

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

**SEEDING REPORT - June 16, 2018**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Upper air analysis shows a subtropical ridge of high pressure moving into the lower Mississippi Valley with a trough across the west and an inverted trough over southwestern Gulf of Mexico. At low levels, mainly ridging across the south with a low centered across the Upper Mississippi Valley. The flow at upper levels is from the east southeast with mainly calm winds near the surface. The current dew point temperature is in the low to mid 70's with our area under scattered low base clouds. For today, expect the subtropical ridge to continue to build in across the Lower Mississippi Valley with Tropical Storm Bub moving up western Mexico today through Saturday. This will erode the ridge a little with moisture remaining generally to the west of the target areas. Expect another day of as sea-breeze type pattern with a little deeper moisture from the Gulf of Mexico moving into our area. Showers and thunderstorms are forecast to begin before noon today and last through 02UTC Saturday. For Saturday, the inverted trough will gradually to make its way near the coast as the as the ridge breaks down and shift to the east allowing for some increasing tropical moisture to impact the coastal and inland counties. Expect for today and tomorrow, scattered showers and thunderstorms across much of the target areas. The dew point temperature is forecast to be in the low to mid 70's which will impact feel like temperature. The heat index value is expected to be again in the low 100's even though the actual temperature is expected to be near the mid 90's. Come Sunday, we will begin to tap into much more deeper tropical moisture as the inverted trough makes landfall. This broad area of disturbance will bring much needed rainfall to the southwest Texas through the end of the forecast period. The precipitable water is forecast to be between 2.0 and 2.7 inches which can lead to substantial amount of rainfall through Monday. Steady rainfall amounts can range anywhere between 1.5 and 4 inches with possibly higher amounts under areas of heavy rainfall due to thunderstorms by Monday evening.

**LIFTING MECHANISM:**

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

**THERMODYNAMIC INDICES (12Z KCRP)**

|                             |         |                      |        |
|-----------------------------|---------|----------------------|--------|
| Freezing Level (m)          | 5098.7  | CAPE (J/Kg)          | 827.29 |
| Precipitable Water (inches) | 1.96    | CINH (J/Kg)          | 12.45  |
| LCL                         | 723.12  | LI(°C)               | -1.74  |
| CCL                         | 989.7   | PB                   | -1.74  |
| CRP ICA                     | -15.39  | Cloud Base Temp (°C) | 21     |
| Cloud Base (meters)         | 1441.09 |                      |        |
| Warm Cloud Depth (meters)   | 3657.61 |                      |        |

**DISCUSSION:**

Another day of sea breeze conditions continued today but was not as active as the pass several days. Storms developed much later in the day and the amount that developed were not as many. There was some instability across the south with much of it to our west and east mainly along the coast, but a few cells managed to develop and hold out long enough for the aircraft to seed them. Aircraft 160P was launched across the Atascosa and Frio Counties as cell had developed. The cell was in the Atascosa County but then it moved over parts

of the Frio County where much of the seeding took place. After this, another cell developed there and since the aircraft was in the vicinity, it went ahead and released several dosages of seeding materials. Afterward, there were a few cells across the Atascosa and McMullen Counties which the aircraft intercepted. Aircraft 160P then flew to Atascosa County and seeded one cell that was across the border of Atascosa and McMullen Counties. Thereafter, the aircraft went to the McMullen County to perform operations and had the opportunity of seeding two cells. Almost all the cells across the entire target zones did not last very long time; thus, over all, the day was relatively quiet. After seeding was completed, 160P returned to base with no intentions of performing additional operations later in the afternoon due settled conditions.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

|     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|--|--|--|--|
| 137 | 219 | 235 | 259 | 277 | 308 |  |  |  |  |
|-----|-----|-----|-----|-----|-----|--|--|--|--|

**FLIGHT INFORMATION:**

| TIME (Z) | Plane | Flare Location | County   |
|----------|-------|----------------|----------|
| 20:15    | 160P  | In Air         |          |
| 20:37    | 160P  | 230° @ 19 nm   | Atascosa |
| 20:38    | 160P  | 233° @ 20 nm   | Frio     |
| 20:39    | 160P  | 236° @ 22 nm   | Frio     |
| 20:41    | 160P  | 234° @ 23 nm   | Frio     |
| 20:42    | 160P  | 235° @ 21 nm   | Frio     |
| 20:55    | 160P  | 248° @ 30 nm   | Frio     |
| 20:55    | 160P  | 248° @ 31 nm   | Frio     |
| 20:56    | 160P  | 246° @ 33 nm   | Frio     |
| 20:57    | 160P  | 248° @ 32 nm   | Frio     |
| 20:59    | 160P  | 244° @ 28 nm   | Frio     |
| 21:17    | 160P  | 213° @ 25 nm   | McMullen |
| 21:17    | 160P  | 212° @ 23 nm   | Atascosa |
| 21:18    | 160P  | 214° @ 21 nm   | Atascosa |
| 21:19    | 160P  | 215° @ 20 nm   | Atascosa |
| 21;20    | 160P  | 215° @ 21 nm   | Atascosa |
| 21:30    | 160P  | 203° @ 35 nm   | McMullen |
| 21:31    | 160P  | 201° @ 34 nm   | McMullen |
| 21:32    | 160P  | 202° @ 31 nm   | McMullen |
| 21:33    | 160P  | 205° @ 36 nm   | McMullen |
| 21:34    | 160P  | 204° @ 36 nm   | McMullen |
| 21:37    | 160P  | 198° @ 30 nm   | McMullen |
| 21:38    | 160P  | 197° @ 29 nm   | McMullen |
| 21:39    | 160P  | 199° @ 28 nm   | McMullen |
| 21:40    | 160P  | 201° @ 31 nm   | McMullen |
| 21:41    | 160P  | 200° @ 29 nm   | McMullen |
| 22:40    | 160P  | Landed         |          |

Seeding operations were conducted in Atascosa (10+0H), Frio (18+2H) and McMullen (22+0H) Counties. 50 flares plus 2 hygroscopic flares were burned within 6 clouds. This is the 6<sup>th</sup> day for seeding in June and the 9<sup>th</sup> day for seeding during the season.