

**SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS**

**SEEDING REPORT - June 19, 2020**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Upper air analysis shows a low over the East, a ridge over the Southern Plains, and a trough extending from the Southwest into the Northern Great Plains. At the surface, low pressure is across the Southwest and Southern Rockies with high pressure across the Northern Rockies and Southern Mississippi Valley. The flow in the upper level is mainly light and variable with it generally southeasterly at the surface. The current dew point temperature is in the upper 60s and middle 70s and the environmental temperature in the lower to middle 70s with broken clouds to overcast skies across our area. For today, expect the chance for streamer showers now through mid-morning with the flow from of the Gulf of Mexico and more robust showers and a few thunderstorms by late morning into this afternoon due to weakens in the upper-level ridge. With daytime heating and precipitable water values ranging between 1.7 and 2.0in in areas east of I-35, showers and thunderstorms are possible mainly to areas near the coastal plains. However, a few storms could reach as far as the Bexar county and even the Uvalde county. There could also be heavy downpours from strong isolated thunderstorms at times. As we begin to lose heat around sunset, showers and thunderstorms will begin to diminish. Expect the temperature to be slightly below the climatological normal for this time of the year due to increasing cloudy skies and rain cool air in the vicinity. Overnight, conditions settle with the low on Saturday morning above the normal with mostly cloudy skies and the high humidity. For Saturday, most areas will be mainly dry as the atmosphere will be somewhat drier. I will go with a very slight chance for showers and possibly a thunderstorm across mainly across the far eastern counties. The temperature by then will increase a few degrees to right around the average due to a lack of cloud coverage. A mid-level shear axis lingers overhead Sunday into Monday. The low-level flow will be off the Gulf of Mexico and combined with some influence of a subtropical ridge, storms that do develop will be diurnal heating and minimal assistance of the mid-level shear axis. The temperatures by then may fluctuate slightly depending on cloud cover and the amount of precipitation. The highs are progged to be in the lower to middle 90s with the lows in the lower to middle 70s through the end of the forecast period.

**LIFTING MECHANISM:**

Warm Air Advection, Weak Ridge, Sea Breeze

**THERMODYNAMIC INDICES (12Z KCRP)**

|                             |         |                      |         |
|-----------------------------|---------|----------------------|---------|
| Freezing Level (m)          | 4778.87 | CAPE (J/Kg)          | 1253.88 |
| Precipitable Water (inches) | 2.01    | CINH (J/Kg)          | 9.96    |
| LCL                         | 787.06  | LI (°C)              | -3.26   |
| CCL                         | 986.09  | PB                   | -3.26   |
| CRP ICA                     | -18.01  | Cloud Base Temp (°C) | 28.6    |
| Cloud Base (meters)         | 670.56  |                      |         |
| Warm Cloud Depth (meters)   | 4108.31 |                      |         |

**DISCUSSION:**

Conditions were somewhat similar to that of the previous seeding day. 57AA was the only pilot available at the time and was called out from Uvalde to go across the eastern Karnes county first then to the Bee county. Many of the cells at first were either too weak, dying, or did not have enough inflow. However, 57AA was able to seed a cell over the northeastern Bee county before

heading across the northeastern Karnes County. When 57AA got to that cell that stretched all the way through a non-seeding county east of it, the pilot was unable to seed it as he could have seen through it. Afterward, I had the pilot head to southwestern Bee County where a good cell developed. The pilot went ahead and released a few seeding materials in that cell before coming to Pleasanton to refuel and take a break. I should also mention that the cell split in two and spread over the Bee County while and after 57AA seeded it. While on his way to Pleasanton a cell moved in across southeastern Bee county while developing but 57AA was far from that county almost to Pleasanton airport to turn back and head that way as the cell weakened after a short time. Also, while resting, an unseeded cell over the Bee County was moving up along the Atascosa/Karnes/Wilson county line where I had 57AA go and investigate it; however, it was not strong enough for the pilot to seed it. Thereafter, 57AA was sent to south Karnes County as another unseeded cell that was over the Bee county moved up into that county. But on while on its way there, that cell was no good. 57AA was ordered to return to Pleasanton as conditions settled across the target area. However, on its way back to Pleasanton, cell developed across eastern Karnes County where I had it return to check it out but that cell was very weak to seed. 57AA finally returned to Pleasanton before continuing to Uvalde for the evening after cells were non-existent.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

|     |     |  |  |  |  |  |  |  |  |  |
|-----|-----|--|--|--|--|--|--|--|--|--|
| 593 | 725 |  |  |  |  |  |  |  |  |  |
|-----|-----|--|--|--|--|--|--|--|--|--|

**FLIGHT INFORMATION:**

| TIME (Z) | Plane | Flare Location | County |
|----------|-------|----------------|--------|
| 17:25    | 57AA  | In Air         |        |
| 19:08    | 57AA  | 107° @ 44 nm   | Bee    |
| 19:10    | 57AA  | 106° @ 44 nm   | Bee    |
| 19:12    | 57AA  | 105° @ 44 nm   | Bee    |
| 20:14    | 57AA  | 122° @ 44 nm   | Bee    |
| 20:15    | 57AA  | 121° @ 44 nm   | Bee    |
| 20:16    | 57AA  | 120° @ 45 nm   | Bee    |
| 20:40    | 57AA  | Refuel         |        |
| 21:39    | 57AA  | In Air         |        |
| 23:12    | 57AA  | Landed         |        |

Seeding operations were conducted in Bee (12+0H) County. 12 flares plus 0 hygroscopic flares were burned within 2 clouds. This is the 5<sup>th</sup> day for seeding in June and the 14<sup>th</sup> day for seeding during the season.