



South Texas Weather Journal

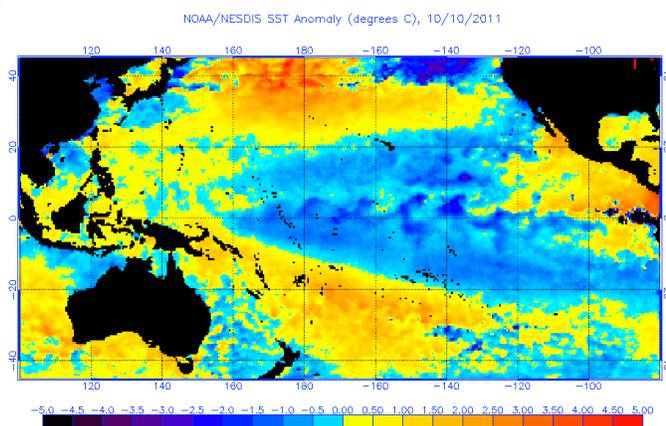


NWS Corpus Christi, TX

Fall 2011 Edition

La Nina Returns: South Texas Will Likely Remain in Drought for at Least the Next Several Months

Greg Wilk - Lead Forecaster



(Above) Sea surface temperature anomalies over the Pacific as of October 10th show that La Nina have already returned

The historic and devastating Texas drought of 2011 appears to have little chance of improving over the next several months as La Nina conditions have formed over the Eastern Pacific Ocean. La Nina conditions are cooler than normal water temperatures in the eastern Pacific Ocean. From a climate standpoint, La Nina generally means that South Texas will likely have below normal rainfall and above normal temperatures during the fall and winter. The current La Nina is expected to last through the winter of 2011 - 2012. Although the previous La Nina ended during the spring of 2011, a more normal rainfall pattern did not materialize over South Texas during the summer.

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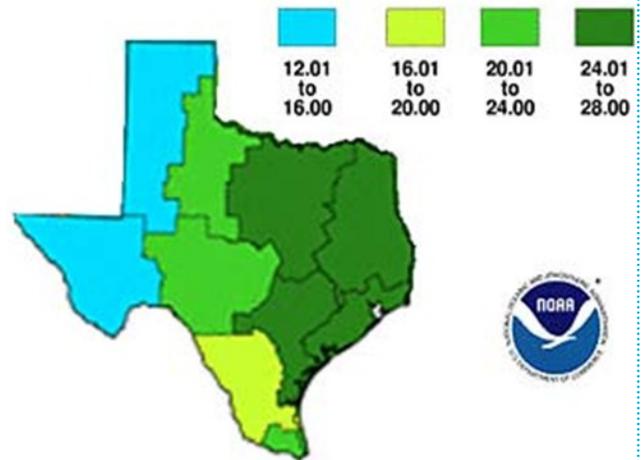
Accumulated rainfall deficits during the last year have been massive, with deficits ranging from 15 to 30 inches below normal. Percentage-wise, most locations in South Texas have received anywhere from 15 to 40 percent of their normal rainfall since October 2010. For example, during the last water year (October 1st 2010 through September 30th 2011), Corpus Christi received only 10.22 inches of rainfall, resulting in a deficit of 21.38 inches (32.3 percent of normal). Victoria received 11.89 inches of precipitation during the 12 month period (a deficit of 28.51 inches/29.4 percent of normal), while Laredo received a mere 3.45 inches of rain (a deficit of 17.39 inches/16.6 percent of normal). This lack of rainfall has been devastating to the farmers and cattle ranchers, with below normal crop yields and cattlemen selling their livestock due to lack of forage.

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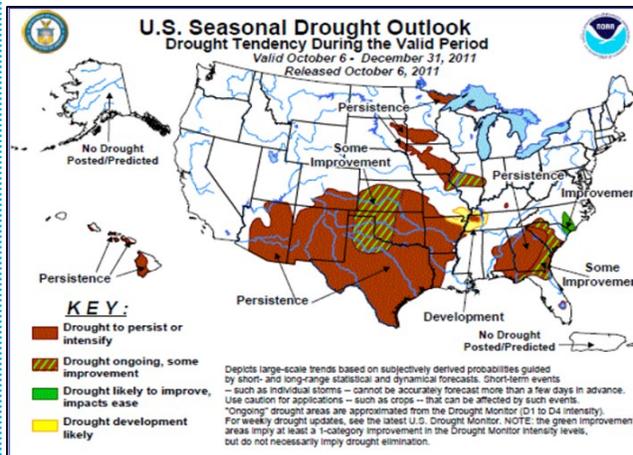


In addition to the drought, daytime temperatures have often been well above normal. This combination of lack of rainfall and above normal temperatures has raised the wildfire danger over the region to very dangerous levels at times. Low afternoon humidity and occasionally windy conditions have helped to spread sporadic wildfires over Texas during the last several months. Also, the increased temperatures and below normal rainfall has resulted in greater water usage (as people water their landscapes more frequently) and larger evaporation rates. This has diminished reservoir levels significantly from reservoir levels observed a year ago.

Rainfall deficits have become so large that it would take one substantial rainfall event (or several significant rainfall events) to greatly alleviate the ongoing drought. For western inland areas (including the cities of Alice and Laredo), it would take between 9 and 12 inches of rain in one month, or 16 to 20 inches in six months, to eradicate the drought. For the Coastal Bend region (including Corpus Christi and Beeville), it would take between 15 and 18 inches of rain in one month, or 24 to 28 inches in six months, to end the drought. For the Victoria Crossroads area (including the city of Victoria), it would take 18 to 24 inches of rain in one month, or 24 to 28 inches of precipitation in six months, to end the drought. With La Nina conditions expected over the next several months, excessive rainfall sufficient for drought relief appears unlikely.



(Above) Rainfall amounts needed over the next six months to alleviate drought conditions



(Above) Rainfall and temperature outlooks for the period October through December 2011

What is the current climate and drought outlook for South Texas? For the remainder of the year, the Climate Prediction Center expects the current La Nina to result in above normal temperatures and below normal rainfall over South Texas, with drought conditions persisting through at least the end of 2011 and probably into 2012. In fact, in a recent article the Texas State Climatologist Dr. Nielson-Gammon says that it is possible that the current drought could last for several years, possibly even to the year 2020. Dr. Nielson-Gammon notes that similar ocean conditions that seem to have contributed to the 1950s drought have been back for several years now, and may last another five to fifteen years. Although this does not imply that there will no breaks in the current drought status, it is

possible that the overall climate pattern for the next several years could (on average) produce below normal rainfall, resulting in varying drought conditions over South Texas.

To keep track of the current drought and its outlook, visit our Drought Page by either clicking on the thumbnail/icon “Drought Info” located near the bottom right of our homepage, or go to: <http://www.srh.noaa.gov/crp/?n=drought>. Drought information specific to South Texas can be found in our Drought Information Statements, located at the top of our South Texas Drought Page. You can also find information concerning temperature and rainfall outlooks at the Climate Prediction Center website: <http://www.cpc.ncep.noaa.gov/>.



SKYWARN

New Online SKYWARN Training Course

John Metz - Warning Coordination Meteorologist

Becoming a storm spotter just became easier with the development of the online SKYWARN Spotter Training Course. This course was developed by our partners at COMET, a group of scientific experts at the National Center for Atmospheric Research in Boulder, Colorado. There are two courses, “Role of the SKYWARN Spotter and “SKYWARN Spotter Convective Basics”.



These courses cover the basics of being a SKYWARN Spotter. The goal of the course is to provide baseline training for all spotters through multiple modules covering the procedures for spotting (including communication and spotter report criteria) and safety considerations for all hazards.

You can choose to register as a SKYWARN Spotter with the National Weather Service (NWS) by using the checkbox that appears after you Enroll in the course. If you check the box, you will be able to register with the NWS after passing the course.

The courses are free and are accessible from the METED website:
www.meted.ucar.edu

If you have any questions, contact John Metz:
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SUMMER REVIEW

A Statistical Review of Summer 2011

Matt Grantham - Meteorologist Intern

Summer 2011 Statistics - Corpus Christi, TX

	June 2011	July 2011	August 2011	September 2011	Jun - Sep 2011	Jun - Sep Normal (1981-2010)
Mean Temp Departure based on (1981-2010)	+1.9°	+2.0°	+3.0°	+2.8°	+2.4°	-
Mean Temp Rank (1887-2011)	7th warmest	5th warmest	1st warmest	4th warmest	2nd warmest	-
Observed Rainfall	1.11	0.02	0.28	0.79	2.20	13.29
Rainfall Departure	-2.42	-1.98	-2.64	-4.05	-11.09	-
Highs 95°F or Higher	19	29	31	18	97	34
Warmest Temp	98°	99°	107°	106°	107°	-

Summer 2011 Statistics - Victoria, TX

	June 2011	July 2011	August 2011	September 2011	Jun - Sep 2011	Jun - Sep Normal (1981-2010)
Mean Temp Departure based on (1981-2010)	+3.2°	+3.6°	+5.2°	+3.5°	+3.9°	-
Mean Temp Rank (1887-2011)	3rd warmest	2nd warmest	1st warmest	5th warmest	1st warmest	-
Observed Rainfall	0.90	0.57	0.45	1.02	2.94	16.15
Rainfall Departure	-4.06	-3.61	-2.40	-3.14	-13.21	-
Highs 95°F or Higher	26	31	31	22	110	45
Warmest Temp	101°	103°	109°	104°	109°	-

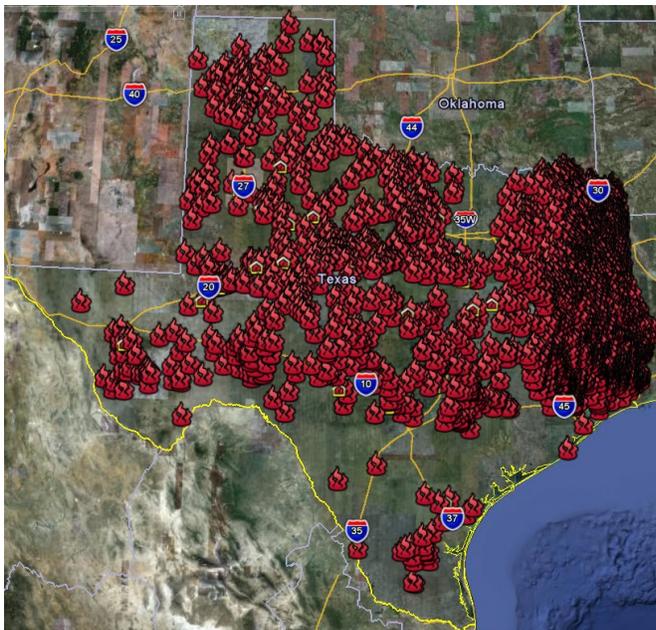


WILDFIRES

Devastating Texas Wildfires Shatter State Records

Jason Runyen - Lead Forecaster

This year's fire season in Texas has been historic. Since November of 2010 around 3.8 million acres of land have burned from wildfires, which is equal to 5,937 square miles. This is almost equivalent in size to the entire Coastal Bend from Kleberg to Calhoun counties (including Victoria and Goliad counties) being completely burned. These 3.8 million acres of charred land shattered the previous record of 2.1 million acres burned during the same time period in 2005-2006. In April of 2011, one million acres of land burned in just one week. Six of the ten largest wildfires on record in Texas occurred in 2011.



(Above) Wildfires responded to by the Texas Forest Service from Nov 2010 to Oct 2011

The staggering number of acres burned pale in comparison to the number of structures that were destroyed by wildfire. According to the Texas Forest Service, the 23,255 fires reported in 2011 have destroyed 7,206 structures, over 1,900 of which were homes. Most notable was the Bastrop Complex Fire just east of Austin, which charred 34,000 acres through the pine tree forests and destroyed more than 1,500 homes as well as 98% of Bastrop State Park. Smoke from this fire reached all the way to the Coastal Bend. Ten people have died in Texas this year from wildfires, including four firefighters and six civilians. In South and Deep South Texas over 356 thousand acres have been burned in 2011, destroying nearly 200 structures.

However, in East Texas, 175 million cubic feet of timber have been destroyed by wildfires this year, enough to produce \$1.6 billion worth of timber products, such as homes, furniture, and paper according to the Texas Forest Service. The destruction also had devastating impacts to the forest's ability to perform functions such as providing habitat for wildlife, preventing soil erosion, helping produce clean water, and helping remove carbon dioxide from the atmosphere.

Most of the fuels burned in South Texas were grassland and brush fuels, which can recover much quicker than timber.

As you can likely guess, the main root of this active wildfire year has been the historic drought, now the worst drought in Texas history according to state climatologists. As of October 11th, 92% of the state was classified as extreme to exceptional drought, the two highest categories possible on the U.S. Drought Monitor Index. The drought has produced an excess of dead or extremely dry vegetation which is vulnerable to more intense and fast moving wildfires.

Unfortunately the outlook looks bleak across much of the state. Below normal rainfall is likely through the winter and into the spring of 2012. The active fire period across South Texas is likely to continue during periods with dry frontal passages and associated gusty winds.

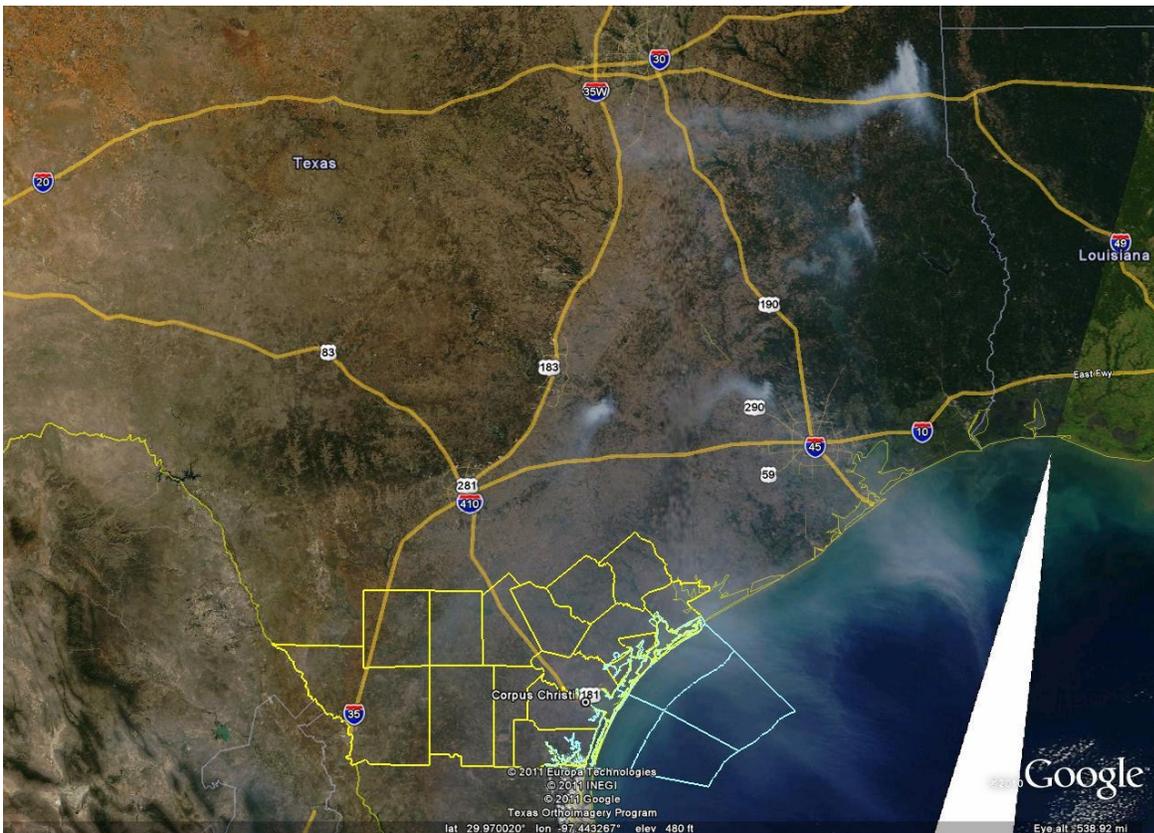
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(Below) View of the Bastrop Complex Fire from the city of Bastrop



(Below) Satellite imagery from September 6, 2011 showing smoke from wildfires affecting much of East, Southeast and South Texas.





HIGH IMPACT EVENTS

High Impact Event E-Mails

Scott Cordero - Meteorologist - in - Charge

High Impact E-mail briefings are not new to the National Weather Service. The National Weather Service in Corpus Christi has been providing this service to community partners and emergency managers for quite some time now. E-mail briefings serve as the only 'product' that is in plain language and is written especially for our core partners and the community. The e-mail briefing therefore becomes a valuable planning tool when sent sparingly. The e-mail also serves as a signal that attention should be given to the weather and the forecast.

The high impact e-mails are concise and start off highlighting potential threats and impacts to the community. The e-mail can be read on a mobile device, laptop, desktop, or tablet. They are short, sweet, and to the point. The e-mails relay confidence-level and contain one to three graphics depicting the high impacts associated with the inclement weather. The fact that the e-mail has come to your inbox already heightens awareness of an upcoming event. The tone of the e-mail helps you plan for the upcoming event. Utilizing both graphics and text gives the reader of the e-mail a clear picture of a high impact weather event, such as severe weather or tropical system that is coming toward South Texas.

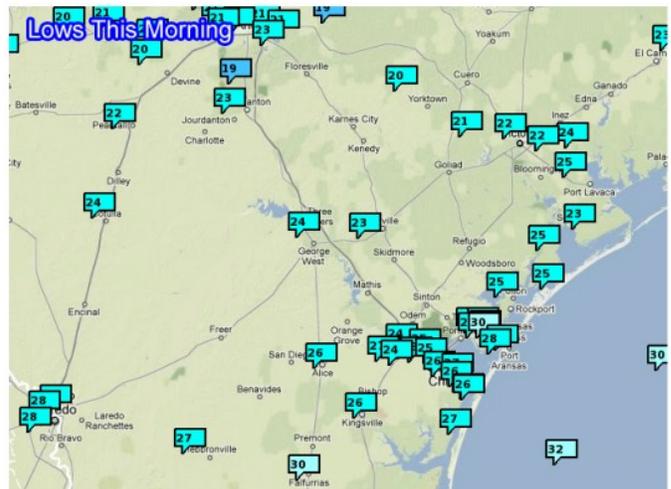
If you wish to receive the event driven high impact e-mails from the National Weather Service, send us an e-mail message at John.Metz@noaa.gov or Scott.Cordero@noaa.gov.

In this manner, you, your workplace or business can receive our email. This service is absolutely free. Your e-mail address will not be shared with anyone, and an e-mail will be sent to your inbox only prior to and during high impact events.

(Below) Example of February 2011 e-mail sent to community partners

A Significant Winter Storm is looking more likely across South Texas Thursday and Friday!!!

Low temperatures reached the mid 20's on the barrier island, and low 20's across the northern Coastal Bend this morning. This resulted in a hard freeze over the entire region as temperatures have been well below freezing for 6-12 hours nearly everywhere. There will be little temperature recovery today. Highs Today will struggle to reach the low 30s as clouds have already spread back over the region. Another hard freeze is expected tonight with lows similar to last night.

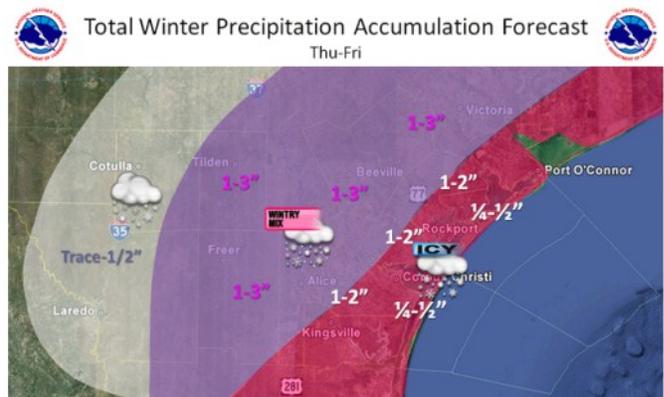


Winter Storm Update:

The Winter storm is still on track to move across South Texas Thursday and Friday. It looks like freezing rain and sleet will begin along the coast around Noon on Thursday, which is a little sooner than we originally thought. The freezing rain and sleet will spread northward across the Coastal Bend during the Afternoon hours affecting most locations by 3pm. Freezing rain and sleet will continue along the coastal counties through Thursday evening making travel extremely hazardous. However farther north, mainly north of Highway 77, the freezing rain will change to sleet and snow.

Accumulations:

Significant accumulations of ice are possible along the coastal counties, generally along and south of Highway 77. Ice and sleet accumulations of 1/4 to 1/2" are possible. To the north of Highway 77, sleet and snowfall accumulations of 1-3" are likely. Out west near Laredo and Cotulla, only trace amounts of sleet and snow are expected.





WEATHER-READY NATION

National Weather Service Taking Action to Build a 'Weather-ready' Nation

John Metz - Warning Coordination Meteorologist

The National Weather Service is launching a comprehensive initiative to build a "Weather-ready" nation. The purpose of this effort is to make America safer by saving more lives and protecting livelihoods as communities across the country become increasingly vulnerable to severe weather events, such as tornado outbreaks, intense heat waves, flooding, active hurricane seasons, and solar storms that threaten electrical and communication systems.

So far this year, nine separate disasters have struck our nation, each resulting in an economic loss of \$1 billion or more, tying the record set in 2008. This year's total losses due to weather disasters has amounted to \$35 billion. The increasing impacts of natural disasters is a stark reminder that our lives and livelihoods are at risk.

In partnership with other government agencies, researchers, and the private sector, the National Weather Service is charting a path to a weather-ready nation through:

- Improved precision of weather and water forecasts and effective communication of risk to local authorities;
- Improved weather decision support services with new initiatives such as the development of mobile-ready emergency response specialist teams;
- Innovative science and technological solutions such as the nationwide implementation of Dual Pol radar technology, Integrated Water Resources Science and Services, and the Joint Polar Satellite System;
- Strengthening joint partnerships to enhance community preparedness;
- Working with weather enterprise partners and the emergency management community to enhance safety and economic output and effectively manage environmental resources.

The National Weather Service is also planning innovative, community-based test projects across the country, ranging in focus from emergency response to ecological forecasting, to enhance the agency's preparedness efforts to better address the impacts of extreme weather. Test projects will initially be launched at strategic locations along the Gulf Coast and in South and mid-Atlantic regions. One of our very own meteorologists, Mike Gittinger, will be leading one of these test projects in Tampa Florida, and will soon be leaving Corpus Christi.

"Building a Weather-ready nation is everyone's responsibility," said Eddie Hicks, IAEM USA president. "It starts with the National Weather Service and emergency managers, like the U.S. Council of International Association of Emergency Managers, but it ends with actions by individuals and businesses to reduce their risks. The more prepared communities are for destructive weather, the less of a human and economic toll we'll experience in the future, and that's a great thing for the country."

www.weather.gov/corpuschristi

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