

**SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – PLEASANTON,
TEXAS**

SEEDING REPORT – September 21, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

Partly to mostly cloudy over south Texas this morning, with patchy fog east of San Antonio. Fog looks to last through the early morning hours. High pressure continues over the Gulf, while another area of pressure is strengthening over the southwest US. As a weak upper level low pressure system passes across TX today, isolated showers and thunderstorms are possible this afternoon. High heat index values possible this afternoon and evening. High temperatures in the lower to mid 90's. Isolated showers and storms are possible through the evening, then mostly cloudy. Overnight low temps in the mid to upper 70's with cooler temps over hill country. Patchy fog possible after midnight.

LIFTING MECHANISM:

Daytime heating, seabreeze, and outflow boundaries (possibly some kind of trough/weak front).

THERMODYNAMIC INDICES (12Z KCRP)

| | | | |
|-----------------------------|---------|-----------------------------|---------|
| KCRP Freezing Level (m) | 5068.91 | KDRT Freezing Level (m) | 4748.31 |
| Precipitable Water (Inches) | 1.97 | CAPE (J/Kg) | 2255.97 |
| LCL (m) | 48.96 | CINH (J/Kg) | 11.82 |
| CCL (m) | 977.29 | LI (degrees C) | -3.98 |
| Cloud Base (m) | 1419 | PB | -1.1 |
| Warm Cloud Depth (m) | 3649.91 | Cloud Base Temp (degrees C) | 23 |
| CRP -15°C height (m) | ~7300 | DRT -15°C height (m) | ~7200 |
| CRP ICA | -12.3 | DRT ICA | -4.3 |

DISCUSSION: Isolated showers and storms began developing after 18Z across Bee county, however all were very short lived. Storm direction is from south to north. Storms started doing better after 19Z so launched pilot. Pilot attempted to seed a few showers in Bee county, but storms were weak and dissipating. Pilot then went to McMullen county where seeding continued on additional showers and storms. Some storms seemed to respond better to seeding in McMullen county. Numerous showers began developing south of Pleasanton around 21Z, however pilot only found a few with strong enough inflow for seeding. Launched second pilot at 21:25Z and send first pilot to Bee county to investigate ongoing storms there. Strong storm formed in southern Atascosa around 21:30 which second pilot began seeding, this storm formed north of Choke Canyon Reservoir, a decent size body of water (could the water have influenced storm development?). Possible the stronger storms formed on a stronger seabreeze which pushed inland. Storms developed into a broken line of strong storms from Atascosa to Bee county. By 22Z the storms in Bee were weakening while a line of strong storms was pushing to the northeast through Atascosa county. First pilot landed to refuel before rain moved over their airport. Sent pilot to developing storms in Karnes county just after 22:30Z. Pilot continued seeding storms in Karnes county until 23:30Z when conditions became unsafe and pilot was running out of flares.

Warnings: None

Seeded cell ID's: 492, 617, 699, 800, 1014, 1024, 1058, 926, 1072, 1188, 1159, 1178, 1418, 1463, unidentified

Flight Information:

| Time (UTC) | Plane | Flare Location | County |
|------------|-------|----------------|----------|
| 19:20 | 160P | In air | |
| 19:30 | 160P | 107 @ 41 NM | Bee |
| 19:31 | 160P | 107 @ 39 | Karnes |
| 20:02 | 160P | 107 @ 35 | McMullen |
| 20:03 | 160P | 165 @ 36 | McMullen |
| 20:07 | 160P | 163 @ 36 | McMullen |
| 20:20 | 160P | 198 @ 26 | McMullen |
| 20:20 | 160P | 199 @ 26 | McMullen |
| 20:30 | 160P | 201 @ 25 | McMullen |
| 20:31 | 160P | 196 @ 24 | McMullen |
| 20:58 | 160P | 168 @ 19 | McMullen |
| 20:59 | 160P | 163 @ 20 | McMullen |
| 21:00 | 160P | 156 @ 22 | McMullen |
| 21:08 | 160P | 181 @ 15 | McMullen |
| 21:09 | 160P | 183 @ 15 | McMullen |
| 21:30 | 57AA | In air | |
| 21:34 | 160P | 116 @ 37 | Bee |
| 21:35 | 160P | 116 @ 38 | Bee |
| 21:39 | 57AA | 186 @ 5 | Atascosa |
| 21:41 | 57AA | 174 @ 6 | Atascosa |
| 21:42 | 57AA | 188 @ 5 | Atascosa |
| 21:47 | 160P | 114 @ 28 | Live Oak |
| 21:48 | 57AA | 233 @ 11 | Atascosa |
| 21:50 | 57AA | 240 @ 11 | Atascosa |
| 21:56 | 57AA | 255 @ 19 | Frio |
| 22:04 | 57AA | 250 @ 11 | Atascosa |
| 22:11 | 57AA | 277 @ 4 | Atascosa |
| 22:12 | 57AA | 273 @ 5 | Atascosa |
| 22:13 | 57AA | 273 @ 6 | Atascosa |
| 22:18 | 160P | Landed | |
| 22:28 | 57AA | 89 @ 10 | Atascosa |
| 22:28 | 57AA | 90 @ 9 | Atascosa |
| 22:29 | 57AA | 89 @ 8 | Atascosa |

| | | | |
|-------|------|---------|----------|
| 22:30 | 57AA | 89 @ 9 | Atascosa |
| 22:51 | 57AA | 76 @ 30 | Karnes |
| 22:52 | 57AA | 76 @ 29 | Karnes |
| 22:55 | 57AA | 80 @ 29 | Karnes |
| 23:03 | 57AA | 80 @ 32 | Karnes |
| 23:04 | 57AA | 79 @ 31 | Karnes |
| 23:07 | 57AA | 76 @ 34 | Karnes |
| 23:11 | 57AA | 74 @ 34 | Karnes |
| 23:13 | 57AA | 72 @ 34 | Karnes |
| 23:16 | 57AA | 73 @ 34 | Karnes |
| 23:50 | 57AA | Landed | |

Seeding operations were conducted over Atascosa (26 + 2H), Bee (6 + 0H), Frio (2 + 0H), Karnes (16 + 0H), Live Oak (2 + 0H), McMullen (24 + 1H) counties. 78 flares plus 3 hygroscopic flares were burned within 14 clouds. This is the 5th day for seeding in September and the 38th day for seeding during the season.