

**SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS**

**SEEDING REPORT - September 02, 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 Ridge, Cool Air Aloft, Sea-Breeze

**THERMODYNAMIC INDICES (12Z KCRP)**

Freezing Level (m)	5150.85	CAPE (J/Kg)	1926.6
Precipitable Water (inches)	2.13	CINH (J/Kg)	27.80

LCL	771.14	LI(°C)	-3.04
CCL	1258.21	PB	-3.04
CRP ICA	-18.63	Cloud Base Temp (°C)	18.4
Cloud Base (meters)	1755.98		
Warm Cloud Depth (meters)	3394.86		

**DISCUSSION:**

Showers and thunderstorms started to develop mainly along the coast early this morning associated with a sea-breeze event and weak upper ridging. As the day progressed, with the trough over the four corners and good surface heating, cells develop more inland during the early afternoon hours. Aircraft 160P, was launched across the Karnes County where it seeded a few cells. Most of the cells that developed were very weak; thus, the aircraft was not able to seed every cell that it hit. After seeding across the Karnes County, 160P headed to the Wilson County where it was able to seed one cell. 160p tried to seed cells across the Bee County but they very non-seedable and very weak. The aircraft seeded cells across the eastern counties as there were abundant moisture and heating that led to cell developments. Afterwards, 160P returned to base. Eventually, conditions settled across the eastern counties and started up across the western counties with the trough nearing the area. 160p was relaunched first across the Atascosa County as cell was in the area but by the time the aircraft got there, it was already dying. The aircraft continued onto the Uvalde and Bandera path where it seeded a couple cells. When 160P arrived across the Uvalde area, it seeded a few cells and then left for the Bandera County where it then seeded one cell. All in all, 160p did release the full dosages of seeding materials in the clouds as the cells were not all that impressive. Also, most of the cells remained to the west of the Bandera and Uvalde Counties through this event with just a couple making there way across the western counties of the target zone. 160P finally returned to base after successfully seeding across several counties.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

1397	1440	1508	1606	1915	2108	2506			
------	------	------	------	------	------	------	--	--	--

**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
19:38	160P	In Air	
19:57	160P	79° @ 42 nm	Karnes
19:59	160P	76° @ 40 nm	Karnes
19:58	160P	77° @ 41 nm	Karnes
20:13	160P	91° @ 27 nm	Karnes
20:14	160P	93° @ 28 nm	Karnes
20:19	160P	85° @ 23 nm	Karnes
20:20	160P	87° @ 22 nm	Karnes
20:31	160P	57° @ 32 nm	Wilson
20:32	160P	56° @ 33 nm	Wilson
21:09	160P	Recon	
22:06	160P	In Air	
23:07	160P	097° @ 78.2 nm	Uvalde
23:09	160P	100° @ 76.3 nm	Uvalde
23:10	160P	102° @ 76.4 nm	Uvalde
23:12	160P	105° @ 77.7 nm	Uvalde
23:25	160P	115° @ 72.9 nm	Uvalde
23:27	160P	117° @ 71.0 nm	Uvalde

<b>23:28</b>	<b>160P</b>	<b>120° @ 71.8 nm</b>	<b>Uvalde</b>
<b>23:39</b>	<b>160P</b>	<b>136° @ 57.4 nm</b>	<b>Bandera</b>
<b>23:41</b>	<b>160P</b>	<b>139° @ 55.9 nm</b>	<b>Bandera</b>
<b>01:23</b>	<b>160P</b>	<b>Landed</b>	

Seeding operations were conducted in Bandera (4+0H), Karnes (14+0H), Uvalde (14+0H) and Wilson (4+0H) Counties. 36 flares plus 0 hygroscopic flare were burned within 7 clouds. This is the 1<sup>st</sup> day for seeding in September and the 29<sup>th</sup> day for seeding during the season.