

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - June 9, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a subtropical ridge of high pressure extending across Mexico and Texas with a weak trough across eastern Gulf of Mexico. At the surface, high pressure ridging is located across much of the east with low trough axis along the Rockies. The flow at upper levels is mainly from the northwest with it calm to light and variable at the surface. The current dew point temperature is in the mid 70's with passing low base clouds hovering over our area. For today, anti-cyclonic flow will persist across Texas with on-shore flow bringing in some moisture from off the Gulf of Mexico. Moisture along with a sea breeze can produce a slight chance for showers this morning with isolated afternoon thunderstorms especially to counties near or along the coast. Low range models suggest that inner counties may see a shower or two but the chances will be slight. Expect another day of hot high temperatures with high heat index values. The dew point temperature is forecast to be in the upper 60's to mid 70's range. The feel like temperature will be 3 to 6 degrees warmer than the actual temperature. Any storms that forms will diminish by this evening with overnight conditions mainly quiet. For Saturday, similar conditions are expected with the highs a degree or two cooler than today. The upper ridge may weaken and its axis shifting to the west across Mexico allowing deep moisture with sea breeze to bring another slight chance for precipitation to counties closer to the coast. The dew point temperature will remain high; thus, the heat index should be in the low 100's for central and eastern target areas. Come Sunday through Monday, a less than 10% chance for isolated showers is expected for the eastern target areas with the ridge strengthening once again. The temperature may rebound to the low 100's especially for the western and central counties. I should also mention that the low temperatures will be in the low to mid 70's as it has been for the passes few weeks.

LIFTING MECHANISM:

Low Level Moisture Advection, Low Level Warm Air Advection, Sea-Breeze
THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4889	CAPE (J/Kg)	2302.6
Precipitable Water (inches)	1.69	CINH (J/Kg)	2.53
LCL	674.5	LI(°C)	-4.67
CCL	811.5	PB	-4.67
CRP ICA	-27.4	Cloud Base Temp (°C)	
Cloud Base (meters)			
Warm Cloud Depth (meters)			

DISCUSSION:

A weak ridge aloft with deep low-level moisture along with a sea breeze contributed to showers and thunderstorms in our area. Showers and weak cells developed just before 17UTC for the far eastern counties then a few stronger cells started to develop across the Bee and Karnes Counties. There was good enough instability and with warm air advection to generate many scattered cells across the eastern and central target areas. Even though the cells began to develop earlier than usual the stronger set were target over the targeting region. Aircraft 160P was launch over the Karnes county where several dosages of flares were released. The aircraft intercepted a few

cells across that county where secondary cells developed and the then rejoined the parent cells. After successfully seeding cells across the Karnes County, the pilot was launched south across the Bee County where operations were carried out. The aircraft flew around for quite some time and then return the Karnes County to intercept newer cells. From there the pilot flew to near the border of the Wilson and Karnes Counties to see if there was any proper inflow, but that had proven to be futile. The aircraft headed south again across western Karnes and northern Live Oaks Counties to look for proper inflow, but even though he did not get any, it was worth it as he was able to fly back down to the Bee County and released several additional dosages of flares. After successful operations, aircraft 160P had to land and refuel before another launch. Aircraft 160P was launched another time across the Atascosa County but while he was en-route to this county the cells weakened significantly. He was then sent to near the border of Atascosa and Bexar County where also a cell was dying with point at seeding. Finally, while heading back south of Atascosa County, he was able to seed a few times. When I saw that there were only very weak cells, thus; instructed the pilot to return to base. However, while aircraft 160P was heading home I spotted a well-defined cell across southwestern Frio County, so the aircraft was directed to go there. While one the way there, another impressive cell developed over the McMullen County that had the same signal as the one across Frio County; thus, the aircraft was redirected to McMullen. There another successful seeding was accomplished. Due to the length of time of operation and the amount of seeding that was done, the pilot had to return to base to restock up on flares and rest.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

232	317	291	601	801	928	767			
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
18:06	160P	In Air	
18:08	160P	104° @ 40 nm	Karnes
18:11	160P	98° @ 40 nm	Karnes
18:12	160P	92° @ 38 nm	Karnes
18:21	160P	73° @ 31 nm	Karnes
18:22	160P	76° @ 31 nm	Karnes
18:24	160P	86° @ 22 nm	Karnes
18:25	160P	90° @ 22 nm	Karnes
18:27	160P	96° @ 22 nm	Karnes
18:30	160P	99° @ 32 nm	Karnes
18:42	160P	117° @ 47 nm	Bee
18:44	160P	121° @ 49 nm	Bee
18:47	160P	119° @ 48 nm	Bee
19:04	160P	85° @ 23 nm	Karnes
19:06	160P	88° @ 23 nm	Karnes
19:49	160P	122° @ 49 nm	Bee
19:50	160P	123° @ 50 nm	Bee
19:51	160P	122 @ 49 nm	Bee
19:53	160P	121° @ 48 nm	Bee
20:08	160P	Landed/Refueled	
20:22	160P	In Air	
20:59	160P	231° @ 17 nm	Atascosa
21:00	160P	229° @ 16 nm	Atascosa
21:52	160P	184° @ 27 nm	McMullen
21:54	160P	180° @ 27 nm	McMullen
21:55	160P	178° @ 26 nm	McMullen

21:57	160P	179° @ 27 nm	McMullen
21:58	160P	177° @ 26 nm	McMullen
22:25	160P	Landed	

Seeding operations were conducted in Atascosa (4+0H), Bee (14+0H), Karnes (22+0H) and McMullen (10+0H) Counties. 50 flares plus 0 hygroscopic flare were burned within 7 clouds. This is the 2nd day for seeding in June and the 5th day for seeding during the season.