

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - May 23, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a trough of low pressures across the Great Basin with weak trough over the Gulf of Mexico and weak ridge over the southern Central Plains and the southeast. At the surface, a low center across the northern Rockies and extending all the way across Mexico with a ridge to the east. The flow at upper levels is generally from the west and at low levels mainly light and variable. The current dew point temperature is in the low 70's with our area under a few clouds. For today, expect similar conditions as yesterday with the upper level trough beginning to depart and lift towards the north and the weak trough over the Gulf of Mexico shift slightly eastward. We will continue to remain under weak upper level ridging throughout today and tomorrow before the ridge amplifies and strengthens. We will again see showers and thunderstorms from heating, lifting and sea breeze. There is a slight chance that some cells that may make it across the Texas-Mexico border late this afternoon that could bring a chance for precipitation to the western target areas. The CAPE values are forecast to be between 1500 and 2500 J/kg with 0 to 50 J/kg of CIN. The cap inversion will be a little more over our region today than it was yesterday but still weak with good enough instability to develop isolated to scattered storms. The high temperature is expected to be a degree or two warmer than yesterday with it still being above the daily normal. For the rest of the period, expect the high temperature to continue to increase on the same trend with it being close to the triple digits by the end of the forecast period.

LIFTING MECHANISM:

Weak Upper Level Dynamics, Heating, Sea Breeze

THERMODYNAMIC INDICES (12Z KMAF)

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|-----------------------------|---------|----------------------|--------|
| Freezing Level (m) | 4383.02 | CAPE (J/Kg) | 1685.2 |
| Precipitable Water (inches) | 1.80 | CINH (J/Kg) | 58.06 |
| LCL | 692.5 | LI(°C) | -6.19 |
| CCL | 901.15 | PB | -6.19 |
| CRP ICA | -23.05 | Cloud Base Temp (°C) | 19.4 |
| Cloud Base (meters) | 1367.79 | | |
| Warm Cloud Depth (meters) | 3015.23 | | |

DISCUSSION: A weak off shore trough produced strong showers and thunderstorms across southeastern Texas this afternoon. With sea breeze, heating and lifting a few isolated storms made it east of highway 281 across the Bee and Goliad and Karnes Counties. Aircraft 160P way launched over the Karnes county where successful seeding was done. While 160P was seeding the cell split in two, so the aircraft went ahead and seeded the newer cell. After that was done, 160P was diverted south along the boarder of Bee and Goliad County but while on the way there the storm weakened and sufficient dbz was no more. 160P then decided to head towards a cell across the Bee County but also while on his way to that cell, it was already dissipating with very weak dbz. After this, the pilot decided to return to base as there were no other storms to seed in the area and so that was it for the evening. One thing that I noticed was that the cell that was seeded lived a long time as it pushed through west southwestward all the way from the border of eastern Karnes to northern Beeville and Live Oak counties. The first cell that was

seeded came in from the De Witt County (type-B cloud) and the other developed over the Karnes County.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

| | | | | | | | | |
|-----|-----|--|--|--|--|--|--|--|
| 903 | 973 | | | | | | | |
|-----|-----|--|--|--|--|--|--|--|

FLIGHT INFORMATION:

| TIME (Z) | Plane | Flare Location | County |
|----------|-------|----------------|--------|
| 21:22 | 160P | In Air | |
| 21:32 | 160P | 89° @ 38 nm | Karnes |
| 21:32 | 160P | 90° @ 39 nm | Karnes |
| 21:34 | 160P | 92° @ 40 nm | Karnes |
| 21:35 | 160P | 92° @ 38 nm | Karnes |
| 21:38 | 160P | 90° @ 35 nm | Karnes |
| 21:39 | 160P | 89° @ 34 nm | Karnes |
| 21:39 | 160P | 88° @ 34 nm | Karnes |
| 21:42 | 160P | 93° @ 36 nm | Karnes |
| 22:30 | 160P | Landed | |
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Seeding operations were conducted in Karnes (16+1H) County. 16 flares plus 1 hygroscopic flares were burned within 2 cells. This is the 3rd day for seeding in May and the 3rd day for seeding during the season.