January 11 Wind and Wildfire



Peak Surface Winds, January 11, 2018

Howling Winds Cause Minor Damage

Dry Front, More Common to a La Niña Winter, Blows Across South Texas

Summary

A blast of very dry air, fed by strong northwest flow at all levels of the atmosphere that originated from the Pacific, rather than the North Pole, surged through the southern Rockies and Sierra Madre Oriental on its way to south Texas and the Rio Grande Valley on January 11th, 2018. Downslope flow during the afternoon of the 11th pushed temperatures well into the 80s, but dropped humidity into the teens as northwest winds picked up to 15 to 25 mph, on average.

The true front arrived by mid to late afternoon across the Rio Grande Plains and South Texas Brush Country ranchlands, then surged into the Rio Grande Valley from sunset through 11 PM. Very strong winds, as high as 60 mph just above the surface, slammed into the region, creating scattered power outages, a number of grass fires, and localized wind damage to trees, power poles, and some roofs. Downed power lines caused numerous small grass fires between Edinburg and Mission, with additional small trees/limbs down in Combes (near Harlingen). At Brownsville/South Padre Island International Airport, a blown down line sparked a small wildfire just down the road from the NWS office. Sustained winds of 25 to 35 mph with frequent gusts ranging from 40 to nearly 55 mph lasted for about three hours in most inland locations, but up to nine hours along the Lower Texas coast, where the moderate gale persisted well into the night of the 11th and into the pre-dawn hours of the 12th.

Preliminary power outage statistics across the Valley suggested between 3,000 and 5,000 customers lost power during the peak of the gusts, based on preliminary reports from local power providers.

Winds gradually diminished overnight on the 11th inland, but gusty winds over 20+ mph on the 12th combined with low humidity (but fortunately lower temperatures) to maintain fire spread danger, but also cause additional and rapid curing of grass and brush (fuels) that had begun following the several day minor freeze (<u>January 1-4</u>, <u>2018</u>).



Damage in Zapata (City) at approximately 5 to 515 PM January 11, 2018, from estimated winds (exposed areas) of 40 to 50 mph. Photo credit: Zapata County Emergency Management.



After five individual cold outbreaks from early December through January 5, a "dry" (but still chilly, though with plenty of sunshine) front surged through south Texas on January 11th. Polar (sub-zero) air remained locked across the northern Plains and Upper Midwest, but the Pacific-sourced air came with strong atmospheric winds, which mixed to the surface and created some of the strongest, and longest, gusts from such a situation since <u>Christmas Eve, 2009</u>.