

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - June 25, 2020

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a ridge over the Southwest and Southern Rockies, a trough over the Northwest and Northern Rockies with a deeper trough over the East. At the surface, low pressure is across the Southwest through the Northern Great Lakes with high pressure across the eastern half of the country. The flow in the upper level is mainly easterly with it generally light and variable at the surface. The current dew point temperature is in the middle 60 and lower 70s and the environmental temperature more or less the same with a few to scattered clouds across our area. For today, expect quiet weather this morning transitioning to semi-active weather this afternoon as a weak upper-level shear axis remains overhead. This coupled with available moisture and daytime heating will produce isolated to scattered spotty showers mainly to areas east of I-35. The precipitable water values should be close to 2in where locally heavy rain is expected. The high temperature will be a few degrees below to normal due to increased cloud cover and precipitation. Overnight, any active weather will be toward the east with lows on Friday morning around the average. By Friday, the weak upper-level shear axis remains across the area. The precipitable water value will be slightly higher than today; thus, expect better rain chance and more widespread. Expect showers and thunderstorms across much of the area with it more pronounced east of I-35 and less pronounced west of the same area. The temperature will be cooler than today with increased cloud coverage and rain cool air. The upper-level shear axis pushes to the southeast across the coastal plains that will result in fewer showers and thunderstorms overnight Friday into Saturday. Drier air filters in on Saturday with the exception of the far eastern counties near the coast. Any thunderstorm will end by Saturday night as we lose daytime heat when the sunsets. A mid to upper-level shortwave move across the region on Sunday that will bring another round of showers and storms by then. Much of the activity will be concentrated to the Rio Grande area, southern Edward Plateau and northern Hill Country with rainfall below .25in. The highs are progged to be in the middle 80s and lower 90s with the lows in the lower to upper 70s through the end of the forecast period.

LIFTING MECHANISM:

Weak Stationary Boundary, Low-Level Moisture Advection, Sea Breeze

THERMODYNAMIC INDICES (12Z KCRP)

| | | | |
|-----------------------------|---------|----------------------|--------|
| Freezing Level (m) | 4896.75 | CAPE (J/Kg) | 687.86 |
| Precipitable Water (inches) | 1.97 | CINH (J/Kg) | 45.30 |
| LCL | 903.38 | LI (°C) | -2.00 |
| CCL | 1369.55 | PB | -2.00 |
| CRP ICA | -14.84 | Cloud Base Temp (°C) | 27.5 |
| Cloud Base (meters) | 1250.96 | | |
| Warm Cloud Depth (meters) | 3645.79 | | |

DISCUSSION:

Mainly quiet weather this morning through noon gave way to a few pop-up storms mainly weak at first. However, as the storms began to strengthen 57AA which was the only available aircraft at the time came from Uvalde and was launched across northeastern Wilson County for a possible seeding opportunity. When 57AA approached the cell, it had a small area but looked fairly okay with reasonable vil and top. 57AA released a few dosages of

seeding material in that cell before returning to base as no other seedable cells were in the area. I had 57AA returned to the skies as cells were trying to evolve. First, I sent it to one cell across the Wilson County but that cell was mostly out of the county across a non-seeding county, so I had it not attend to that cell for the time being and instead head down to the AT/MC county to seed a few cells. After seeding across the McMullen county, 57AA headed to the southern Wilson County to seed another cell. However, when 57AA to the Wilson County it was able to seed two cells instead of one. After seeding those cells, 57AA was ordered to return to Pleasanton as those were the only seedable cells out there at the time. A cell developed across a non-seeding zone of Bexar County, which 57AA could not reach. However, as the cell was beginning to move out of the northwestern Bexar County 57AA left Pleasanton to head for that cell. 57AA successfully seeded that cell across northeastern Medina County. The aircraft departed for Uvalde airport thereafter for the evening.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

| | | | | | | | | | |
|------|------|------|------|------|------|--|--|--|--|
| 1791 | 2385 | 2450 | 2634 | 2766 | 2955 | | | | |
|------|------|------|------|------|------|--|--|--|--|

FLIGHT INFORMATION:

| TIME (Z) | Plane | Flare Location | County |
|----------|-------|----------------|----------|
| 19:56 | 57AA | In Air | |
| 20:18 | 57AA | 47° @ 38 nm | Wilson |
| 20:20 | 47AA | 47° @ 36 nm | Wilson |
| 20:21 | 57AA | 48° @ 35 nm | Wilson |
| 20:44 | 57AA | Recon | |
| 21:11 | 57AA | In Air | |
| 21:26 | 57AA | 129° @ 18 nm | Atascosa |
| 21:36 | 57AA | 152° @ 18 nm | Atascosa |
| 21:37 | 57AA | 154° @ 18 nm | Atascosa |
| 21:38 | 57AA | 151° @ 17 nm | Atascosa |
| 21:39 | 57AA | 163° @ 20 nm | McMullen |
| 21:39 | 57AA | 165° @ 20 nm | McMullen |
| 21:40 | 57AA | 166° @ 19 nm | McMullen |
| 21:41 | 57AA | 165° @ 20 nm | McMullen |
| 21:50 | 57AA | 167° @ 20 nm | McMullen |
| 22:06 | 57AA | 53° @ 18 nm | Wilson |
| 22:07 | 57AA | 55° @ 17 nm | Wilson |
| 22:07 | 57AA | 54° @ 18 nm | Wilson |
| 22:10 | 57AA | 53° @ 19 nm | Wilson |
| 22:22 | 57AA | 56° @ 19 nm | Wilson |
| 22:24 | 57AA | 59° @ 35 nm | Wilson |
| 22:25 | 57AA | 58° @ 35 nm | Wilson |
| 22:49 | 57AA | Recon | |
| 24:48 | 57AA | In Air | |
| 01:10 | 57AA | 326° @ 43 nm | Medina |
| 01:11 | 57AA | 327° @ 43 nm | Medina |
| 01:12 | 57AA | 327° @ 44 nm | Medina |
| 01:13 | 57AA | 327° @ 45 nm | Medina |
| 01:13 | 57AA | 328° @ 44 nm | Medina |
| 01:46 | 57AA | Landed | |

Seeding operations were conducted in Atascosa (8+0H), McMullen (10+0H), Medina (10+0H), and Wilson (20+0H) County. 48 flares plus 0 hygroscopic

flares were burned within 6 clouds. This is the 7th day for seeding in June and the 16th day for seeding during the season.