

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - September 5, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a broad ridge of high pressure centered over the Rockies and South Plains, Hurricane Dorian over the Southeast and a former tropical storm Fernand over northern Mexico. At the surface, high pressure is located across much of the country with a low associated with the tropical system across the southeast. The flow at upper levels is mainly east southeasterly with it light and north northeasterly at the surface. The current dew point temperature is in the upper 60s and lower 70s and environmental temperature in the lower to upper 70s with scattered to broken clouds in our area. For today, expect increasing moisture with the remnants from ex-tropical storm Fernand currently located off the northern or northeastern Mexico. There are areas across the southern half of the target area are under precipitation will as it moves west-northwestward or northwestward. Expect showers and thunderstorms to linger into the afternoon and possibly the early evening hours across south-central Texas. Expect clearing overnight with at or slightly above normal Friday morning low temperatures. For Friday, the upper-level ridge of high pressure will regain more control over bringing drier and warmer conditions to our areas. Any leftover showers and thunderstorms will be confined to the Texas-Mexico border and areas west of there. Saturday through Sunday, the ridge continues to dominate our weather with the highs above the climatological normal for this time of the year. Quiet weather is expected by then courtesy of this ridge. By the late weekend, the ridge begins to break down slightly that may allow for the temperatures to cool a degree or two from Saturday. The highs are progged to be in the middle to upper 90s with the lows in the lower to middle 70s through the end of the forecast period.

LIFTING MECHANISM:

Weaken Tropical Storm, Weak Upper-Level Ridge, Warm Air Advection

THERMODYNAMIC INDICES (12Z KCRP)

| | | | |
|-----------------------------|---------|----------------------|--------|
| Freezing Level (m) | N/A | CAPE (J/Kg) | 227.08 |
| Precipitable Water (inches) | 2.05 | CINH (J/Kg) | 21.31 |
| LCL | 674.32 | LI (°C) | N/A |
| CCL | 924.94 | PB | N/A |
| CRP ICA | N/A | Cloud Base Temp (°C) | 28.9 |
| Cloud Base (meters) | 1297.23 | | |
| Warm Cloud Depth (meters) | N/A | | |

DISCUSSION:

Showers and thunderstorms moved in very early this morning from the remnants of ex-tropical storm Fernand that moved out and dissipated before noon. There was some lingering moisture in the afternoon mainly across the northern half of the target area and with daytime heating convective cells developed. A couple of cells developed over parts of the Uvalde and Medina Counties. The cells had small areas. There were a couple but 57AA was only able to seed a few across the Uvalde County. I had 57AA returned to the first cell to complete the dosages of seeding materials. Thereafter, the aircraft headed to the northeastern Uvalde County as a cell had developed across the northeastern Medina county and moving westward. Before I had 57AA hit the

cell across northeastern Uvalde, I had it target a small cell located across the middle of Uvalde. However, the cell was weak and the pilot was only able to release a few flares in that cell. 57AA then headed to a cell that I wanted him to seed before but by the time the aircraft got to it, it was already gone. A very small cell developed across the central northern Uvalde that 57AA was then sent to investigate it but it only released a few flares in that cell as it was weak and did not have good reflectivity. There were a couple pop-up weak cells around but I ordered 57AA to returned to base to re-flare as those cells looked non-seedable. 57AA was on standby at the Uvalde airport for a while. Also, I should mention we had no pilots available to seed the east at the time there were marginally seedable cells that developed across the Wilson and Karnes counties. Earlier in the day. A couple cells developed across the Medina, Bandera and Atascosa counties where I had both 60P and 57AA go and investigate them. 57AA was able to seed over the Bandera county whereas 60P was unable to seed across the Atascosa and Bexar county as the pilot reported only rain shafts and nothing to support it even though it had a good area and reflectivity. 60P returned to base as there were no other cells across the east for it to target. 57AA continued on seeding a couple cells across the Bandera County. As cells began to cease in development, 57AA returned to base for the evening.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

| | | | | | | | | | |
|------|------|------|------|------|------|------|--|--|--|
| 2503 | 2613 | 2807 | 2857 | 3084 | 3101 | 3165 | | | |
|------|------|------|------|------|------|------|--|--|--|

FLIGHT INFORMATION:

| TIME (Z) | Plane | Flare Location | County |
|----------|-------|----------------|---------|
| 19:35 | 57AA | In Air | |
| 19:52 | 57AA | 283° @ 59 nm | Uvalde |
| 19:53 | 57AA | 284° @ 64 nm | Uvalde |
| 19:53 | 57AA | 284° @ 64 nm | Uvalde |
| 19:55 | 57AA | 282° @ 59 nm | Uvalde |
| 20:14 | 57AA | 292° @ 69 nm | Uvalde |
| 20:17 | 57AA | 292° @ 72 nm | Uvalde |
| 20:18 | 57AA | 292° @ 74 nm | Uvalde |
| 20:30 | 57AA | 279° @ 62 nm | Uvalde |
| 20:42 | 57AA | 284° @ 72 nm | Uvalde |
| 20:43 | 57AA | 285° @ 73 nm | Uvalde |
| 21:14 | 57AA | 286° @ 77 nm | Uvalde |
| 21:17 | 57AA | 286° @ 88 nm | Uvalde |
| 21:41 | 57AA | Landed | |
| 23:04 | 57AA | In Air | |
| 23:05 | 60P | In Air | |
| 23:27 | 57AA | 310° @ 63 nm | Bandera |
| 23:28 | 57AA | 308° @ 65 nm | Bandera |
| 23:30 | 57AA | 310° @ 65 nm | Bandera |
| 23:31 | 57AA | 314° @ 62 nm | Bandera |
| 23:33 | 57AA | 310° @ 66 nm | Bandera |
| 23:40 | 57AA | 311° @ 74 nm | Bandera |
| 23:41 | 57AA | 311° @ 73 nm | Bandera |
| 23:46 | 57AA | 311° @ 72 nm | Bandera |
| 23:56 | 57AA | 317° @ 67 nm | Bandera |
| 23:56 | 57AA | 318° @ 67 nm | Bandera |
| 23:57 | 57AA | 316° @ 68 nm | Bandera |
| 24:02 | 57AA | 317° @ 68 nm | Bandera |
| 24:05 | 57AA | 316° @ 69 nm | Bandera |
| 24:08 | 60P | Landed | |

| | | | |
|--------------|------------|---------------|--|
| 24:53 | 60P | Landed | |
|--------------|------------|---------------|--|

Seeding operations were conducted in Bandera (26+0H) and Uvalde (24+0H) Counties. 50 flares plus 0 hygroscopic flares were burned within 7 clouds. This is the 2nd day for seeding in September and the 30th day for seeding during the season.