

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - PLEASANTON, TEXAS

SEEDING REPORT - AUGUST 12, 2009

SYNOPTIC/MESOSCALE CONDITIONS:

500mb trough over eastern U.S. with shortwave moving southward across Texas on west side of trough; 500mb high centered near Four Corners area with ridging southwestern quarter of U.S., both features promoting northerly flow aloft over Texas; quasi-stationary frontal boundary draped across east Texas; moisture convergence along axis from San Angelo to Austin to Galveston; PW values from 1.78" at CRP to 1.54" at DRT, but higher values near 2.00" northern target area; moderate to strong instability, with LI's to -7 and CAPE values in excess of 2500 J/kg; seabreeze moving inland; outflow boundary moving southward across target area.

LIFTING MECHANISM:

Intense surface heating; subtle lift from shortwave; convergence along seabreeze boundary; convergence along outflow boundary; enhanced convergence from seabreeze/outflow collision.

DISCUSSION:

An axis of convergence and enhanced moisture was positioned in a northwest to southeast fashion from west-central Texas to the upper Texas coast. A shortwave was moving south across the state and helped increase lift in addition to intense heating and frontal convergence north of the target area. Scattered showers and thunderstorms developed over the Hill Country early in the afternoon, increasing in size and number as it moved southeast into the northern target area. A flight was dispatched to the northern target area where initial investigation showed "mushy-looking clouds". Further south, near Medina Lake, the developing clouds looked better and seeding commenced. The plane continued to seed convection in eastern Medina and southwestern Bexar counties as the activity developed/moved south and southeast. A prominent outflow boundary pushed south through Bexar and Wilson counties with some additional development along it. Later in the afternoon, the seabreeze boundary ignited convective development over Bee County and this was also seeded as it moved slowly west into Live Oak County. Early in the evening, the outflow boundary and associated convection collided with the inbound seabreeze front and its convection, with rapid development of thunderstorms over the central and eastern target area, some of which was seeded.

WATCHES/WARNINGS/LIMITATIONS:

Flood Advisory - Bexar Co.: 2357-0200 UTC.

The pyrotechnics were 40g AgI flares and 1000g CaCl flares. 36 AgI flares were burned in Medina (11), Bexar (10), Wilson (4), Bee (6) and Karnes (5) counties, totaling 1440g of AgI. One hygroscopic (CaCl) flare was burned in Wilson County, totaling 1000g of CaCl.