SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION – Pleasanton, TEXAS

SEEDING REPORT – September 05, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a trough of low pressure across the Southern Rockies and South Plains with a ridge of high pressure across the east with an inverted trough associated with Tropical Depression Gordon to the southeast mainly across the state of Mississippi. At the surface, mainly weak ridging with a low /trough axis extending across the southern Rockies. The flow at upper levels is light and variable with it also 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. For today, the upper trough will continue to linger across the far west Texas with a weak disturbance moving in this afternoon across south Texas. The precipitable water value is expected to be above 2.0 inches. This will be a complete wash out but isolated to scattered showers is anticipated across the target zone. For tonight, conditions settle somewhat across much of the target zone after the sun sets. Can't rule out a stray shower or even thunderstorm across any part of the target zone from left over from the afternoon period. By this time, energy from the day time heat would have diminished causing storms to weaken and dissipated. 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 again 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. Thursday through Saturday, 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. A few impulses may make their way across our area with a very weak upper level ridge late this week and the remnants of the former Tropical Depression impacting our area on Thursday and possibly into Friday. Also, a front will drop mainly across north of our area that will that will enhance lift Friday into Saturday mainly across the northern counties of the target zone

LIFTING MECHANISM:

Upper Level Dynamics, Low level Moisture Advection, Inverted Trough

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4933.21	CAPE (J/Kg)	782.99
Precipitable Water (inches)	2.14	CINH (J/Kg)	33.17
LCL	901.62	LI(°C)	-1.94
CCL	1275.29	PB	-1.94
CRP ICA	-15.74	Cloud Base Temp (°C)	
Cloud Base (meters)	1204.62		
Warm Cloud Depth (meters)	3728.59		

DISCUSSION:

Another repeated day of active weather continues mainly during the afternoon hours as the upper trough stalls across the western half of the country and Tropical Depression stay to our east. This tropical cyclone continues to directly impact the Southern Mississippi Valley while sending moisture across

South Texas. With a weakened ridge, enough low-level moisture and daytime heating, showers and thunderstorms developed across the eastern counties first before moving west. Aircraft 160P, was launched across the Karnes County where it seeded many cells. However, the cells did not get the full dosages of seeding materials as they were not that strong. After 160P was done across the Karnes County, it headed to the Bee county where similar cells were located. It was able to seed one cell at the county. In general, 160P did a lot of maneuvering across the eastern counties where it also went to the Wilson County twice and seeded two individual cells. As mentioned before, the cells today were not all that impressive but was they we still seedable. 160P also returned across to the Karnes County for a second time to seed two cells across the southern parts of the area. After seeding across the eastern counties, 160P flew to the McMullen County to seed a cell that looked impressive from radar but was not that impressive in plain sight. 160P still went ahead and release a few dosages of seeding materials into that cell. The aircraft headed back to base as conditions began to settle a bit across the eastern and central counties of the target zone. Overall, seeded was done on not so typical day as much of the cells were fairly favorable as the atmospheric conditions were somewhat favorable.

WATCHES/WARNINGS:
N/A

SEEDED CELL ID'S:

2147	2256	2098	2238	2550	2642	2283	3019	3019	3055	3028
3203										

FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
19:05	160P	In Air	
19:23	160P	92° @ 40 nm	Karnes
19:24	160P	90° @ 40 nm	Karnes
19:27	160P	90° @ 36 nm	Karnes
19:28	160P	89° @ 36 nm	Karnes
19:37	160P	96° @ 24 nm	Karnes
19:42	160P	118° @ 21 nm	Karnes
19:43	160P	117° @ 22 nm	Karnes
20:00	160P	79° @ 31 nm	Karnes
20:01	160P	80° @ 31 nm	Karnes
20:08	160P	83° @ 40 nm	Karnes
20:10	160P	82° @ 41 nm	Karnes
20:27	160P	121° @ 41 nm	Bee
20:28	160P	122° @ 55 nm	Bee
20:46	160P	81° @ 14 nm	Wilson
20:47	160P	79° @ 14 nm	Wilson
21:06	160P	97° @ 43 nm	Karnes
21:07	160P	98° @ 43 nm	Karnes
21:15	160P	105° @ 42 nm	Karnes
21:16	160P	104° @ 43 nm	Karnes
21:35	160P	47° @ 20 nm	Wilson
21:37	160P	44° @ 17 nm	Wilson
22:07	160P	212° @ 29 nm	McMullen
22:08	160P	214° @ 28 nm	McMullen
22:55	160P	Landed	

Seeding operations were conducted in Bee (4+0H), Karnes (30+0H), McMullen (4+0H) and Wilson (8+0H) Counties. 46 flares plus 0 hygroscopic flare were burned within 12 clouds. This is the 4th day for seeding in September and the 32nd day for seeding during the season.