# Trans pecos weather modification association

Trans Pecos Texas' latest rain enhancement project made its inaugural seeding flights in May 2003. The Association consists of the Ward County Irrigation District and other political subdivisions within Culberson, Loving, Reeves, and Ward counties. The target area in that part of Texas along and west of the Pecos River consists of 5.1 million acres. Trans-Pecos Weather Modification Association (TPWMA) owns and operates a C-band radar and takes NEXRAD data from the Midland site. TPWMA is a non-randomized operational program for the primary purpose of increasing rainfall. Hail suppression is not a goal of the program. South Texas Weather Modification Association Current operational status: The operational season is closed for 2017. There were 41 seed missions in southern TX (April 1, May: 5, June: 7, July, July 12, August: September 8, September 7, October: 1). More information about past project years can be found on the Operations page. The South Texas Weather Modification Association (STWMA) is a non-profit organization made up of several water districts dedicated to improving rainfall in the south Texas operating area. Precipitation improvement is performed using cloud seeding techniques in which aircraft release microscopic particles of silver iodide and calcium chloride in thunderstorms to increase rainfall efficiency. The association was first founded in 1996 and conducted its first cloud seeding mission the following year. After 20 years in existence, the STWMA, based in Pleasanton, continues to conduct seeding operations across multiple counties in south-central Texas.A map of other associated weather modification projects in Texas area can be found here. An overview presentation of weather modification in Texas can be found here. (Provided by the Texas Weather Modification Association) You can safely navigate the website, whether it's checking our radar image for current activity, getting the local forecast and conditions for the target area, or read our FAQ page to learn more about cloud seeding. Other Active Weather Modification Programs in Texas: Panhandle Groundwater Conservation District: PGCDSeeding Operations and Atmospheric Research: SOARWest Texas Weather Modification Association: WTWMATrans-Pecos Weather Modification Association: TPWMA 2020 Project Counties All data, documents and images on this site are owned by the South Texas Weather Modification Association. The use or duplicate of data, documents or images is not permitted unless it has granted written consent from the Chairman or Webmaster. Welcome to the Soxan Weather Modification AssociationInformation Website Visit the TRANS-PECOS WMA website HERE or on the on the left column. Stay up-to-date with edits under the Edits tab of 2018 above. Or, for Trans-Pecos operations, visit their page on the link in the left column. The West Texas Texas Modification Association is an Operational Cloud Seeding program that operates more than 6 million acres of land in West Texas. The primary goal of the program is to improve rainfall in convective thunderstorms to help increase dry land crop revenue, reduce groundwater consumption, save on irrigation costs and to help charge area aquifers while putting some water in area lakes, rivers and reservoirs. Since 2004, the WTWMA has helped increase rainfall by 16%, which translates into an additional 2.25 throughout the area. The WTWMA is funded by the local groundwater protection districts and the city of San Angelo. As a member of the Texas Weather Modification Association, which groups together other programs such as the Panhandle Groundwater Conservation District, the South Texas Weather Modification Association, the Edwards Aquifer Authority, the Trans-Pecos Weather Modification Association among others, the WTWMA continues to expand its knowledge and capabilities through continuing research and development projects per the Texas Weather Modification Act of 1967. The first hint of the potential of human activity to change the behavior of clouds came just after the Civil War, when civil engineer Edward Powers made the comment that downpours often occurred where major battles between the Union and Confederate forces were waged. The immense smoke, dust and other particles that had been put into the air during conflicts seemed to stimulate clouds to rain more. Weather Modification has been tried since 1891 in Texas, the first attempt by patent attorney Robert Dyrenforth, who received a $2,000 grant by the U.S. Congress to do a series of rain-making experiments near Midland. Severe droughts have led to the need for weather modification since the beginning, and the current effort is no exception. Ground-based generators have been used in different parts of the state over the years; then planes were tried, delivering dry ice, and then flares, and generators producing silver ioded particles. Entrepreneur C. W. Post, founder of the Post cereal company, established a beach-head along the Caprock, at present Post, Texas during the early 1910s to experiment with explosives to disrupt promising rain clouds. Post and his team of researchers conducted numerous trials during 1911-1914, using dynamite strategically placed just below and along the Caprock. While the rain fell on some days, the results of the experiments were never conclusive. Numerous rain-making efforts shot up in Texas during the terrible drought of the 1950s. Some of the projects used ground-based generators to distribute agents such as silver iodde, others aircraft that released different hygroscopic and glaciogenic sowing materials, including dry ice. The drought of the 1950s, and the subsequent drought in the early 1960s, led to so much that the Texas Legislature was led to adopt the Texas Weather Modification Act in 1967. That act required each person, or organization, to attempt to modify the weather to obtain a weather modification license and permit from the State water agency. In 1997, Texas State made its initial commitment to sponsoring rain-raising projects by spending $550,000 on cost-share, with four political subdivisions, for cloud-seeding activities using airplanes. Subsequent legislative sessions increased funding for these, and other projects, first through the Texas Natural Resource Conservation Commission (TNRCC) and then to Texas Department of Agriculture. One of the nation's most sustainable weather-modification projects is located in West Texas between the Permian Basin and the South Plains, on the headwaters of the Colorado River or Texas. The rain-enhancement project of the Colorado River Municipal Water District (CRMWD) was started in 1971 to generate additional rainwater, and thus runoff, in the two reservoirs (Lake Thomas and E. V. Spence Reservoir) on the Colorado. The district employs its own team of experts and uses its own weather radar and specially equipped aircraft to carry out sowing operations every year from April to October. With its base of operation in Big Spring, the District's seeding program covers about 2.6 million acres (or about 4,000 square miles) between Lubbock and Midland. As with any organizations that have cloud-seeding activities, or contract with companies for cloud-seeding services, the CRMWD holds a weather modification license and license from the Texas Department of Licensing and Regulation (TDLR). Nine other cloud-seeding projects operate elsewhere in West and South Texas during the growing season. A number of counties between San Angelo and Midland led the way in forming a weather modification association in 1995 to sponsor cloud seeding in a 6.4 million acre area on the Edwards Plateau. The county's water conservation districts served as a convenient way to finance the cost of a cloud-seeding operation through ad valorem taxes. The board of the association, with representation of each of the seven provinces participating in the project, then made decisions about when and how to do rain increase. For a program of about 5-6 months, the cost of cloud seeding (about $0.08/acre) was uniformly assessed over the entire purpose, using acreage in each county as a basis for cost assessment. Initially, the West Texas Weather Modification Association (WTWMA) contracted for cloud-seeding services, but eventually invested in its own aircraft, radar facilities, and personnel. The Association is Conducting its own weather-modification operation since 1998.The WTWMA served as a prototype for the formation of other, similar groups sponsoring weather-modification operations in other parts of and South Texas. Several counties south of San Antonio formed the South Texas Weather Modification Association in 1996, and that organization has been sowing clouds ever since in what is now a 6.6 million-acre area from San Antonio to Beeville. Another weather modification sponsor materialized in 1998 when three counties along the Rio Grande formed the Texas Border Weather Modification Association. That organization has been sowing clouds since the summer of 1998 from a base of operation in Del Rio. Still, another group of counties further south formed the South Texas Rain-Enhancement Association in 1999, seeding in a 5-county area using aircraft based in Laredo and Cotulla. In the same year, the Edwards Aquifer Authority designed a cloud seeding program for the invaluable Edwards Aquifer watershed and hired a Fargo ND contractor to conduct cloud-seeding operations across a 6 million-acre area of the Texas Hill Country. That program was redesigned in 2002, with four of the counties in the original EAA goal being sown for the EAA today through the two rain-enhancement projects south of the Balcons Escarpment (Southwest Texas Rain-Enhancement Association and the South Texas Weather Modification Association). Two rain-enhancement projects were established in the spring of 2000 in the northern High Plains of Texas. These projects, covering a combined 8.2 million acres, are sponsored by major water districts, the North Plains Groundwater Conservation District (NPGWCD) and the Panhandle Groundwater Conservation District (PGWCD), with seeding aircraft launched from airports in Dumas and Pampa. One project, the Southern Ogallala Aquifer Rain (SOAR) Program, is a spin-off of what was the largest rain-enhancement project in Texas during the second half of the 1990s. The High Plains Underground Water Conservation District (HPUWCD), located in Lubbock, sown in a 17-county area of the South Plains of Texas from 1997-2002. Before that program ended in August 2002, two of the counties (Terry and Yoakum) formed the SOAR program and picked up, in addition to Gaines County, an additional 2 million acres in eastern New Mexico. The SOAR Project, which today covers 5.8 million acres, is the only weather-modification program that embraces territory in both Texas and a neighboring state. The first weather-modification project to be located in an area without a water district was that of the West Central Texas Weather Modification Association (WCTWMA), which in the summer of 2002 formed and sponsored cloud seeding services provided by a contractor. The project, which covers 4.9 million acres of the Big Country, has radar and aircraft based on Airport in Abilene.The state's latest program is that of the Trans Pecos Weather Modification Association (TPWMA), which began sowing for the first time in spring 2003 2003 a 4-county area along and west of the Pecos River. TPWMA refreshes its own equipment, including two aircraft and a radar, and hired its own staff to run its operation, covering 5.1 million acres in the area between El Paso and Midland. Midland.