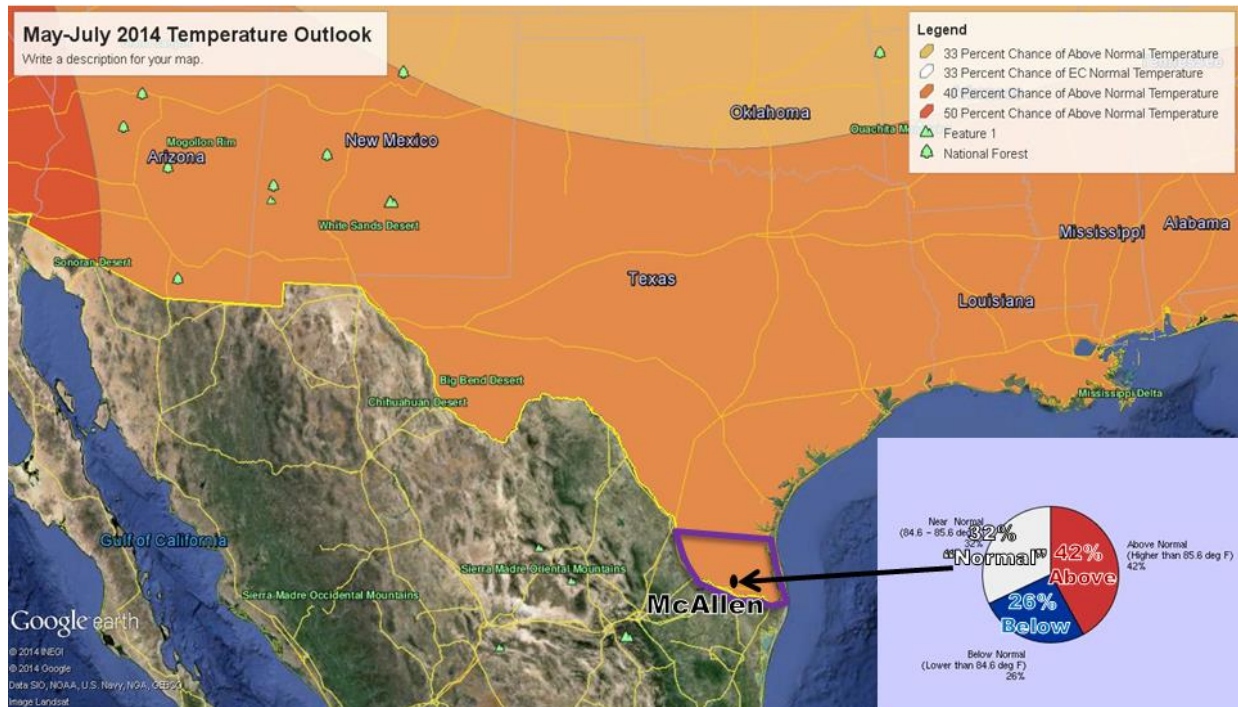


May to July 2014 Quicklook



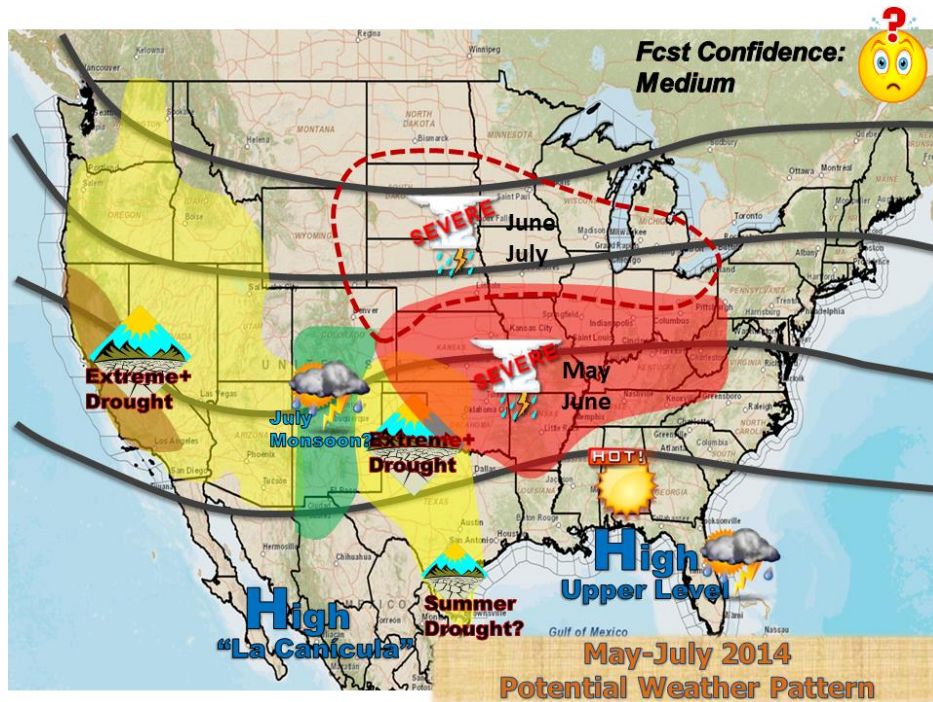
Average High: ~92° Lower Valley, 95° Mid Valley, 97° Upper Valley
Average Low: ~75° Lower Valley, 73° Mid/Upper Valley
Average All: 83-85°

Hotter than H-E-Double Hockey Sticks?

Confidence Beginning to Increase for Blazing Early Summer 2014 in the RGV

A developing pattern of hotter than average temperatures and below average rainfall during the last ten days of April 2014 appeared to be a harbinger of weather to come for the end of meteorological spring (May) on into the heart of meteorological summer (June-July). Seasonal model consensus, along with analogues with [rapidly developing El Niño conditions](#) across the east central tropical Pacific, increased confidence in the expectation of a hot and 'leaning' dry late spring through mid-summer. This could mean long strings of 100+°F afternoon temperatures for the Mid Valley (Hidalgo County), and near 100°F temperatures along the U.S. 77 corridor in Cameron and Willacy County from late June through July, along with limited sea breeze thunderstorm activity.

Prior to the arrival of persistent summer heat, May looks to pick up where April left off: Slightly above normal temperatures (lower 90s afternoon, lower 70s daybreak) with a 'lean' toward below average rainfall. Back in March, we provided [two potential weather pattern scenarios](#) for the April-June period: one which would increase the chance for more frequent rain (provided by dangerous lightning and potentially damaging hail/wind storms, similar to 2012), and another that was hotter and drier. Trends during the last week of April 2014 suggested the hotter/drier pattern would prevail in May 2014 – though typically, there are at least one or two dangerous thunderstorms in May, even during such a pattern, as the atmosphere completes its transition to the summer pattern of broad upper level high pressure ridging across much of the southern U.S.

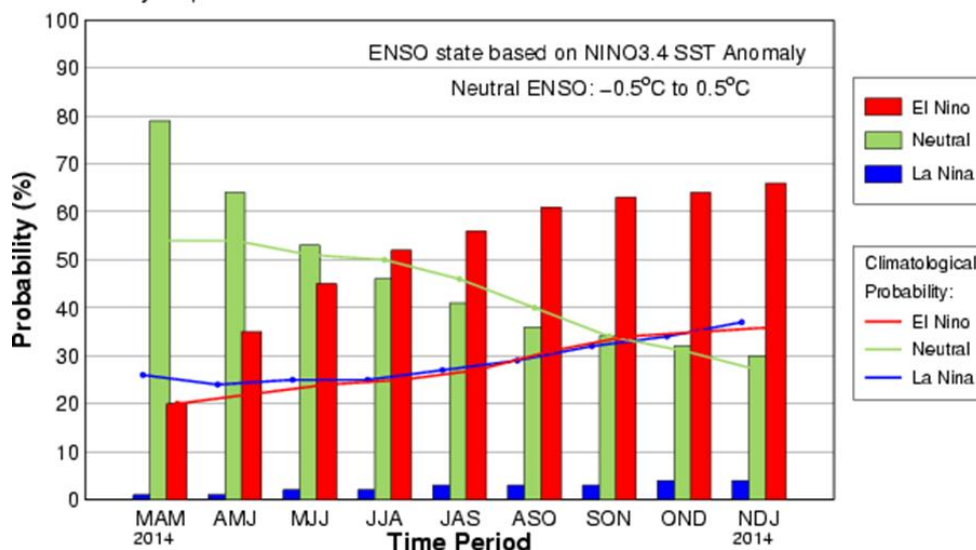


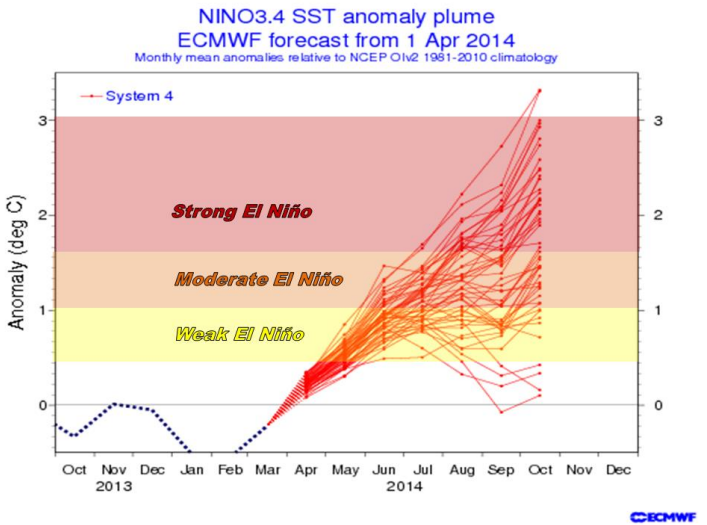
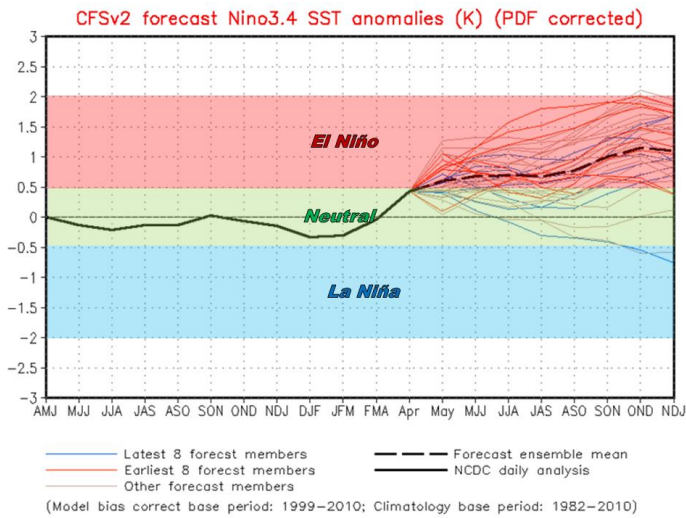
Though confidence had increased on the hotter and “lean” toward a dry spring and early summer, enough uncertainty in the pattern evolution still leaves the level of confidence at medium. Forecasters continued to be chastened in April 2014, as the persistence of the [positive Pacific-North American \(PNA\) teleconnection pattern](#) which refused to go quietly. As of this writing (April 25), April temperatures were below average across the nation’s midsection, stretching all the way to the Rio Grande Valley (1 to 2.5°F below). A hot period from April 25-28 may raise values toward average, but the rise may not be enough to end the string of below average months, which would reach six, dating back to November 2013.

The Coming El Niño

After a potential El Niño episode failed to launch in late 2012, an impressive surge of warming waters had reached the east central tropical Pacific in early April. This surge pushed equatorial upper temperature departures more than 1.5°C above average, with the ENSO 3.4 monthly index nearly 0.5°C above average (the edge of El Niño conditions) after many months flirting with 0.5°C *below* average! [Note: It requires three consecutive months of departures 0.5°C above (El Niño) or below (La Niña) average to be considered an episode]. A sustained push of very warm waters from the western tropical Pacific that began in January and February reached the International Date Line in March, and has since spread east toward 120W longitude (south of the southern California coast). Model forecasts (below and top of next page) are now consistently indicating a rapidly developing El Niño episode by July, if not sooner.

Early-Apr CPC/IRI Consensus Probabilistic ENSO Forecast



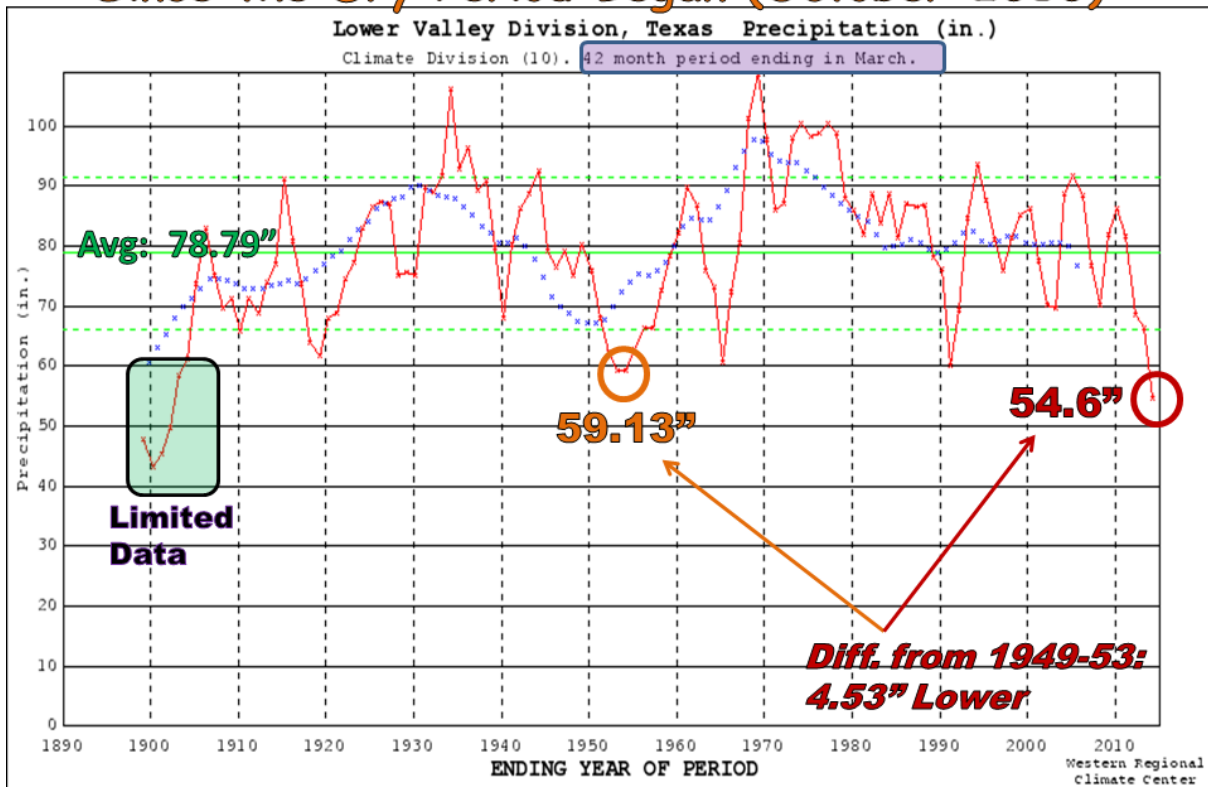


Above: Ensemble forecasts from the Climate Forecast System (Version 2), left, and European Centre for Medium Range Weather Forecasting (right) forecasts of anomalies in Niño region 3.4, generally between 170W and 120W longitude. Three month averages from each model suggest at least moderate El Niño conditions will develop by late summer or early autumn 2014.

What It Might Mean: Sooner...

Between May and July the transition to El Niño, combined with the potential for a recurring (though weaker) positive PNA, favors a gradual and perhaps briefly accelerating return to moderate or severe drought across the southern tip of Texas, beginning in the Rio Grande Plains/Ranchlands and spreading into the mid Valley, possibly reaching portions of the lower Valley. Lurking in the background of the recent rain relief from September 2013 through early March 2014 was a 42-month period of record dry conditions (below). The long term drought which recently ended would take little effort by a hot, dry spring and early summer to return in force.

Still A Record:
Since the Dry Period Began (October 2010)



Hot, dry weather in mid to late spring may require additional irrigation of crops even as deep soil moisture disappears under the increasingly strong sunshine. Of greater concern is the threat for rapid wildfire spread, should one occur if late season fronts provide breezy to windy, very dry conditions. The threat will be greatest across un-grazed/un-cut pastures and brush, particularly along/west of U.S. 281 from western Hidalgo and much of Brooks County into Jim Hogg, northern Starr, and Zapata County. We recommend all ranchers and ranch hands be [Firewise](#) through July!

For everyone else, the beach and pool will offer cooling relief as they typically do this time of year, but swimmers should remain alert for rip and longshore currents. The potential for even higher than normal heat index values means folks should take extra precautions when being outdoors for prolonged periods this summer. As always, [follow these safety tips](#), and remember to [check the back seat of your vehicle](#) for children and pets.

Could 2009 Repeat in 2014? Exact replicas of weather episodes are very rare, which makes the possibility of nearing or breaking the [incredible record hot July](#) (and [August](#)) of 2009 virtually impossible. However, there are some early indications that July 2014 could resemble July 2009 in some ways, in the form of a majority of century mark afternoon temperatures for areas west of U.S. Highway 77 and below average rainfall. Stay tuned!

...And Later

The prospect of a hot and dry 'leaning' late spring through mid-summer may bring back fears of water crises and local water emergencies that developed in early 2013, but a possible silver lining may await by autumn 2014 (September-November), and especially winter 2014/15 (December-February). If summer 2014 tracks with summer 2009, one can hope that autumn and especially winter that follows could do the same. [September 2009 brought rain relief](#) to the Lower Valley, and [December-February 2009/2010](#) ended in the top five wettest all-time, and among the top twenty-five coolest.