action would have alerted Peterson Regional Medical Center to activate its response. No one from Peterson Health was questioned by the legislative inquiries, and the hospital wasn't

included in the initial Emergency Operations Center briefings.

At 3:40 a.m., the log reads: "STRAC CONTACTED."

Seconds later: "TASK FORCE TEAM IN AREA."

This single decision by a dispatcher — made without direction from any elected official, made based on professional training and the evidence of their own eyes as desperate calls flooded the system — meant that hospitals from San Antonio to the coast were mobilizing before the sun rose over Kerr County.

At Camp Mystic, evacuation was underway but complicated. Legal filings indicate counselors were told "by the camp" not to leave cabins, though Edward Eastland disputes this, telling *The New York Times* he never directed anyone to stay. The camp's emergency procedure for floods, as pictured in the lawsuit filings says:

"In case of flood, all campers on Senior Hill must stay in their cabins. They will be given instructions through the loud speaker. If the electricity is off, a walkie-talkie will be used. Food and other supplies will be delivered to Senior Hill by boat or truck. Campers and counselors NEVER wander away from your cabin. Those on the flats must also stay in their cabins unless told otherwise by the office. All cabins are constructed on high, safe locations. In case of flood, all campers on. The Eastlands were using vehicles, two pickups and an SUV, to evacuate girls to the Rec Hall on higher ground. Five cabins were evacuated. Six remained, including Twins I and II and Bubble Inn.

At 3:51 a.m., Dick Eastland's Apple Watch registered as submerged. He

had driven a Chevrolet Tahoe to Bubble Inn to evacuate the girls there.

At 3:53 a.m., Camp Mystic made what appears to be its first call to the county's 911 system, though this call does not appear in the Kerrville Police Department logs obtained by *The Lead*. The Kerr County Sheriff's Office has not provided its 911 logs despite public information requests.

PEAK SURGE

At 4:00 a.m., three primary water sources reached peak convergence at Camp Mystic, according to flood modeling completed by Kerr County Engineer Charlie Hastings.

The Guadalupe River, flowing past the camp's eastern boundary, carried 624,000 gallons per second. Cypress Creek, flanking the camp to the west, contributed 109,700 gallons per second. Edmundson Creek, flowing behind the camp, added 11,438 gallons per second.

Combined, more than 745,000 gallons of water per second surrounded Camp Mystic from three directions. Every small tributary along Highway 39 contributed 5 to 10 feet of rushing water to the main river channels.

In 30 minutes, the Guadalupe River alone moved 1.12 billion gallons past the camp — enough water to fill 56,160 swimming pools.

Dr. David Maidment, a hydrologist who analyzed the flood, identified a critical phenomenon that could have provided warning — if anyone had been measuring it.

At Comfort, more than 20 miles downstream to the east from Camp Mystic, a specialized radar stream gauge recorded something remarkable. The gauge measured both water

surface elevation and velocity — a rare capability that most stream gauges don't have.

At 9 a.m., the velocity at Comfort was 1.64 feet per second.

At 9:05 a.m., it was 1.56 feet per second.

At 9:10 a.m., the velocity spiked to 14.76 feet per second.

Maidment described this as the velocity going “right back straight up” — a “shock wave” or “velocity wave” that preceded the peak water elevation by 1 hour and 35 minutes.

“The nature of wave phenomena is that they do not travel at the same speed as the water they are in,” Maidment explained. A velocity wave can travel faster than the water itself, sending a measurable signal ahead of the rising flood.

THE PHYSICS OF DESTRUCTION

The numbers flowing past Camp Mystic and through the Guadalupe River valley weren't just statistics that ripped massive trees out by the roots, carried massive boulders and debris downriver and overwhelmed even well-built structures.

Water is extremely heavy. A single cubic foot is about the size of a basketball and weighs 62 pounds. During the flood's peak, 745,000 gallons of water per second surrounded Camp Mystic from three directions, totaling over 11 million pounds of water moving past every second.

The water's force grows quickly as its speed increases. When water speed doubles, its force quadruples. At 5 mph, moving water pushes against a vehicle or structure with about 20 pounds per square foot. At 10 mph, that force increases to 80 pounds per square foot—enough to move most vehicles.

The amount of water needed for danger and destruction is surprisingly small:

- Six inches of fast-moving water can knock an adult over. At this depth, the current combines with the water's lift to suddenly sweep a person off their feet.
- Twelve to 24 inches of moving water can sweep away most passenger cars, which can start floating in as little as 12 inches of water. Even large SUVs and trucks can be carried away by 24 to 36 inches of water.
- Three feet of water moving at 6.7 mph (3 meters per second) is strong enough to likely cause a typical residential wall to collapse, according to flood damage guidelines.

The Guadalupe River at Hunt wasn't

moving at 3 meters per second during the peak of the flood. It was moving faster. Much faster. Hastings described it as an inland tsunami.

At Comfort, 20 miles downstream, Maidment's analysis showed velocity spiking from 1.64 feet per second to 14.76 feet per second in just five minutes — a ninefold increase. That's 4.5 meters per second, or about 10 mph.

Upstream at Camp Mystic and River Inn, where the terrain was steeper and the flood wave more concentrated, velocities were almost certainly higher.

“The buoyancy happens — it's like a yes, no situation,” explained Upmanu Lall, Director of the Columbia Water Center and professor of engineering at Columbia University, describing how people lose their footing in floods. “If the water reaches a certain depth and it has some velocity, you're going to get knocked off your feet and floating simultaneously.”

The upward force of buoyancy isn't felt gradually — it overwhelms suddenly. A person standing in rising water may not realize they've lost the ability to maintain footing until they're already being swept away.

Valerie Tucker's home sat 36 feet above the normal river level, built on piers and elevated above the floodway. The water moved it anyway.

At Camp Mystic, counselors and campers faced water moving fast enough to pull them through cabin doors. At HTR RV Resort, campers were swept away in their trailers. At Casa Bonita, the Smith family was overtaken within minutes of calling 911.

The physics were unforgiving: 745,000 gallons per second from three directions, moving at velocities that exceeded the structural capacity of homes, vehicles, and human bodies to resist.

Between 1:14 a.m. and 5:01 a.m., thousands of people along the Guadalupe River encountered those forces.

At Casa Bonita, a cluster of cabins east of Camp Mystic, Madeline Smith called 911 at 4:00 a.m.

“CASA BONITIA - MADILINE SMITH - 832.858.5485 - 7 PEOPLE - 5 ADULTS 2 KIDS 3 DOGS,” the dispatcher typed.

Smith survived. Her parents, Mike and Pam Smith, and her brother-in-law Brian Carpenter and daughter Blake did not. The flood wave swept through Casa Bonita within minutes of her call.

At 4:03 a.m., the National Weather Service declared a flash flood emergency for South Central Kerr County, including Hunt. The alert stated: “PARTICULARLY DANGEROUS SITUA-

TION. SEEK HIGHER GROUND NOW!”

Forecasters reported that numerous low water crossings and the Guadalupe River at Hunt were flooding, with 4 to 10 inches of rain fallen. The flood damage threat was upgraded to “catastrophic.”

The declaration came 10 minutes after one lawsuit says Camp Mystic made an emergency call to the county. The National Weather Service's emergency call came after fatalities had occurred and many were being swept away, including children.

At 4:05 a.m., River Inn reported “35 people” trapped. Multiple entries in the logs reference the resort, where Blackburn and other survivors waited for daylight.

At Camp Mystic, the final tragedy was unfolding. At 3:35 a.m., Edward Eastland had walked to the Twins cabins, where girls begged to evacuate. According to legal filings, Edward told them to stay, saying water would “go back down.”

At 4:09 a.m., Edward Eastland's Apple Watch registered as submerged in water. Around this time, Edward and most campers were pulled through the Twins cabin door by the force of water. Edward and several girls clung to a tree and survived. Other campers were washed away.

Eleven campers from Twins I and Twins II died. One died inside the cabin. The others were swept away.

Dick Eastland and an unspecified number of campers were later found inside the Tahoe. According to a counselor's account, the vehicle was swept away after he loaded all Bubble Inn cabin occupants. All 13 campers and two counselors from Bubble Inn died.

Edward later told The New York Times that when his father parked at Bubble Inn, water was already at the top of the wheels. It rapidly rose to waist then neck-deep as he tried to load girls.

At the same time, Dick Eastland and his son Edward faced the full fury of the river, and another longtime and beloved camp director was experiencing the same catastrophe downstream. At Heart of the Hills Camp for Girls, Jane Ragsdale's home was crushed by a wave of water 40 feet tall, washing away most of the camp that sat in the flood plain. Ragsdale died in her home. Fortunately, the camp was not in session, and the counselors preparing for another summer session were able to scramble to higher ground.

At 4:19 a.m., someone from near Camp Mystic called Kerrville Police Department's 911 center — the first reference to the camp in the logs obtained



by The Lead.

The log notes: “12 girls and rest unk” and “washed away from their cabin.”

At 4:21 a.m., a water rescue team from Junction was already en route to the disaster area.

‘ALL HANDS ON DECK’

By the time the sun rose, Gordon and fellow dispatchers Amber Stark, Garrett Beam and Samantha Dixon were managing an overwhelming surge of calls. Additional staff including Karla Garcia, Haleigh Parks, Abigail Cox and Joshua Walker would join the effort throughout the day.

Between 4 and 5 a.m., Kerrville dispatchers handled 87 calls from the Hunt area — all desperate for help.

At HTR Texas Hill Country RV Resort, the situation was becoming catastrophic. Staff had allegedly learned about nearby evacuations due to flooding between 2:30 and 3:00 a.m., according to legal filings, but no action was taken to warn guests.

Sometime before 4:49 a.m., Jeffrey Ramsey made a final phone call to his children as waters rose around his camper. He told them he loved them “with fear of his imminent death,” according to the Ramsey family lawsuit.

Simultaneously, his wife, Tanya Ramsey, called her mother, who was staying in a cabin approximately 150 yards up the hill from the river. The warning call allowed Tanya’s mother and her brother to reach higher ground and survive.

Floodwaters surrounded and swept away the Ramsey’s camper.

At 4:35 a.m., someone from Camp La Junta called 911: “CAMP LA JUNTA CABINS GOING UNDER WATER MUL-



TILE ALREADY UNDER.”

At 4:42 a.m., another call from the camp: “CAMP LA JUNTA STRUCTURE COLLAPPSSED.”

At 4:45 a.m., the desperation in the dispatcher’s typing was evident: “CAMP JAJONTA 60 PEOPLE IN CABIN WATER COMING IN STUCK IN THE CABIN.”

The misspelling — “JAJONTA” instead of “La Junta” — reveals the chaos

dispatchers faced.

Despite their calls, Camp LaJunta was cut off. Pool, the Hunt fire chief, recalled the most challenging call he made was to his friend Scott Fineske, the La Junta owner, to tell him no one was coming to help.

At 4:47 a.m., a caller reported: “RIVER IS FILLING UP -- CAN HEAR PEOPLE SCREAMING ACROSS THE RIVER -- HTR CAMPGROUND.”



The 4:47 report was one of the first calls from HTR in the Kerrville logs.

Two minutes later, at 4:49 a.m., another caller reported: "PEOPLE IN A VEHICLE GETTING SWEEP AWAY I CANT TELL// CAN SEE IT ON AN ISLAND -- CAN HEAR SCREAMING I THINKS VEHICLE IS BY HOWDYS II SUV WHITE IN COLOR."

The double slashes, the fragments, the capitals — all evidence of dispatchers trying to capture horror in real time while the next call was already coming in.

At 4:49 a.m., HTR sent a text warning to guests. The lawsuit notes: "By the time the warning was issued, however, the floodwaters had risen to dangerous levels."

It was 3 hours and 35 minutes after the first National Weather Service flash flood warning. More than 30 people would die at HTR.

Tanya Ramsey's body was recovered July 7. Jeffrey Ramsey's body remains missing.

At 5:03:49 a.m., another call from Camp La Junta captured the horror: "CANT GET KIDS OUT OF THE CABINS AND KIDS IN THE RAFTERS -- LA JUNTA."

At 4:56:44 a.m., Michael Huff called about his ex-wife trapped in a camper at Riverside RV Park in Ingram: "WIFE IS IN A CAMPER// FLOODING// 830.370.0156 // MICHAEL HUFF// RIVERSIDE RV PARK IN INGRAM."

She did not survive.

At 5:01 a.m., Kerr County issued its opt-in text message service Code Red alert to residents — 68 minutes after Camp Mystic's alleged first emergen-

cy call to the county and more than an hour after the National Weather Service's flash flood emergency declaration.

Judge Kelly later acknowledged the alert came "too late" due to the speed and magnitude of the event.

At 5:04 a.m., the Starflight helicopter launched from Austin, already racing toward Kerr County. It's one of many helicopters that began streaming into Kerr County.

At 5:12 a.m., a water rescue team arrived on site at HTR, with notes showing staging at City West Church, Texas Game Warden boat on scene, and a "6-8 foot rise in river."

A RESPONSE FASTER THAN THE DISASTER

The call logs noted here only represent the Ingram and Hunt segment of the log. They show a coordinated effort among local, state and federal agencies that began before most elected officials knew the disaster was unfolding.

Water rescue teams were staged in Ingram at 3:33 a.m., a Junction team was en route by 4:21 a.m., Starflight out of Austin launched at 5:04 a.m., and Texas Game Wardens arrived on scene at 5:13 a.m.

The logs show particular attention to vulnerable populations, children at camps, elderly residents, and people with medical needs requiring oxygen or medications.

The logs show the adaptability of responders facing rapidly changing conditions. Multiple staging areas were established. When voice calls couldn't get through, dispatchers used text-

to-911. When roads became impassable, boats and helicopters took over.

BODIES IN THE RIVER

As the flood made its way downstream into Kerrville, KPD and Kerrville Fire Department were not only dealing with rescues and routine calls but also began recovering bodies.

By mid-morning, the grim scope of the disaster became visible in Kerrville, more than 10 miles downstream from Hunt. At 9:08 a.m., Officer Harris responded to Louise Hays Park on Thompson Drive for an unattended death — a body found at the fish statue by the splash pad where children play on summer days. Minutes later, at 9:10 a.m., another call came in for a body recovered at Rolling Green on Bandera Road, stuck on a tree, submerged power lines nearby made recovery difficult. The victim was an unclothed female.

The Guadalupe River had carried victims from the camps and RV parks through the heart of the city, transforming public parks and residential neighborhoods into recovery scenes. First responders who had spent the night racing to save lives now faced the grim task of documenting and recovering the dead.



CHAPTER 5

A COMMUNITY FOCUSED ON RECOVERY AFTER TRAGEDY

Kerr County could not stand on its own without the army of volunteers and first responders who showed up for search and rescue. The community also needed money, with hundreds of homes, businesses and infrastructure wrecked. In the center of Kerrville, Louise Hays Park was shattered, harboring many of the dead. Initial damage estimates reached hundreds of millions of dollars.

Up and down the river, first responders faced the grim task of not only recovering the bodies of adults, but of children — some unrecognizable due to the blunt force trauma. Grimes Funeral Home handled many of those early recoveries, serving as a morgue, but the event proved taxing on all, including Kerr County Justices of the Peace. Precinct 4 Justice of the Peace Bill Ragsdale wanted autopsies on the victims, which would require transport to Austin or San Antonio. The delay angered families and led to proposed changes in the legislature. The legislation would have led to the creation of a mandatory training program for JPs in counties without medical examiners on how to handle large numbers of bodies during a disaster. However, the legislature failed to pass

the changes.

Across the county, groups marshaled to raise funds and by 10 a.m. July 4, the Community Foundation of the Texas Hill Country had stood up its fundraising efforts.

“One of our primary roles at the Foundation is to steward that generosity and let them know that the money is going to be spent well,” said Austin Dickson, the CEO of the Community Foundation. “Thank them and thank their customers and all the people that have kept our community in their hearts so many months down the line.”

The Foundation raised more than \$100 million, distributing millions of dollars to get people back into homes and provide mental health care. Since the July 4 floods, more than 12,000 people have sought mental health care from MHDD, a regional mental health authority based in Kerrville.

The flood’s impact stretched nearly every nonprofit and organization in Kerr County. In the first hours, Kerrville’s Walmart served as the reunification point for flood victims, though many were at Peterson Regional Medical Center. Shelters were set up at churches, including Calvary Temple and City West Church. By day’s end,

Schreiner University’s Event Center became the reunification center for Camp Mystic families, leaving Schreiner staff to deal with frantic families seeking their children. Arcadia Live served as a reunification center for Camp Waldemar.

Kerrville, Ingram, Hunt and Ingram independent school districts all provided facilities as reunification centers, shelters, first-responder housing or, in the case of Ingram Tom Moore High School, a food distribution center.

Hunt School was incredibly active during the flood, quickly transforming to an emergency shelter for search and rescue teams. Superintendent Luci Harmon and Principal Sarah Nichols saw that first responders from out of town needed a place to stay, since many were making daily trips to accommodations in locations as far as San Antonio each day or sleeping in their vehicles.

“We decided we would open up and let people stay because we have showers and we have a laundry facility,” Harmon said. They created flyers and put them under windshield wipers along the highway since most responders weren’t monitoring social media. Soon they had many teams



staying onsite, including K-9s.

The Red Cross provided the cots, and school staff worked daily shifts, doing laundry and organizing food delivery for the first responders. They stayed open until August 1, when work began to clean and repair school grounds to prepare for back to school.

Kerrville Pets Alive was active from the start as well, rescuing more than 350 pets during the flood and confirming the deaths of many others. KPA quickly formed a partnership with Austin Pets Alive, who helped with search and rescue, transport and communications with people searching for lost pets.

The Salvation Army faced an avalanche of clothing from across the country, leading nonprofit Sisters In Service to help with logistics.

GOVERNMENT RESPONSE

In the days after the flood, a steady stream of politicians and government officials made their way to Kerr County, including President Trump on July 11. Trump promised to move the process forward, but the realities of the Federal Emergency Management Agency's complex rules and procedures have slowed some efforts. Moreover, FEMA only reimburses up to 75% of damage, and the more aid one receives — including volunteer support — the more it counts against reimbursement.

The Texas Department of Emergen-



cy Management and Gov. Greg Abbott, a frequent visitor, pushed to have 2 million cubic yards of debris removed. But even that ran into questions over the removal process, especially woody debris, which environmental groups argued should have been left to enhance riparian restoration.

"I do want to say that dead wood is crucial to the restoration of our river," said Clint Carter of the Bandera County River Authority.

Carter, a watershed ecologist, presented an analysis that showed an estimated 52% loss of riparian vegetation across a 30-mile reach of the upper Guadalupe River, totaling approxi-

mately 820 acres.

RIPARIAN REPAIR

Speaking at the Texas Water Symposium on October 23, Clint Carter delivered a sobering assessment of the Guadalupe River's ecological damage—and urged landowners to resist the impulse to remove all remaining woody debris.

The flood stripped approximately 820 acres of vegetation across a 30-mile river reach, representing a 52% loss of canopy cover. Some areas, particularly downstream of large structures, lost upwards of 90% of their trees. Hunt saw 95% canopy cover loss in certain sections.

The immediate cleanup response compounded the damage. Carter noted that an estimated 2 million cubic yards of wood debris have already been removed from the 30-mile stretch, eliminating what he called the river's "building blocks" for self-repair.

Now, as the Texas Department of Emergency Management offers free debris removal to landowners, Carter is urging a more selective approach—a message echoed by the Texas Department of Parks and Wildlife, Hill Country Alliance, and Riverside Nature Center.

Carter reiterated the dead wood pitch at the Schreiner University event, which was held in partnership with the Hill Country Alliance and Texas Public Radio.

Carter presented a new landowner guide emphasizing that woody debris provides essential ecological benefits: protective cover and nurseries for native species like bald cypress, sycamore, pecan, walnut and black willow; improved groundwater infiltration leading to sustained base flows; and bank stabilization when debris is anchored.

The guide includes a decision matrix for property-specific evaluation. Carter stressed it's not prescriptive—"whether to remove woody debris depends. It's site specific."

His advice for landowners considering TDEM removal: "Just take the trash and we leave the sticks."

Carter's five guiding principles: Take it slow. Be selective. Leave what lives. Keep what covers. Remove what harms.

FLOOD WARNING SYSTEM

Lt. Gov. Dan Patrick committed state funding to implement flood warning sirens along the Guadalupe River before next summer, acknowledging sirens could have saved lives. Those efforts are now ongoing.

Senate Bill 3 establishes a grant program to help local governments install outdoor warning sirens in flash flood-prone areas. The Texas Water Development Board will identify high-risk areas and require municipalities or counties to install and maintain the warning systems.

Last month, the Upper Guadalupe River Authority Board of Directors approved agreements with regional partners to pursue state funding for telecommunication infrastructure needed to support a flood warning system in the wake of the deadly July 4 flood.

The board unanimously approved two resolutions necessary for the Texas Middle Mile grant application. The grant seeks funding to expand the Lower Colorado River Authority's private LTE network to provide secure communication for rain gauges, water sensors and warning infrastructure throughout Kerr County.

Kerrville Public Utility Board is serving as lead applicant for the grant because the utility already has a grant writer on staff. Even before the flood, UGRA officials were working on improving data collection to aid a flood warning system.

Kerr Economic Development Corp. Executive Director Todd Bock is leading many of the economic recovery efforts, and has repeatedly praised the efforts to make the river safer.

"This will come out as literally the



platinum standard for flood warning systems across the state of Texas," Bock said.

ECONOMIC RECOVERY

Bock outlined the sweeping scope of the county's long-term recovery efforts, revealing that approximately 260-265 businesses were affected by the July 4 flood and that commercial rebuild costs are estimated at \$58.6 million.

"We are keeping up with the community. The community is leading this. We're not leading this. We're keeping up with the community demand," Bock said, emphasizing the grassroots nature of the recovery.

Of the affected businesses, 74 self-identified as directly impacted, with more than 90% contacted by business case management teams. Three businesses have closed and one has been sold as of early October.

The hardest-hit sectors include camps (\$43.9 million in rebuild estimates), vacation rentals (\$6.6 million) and retail (\$6.7 million). Camps alone account for \$17.6 million in materials costs.

Bock stressed that available funding functions as a support program rather than full reimbursement. "There's not enough readily available money currently to go through and just make everybody whole," he said, urging businesses to contact the Small Business Administration. "Get in their queue."

LiftFund Hill Country Disaster Relief has awarded 285 grants totaling \$2.02 million and disbursed eight loans totaling \$371,000, helping retain 787 full-time and 460 part-time jobs. The program has approximately \$3.15 million remaining across all categories.

The Kerr Together Long Term Recovery Group operates under the umbrella of KerrEDC and includes working groups focused on business

recovery, housing, tourism, emotional and spiritual care, and unmet needs.

"Emotional and spiritual needs, and your unmet needs table, those two on the end are probably the two of the most important working groups in long-term recovery," Bock said. "If we don't heal ourselves, our spirits, our minds and our bodies, then we can't move forward."

The recovery effort partners with Global Empowerment Mission for construction management, the American Red Cross for mass care and Texas Rio Grande Legal Aid for survivor legal assistance.

BUILT TO LAST

Unlike temporary disaster response, the Long Term Recovery Group is designed to remain operational indefinitely.

"Once you create a long-term recovery group in a disaster area, the intent is for it to never go away," Bock explained. "It stays intact forever, long beyond the recovery from the disaster itself, so that your community is poised if there ever is another one, whether it be tornado, another flood, any sort of tragedy or any sort of disaster."

Bock, who previously served as mayor, said he believes his current role is part of a larger plan. "I think God puts people in place where he deems fit for them," he said. "And it's not our timing, it's his timing."

The recovery effort also aims to combat misconceptions about the county's condition. "Kerr County is destroyed and we are — we've taken a hit but we're not out," Bock said.

But will the river and community ever recover? That's still the work that needs to be done, and Bock, like others, says this is a long race, with Kerr County still in the early stages.