On June 28, 2010, TDEM directed TX-TF1 to activate search and rescue assets for deployment to South Texas. As a result, TX-TF1 activated and staged in College Station, Texas, a Type-I US&R Team, a Quick Reaction Task Force, 9 Water Rescue Squads, support personnel for the State of Texas ESF-9 Command Team, 10 HSARTS, 2 ESF-9 Coordinators assigned to the State Operations Center, and 1 ESF-9 Liaison Officer assigned to the TXMF Joint Operations Center. Additionally, a Type-III US&R Task Force from TX-TF2 was also activated and staged in Dallas, Texas. At the time, Tropical Storm Alex was located in the Gulf of Mexico and the NWS predicted the storm may intensify into a hurricane, with possible landfall between Brownsville and Corpus Christi, TX.

On June 29, all search and rescue resources forward deployed to South Texas and began familiarizing themselves with the local area and establishing communications with local emergency responders.

Hurricane Alex made landfall as a Category 2 Hurricane on July 30 in Soto La Marina, Mexico, with 105 miles per hour winds. After landfall, Alex continued moving westward and dropped significant rainfall over South Texas and North Mexico during a 36 hour period, causing some isolated flooding. The storm impacted 6 counties in South Texas. Task force resources worked over the next 3 days supporting local jurisdictions in the impacted area.

On the morning of July 3, after the threat of major flooding had subsided, TDEM released all deployed task forces to return from operations in south Texas.