

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - June 14, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a subtropical ridge of high pressure across the Southern Plains with a trough over the Gulf of Mexico and the West with an inverted trough over the Rio Grande/Sierra Madres. At the surface, a low is centered over parts of the Northern Rockies and Northern Central Plains with ridging across the South and Southeast. The flow at upper level is from the northwest with it calm to light and variable at the surface. The current dew point temperature is in low to mid 70's with our area mostly clear to sunny skies. For today, expect a somewhat similar pattern as yesterday with isolated showers and storms expected mainly after 18UTC. Moisture along with sea-breeze will bring a slight to low chance for precipitation to areas closer to the coast. Some storms may make their way into the central target region by late this afternoon but much of the active weather should remain across the Coastal Plains. Come Friday, the subtropical ridge of high pressure weakens and shift to the east across the Lower Mississippi River with the remnants of what was once Hurricane Bud across the western Pacific to move up into Northwestern Mexico. Even though this will not impact us, showers and thunderstorms are still possible due to another sea-breeze event. Saturday through the end of the forecast period is when conditions starts to get interesting as a tropical disturbance moves into the Gulf of Mexico, with the outskirt shower bands impacting commutes during the daytimes and night times. Expect showers to be more dominant during the day due to a combination of low level moisture and daytime heating. There will enough atmospheric support for overnight showers to occur on Sunday night. Otherwise, expect high temperatures to be above the normal for today and tomorrow with a near or at normal by the latter half of the weekend. The dew point temperatures are forecast to be in the upper 60's to low 70's across much of the area which will cause the feel like temperature to be 2 to 4 degrees warmer than they actual are. The heat index values are expected to continue in the low 100's for central and eastern counties.

LIFTING MECHANISM:

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

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4531.9	CAPE (J/Kg)	1100.3
Precipitable Water (inches)	1.77	CINH (J/Kg)	39.98
LCL	790.8	LI(°C)	-4.62
CCL	1340.8	PB	-4.62
CRP ICA	-19.35	Cloud Base Temp (°C)	19.9
Cloud Base (meters)	1508.3		
Warm Cloud Depth (meters)	3032.6		

DISCUSSION:

Showers and thunderstorms developed as a result of deep moisture along with a sea-breeze. There were a few weak cells across the eastern counties before 18UTC, but they died shortly after they developed. With good enough instability and no CAP, aircraft 160P was first launched to the Wilson County area where successful seeding was done. After a half an hour or so, aircraft 49P was launched to the Live Oak County for possible seeding. During this

time 160P was over the the Wilson and Karnes Counties caring out operations. Most of the cells developed over the target zones with just one that develop outside Karnes County area which 160P seeded. When 47P arrived over the tip of the border of Live Oak and Bee Counties where there was a decent cell that was seedable. 47P went ahead and released several dosages of seeding materials across the Live Oak/Bee Counties. After that, 47P went further south where there were a few cells and perform additional seeding over the Live Oak County. 160p continued to seed over the Karnes County for a while as favorable conditions persisted. Eventually, 47P headed to the Bee County where significant seeding took place. The pilot flew north and south to find good inflow to release flares. Also, 160P flew over a couple areas across the Karnes County with my direction for suitable inflow and was able to seed a few cells. Most of the cells were over the eastern target zones while a few made their way central but the ones that made it across the central counties were already seeded. Overall, seeding was a success and we were able to target many cells without having to return to base.

WATCHES/WARNINGS:

Hail

SEEDED CELL ID'S:

369	467	464	678	588	675	655	715		
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
18:33	160P	In Air	
18:41	160P	80° @ 18 nm	Wilson
18:43	160P	73° @ 17 nm	Wilson
18:49	160P	53° @ 16 nm	Wilson
18:52	160P	51° @ 15 nm	Wilson
19:02	47P	In Air	
19:14	47P	117° @ 29 nm	Live Oak/Bee
19:15	47P	118° @ 29 nm	Live Oak/Bee
19:19	47P	116° @ 29 nm	Live Oak
19:20	47P	116° @ 29 nm	Live Oak
19:20	160P	85° @ 35 nm	Karnes
19:22	160P	82° @ 35 nm	Karnes
19:22	160P	85° @ 35 nm	Karnes
19:23	160P	86° @ 35 nm	Karnes
19:24	160P	83° @ 34 nm	Karnes
19:37	160P	99° @ 40 nm	Karnes
19:38	160P	97° @ 40 nm	Karnes
19:39	160P	96° @ 42 nm	Karnes
19:42	160P	95° @ 41 nm	Karnes
19:53	47P	148° @ 37 nm	Live Oak
19:56	47P	148° @ 42 nm	Live Oak
19:58	47P	147° @ 40 nm	Live Oak
20:05	47P	151° @ 40 nm	Live Oak
20:07	47P	148° @ 48 nm	Live Oak
20:17	160P	74° @ 46 nm	Karnes
20:18	160P	72° @ 46 nm	Karnes
20:19	160P	73° @ 47 nm	Karnes
20:20	160P	72° @ 46 nm	Karnes
20:21	160P	73° @ 47 nm	Karnes
20:23	47P	125° @ 41 nm	Bee
20:24	47P	124° @ 38 nm	Bee
20:25	47P	121° @ 38 nm	Bee
20:28	47P	112° @ 34 nm	Bee
20:29	47P	111° @ 33 nm	Bee
20:30	47P	113° @ 33 nm	Bee

20:55	160P	Landed	
21:03	160P	landed	

Seeding operations were conducted in Bee (12+24H), Karnes (28+1H), Live Oak (18+36H) and Wilson (8+0H) Counties. Aircraft 47P burned 1 modular flare each seeding time. 61 flares plus 85 hygroscopic flares were burned within 8 clouds. This is the 4th day for seeding in June and the 7th day for seeding during the season.