

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

**SEEDING REPORT - July 31, 2018**

**SYNOPTIC/MESOSCALE CONDITIONS:**

Upper air analysis shows a positively tilted trough of low pressure across parts of the South Great Plains, the Southern Mississippi Valley and Southeast with a ridge across the West. At the surface, a low pressure with a cold front extending across South Central Texas with riding to the West. The flow at upper levels is mainly from the north with it light and variable at the surface. The current dew point temperature is in the low 70's with broken mid to upper level clouds pushing from the north along with the front. There are showers over the Bandera and parts of the Uvalde Counties at this time. For today, expect a low chance for showers and thunderstorms as the cold front continues its progress southwards. Much of the precipitation is expected west of Uvalde with a few hit or miss showers and thunderstorms across the target zone. The bulk of the precipitation will enter northeastern Mexico as Southeast Texas later this morning and this afternoon with much of the areas under mostly cloudy skies. The latest HRRR does bring in isolated afternoon showers and thunderstorms across parts of the target zone this afternoon. I will maintain a slight chance for operations this forecast. However, seeing that the front would have already past us and much of the energy with it would to the southwest and far southeast, seeding may not be likely. The dew point temperature is forecast to be in the upper 60's and low 70's; thus; the dew point temperature is expected to be 5 to 7 degrees warmer than the actual temperature today. Tonight, through the end of the forecast period, mainly settled conditions are expected as high pressure builds in. The ridge will suppress any convection across the target zone at least until early Friday evening.

**LIFTING MECHANISM:**

Upper Level Dynamics, Cool Air Aloft, Cold Front

**THERMODYNAMIC INDICES (12Z KCRP)**

Freezing Level (m)	4818.81	CAPE (J/Kg)	2177.5
Precipitable Water (inches)	2.03	CINH (J/Kg)	37.71
LCL	697.08	LI(°C)	-4.72
CCL	1240.70	PB	-4.72
CRP ICA	-22.52	Cloud Base Temp (°C)	21.6
Cloud Base (meters)	1734.31		
Warm Cloud Depth (meters)	3084.5		

**DISCUSSION:**

An unusual upper disturbance moved in across Texas that brought early morning showers and thunderstorms across the northern and western counties of the target zone. Showers and thunderstorms tapped off by around mid-morning with the afternoon mainly quiet. The skies were mostly cloudy with ceiling heights above 5000ft. The front had already pushed south across McMullen County and land southeast of Bee County by the afternoon. The cold front then became a moderate stationary front that produced storm cells along the Coastal Plains in the afternoon. With enough moisture and instability behind the front, storms began to roll in from the north across the northern counties; thus, aircraft 47P was launched. Aircraft 47P was first launched to the Bee County as a weak cell developed however while on its way there it

dissipated. 47P was then diverted to the Wilson County but on its way there that cell dissipated. 47P returned to base without seeding any cells. During the late afternoon and early evening hours the front moved in a little further inland causing storms to develop across the south-central Bee County and cells came in from the north across the northern counties of the target zone. Aircraft 47P, was then relaunched again as the atmosphere became active. It was first sent to Bee County where it successfully seeded a cell. After, it was launched across the Wilson and the Atascosa Counties where it performed additional seedings two other cells. The aircraft did not stay too long seeding the last two cells as it was late, so it returned to base as dark was approaching.

**WATCHES/WARNINGS:**

N/A

**SEEDED CELL ID'S:**

2871	2999	--							
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**FLIGHT INFORMATION:**

TIME (Z)	Plane	Flare Location	County
21:24	47P	In Air	
22:14	47P	Recon	
23:38	47P	In Air	
24:09	47P	126° @ 63.0 nm	Bee
24:12	47P	126° @ 63.0 nm	Bee
24:16	47P	126° @ 63.0 nm	Bee
24:20	47P	126° @ 67.0 nm	Bee
24:24	47P	126° @ 67.0 nm	Bee
1:03	47P	40° @ 24 nm	Wilson
1:05	47P	30° @ 21 nm	Wilson
1:05	47P	33° @ 20 nm	Wilson
1:23	47P	309° @ 22 nm	Atascosa
1:24	47P	306° @ 21 nm	Atascosa
1:37	47P	Landed	

Seeding operations were conducted in Atascosa (4+8H), Bee (10+20H), Wilson (6+12H) Counties. 20 flares plus 40 hygroscopic flares were burned within 3 clouds. This is the 8<sup>th</sup> day for seeding in July and the 18<sup>th</sup> day for seeding during the season.