

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - September 2, 2018

SYNOPTIC/MESOSCALE CONDITIONS:

The upper ridge has broken down and allowed for a shortwave trough to dig into West Texas. After a large system pushed through the Permian Basin/Trans-Pecos yesterday, it has left behind an MCV which will help produce additional convection today across the Concho Valley. Showers and storms should initiate early and should be focused along and east of a Sterling City to Big Lake line. Storm organization will be a bit limited, but with such strong dynamical forcing we could see a few storms reach severe limits.

LIFTING MECHANISM:

Strong Dynamics Aloft

THERMODYNAMIC INDICES (12Z KMAF)

Freezing Level (m)	4689	-15°C Height (m)	7450
Precipitable Water (inches)	1.50	CAPE (J/Kg)	149
LCL	1151	CINH (J/Kg)	204
CCL	2974	LI(°C)	-0.9
MAF ICA	-1.68	PB	1
Cloud Base (meters)	2222	DRT ICA	-4.96
Warm Cloud Depth (meters)	2467	Cloud Base Temp (°C)	20

DISCUSSION:

An MCV was spinning over Pecos County as of 17Z with good moisture advection ahead to the east into the Edwards Plateau and Concho Valley. To the NE of this system a cu field is already developing across parts of the Concho Valley where temperatures were heating into the mid 80's and dew points in the mid 60's. Latest HRRR model seems to think convective initiation is still an hour or two away, but cu field is looking robust at this time. Pilots were put on standby and we'll launch when needed. Pilot was called airborne at 1715Z as cu were growing more vertical nearby San Angelo. As pilot was getting airborne, cells in eastern Tom Green County were best (not target area). However, we still had some growing cu along the IR/TG county line and also along the CR/SC county line. These will be our initial targets. Pilot seeded cell just NW of San Angelo but had little luck. Target was very small to begin with. We headed just E of Barnhart and seeded a cluster of storms just before 1830Z. Aggressive seeding continued, and a cluster of storms lumped together. Additionally, main area of seeding was returning the highest dbz values, so it appears seeding is enhancing the rainfall as expected. With convection not yet widespread, second pilot has not been needed. However, we will launch a second pilot now (1840Z) to cover the tracks of the first pilot and to also take care of any new development that is taking place north of highway 67. First pilot will take care of the area south of highway 67 where small echoes were taking place in Crockett/Sutton/Schleicher counties. First pilot dove south along the CR/SC county line and seeded a stubborn storm through the 18Z hour. This cell was providing very little but after a few dosages of flares it began to respond well. We'll stick on this cell a little longer. Meanwhile, a strong storm in eastern Tom Green County is beginning to slide east into San Angelo. We may have to take a look at that shortly. First pilot continued seeding in Schleicher County while second pilot is now providing maintenance seeding in Irion County. The big storm east of San Angelo has popped off an outflow boundary and is now dissipating. However, the outflow boundary was providing some extensive cu so we may see storms fire up here. If so, first pilot will head that way. First pilot lost inflow on the storms in western Schleicher County so we will move towards the outflow boundary. Much of this convection was short lived and did not provide

much. However, one cell was seeded efficiently. First pilot was called back to base at 1935Z to recover at Ducote before the big storm hit. Second pilot should be OK for now as storm is projected to move north of SJT. Second pilot will head back into eastern Irion County and begin seeding the large cell once again. Much of the small cells surrounding the large system just simply lacked inflow. The large system over eastern Irion County grew strong and severe. Pilot seeded it a bit more but came across extremely severe turbulence. It was likely an outflow boundary popping off. We will RTB as this storm moves through and look at a relaunch when needed. Other convection was very shallow and short lived. Also, pilot simply needed back on the ground to regroup. While allowing the dust to settle, a few storms in Reagan County developed as well as other in eastern Sterling County. As this storm passes over SJT, we'll get ready to launch again on those two areas if still needed. At 2115Z, showers/storms were still widespread, especially over Reagan, eastern Crockett and parts of Schleicher and Sutton counties. Much of the convective development is no longer intense. However, the large warned system has dissipated and opened a window for relaunch. Aircraft will head due south towards Sutton County but with the option to head east or west if needed, depending on the radar trends at launch. We continued south towards Sutton County where convection was best. Over in Crockett and Reagan Counties, all convection was heavily embedded with overcast conditions. We still had some clearing in Sutton County, so we should be able to get some work done here, however, cloud coverage was increasing area wide. Storm #2318 was seeded in Sutton County from west to east and back west again into the 22Z hour. Initial response did not look good, but several minutes after seeding storm began to respond well and appeared to enhance dbz/rainfall along I-10. Latest radar scans after 2210Z showed the storms becoming heavily embedded. Bases were falling on the pilot and visibility was becoming an issue as storms were being wrapped with virga. We'll get ahead and RTB and get the aircraft re-flared for possibly another busy day tomorrow.

WATCHES/WARNINGS:

T-Storm Warning - Irion

SEEDED CELL ID'S:

1486	NA1	1573	1604	1517	1815	1856	1889	2318			
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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
1745	49P	In Air	
1756	49P	308° @ 13 nm	Tom Green
1758	49P	303° @ 12 nm	Tom Green
1808	49P	249° @ 09 nm	Tom Green
1812	49P	243° @ 10 nm	Tom Green
1824	49P	231° @ 27 nm	Irion
1827	49P	231° @ 31 nm	Irion
1827	49P	231° @ 31 nm	Irion
1828	49P	232° @ 31 nm	Irion
1830	49P	232° @ 32 nm	Irion
1831	49P	230° @ 32 nm	Crockett
1834	49P	229° @ 32 nm	Crockett
1834	49P	229° @ 32 nm	Crockett
1846	49P	209° @ 37 nm	Schleicher
1846	49P	208° @ 38 nm	Schleicher
1850	24P	In Air	
1856	49P	206° @ 37 nm	Schleicher
1902	49P	204° @ 34 nm	Schleicher
1903	49P	203° @ 35 nm	Schleicher
1905	49P	203° @ 36 nm	Schleicher

1906	24P	238° @ 16 nm	Irion
1907	49P	209° @ 37 nm	Schleicher
1907	24P	233° @ 16 nm	Irion
1913	24P	214° @ 19 nm	Irion
1914	24P	215° @ 22 nm	Irion
1926	49P	173° @ 17 nm	Schleicher
1926	24P	233° @ 38 nm	Crockett
1927	49P	165° @ 16 nm	Schleicher
1928	24P	232° @ 37 nm	Crockett
1929	24P	228° @ 39 nm	Crockett
1931	49P	170° @ 56 nm	Schleicher
1931	24P	219° @ 40 nm	Crockett
1932	49P	171° @ 16 nm	Schleicher
1935	49P	RTB	
2130	24P	In Air	
2159	24P	186° @ 45 nm	Sutton
2200	24P	186° @ 45 nm	Sutton
2201	24P	181° @ 45 nm	Sutton
2202	24P	177° @ 43 nm	Sutton
2204	24P	172° @ 44 nm	Sutton
2205	24P	171° @ 45 nm	Sutton
2207	24P	167° @ 44 nm	Sutton
2207	24P	172° @ 43 nm	Sutton
2211	24P	177° @ 41 nm	Sutton
2220	24P	RTB	

Seeding operations were conducted over Tom Green (8), Irion (26), Crockett (14+1H), Schleicher (22) and Sutton (22) Counties. 92 flares plus 1 hygroscopic flare were burned within 8 clouds. This is the 1st day for seeding in September and the 21st day for seeding during the season.