

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - September 04, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a trough of low pressure across the western half of the state of Texas with a ridge of high pressure across the east northeast with an inverted trough associated with Tropical Storm Gordon to the southeast mainly across the northeastern Gulf of Mexico. At the surface, mainly weak ridging with a low /trough axis extending from the Rockies into Mexico. The flow at upper levels is generally from the south with it calm to light and variable at the surface. The current dew point temperature is in the mid 70's and the environmental temperature in the mid to upper 70's with low level to mid level scattered and broken clouds across our area. Currently, there are widespread showers across the Uvalde, Medina, Bandera and parts of Bexar Counties. For today, showers and storms to continue as the with good upper level support. The upper trough will continue to linger across west Texas backing up towards the west than being more south central as it was overnight. As the trough retreats westward, showers as thunderstorms will decrease especially during the afternoon period. The hi-res models have most of the shower ending before midday. However, there may be some isolated across the eastern counties of the target zone this afternoon due to lingering moisture and daytime heating. The HRRR has much of the current storms ejected to the north by 16UTC with some trailing bands coming out from the Mexico into the western counties bring additional rainfall thereafter until 23UTC. For tonight, conditions settle a little except for western and northern counties as the may maybe a weak low-level jet setup impacting those area. The dew point temperature is forecast the be in the upper 60's to 70's across much of the target zone; thus, the heat index values are expected to be on the high side later in the day. Expect the feel like temperature to be several degrees warmer the actual temperature by this afternoon. Also, the highs for today should be below the normal for this time of the year due to cloud cover and wet grounds. The highs for the rest of the forecast period is expected to be at or below the normal. Wednesday through Friday, the forecast calls for more showers and storms as we tap into moisture from off the gulf and the jetstream lingers across parts of the Southern Rockies and South Plain. Not expecting wide showers that was felt overnight but a few thunderstorms could bring heavy downpours that could add to already saturated grounds especially to the western counties. Also, should more storms occur over the Bexar County throughout the forecast period and beyond, there too may encounter flooding events as they were dosed with several inches of rainfall overnight. Tropical Storm Gordon will continue to strengthen over the open waters of northeast Gulf of Mexico today before making landfall by this early this evening between Mississippi and Alabama coast. There will be no direct impact to Texas expect for some rip current across the southeastern coast later in the day.

LIFTING MECHANISM:

Upper Level Dynamics, Low level Moisture Advection, Inverted Trough

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4935.42	CAPE (J/Kg)	1401.5
Precipitable Water (inches)	2.07	CINH (J/Kg)	8.86
LCL	762.11	LI(°C)	-3.11

CCL	976.70	PB	-3.11
CRP ICA	-18.75	Cloud Base Temp (°C)	21
Cloud Base (meters)	1209.05		
Warm Cloud Depth (meters)	3726.37		

DISCUSSION:

The upper trough continued to linger across parts of the Great Basin and parts of the South Plain today with a Tropical Storm Gordon across to our east. This tropical cyclone did not make its way across Texas but energy for this system tried to make it mainly across the central and eastern counties of the target zone. After overnight showers and thunderstorms hit much of the western and central counties with flooding being an issue, operations were mainly focus across the eastern half of the target zone. As afternoon cells began to develop across the eastern zone, aircraft 160P was launched to the Bee County at first with it seed fairly good cells. 160P tried to hit as many cells as possible but some of the cells were pretty weak with very little to no inflow for seeding. After 160P was done with Bee County it headed to the Atascosa County but by the time it got there the weak cells dissipated quickly. Afterwards, 160P was send to the Wilson County with it seeded a couple cells. However, it did not release the full dosages of seeding materials as it the cells did not look all that impressive. 160P headed back to Atascosa County to finish seeding a good-sized cell that extended all the way into the Wilson/Karnes County. After all the cells were seeded, 160p returned to base with the intent to return to the air later in the afternoon. 160P was recalled to the air across the Karnes County where an impressive cell had developed. The aircraft was able to seed the cell with almost the full amount of dosages. After taking care of that cell, 160P returned a second time to base with no intent to return to the air as conditions began to calm down.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

3351	3378	3648	3884	3799	4363				
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
18:23	160P	In Air	
18:56	160P	132° @ 33 nm	Bee
18:57	160P	130° @ 33 nm	Bee
19:12	160P	128° @ 49 nm	Bee
19:13	160P	130° @ 48 nm	Bee
19:51	160P	126° @ 53 nm	Bee
20:37	160P	54° @ 46 nm	Wilson
20:38	160P	52° @ 47 nm	Wilson
20:52	160P	36° @ 24 nm	Wilson
20:53	160P	38° @ 23 nm	Wilson
21:01	160P	73° @ 20 nm	Wilson
21:03	160P	77° @ 21 nm	Wilson
21:05	160P	81° @ 21 nm	Wilson
21:22	160P	284° @ 8 nm	Atascosa
21:23	160P	276° @ 7 nm	Atascosa
22:22	160P	Recon	
23:17	160P	In Air	
23:25	160P	77° @ 35 nm	Karnes
23:26	160P	78° @ 33 nm	Karnes
23:26	160P	79° @ 31 nm	Karnes
23:31	160P	80° @ 33 nm	Karnes

23:46	160P	Landed	
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Seeding operations were conducted in Atascosa (4+0H), Bee (8+0H), Karnes (8+0H) and Wilson (14+0H) Counties. 34 flares plus 0 hygroscopic flare were burned within 6 clouds. This is the 3rd day for seeding in September and the 31st day for seeding during the season.