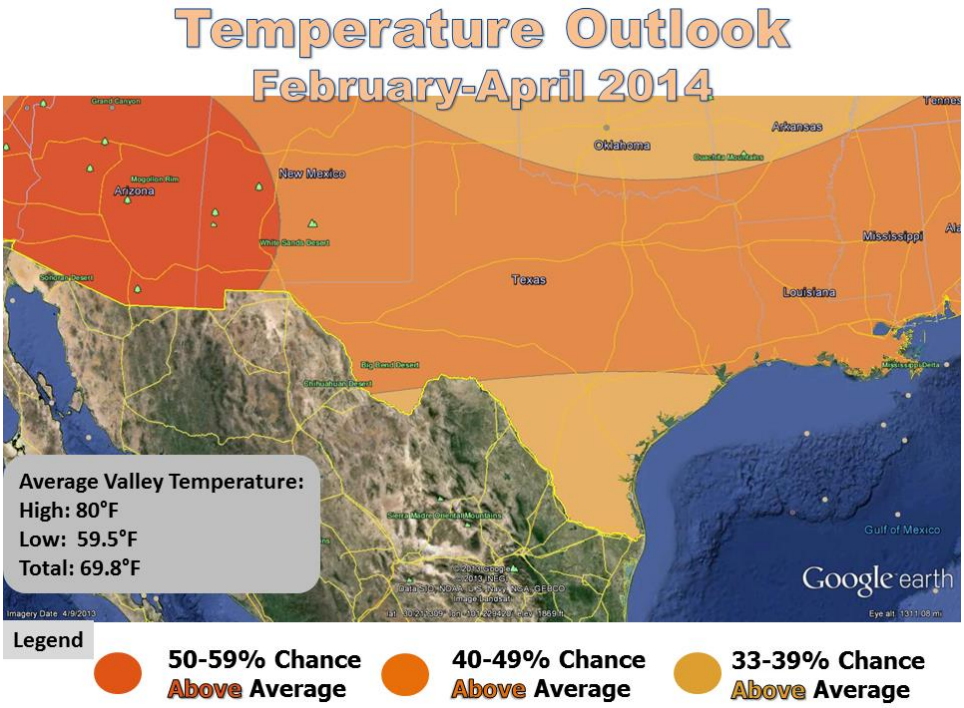
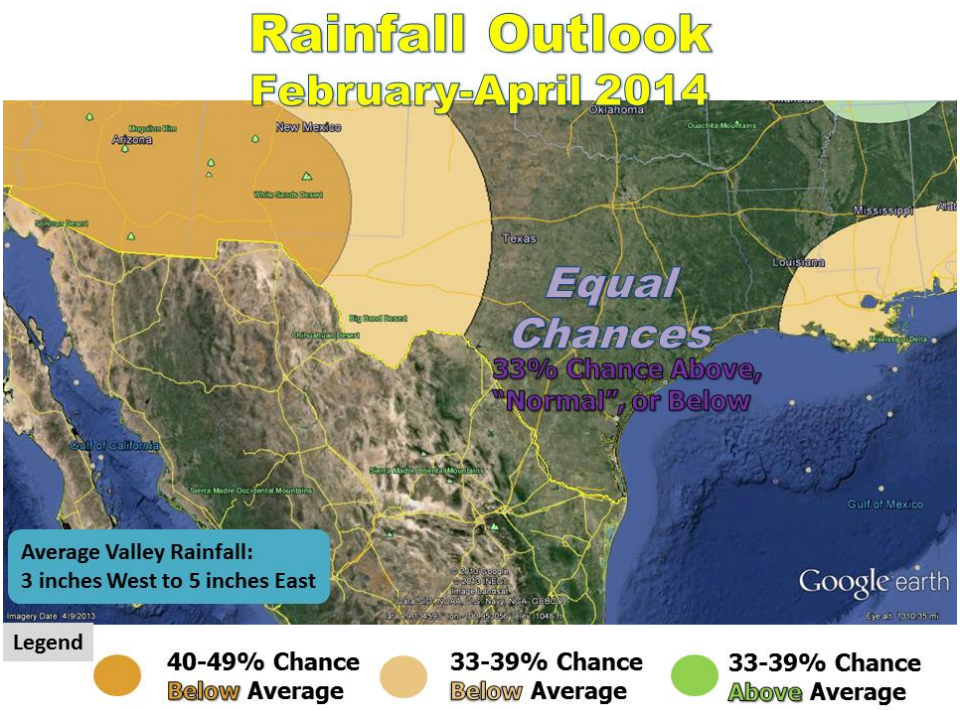
Early Spring 2014 Outlook

Warm and Dry?

Will Helpful Rains of November and December Be a Memory by April 2014?



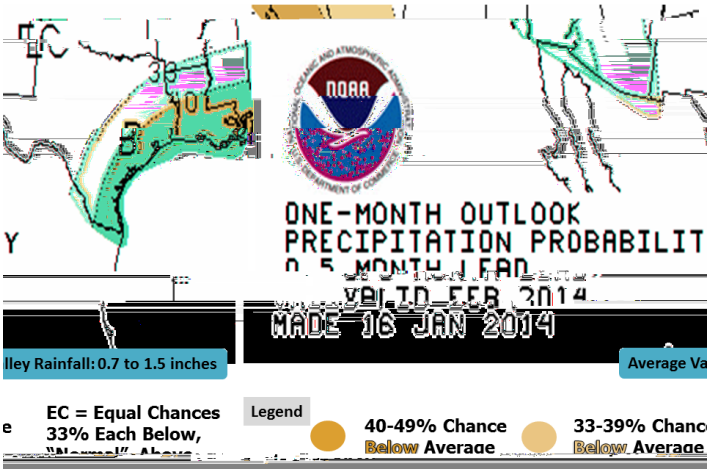


The important forecast for the Rio Grande Valley and South Texas Brush Country growing and livestock season (February through April) is in, and trends continue to favor a fourth consecutive warm and generally dry period. For most of the Lower Rio Grande Valley, February 2014 will likely begin with only pockets of "moderate" drought conditions and most of the area just slightly drier than normal. This starting point is a notable improvement; for some areas, including eastern Hidalgo and most of Cameron County, soil moisture hasn't been this "rich" at the start of the growing season since February 2010. Unfortunately, welcome rain

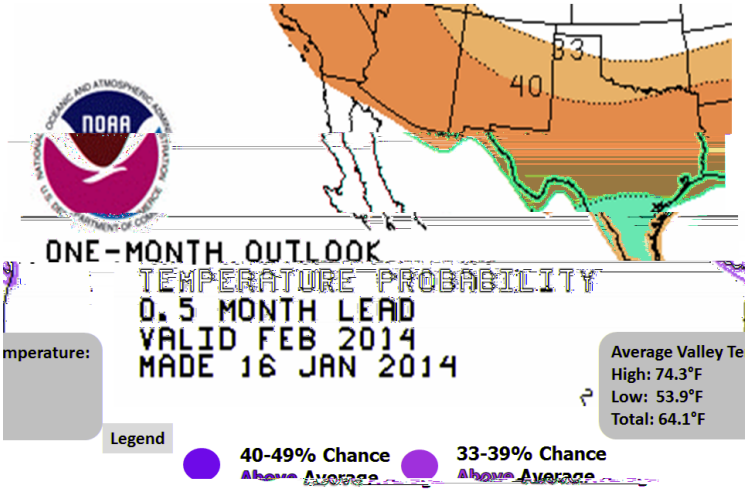
provided by favorable weather patterns from September through December 2013 may well be taken away by March 2014. Seasonal climate models and the development, at last, of an atmospheric pattern conducive to dry fronts and low daytime humidity in mid-January 2014 has increased confidence in a dry end to winter (January and February). If recent late winters and early springs are any guide, March will likely continue the trend; as the pattern begins lifting north, warm air will return as fronts will have increasingly limited impact.

Though confidence has increased in a dry end to winter, certainty in the potential return of serious drought remains in doubt. Should the atmospheric pattern continue to bring dry air from the lees of the Sierra Madre Oriental through the Rockies, the return of drought to the Valley will become near certain. Should the pattern deviate a hair by lifting toward the nation's midsection and a subtropical stream of moisture develop from the eastern Pacific and migrate toward northern Mexico and the tip of Texas, a series of light to moderate rain events could reappear, as they did to close December. Stay tuned.

Rainfall Outlook February 2014

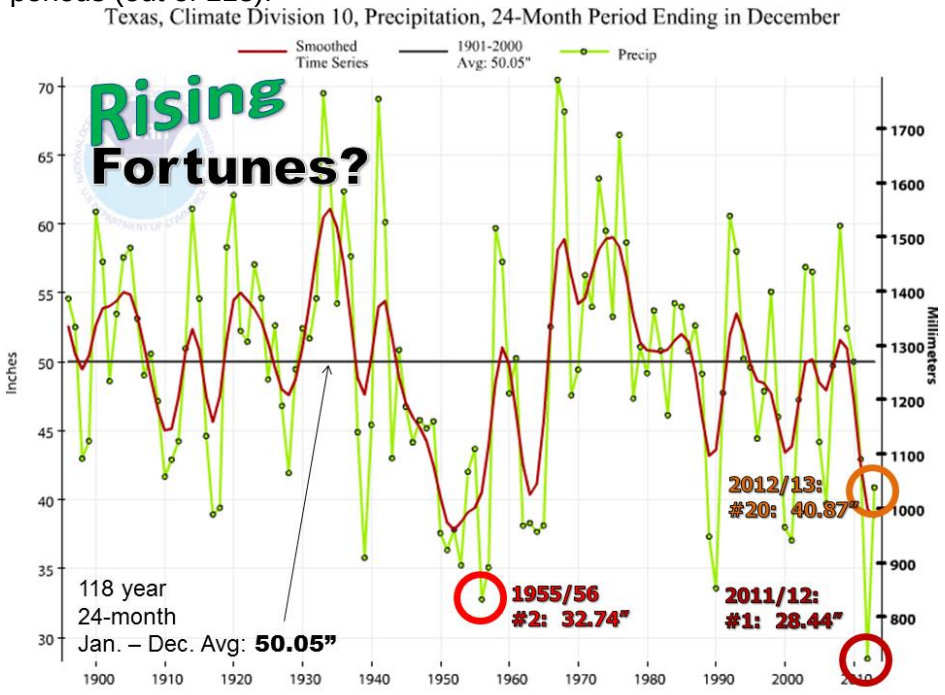


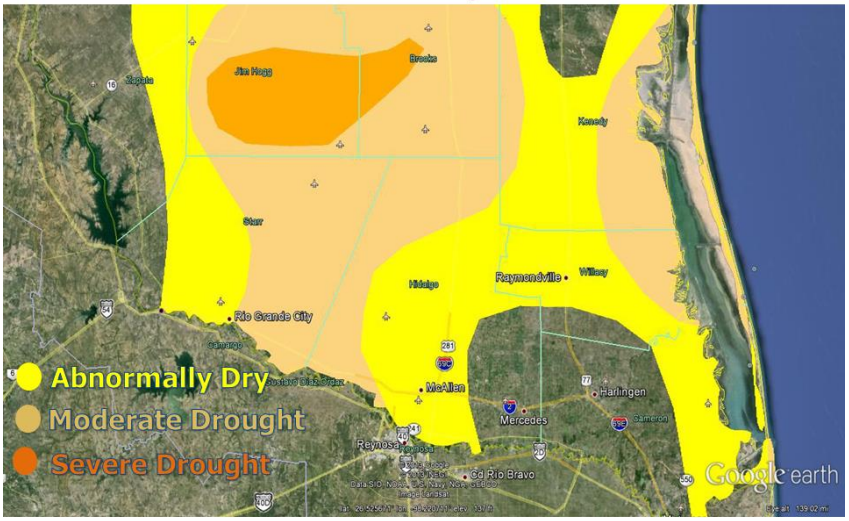
Temperature Outlook February 2014



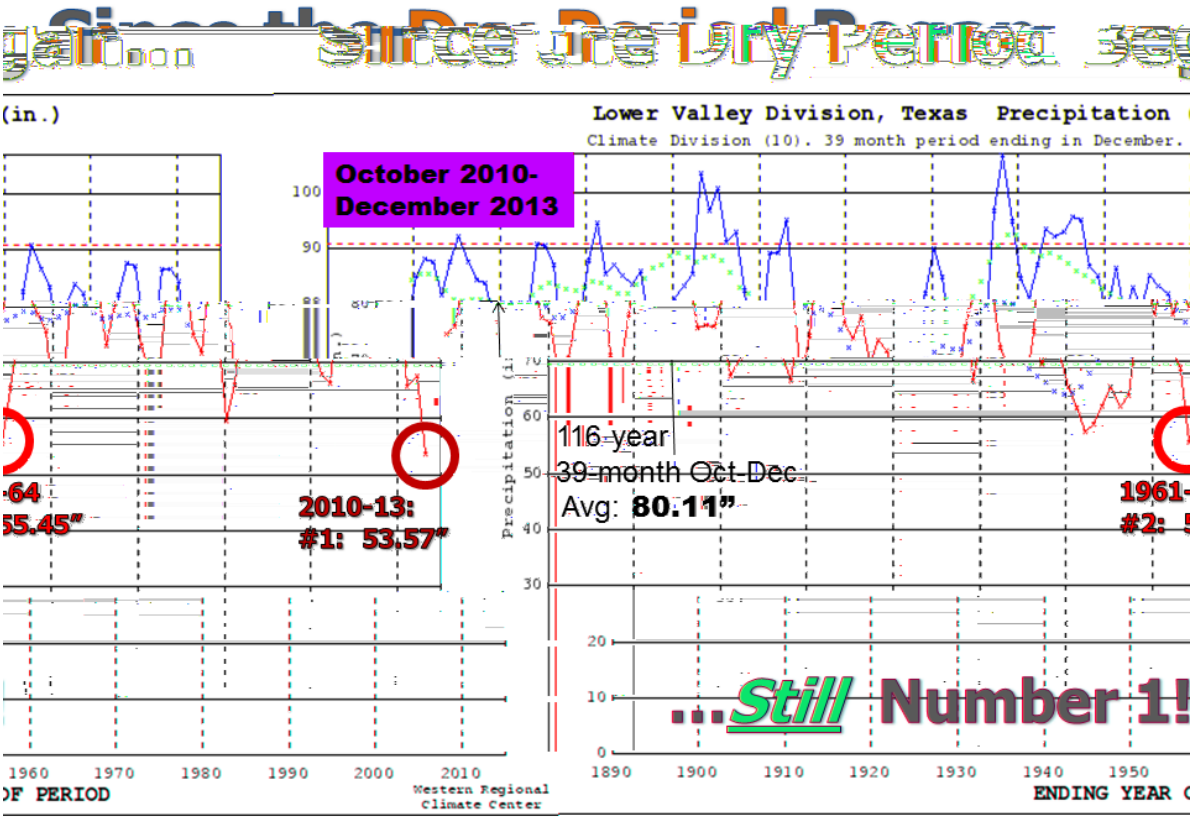
Where We've Been

The autumn 2013 rains *finally* put a dent in the prolonged dryness of Deep South Texas and the Rio Grande Valley. For the highest concentration of people and agribusiness (Hidalgo, Cameron, Willacy), the 24 month rainfall from January 2012 through December 2013 increased by more than 12 inches (below) over the record low from January 2011 through December 2012. While coming in 20th is an improvement, there is still more water to be recovered; 20th still ranks near the top fifth driest 24 month January-December periods (out of 118).





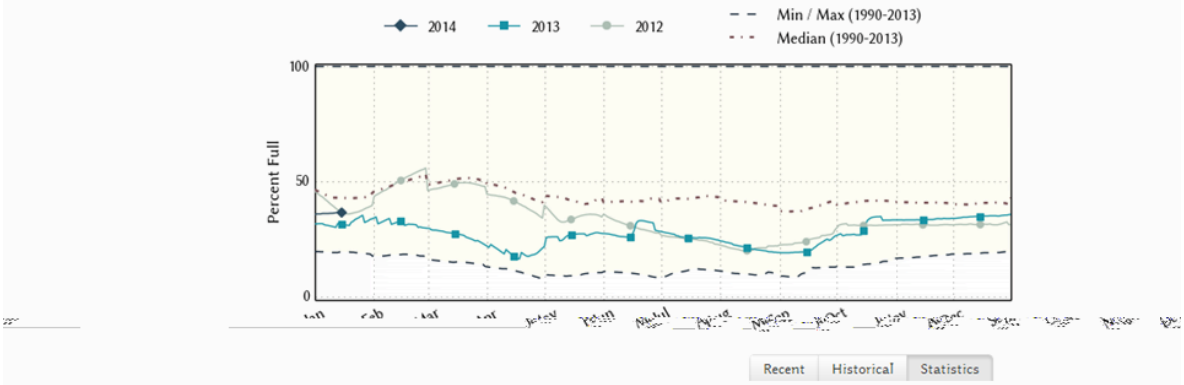
Relief is relative, of course. Since the initial spigot turned off after a record wet water year (October 2009-September 2010), the dry period as of December 2013 still ranked first by a little more than two inches (below), and was more than 26 inches below the 116 period average dating back to the 1890s. The 2.12 inch separation was the lowest since we began tracking the extended dry period after the first 24 months (as of September 2012). Unfortunately, a dry spring would maintain or increase the separation through the first several months of 2014.



Reservoir Relief Holds

Ample water flows into the Rio Grande Basin from Mexico and the U.S. in July and September 2013 from tropical rainfall, followed by pockets of heavy rainfall in the Rio Grande basin west of Falcon Dam and held in check by colder than average temperatures and prolonged cloud cover and high humidity, allowed Falcon to continue at levels ahead of the 2013 pace and nearly match the levels that began 2012 (top). Lake levels at Amistad (bottom) remained steady in early 2014, a little above the 2013 levels. Conditions heading into spring 2014 are a good news/bad news story: The good news? The higher levels will ensure at least one sufficient spring water release from Falcon, as needed. Abundant sub soil moisture from the late autumn 2013 rains give the Lower Valley an opportunity for improved early crop growth. Recovery of lost production in 2013 is also a possibility. The bad news? Levels at both reservoirs are still well below average, and a dry and warm early spring (and beyond) could induce evaporation, especially at Falcon, for much of the first half of 2014.

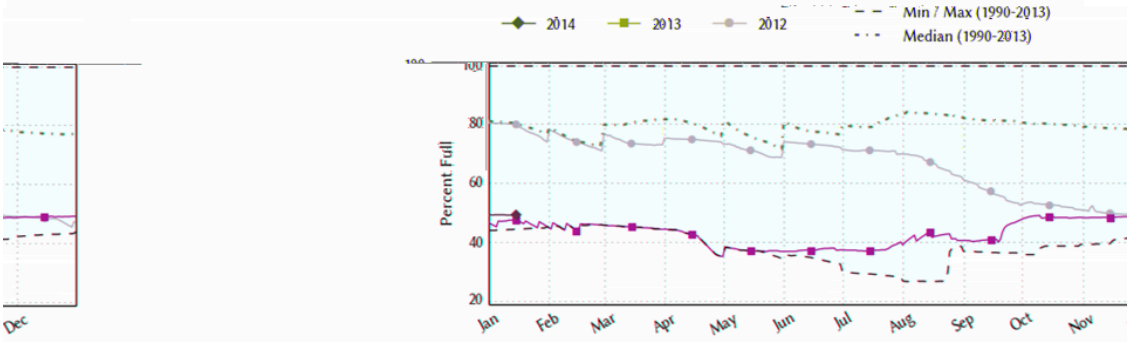
Falcon Reservoir is 36.8% full as of 2014-01-17



Recent | Historical | Statistics

Conservation Storage (acre-ft)		Date	Percent Full	Water Level (ft)	Height Above Conservation Pool (ft)	Reservoir Storage (acre-ft)
570,913	Today	2014-01-17	36.8	275.62	-25.48	1,014,277
569,276	Yesterday	2014-01-16	36.7	275.56	-25.54	1,011,369
568,183	2 days ago	2014-01-15	36.6	275.57	-25.53	1,011,891
563,072	1 week ago	2014-01-10	36.3	275.37	-25.73	1,002,789
543,814	1 month ago	2013-12-17	35.1	274.60	-26.50	967,937
514,468	3 months ago	2013-10-17	33.2	272.21	-28.89	863,907
397,974	6 months ago	2013-07-17	25.7	264.62	-36.48	589,610
483,961	1 year ago	2013-01-17	31.2	266.14	-34.96	639,539

Amistad Reservoir is 49.2% full as of 2014-01-17



Conservation Storage (acre-ft)		Date	Percent Full	Water Level (ft)	Height Above Conservation Pool (ft)	Reservoir Storage (acre-ft)	C
905,140	Today	2014-01-17	49.2	1,081.52	-35.48	1,503,688	
904,739	Yesterday	2014-01-16	49.1	1,081.51	-35.49	1,503,021	
905,793	2 days ago	2014-01-15	49.2	1,081.49	-35.51	1,502,330	
903,584	1 week ago	2014-01-10	49.1	1,081.39	-35.61	1,498,667	
902,655	1 month ago	2013-12-17	49.0	1,080.95	-36.05	1,482,582	
894,417	3 months ago	2013-10-17	48.6	1,079.45	-37.55	1,429,581	
684,479	6 months ago	2013-07-17	37.2	1,058.01	-58.99	833,420	
864,373	1 year ago	2013-01-17	47.0	1,077.32	-39.68	1,357,266	

Above: Reservoir levels at Falcon (top) and Amistad (bottom) International Reservoirs, January 17, 2014. Note the improvement at Falcon since January 2013 – just under 175% of reservoir storage. Levels at Amistad were just a shade above 2013 values.

Despite the increase in local soil moisture and increased water availability, many local cities and towns were still under water restrictions. Check with your local public utility or elected officials for conditions in your community throughout this spring.

Be Firewise!

Across much of Texas, drought improvement instigated by late summer and early autumn rainfall has increased the acreage of fine fuels (such as grasses and brush) that could become a conduit for rapid to explosive wildfire spread, should fires begin later this spring. Many of these fuels have "cured" through a combination of winter dormancy, freezes, and recent breezy to windy drying fronts. While the Rio Grande Valley is only minimally cured – many fine fuels still have some green given the deep soil moisture – ranchlands north of the Valley have become more cured due to a combination of lower soil moisture, lower humidity on more days, and up to three minor freezes (December 16, 24; January 3). Now is the time to consider methods to remove at least some of the potential fuels. These could include mowing on humid days, more frequent grazing, and brush clearing.

Ranchers, farmers, and others should follow these safety tips, especially on breezy to windy days with low humidity:

- Park vehicles on dirt or paved roads, not in high grass. Hot undercarriages can spark a fire.
- Avoid using welding or grinding equipment in high grass or brush
- Dispose of cigarettes in fire safe receptacles

The Texas Forest Service has issued a **spring fire weather outlook**, which contains helpful information for you to plan. Remember, only you can prevent wildfires.