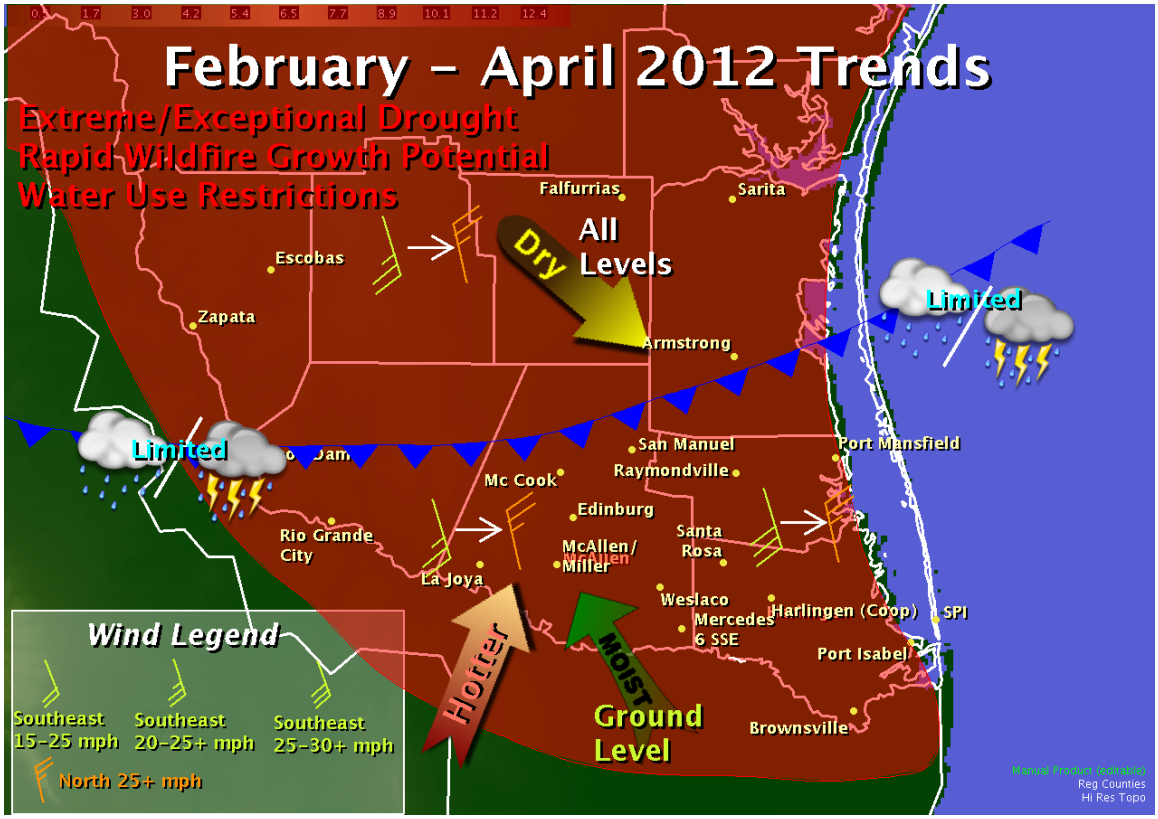


The "Valley Wind Machine" will become active once again, with persistent south to southeast winds bringing warm and humid conditions. Occasional heat bursts will precede the relatively dry fronts; fronts will become less frequent by March and April, and changes will be to humidity levels and overnight temperatures for the most part.

Early Spring Preview

Here Comes Trouble?

Early spring 2012 Will Extend Devastating Drought

What to Watch For

As winter turns to spring (typically, spring growth begins in February across the Rio Grande Valley), the following conditions and potential hazards can be expected:

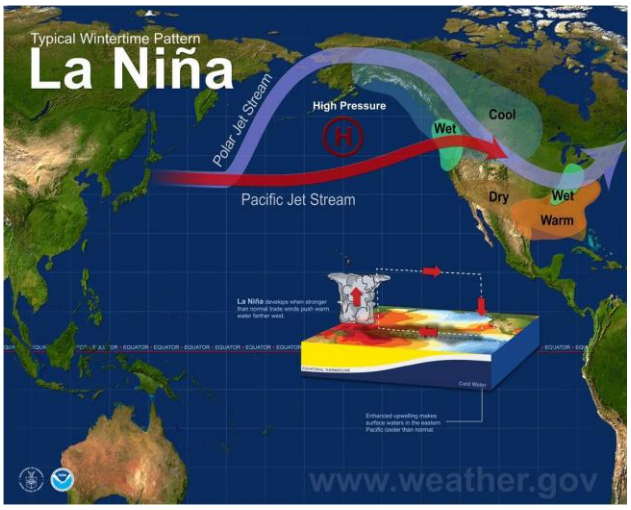
- December put temporary brakes on the record 2011 Drought. Extreme (D3) to Exceptional (D4) Drought should become Exceptional for all or most of the Valley in March or early April.
- Rapid wildfire growth potential will continue with the passage of a number of fronts, as north winds increase and humidity tumbles within the 24 to 48 hours that follow...
- ...One sliver of good news compared with spring 2011 is significantly less "fuel loading" due to very little new rangeland grass growth since October 2010, when the current dry spell began. The key word is ***sliver.***
- Burn bans continue across many jurisdictions in the Rio Grande Valley. Some general bans may expire early in the period, but expect bans to be reissued in all areas by March.
- Reservoir water levels are significantly lower now than a year ago. In January, 2011, the levels at Amistad and Falcon were at or just above 100 percent; levels have fallen to 32 percent of capacity at Falcon in mid-January 2012 - **one-third** the level just a year ago The pool level at Amistad had fallen to 83 percent. Updated daily levels can be found here.
- Based on the overall warm and dry forecast, reservoir levels will fall steadily, then more rapidly, as temperatures warm and the sun angle increases. Pool levels could drop as low, or lower, than those in the late 1990s (below 20 percent of conservation)

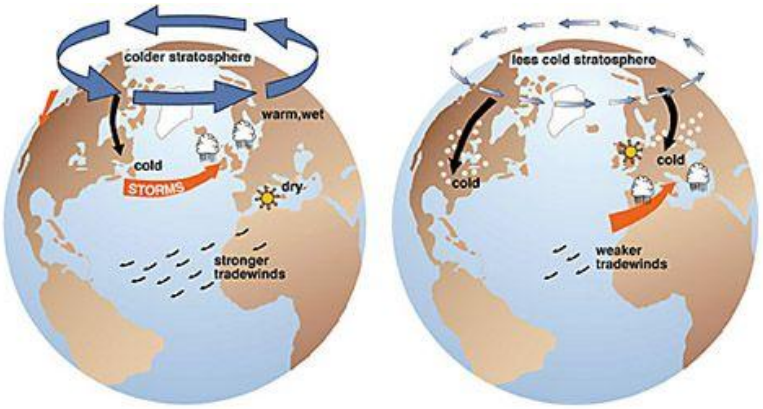
- A warm and dry late winter and spring (February - May 2012) is virtually guaranteed, as La Niña (below left) and a continuation of the positive phase of the Arctic Oscillation (below right) team up to bring similar conditions experienced in 2011.
- Another freeze and ice storm in our future? Highly unlikely, but no guarantees in January. One hopeful sign: Arctic air was locked up across the northern tier of states and Canada, with a minimal snow pack across the northern Plains on January 15th, 2012 compared with January 15th, 2011.
- Hotter temperatures will begin as early as late February; prolonged heat and little rain is possible again in April.

The forecast ensures water restrictions for many communities in the Valley later this spring, and limitations on crop and pasture irrigation.

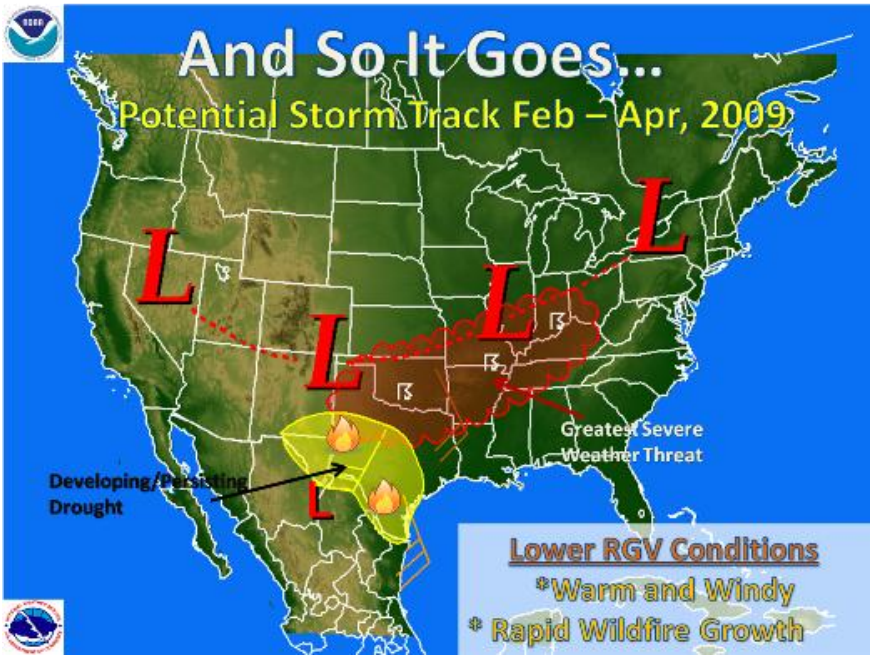
Now is the time to plan a water conservation strategy. Here are a few things you can do now to reduce water consumption:

- ❖ Check all pipes, seals, fittings, etc. for leaks.
- ❖ Run water only as long as necessary when brushing teeth, preparing food, cleaning dishes, etc.
- ❖ Take short showers.
- ❖ Buy an energy and water efficient dishwasher.
- ❖ If you or your business uses irrigation for plants and sod, minimize the time and be sure to water *only in the hours before sunrise.*
- ❖ Wash vehicles sparingly, and use an automatic shutoff nozzle. Wash on grassy areas.
- ❖ Use low-flow toilets.
- ❖ For more, check out the Texas Commission on Environmental Quality's conservation tip sheet.



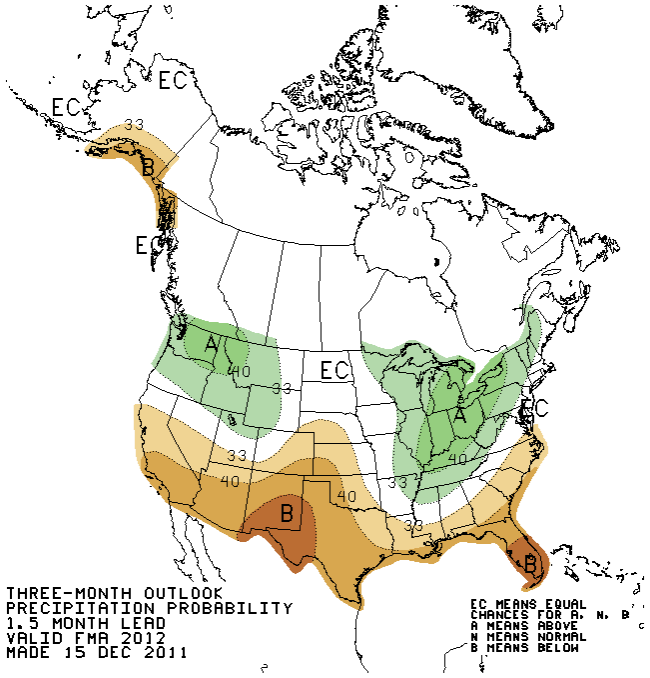


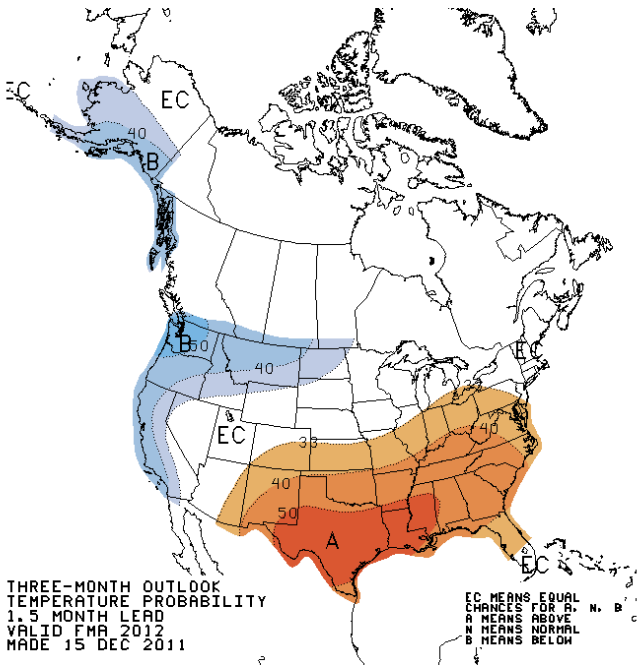
Left: Winter and early spring pattern of La Niña, showing warm and dry pattern across the southwestern United States, including Texas. **Right:** Phases of the Arctic Oscillation. Left globe: Positive phase, which favors a farther north storm track and less cold air into the United States east of the Continental Divide; right globe, Negative phase, which favors a farther south storm track and more cold air into the United States east of the Continental Divide. The Arctic Oscillation has been largely positive since October, 2011



Déjà Vú All Over Again? We've used this chart in 2009 and again in 2011 to indicate a likely storm track across the U.S. during the spring. In 2009, severe weather occurred in the red shaded area. In 2011, a similar area was impacted, displaced and extended 150 miles south into Alabama and Mississippi, and 150 miles east into Georgia and the Carolinas.

For updated information through the spring, continue to surf to http://weather.gov/rgv or follow us on **Facebook**.





Déjà Vú All Over Again, Part II? Left: February through April 2012 U.S. Precipitation Outlook. Right: February through April 2012 Temperature Outlook. Percentages describe the probability of the period being above (red/brown colors) or below (green/blue colors). The Rio Grande Valley has a 40+% chance of having above average temperature and below average rainfall. Though less than the remaining chances (equal and below/above), this value is the highest of the three categories and has the best opportunity to occur. For example, using temperature (right): The RGV has approximately a 48% probability of above average temperature. Equal probability of average temperature and below average temperature would each be 26%, a 22% lower chance.