

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - August 31, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows mainly a flight ridge of high pressure across the parts of the South with a shortwave across the parts of the Upper Mississippi Valley and a weak disturbance across central-eastern Mexico and an incoming trough across the Southwest. At the surface, mainly ridging with a front extending all the way from a low to the far northeast across the Atlantic Ocean into parts of the South Plains with a low/trough axis across parts of the Southern Rockies. The flow at upper levels is generally from the east with it calm at the surface. The current dew point temperature is in low to mid 70's and the environmental temperature in the mid to upper 70's with broken clouds across our area. For today, expect a replica of yesterday's weather as a ridge of high pressure lingers across Texas with. There will be some pulses mainly south of this ridge that may try to creep in near the coast and possibly inland by this late this morning and afternoon hours, so I will go ahead and included a chance for precipitation at least for the Bee County. Much of the precipitation is expected to remain off the coast today with the precipitable water values 2 inches across the Bee and McMullen Counties and less further inland. Both the WRF and HRRR has any showers and storms mainly south of the target zone with the HRRR bringing in a few isolated storms across the Bee County during the day. The HRRR brings in and dissipates cells earlier than the WRF does so timing is an issue. However, due to showers already located across the southern counties south of the target zone I will lean more towards the HRRR. The dew point temperature is forecast to be in the 60's across much of the target zone with the southeastern target zone in the low 70's; thus, the heat index values are expected to be on the high side later in the day. Expect the feel like temperature to be a few to several degrees warmer than the actual temperature by this afternoon. Also, the highs for today should be a few degrees warmer than the normal for this time of the year especially for the inland areas. The highs for this weekend are expected to be still above the average for much of the target zone except for near the coast. Saturday through Sunday, a trough of low pressure digs south across the Southwest that will begin to break down this ridge allowing for moisture to continue to move in bringing storms into the southern parts of the target zone this weekend. By Sunday, the trough will reach the Southern Rockies that will allow for deeper fetch of moisture to moving across much of the entire area with a chance for precipitation through Monday. I will keep chance for showers and storms low as latest models runs are varying on where precipitation will occur. The NAM has showers and storms on Sunday through Monday near the coast and east of the target zone and on the other hand, the GFS has more wet across much of the target zone for the same period. Most areas will remain dry through Saturday evening as conditions are forecast to be similar to today. Can't rule out an isolated shower or thunderstorm across the Central counties of Saturday though.

LIFTING MECHANISM:

Weak Upper Level Ridge, Low Level Moisture Advection, Sea-Breeze

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	5027.77	CAPE (J/Kg)	1697.1
Precipitable Water (inches)	2.14	CINH (J/Kg)	2.38

LCL	697.32	LI(°C)	-3.54
CCL	925.0	PB	-3.54
CRP ICA	-19.63	Cloud Base Temp (°C)	21.3
Cloud Base (meters)	1087.11		
Warm Cloud Depth (meters)	3940.66		

DISCUSSION:

Similar to yesterday, sea-breeze another round of activity took place today mainly near the coast with one or two weak cells making their way inland. There were a few showers and isolated weak storms near the coast and south of the Bee County by early to mid-morning. Much of the weak cells died quickly after they developed. As cells began to look impressive, aircraft 160P was launched across to the Bee County where it seeded three cells. However, they all did not received the full dosages of seeding materials as the weak cells were dying quickly but not as rapid as the cells earlier on. These were located near the eastern side of the Bee County and moved west northwestward while dissipating. They the B-type clouds. After 160P was done, it headed across to the western side of the Bee County where a weak cell was trying to develop but that too was non-seedable. After much of the weak cells were dissipating, aircraft 160P head back to base as conditions settled.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

514	442	539						
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
20:16	160P	In Air	
20:27	160P	113° @ 59 nm	Bee
20:28	160P	112° @ 58 nm	Bee
20:29	160P	113° @ 57 nm	Bee
20;35	160P	117° @ 61 nm	Bee
20;36	160P	118° @ 63 nm	Bee
20:38	160P	117° @ 61 nm	Bee
20:39	160P	118° @ 60 nm	Bee
21:05	160P	112° @ 44 nm	Bee
21:06	160P	111° @ 44 nm	Bee
21:51	160P	Landed	

Seeding operations were conducted in Bee (18+0H) County. 18 flares plus 0 hygroscopic flare were burned within 3 clouds. This is the 10th day for seeding in August and the 28th day for seeding during the season.