

## **Southwest Texas Rain Enhancement Association**

### **Flight Activity Report**

**June 2, 2010**

#### **Synoptic conditions:**

A mid to upper level trough was located over west Texas. A disturbance move across the base of the trough, across northern Mexico, and by the evening hours, moved into south Texas. This disturbance combined with good moisture profiles and good instability gave rise to a couple of MCS's over south Texas.

#### **Mesoscale Discussion:**

An MCS was moving south from west Texas during the afternoon hours. As well, over the Mexican mountains, another area of thunderstorms was moving out of Mexico towards the Rio Grande. As these thunderstorms moved into the target area, they began to form an MCS as it moved into Webb and Dimmit counties. A flight was launched on this convection as it was just moving into Texas. Seeding occurred along the MCS as it moved further into the southwestern target area. Hail suppression operations did start early in the flight as a warning was issued from the National Weather Service and vertical profiles indicated elevated high intensity cores that were located above the freezing level. Seeding operations extended into Zavala County as the MCS began to develop northward. The northern portion of the line did show signs of weakening as it moved midpoint through the county but this was due to an outflow boundary out running the convection. Soon after operations concluded, power was lost at the radar site, so seeding operations were unable to continue. The MCS that was to the north of the target area eventually merged with the MCS over the southern target to the east of the target area later in the evening.

#### **Operational Notes:**

Power was lost at the radar site around 0230Z.

#### **Warnings:**

Severe thunderstorm watch: Uvalde, Dimmit and Zavala → 20Z-03Z

Severe thunderstorms watch: Webb and LaSalle → 01Z-08Z

Severe thunderstorm warning: NW Webb → 0030Z-0115Z

Dimmit and Zavala: 0030Z – 0130Z

Flash flood warning: W Webb → 0045Z- 0445Z

**First flight – 622X**

48(40g) Flares → 1040g AgI Rain Enhancement and Hail Suppression  
 11(80g) Flares → 880g AgI Rain Enhancement and Hail Suppression  
 1(1000g) Flare → 1000g CaCl Rain Enhancement

<b>Flare (# of flares)</b>	<b>Time (Z)</b>	<b>Radial and Distance</b>	<b>Track number</b>	<b>County</b>	<b>Inflow (ft/min)</b>
1-2	2339	256@56	38/717	MV	600
3-4	2341	256@57	28/717	MV	500
5-6	2349	259@44	38/739	MV	1000
7-8	2350	261@65	38/739	MV	700
9-10	2351	265@49	38/739	MV	700-900
11-12	2353	262@48	38/739	MV	800-900
13	2356	258@46	38/754	DM	700-800
14-15	2358	253@43	38/776	DM	1000
16-17	0000	248@41	38/776	DM	1000
18	0001	245@39	38/776	DM	700
19	0004	240@39	38/777	DM	700
20-21	0010	225@40	728/826	WB	800
22-23	0011	224@39	728/826	WB	700-800
Hygro-1	0012	224@39	728/826	WB	700
24-25	0016	220@36	78/862	WB	1200
26-27	0021	209@33	78/862	WB	600
28-29	0027	212@40	78/862	WB	500
30-31*	0040	222@27	38/910	WB	1000
32-33* (80g)	0041	227@26	38/910	WB	1200
24-37* (80g)	0042	229@24	38/910	WB	1500
38-39*	0045	243@20	38/910	WB	1200-1500
41-42*(80g)	0048	261@19	38/931	WB	1500
43-46*(80g)	0050	267@19	38/931	DM	1500
47-48*	0109	298@39	38/973	ZV	1500
49-52*	0109	296@39	38/973	ZV	1500
53-59*	0112	291@38	38/973	ZV	500