

## Rio Grande Relief, Late September 2017

Falcon Reservoir: 52.7% full as of 2017-11-03

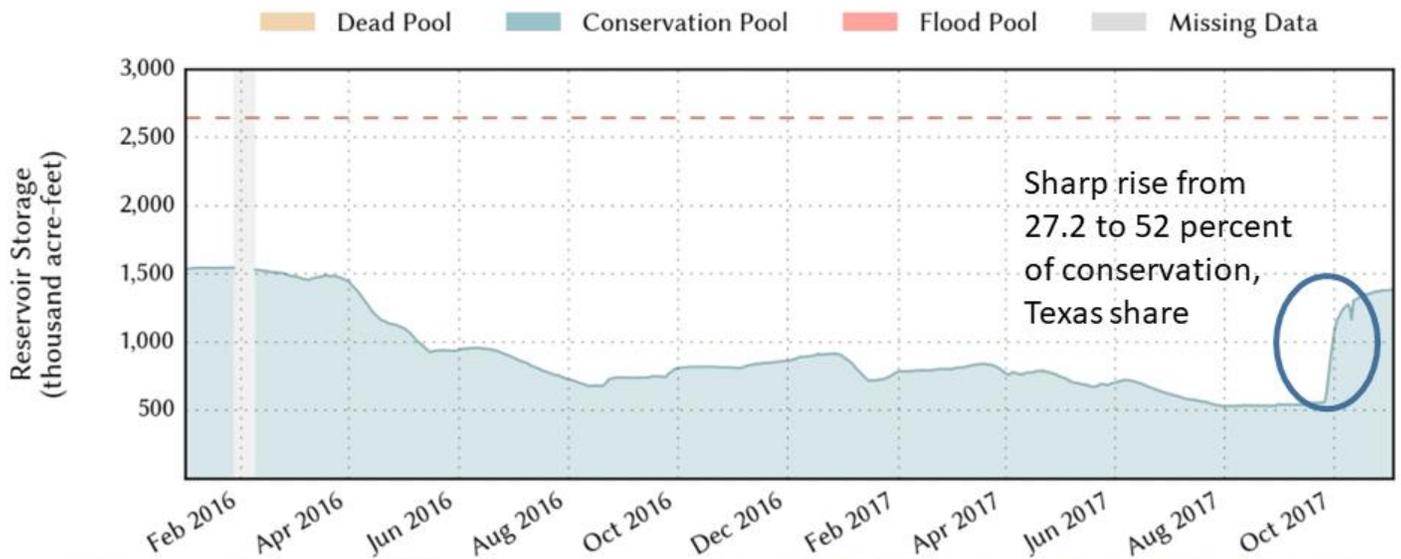


Figure 1. Sharp rises of water levels in Falcon Reservoir at the end of September after between 15 and 20 inches (or more) of rain fell along the Rio Grande north of Laredo, and northwest of Falcon International Reservoir over the Rio Salado,

## Fortune Smiles on Falcon Reservoir

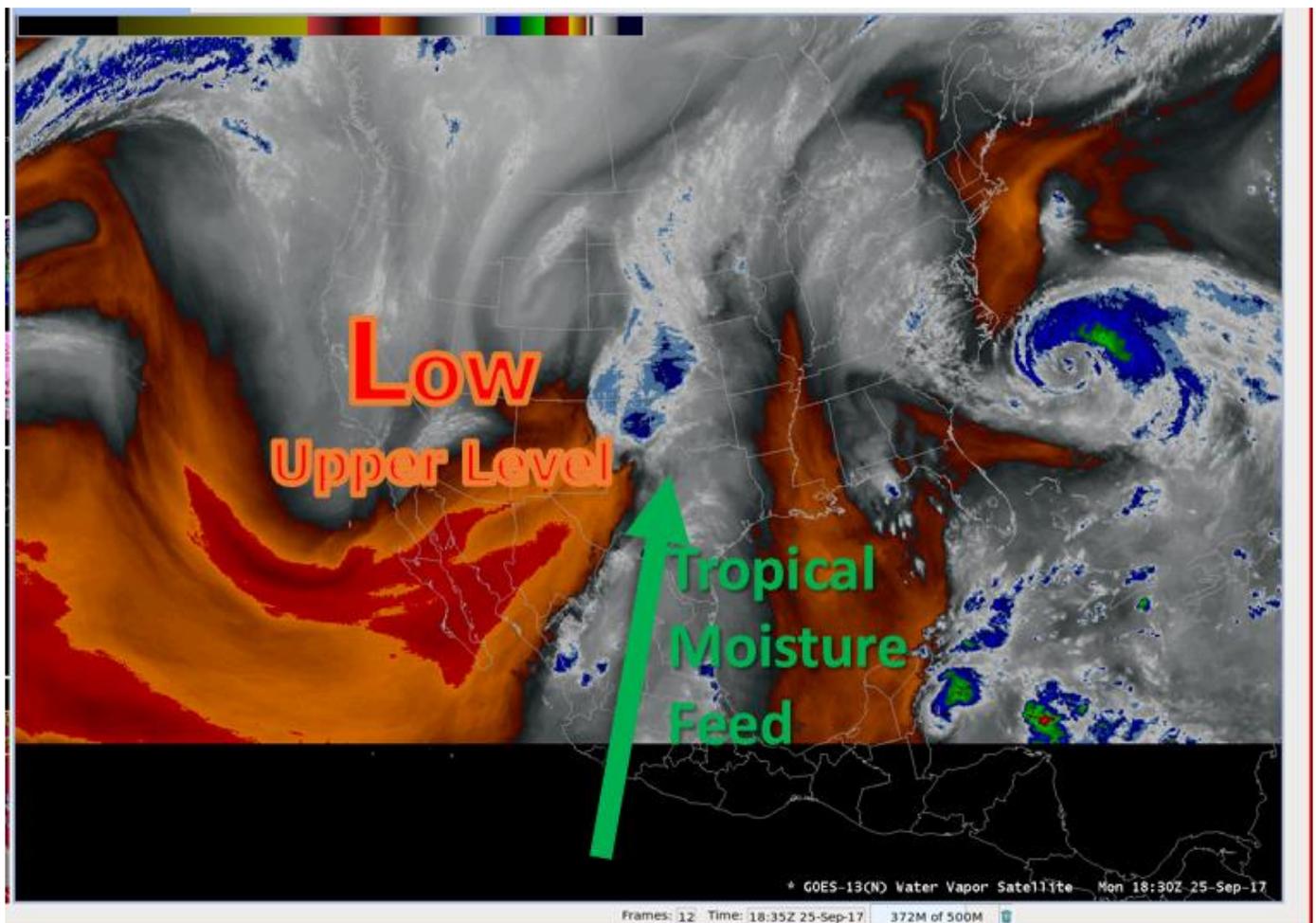
### Late September “Atmospheric River” Event Floods Rio Grande North of Valley but Provides Welcome Storage Water Just In Time

#### Overview

An atmospheric river of deep tropical moisture (below) that flowed from the eastern tropical Pacific Ocean through Mexico, combined with the remnants of Tropical Storm Pilar to enhance rainfall along the Rio Grande from northern Zapata County through Webb County from late on September 25<sup>th</sup> and again on September 26<sup>th</sup>. Additional heavy rains fell over the Rio Grande Basin in northern Nuevo Leon and extreme eastern Coahuila State (Mexico) on the 27<sup>th</sup>. A fairly widespread zone of 10 to 15 inches of rain fell along the Rio Grande in Webb County through the period, with a pocket of 8 to 10 inches along the Rio Salado west and northwest of Falcon International Reservoir during the late evening/overnight of September 25 and 26. The efficient, tropically-infused rainfall quickly flowed into the Rio Grande in Webb County, and would lead to very rapid rises and a “flood wave” along the river, with high-end moderate flooding near and in Laredo. On September 28, the peak stages of 26.94 feet at Columbia Bridge ranked #4 all time, the highest since June 16, 2013; at Laredo, the 22.70 feet ranked #11 all time, the highest since the [Alex-remnant major flood of July 2010](#).

Downstream, the river flooding continued in a small stretch of Zapata County, where water levels were comparable but a little less than those last seen during the Alex-remnant floods of July 2010 (left photo on first page). The high waters damaged U.S. Border Patrol equipment, including at least one generator, two light poles and one or two submerged vehicles. However, higher ground in San Ygnacio proper was not impacted (and was not impacted in 2010, either).

The total rainfall for the month along the river and over the foothills of the Sierra Madre Oriental, across the Rio Salado down to locations just east of Monterrey (Nuevo Leon) was dominated by the events of September 25-27, and water flows in both the Rio Grande and Rio Salado emptied into Falcon Reservoir, more than doubling reservoir storage in just a week (from ~550 thousand acre-feet to more than 1.1 million acre-feet)! The fortunate – one might say serendipitous – rains provided welcome water into Falcon, which could have faced significant shortages in what is a confident forecast of a [warmer and drier than average late autumn 2017](#) through spring 2018. Such shortages may have required irrigation rationing, and while smart irrigation and conservation is always a reality for the Rio Grande Valley's agricultural economy, having the additional storage removes worries – temporarily – for growers and municipalities should they need to draw from Falcon in early 2018.

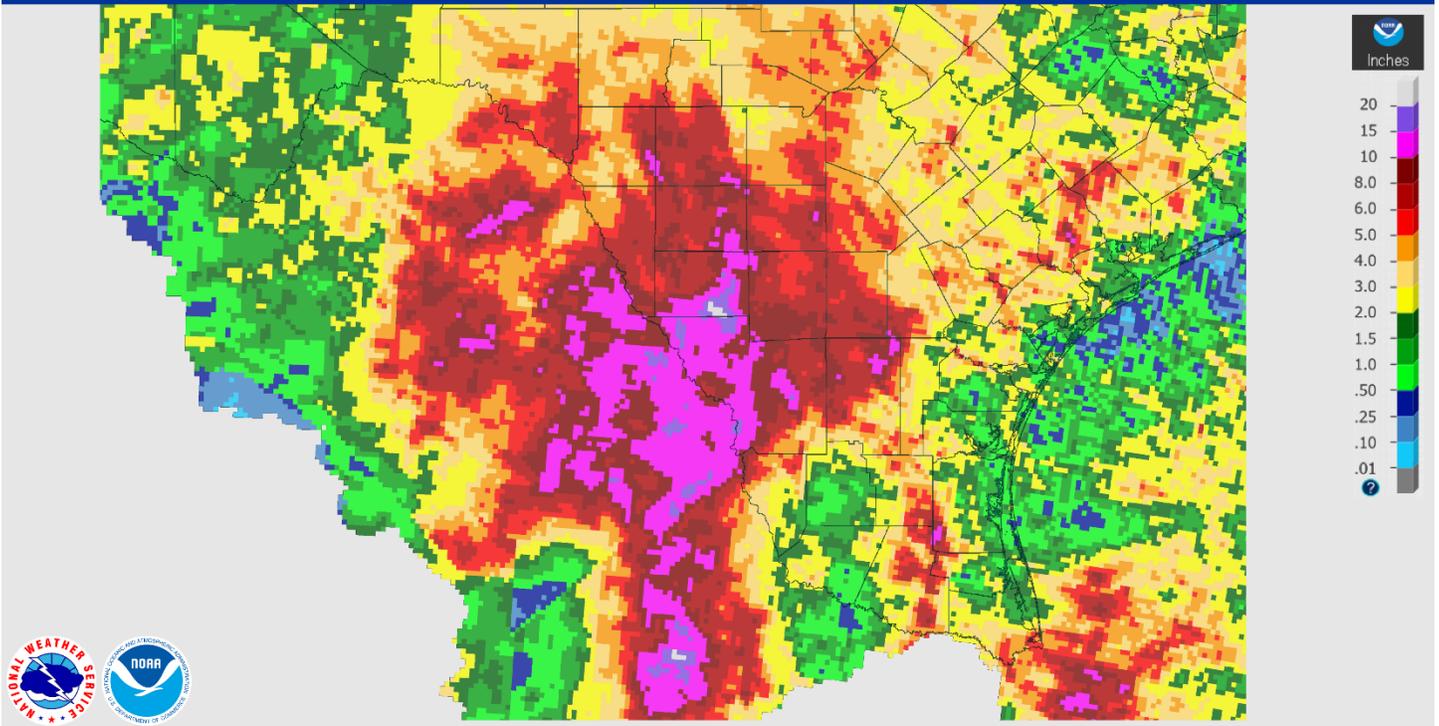


Atmospheric river pattern of deep tropical moisture flowing northward through the Sierra Madre into the Rio Grande Basin and into central Texas ahead of an upper level disturbance across the Great Basin region of the U.S.; September 25, 2017. The upper disturbance provided additional lift of moisture into rain, and the remnant of eastern Pacific Tropical Storm Pilar provided a moisture efficiency boost.

## September 01, 2017 Monthly Observed Precipitation

Created on: November 03, 2017 - 16:56 UTC

Valid on: October 01, 2017 12:00 UTC



Widespread 10 to 15 inches of rain fell in September across the Rio Grande and the basin that feeds it (tributaries in Texas and from the Sierra Madre), with pockets of 15 to 20 inches (and a few spots with more than 20 inches). Most of this water flowed into the river or tributaries that eventually empty into Falcon International Reservoir.



Terrain imagery and pointers showing where along the Rio Grande and Rio Salado photos were taken on September 28, 2017, the day of peak flooding along the Rio Grande and tributaries. Note the Rio Salado (bottom) bends south before heading north and emptying into Falcon Reservoir. Both flows contributed to more than doubling the storage (Texas share) in Falcon by the end of the month.