

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - July 4, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a trough of low pressure across parts of the Northern Rockies and the Upper Mississippi Valley with an inverted trough across southeastern Texas. At the surface, low trough axis is located across Southern Rockies and Rio Grande with the low to our east and mainly a ridge across much of the eastern states. The flow at upper levels is from the northeast with it calm to light and variable at the surface. The current dew point temperature is in the mid 70's with a few clouds over our area. For today, expect quiet conditions mainly before 18UTC ahead of an incoming low pressure system from the east. The inverted trough is on its way heading towards the target zone and should begin to impact the eastern zone by around 19UTC bringing showers and thunderstorms to that region first. This system continues to move westward impacting much of the target zone by 04UTC Thursday. The only difference to this forecast than yesterday's forecast would be that the precipitation is forecast to spread generously across much of the eastern and central target zone. I previously forecasted that much of the precipitation will be toward the coast but that will not be the case this afternoon and this evening. However, the center of the low is forecast to remain on land further north of the coastline. Expect 0.5 to 1.5in by the time the center of this system enters northeastern Mexico. Showers and thunderstorms will continue overnight into Thursday with some areas receiving heavy downpours from thunderstorms. The center of this low is forecast to be over northeastern Mexico by around 12UTC Thursday, but due to mid-level circulation close to Eagle Pass, showers and thunderstorms can be expected across areas east of Rio Grande. For Friday and Saturday, with enough residual moisture in place and daytime heating, showers and thunderstorms can develop mainly during the day. Expect the high temperatures to be below the normal for this time of the year beginning on Thursday courtesy of the passage of this low.

LIFTING MECHANISM:

Low Level Moisture, Low Level Warm Air Advection, Inverted Trough

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4725.95	CAPE (J/Kg)	733.84
Precipitable Water (inches)	1.50	CINH (J/Kg)	197.68
LCL	799.39	LI(°C)	-2.24
CCL	1908.75	PB	-2.24
CRP ICA	-16.25	Cloud Base Temp (°C)	25
Cloud Base (meters)	548.64		
Warm Cloud Depth (meters)	4177.31		

DISCUSSION:

An inverted trough of low pressure that formed across northeastern Gulf of Mexico has finally arrived over our area. This low gradually moved westward and slowly churned west southward while bringing wide spread showers and thunderstorms. The center of the low is now located just northeast of San Antonio and drifting in a southwesterly direction. A cluster of thunderstorms developed outside of the target zone mainly to the north and northeast that pushed through hitting the Bandera and Bexar Counties first before moving down across the rest of the counties. Aircraft 160P was

launched before a large cell across the Guadalupe moved over the Wilson County. However, by the time the aircraft arrived, part of the cell made it in. 160P released several dosages of seeding materials across the Wilson County due to multiple cellular development. After the pilot was through with Wilson County, he went ahead and released additional dosages over the Atascosa County. 160P was then directed to go to the border of Medina and Bexar County as cells looked as though they were developing but it turned out to be a false alarm. In the end the pilot decided to head back to base ahead of the incoming storm. The aircraft made it back safely and in front of the approaching storm. In general, the pilot was able to seed several cells despite a quick turn in unfavorable conditions.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

1749	1777	1802	1816	1843					
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
21:59	160P	In Air	
22:12	160P	59° @ 36 nm	Wilson
22:12	160P	58° @ 35 nm	Wilson
22:13	160P	55° @ 31 nm	Wilson
22:14	160P	54° @ 31 nm	Wilson
22:15	160P	52° @ 31 nm	Wilson
22:16	160P	50° @ 30 nm	Wilson
22:17	160P	48° @ 28 nm	Wilson
22:18	160P	48° @ 26 nm	Wilson
22:19	160P	45° @ 23 nm	Wilson
22:20	160P	46° @ 21 nm	Wilson
22:21	160P	48° @ 19 nm	Wilson
22:22	160P	46° @ 17 nm	Wilson
22:24	160P	43° @ 14 nm	Wilson
22:25	160P	37° @ 13 nm	Wilson
22:26	160P	24° @ 11 nm	Wilson
22:27	160P	13° @ 11 nm	Atascosa
22:29	160P	7° @ 10 nm	Atascosa
23:20	160P	Landed	

Seeding operations were conducted in Atascosa (4+0H) and Wilson (30+0H) Counties. 34 flares plus 0 hygroscopic flare were burned within 5 clouds. This is the 1st day for seeding in July and the 11th day for seeding during the season.