

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - August 19, 2020

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a huge ridge over the West and the Great Plains with a trough over to the East. At the surface, high pressure is across the Great Lakes and the Rockies with low pressure across Upper and Lower Mississippi Valley. The flow at upper levels is mainly north northeasterly with it calm to light and variable at the surface. The current dew point temperature is in the middle 60s and middle 70s and the environmental temperature in the lower to middle 70s with clear skies to scattered clouds across our area. For today, drier air mass moves in from the north bringing mainly quiet weather across the region. The temperature will be above the climatological high with limited cloud coverage and precipitation. However, moisture may move into the western counties with precipitable water around 1.5in. The mean CAPE values will be around 1000 J/kg; thus, I can't rule out an isolated shower or thunderstorm mainly this afternoon. Both the TT WRF and ARW model solutions suggest this but with the lack of upper-level forcing, there is no guarantee this may take place. Should this verify, ops may not even take place as the cell or cells will most likely be weak. Due to uncertainty in the short-term, I have mentioned just a very slight chance for storms and operations. I will monitor the weather this afternoon to see if we get at least a slim chance for seeding. Otherwise, mainly quiet weather with calm to light winds. Overnight, will be pleasant with Thursday morning's lows on the cool side where some area may be several degrees lower than the average something that we have not seen in a while under clear skies to aid in rational cooling. Thursday, drier weather is expected with the temperature continuing to be on the high side with a couple of degrees above the normal. The flow overnight Thursday transitions to southeasterly bring back moisture across the Coastal Blend and increasing the dewpoint temperature on Friday. A shallow moist layer is expected with just some spotty morning stratus anticipated. This the morning stratus will burn off later in the morning both Friday and Saturday with the mixing of a dry air aloft that will cause the afternoon dew point temperature by then to be relatively on the low side. There could be isolated convection in a meridional flow mainly near the coastal plains into the weekend but with little to no positive vorticity advection and an amplified ridge in place across the western United States, this looks to be not likely. The highs are progged to be in the upper 90s and lower 100s with the lows in the upper 60s and middle 70s through the end of the forecast period.

LIFTING MECHANISM:

Warm Air Advection, Low-level Moisture Advection, Sea-Breeze

THERMODYNAMIC INDICES (12Z KCRP)

| | | | |
|-----------------------------|---------|----------------------|--------|
| Freezing Level (m) | 5760.00 | CAPE (J/Kg) | 677.87 |
| Precipitable Water (inches) | 1.89 | CINH (J/Kg) | 180.64 |
| LCL | 1438.54 | LI (°C) | -2.29 |
| CCL | 2071.95 | PB | -2.29 |
| CRP ICA | -12.34 | Cloud Base Temp (°C) | 16.7 |
| Cloud Base (meters) | 2042.16 | | |
| Warm Cloud Depth (meters) | 3717.84 | | |

DISCUSSION:

Quiet weather this morning and early afternoon transitioned to some activity across the Bee County by mid-afternoon. Small cells popped-up and when 60P was available, I had it go over the southern side of that county to investigate the cells. By the time 60P got to southern Bee County, the cells merged and became one good-sized cell. 60P successfully seeded it. There was a good cell across to the west of Bee county along its border with much of it over Live Oak County. It did not worth 60P seeding it as it would have not benefitted Bee County. 60P returned to base as there were no other cells across the target counties to seed.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

| | | | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|--|--|
| 133 | | | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|--|--|

FLIGHT INFORMATION:

| TIME (Z) | Plane | Flare Location | County |
|----------|-------|----------------|--------|
| 20:25 | 60P | In Air | |
| 20:42 | 60P | 130° @ 55 nm | Bee |
| 20:43 | 60P | 129° @ 59 nm | Bee |
| 20:44 | 60P | 128° @ 57 nm | Bee |
| 20:46 | 60P | 128° @ 58 nm | Bee |
| 21:09 | 60P | Landed | |

Seeding operations were conducted in Bee (10+0H) County. 8 flares plus 0 hygroscopic flares were burned within 1 cloud. This is the 6th day for seeding in August and the 29th day for seeding during the season.