

WEST TEXAS WEATHER MODIFICATION ASSOCIATION - SAN ANGELO, TEXAS

SEEDING REPORT - July 17, 2017

SYNOPTIC/MESOSCALE CONDITIONS:

Upper level ridging aloft to our west will put West Texas under northerly flow aloft. This will advect cooler air into our upper levels this afternoon and evening enhancing instability. Meanwhile, at the surface, a warm and moist airmass will take over across the southern edge of the WTWMA target area. This will be the focal point for shower and storm activity today and tomorrow as the upper level pattern changes very little. Both the HRRR and WRF develop storms across Schleicher, Sutton, and Crockett Counties this afternoon. Isolated showers are expected by 1PM with more widespread development by 3 or 4PM.

LIFTING MECHANISM:

Sufficient Surface Heating

THERMODYNAMIC INDICES (12Z KMAF)

| | | | |
|-----------------------------|-------|----------------------|-------|
| Freezing Level (m) | 4776 | CAPE (J/Kg) | 579 |
| Precipitable Water (inches) | 1.51 | CINH (J/Kg) | 79 |
| LCL | 1519 | LI(°C) | -1.9 |
| CCL | 2562 | PB | 2 |
| MAF ICA | -2.96 | DRT ICA | -6.68 |
| Cloud Base (meters) | 2289 | Cloud Base Temp (°C) | 17.8 |
| Warm Cloud Depth (meters) | 2484 | | |

DISCUSSION:

FROM 18Z TO 1830Z, A FEW SHORT-LIVED SHOWERS HAVE DEVELOPED ACROSS CROCKETT, SCHLEICHER, AND SUTTON COUNTIES. RIGHT NOW, THESE SHOWERS ARE LASTING ANYWHERE FORM 10-15 MINUTES. ONLY PILOT FOR THE DAY WAS PUT ON STANDBY AT 18Z AND WE'LL LAUNCH AS SOON AS WE SEE SOME CONSISTENCY WITH DEVELOPMENT. PILOT WAS CALLED AT 1845 TO LAUNCH AS SOME SHOWERS WERE SHOWING SOME CONSISTENCY. ALTHOUGH ACTIVITY IS STILL MARGINAL, GETTING UP EARLY SHOULD PROVIDE US TIME TO GET TO WHERE THE BEST CONDITIONS WILL BE BEFORE STORMS DEVELOP. WE HEADED DUE SOUTH TO SUTTON COUNTY WHERE STORMS WERE MOST CONSISTENT. WE DID THIS DESPITE OTHER DEVELOPMENT NEAR CHRISTOVAL, BUT THE ATMOSPHERE CONDITIONS WERE BEST THE FURTHER SOUTH YOU WENT. WE'LL HANG AROUND SUTTON COUNTY UNTIL STORMS EITHER MOVE US INTO CROCKETT COUNTY OR NO LONGER PROVIDE SUFFICIENT INFLOW. PILOT DID SAY THAT STORMS WERE VERY HARD TO WORK WITH MUCH OF THE BASE EMBEDDED IN VIRGA/LIGHT RAIN. WE'LL TRY TO FIND THE SWEET SPOTS AND GO FROM THERE. FIRST CELL IN SUTTON COUNTY DID NOT PROVIDE MUCH, BUT THE SECOND CELL HAD MUCH MORE INFLOW AND BETTER BASES. WE SEEDED THIS STORM EFFICIENTLY THROUGH THE 19Z HOUR. HOWEVER, BY 20Z, WE RAN OUT OF AREA TO SEED AS THE STORM BECAME EMBEDDED ONCE AGAIN BY VIRGA/LIGHT RAIN. WE'LL NOW HEAD NORTH INTO NORTHERN SCHLEICHER COUNTY WHERE STORMS WERE ONGOING AND HAD JUST PUSHED OFF AN OUTFLOW BOUNDARY. MEANWHILE, STORM TO THE SOUTH THAT WAS SEEDED IN SUTTON COUNTY, DID APPEAR TO SHOW A RESPOSE TO OUR EFFORTS. ALTHOUGH CONDITIONS ARE NOT GREAT, IT'S GOOD TO SEE AN IMPACT, NO MATTER HOW SMALL. STORM IN NORTHERN SCHLEICHER COUNTY WAS HEAVILY SEEDED ON THE EAST SIDE. THE WESTERN EDGE OF THE STORM QUICKLY FELL APART, BUT OUR SEEDING EFFORTS ALLOWED FOR THE EASTERN HALF OF THE CELL TO BECOME MUCH LARGER IN AREA AND PRODUCE WHAT APPEARED TO BE GREAT PRECIPITATION. CONVECTION IN SUTTON COUNTY AS OF 2045Z WAS TOO EMBEDDED TO SEED, WHILE ISOLATED CELLS IN IRION/REAGAN COUNTIES WERE VERY SMALL AND TOO SHORT LIVED. ONCE THIS CELL WAS SEEDED EFFICIENTLY, WE MOVED OFF DUE TO A STRONG OUTFLOW BOUNDARY. WE'LL HEAD FURTHER EAST TOWARDS A CELL THAT IS MOVING IN FROM MENARD COUNTY. IT, HOWEVER, WAS ALREADY DISSIPATING. WE'LL TAKE A QUICK LOOK BUT IT SEEMS THE ATMOSPHERE HAS PROVIDED

ALL IT COULD OFFER. WE DID FIND A BATCH OF INFLOW BUT IT DIDN'T DO MUCH AS THE OUTFLOW STORMS BECAME EMBEDDED IN THE LARGER SYSTEM. AT THIS POINT, ALL SEEDABLE CONVECTION WAS SEEDED AND EVERYTHING ELSE WAS HEAVILY EMBEDDED SOUTH OF HIGHWAY 67. WE DO HAVE ISOALTED SHOWERS/STORMS NEAR WATER VALLEY AND BIG LAKE, BUT THE ATMOSPHERE WILL NOT SUSTAIN THESE FOR TOO LONG. WE'LL HEAD TOWARDS HOME BUT KEEP AN EYE ON THESE AS WE DO SO. PILOT DID INDEED HEAD HOME AS THOSE CELLS DID NOT LAST LONG AT ALL. WE'LL REGROUP AND DO A SECOND LAUNCH IF NEEDED, BUT RIGHT NOW HOW EMBEDDED THE SHOWERS ARE WILL MAKE IT UNLIKELY TO LAUNCH AGAIN.

WATCHES/WARNINGS:

N/A

SEEDED CELL ID'S:

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|----|-----|-----|-----|--|--|--|--|--|--|
| 98 | 261 | 265 | 240 | | | | | | |
|----|-----|-----|-----|--|--|--|--|--|--|

FLIGHT INFORMATION:

| TIME (Z) | Plane | Flare Location | County |
|----------|-------|----------------|------------|
| 1915 | 09P | IN AIR | |
| 1944 | 09P | 185° @ 50 nm | SUTTON |
| 1945 | 09P | 186° @ 51 nm | SUTTON |
| 1946 | 09P | 186° @ 51 nm | SUTTON |
| 1951 | 09P | 186° @ 58 nm | SUTTON |
| 1955 | 09P | 188° @ 64 nm | SUTTON |
| 1956 | 09P | 189° @ 65 nm | SUTTON |
| 1958 | 09P | 189° @ 66 nm | SUTTON |
| 2000 | 09P | 189° @ 66 nm | SUTTON |
| 2031 | 09P | 217° @ 32 nm | SCHLEICHER |
| 2034 | 09P | 213° @ 34 nm | SCHLEICHER |
| 2036 | 09P | 209° @ 34 nm | SCHLEICHER |
| 2037 | 09P | 206° @ 33 nm | SCHLEICHER |
| 2040 | 09P | 204° @ 34 nm | SCHLEICHER |
| 2041 | 09P | 207° @ 34 nm | SCHLEICHER |
| 2044 | 09P | 208° @ 37 nm | SCHLEICHER |
| 2100 | 09P | 159° @ 28 nm | SCHLEICHER |
| 2110 | 09P | RTB | |

Seeding operations were conducted Sutton (16) and Schleicher (16+1H) Counties. 32 flares plus 1 hygroscopic flare was burned within 3 clouds. This is the 5th day for seeding in July and the 15th day for seeding during the season.