



Sharp Change Brings Holiday Spirit to RGV by Dec. 18th

# Largest One-Day Temperature/ "Feels-Like" Temperature Difference since March 2 to 3, 2014, Turns Summer to Winter in a Hurry

## First Freeze Touches Ranchlands; Cures Grasses

#### Overview

It had been nearly three years. But after a "teaser" event between December 7 and 8, where "feels like" temperatures fell nearly 40°F (and actual temperatures fell nearly 30°F) in portions of the Rio Grande Valley, the last full shopping weekend of the 2016 Christmas season saw a day-today change that was the largest since March 2-3, 2014. By 2 PM on March 3, 2014, air temperature had fallen more than 50°F in some areas; combined with the wind, it felt up to 60 degrees colder! The change from December 17 to 18, 2016, rivaled closely that of March 2-3, 2014, with actual temperatures between afternoons having fallen by 40 to nearly 50°F, and feels-like temperatures between 55 and 60°F in some locations. Unlike the March 2014 case, which was the seventh of an unusual "roller-coaster" cool season that began with sharp drops in November, only the December 7-8 case preceded the sharp temperature dive and change of seasons from summer to winter in just a day. Many Valley residents were not acclimated – yet – to such a rapid change and the potential health risks that come without proper protection and shelter.

#### December 19: Coldest "Feeling" Day Since January 10, 2015

The chilly air came drier than some fronts, as dewpoints – a measure of surface moisture – plunged into the teens and lower 20s in all areas. The dry air allowed cloud bases to lift close to 5,000 feet Sunday afternoon (Dec. 18<sup>th</sup>), which in some areas stopped the temperature slide and actually allowed for a brief rise back toward 50 (McAllen). That was not the case for the Brownsville/Harlingen area, where stiff northwest winds and slightly lower cloud bases locked temperatures in the lower and mid 40s for the balance of the 18<sup>th</sup>. With nightfall, temperatures oozed slowly toward 40°F by midnight, and resumed a gradual fall through daybreak and until around 10 AM. Enough cold air remained across the South Texas Brush Country to slide temperatures below freezing from northern Zapata through central Kenedy County for at least 2 hours in some spots (Hebbronville, for one). For the ranchlands, it was the first freeze since early February, 2016 – generally, par for the course. In nearly all areas, the wind chill, or "feels like" temperature, dipped into the 20s for one to three hours – during the morning commute and school bus ride.

### Reasons for the Season-al Cold

There was nothing unusual about the situation that setup the cold blast: A polar-sourced high pressure drove southward out of western Canada and "nosed" along the Lee of the Sierra Madre, punching chilly air well south into Mexico. Alas, the blast was only temporary; a return to southerly flow arrived in the form of a soupy warm front by late week – and after the ground "sweated" and dense fog setup for three days in a row with air temperatures and dew points surging above 70° over the still cold ground – the Christmas weekend 2016 returned to a flavor very similar to that in 2015 – warm, breezy and humid, with temperatures nearly 20°F above average

