

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - May 12, 2020

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a disturbance across parts of the Southern Plains, zonal flow over the Southeast, a weak ridge over the Rockies, and a low of the Northwestern coast. At the surface, high pressure across the Northern Central Plains through the East with low pressure across the Southwest through the Rockies and the Northwest. The flow at upper levels is variable with it southeasterly at the surface. The current dew point temperature is in the middle 60s and lower 70s the environmental temperature in the more or less the same with broken clouds to overcast skies and a few isolated showers across our area. For today, an upper-level disturbance continues to rotate and gradually head east not until it brings a few showers and thunderstorms across south-central Texas. Expect mostly cloudy to cloudy skies areas of areas fog this morning. Much of the storms will take place this morning; however, with diurnal heating and mid-level forcing in the vicinity, expect a few more isolated showers and thunderstorms this after. The latest HRRR suggests the above while the Texas Tech WRF has the target area mainly dry after 1 p.m. For tonight, there may be some left-over showers from some wrap-around energy as the shortwave moves away from the region. Should also mention the winds could be a little gusty at times as will be between two pressure gradient fields. Expect the temperature today to be slightly cooler than the normal due to cloud cover and few spots of rain cool air. The overnight lows will a few degrees warmer than the average with increase cloud coverage and the flow off from the Gulf. For Wednesday, can't rule out a thunderstorm, or two as the mid-level disturbance spreads with across Southeast Texas that could bring some energy across to the eastern half of the target area. Showers and thunderstorms fire up across to the west along a dry line boundary that could track eastward overnight Wednesday across the western half of the target area. The Storm Prediction Center does give a marginal risk for severe weather across the Uvalde through the Bexar county. This will not take place until Wednesday evening. Thursday looks to be fair with a zonal westerly flow aloft and no disturbances in the area. The temperature by then will be on the warm side with areas of sun. By Friday, a shortwave trough across the deep Southern Rockies will bring a chance for showers and storms to our area. Much of the precipitation will be during the overnight hours as the wave spreads across the Southern Plains and with better upper-level forcing. The highs are progged to be in the upper 70s and lower 90s with the lows in the middle 60s and lower 70s through the end of the forecast period.

LIFTING MECHANISM:

Mid-Level Disturbance, Mesoscale Convective Vortex, Warm Air Advection

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4326.27	CAPE (J/Kg)	871.2
Precipitable Water (inches)	1.77	CINH (J/Kg)	16.74
LCL	864.38	LI (°C)	-5.50
CCL	1150.37	PB	-5.50
CRP ICA	-18.86	Cloud Base Temp (°C)	21.4
Cloud Base (meters)	1184.15		
Warm Cloud Depth (meters)	3142.12		

DISCUSSION:

Showers and thunderstorms develop mainly outside of the target area early this afternoon that moved into an MCV. However, by midafternoon a few small cells developed across the northern Wilson county where I had 47P head to and investigate them. Also, I should mention that there were a few weaker cells that developed along the edge of the target counties such as Wilson and Karnes with one cell in the center of Karnes county. Those cells were too weak and did not last long enough for the aircraft to become airborne. When 47P arrived, the cells had gotten stronger and merged with a bigger cell east of the target area. While seeding a cell, it broke apart but still strong enough for 47P to release the full dosages of seeding materials in it. 47P returned to base with the intention of heading back to the skies as there were cells in the non-seeding zone across the Bexar county that gradually tracked east and southeastward into Wilson county. 47P headed to a cell that was coming out of the Bexar County and into the Wilson Country. The pilot was able to release the full dosages of seeding materials into it. There were a few other smaller cells to the east of it, but 47P was unable to reach due to very low ceiling. 47P head back to base. 57AA was launched across to eastern Bandera County as a small but reasonable cell was moving in from over a county to the north. However, while 57AA was on its way there, that cell dissipated; thus, 57AA was sent to the south southeastern Bexar county where it released three modular flares. From there, it was launched across the eastern Frio county/western Atascosa county as another okay cell was in the midst. After seeding that cell, it headed to a cell north northeast of the present cell but was unable to seed it as the pilot was not getting much even though it looked healthy on radar. From there, 57AA headed for a couple of smaller weaker cells across eastern Medina and Frio county. 57AA was able to seed across the northeastern Frio county and southeastern Medina county where two cells merged. After seeding these cells, 57AA headed back to base for the evening. While on its way to base, there were very weak cells over the Uvalde and Medina county that dissipated by the time the aircraft approached them.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

716	2291	2525	2609	2716	2906			
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
21:40	47P	In Air	
21:53	47P	52° @ 37 nm	Wilson
21:54	47P	53° @ 39 nm	Wilson
21:55	47P	55° @ 40 nm	Wilson
21:56	47P	56° @ 42 nm	Wilson
21:57	47P	54° @ 43 nm	Wilson
22:17	47P	Landed	
22:57	47P	In Air	
23:08	47P	57° @ 13 nm	Wilson
23:09	47P	53° @ 13 nm	Wilson
23:10	47P	48° @ 10 nm	Atascosa
23:11	47P	31° @ 08 nm	Atascosa
23:12	47P	8° @ 07 nm	Atascosa
23:29	57AA	In Air	
23:34	47P	Landed	
23:54	57AA	324° @ 25 nm	Bexar
23:55	57AA	325° @ 27 nm	Bexar
23:57	57AA	324° @ 27 nm	Bexar

24:10	57AA	278° @ 14 nm	Atascosa
24:11	57AA	279° @ 14 nm	Atascosa
24:15	57AA	266° @ 15 nm	Atascosa
24:39	57AA	283° @ 21 nm	Frio
24:41	57AA	284° @ 20 nm	Frio
24:47	57AA	287° @ 21 nm	Medina
24:53	57AA	282° @ 20 nm	Frio
01:30	57AA	Landed	

Seeding operations were conducted in Atascosa (12+12H), Bexar (6+12H), Frio (6+12H), Medina (2+4H), and Wilson (14+0H) Counties. 40 flares plus 40 hygroscopic flares were burned within 6 clouds. This is the 3rd day for seeding in May and the 4th day for seeding during the season.