



# The Bayou Observer

December 23, 2010

## WINTER 2010 EDITION

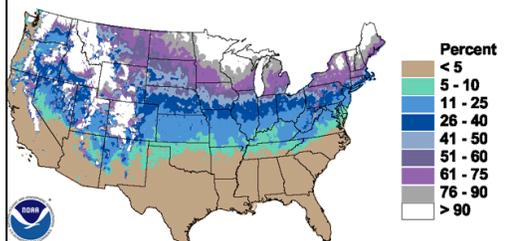
### Christmas Climatology

Every year, people inevitably want to know whether there will be a chance of a white Christmas. The answer is "Not this year." In fact, climatologically, there is less than a 5% chance of snow on Christmas Day across the Gulf South. A rare exception was 2004—when the New Orleans metro area experienced its first ever white Christmas— a dusting of 0.5 to 1.0 inch of snow was recorded across the area. The snow didn't last long however as rising temperatures caused the snow to melt on the 26th.

Temperatures on Christmas Day typically top out in the low 60s with lows ranging from 39 to 44 across the region. The coldest Christmas was, by far, Christmas of 1983. That year, an arctic outbreak caused temperatures to fall into the single digits across southern Mississippi—with McComb, Mississippi recording a minimum temperature of 9 degrees. Across Southeast Louisiana, temperatures dropped into the low teens. Baton Rouge recorded a low of 11 and New Orleans bottomed out at 14.



### Probability of a White Christmas



Temperatures have even crossed the 80 degree threshold in some parts of the forecast area on Christmas day. Baton Rouge reached 85 degrees on Christmas day 1903; Slidell reached 80 in 1964 and Houma reached 82 degrees in 1922.

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### A Look Back at Hurricane Season 2010

Before the start of hurricane season 2010, NOAA issued a forecast predicting an active season. The official forecast called for 14 to 20 named storms, 8 to 12 hurricanes and 4 to 6 major hurricanes. While it may seem that this year's hurricane season didn't live up to the hype, a quick look at the numbers shows that the 2010 hurricane season was in fact an active one.

While the final numbers may change slightly based on post-season analysis, the 2010 hurricane season saw

the following activity: 19 named storms, 12 hurricanes and 5 major hurricanes. These numbers were all on the upper end of NOAA's forecast.

The reason that the 2010 hurricane season seems to have ended with little fanfare is because very few of the 19 named storms impacted the United States. In fact, for the second year in a row, the U.S. escaped without seeing a hurricane make landfall in the country.

The season started out with a bang in June with Hurricane Alex.

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## LIX in the Community

During the fall months, WFO LIX too part in several different outreach events throughout southeast Louisiana and southern Mississippi. Some of the higher profile events included participating in the 2010 “Wild Things” event held in Lacombe, Louisiana. The event was a huge success with several thousand people in attendance. WFO LIX and the collocated Lower Mississippi River Forecast Center sponsored a booth where children could learn about ground water runoff using the LMRFC’s hydrology model. WFO LIX also brought the hurricane toss game—which is always a huge hit with the kids!

A few weeks later, representatives from WFO LIX and the LMRFC were also on hand at the annual “Ocean Commotion” event held in Baton Rouge. Employees provided informational brochures and children’s activity books while also engaging children in several activities such as the hurricane toss game.

In November, a representative from WFO LIX participated in Hahnville High School’s Freshman Career Day.

WFO LIX also helped staff the NOAA booth at a super computing convention that was held in New Orleans later that same month. The highlight of the NOAA booth was Science on a Sphere (SOS) —a 6 ft sphere on which an entire globe’s worth of data can be projected. WFO LIX staff members used the SOS display to give weather briefings and discuss both current and forecast weather phenomena (see picture at left).



In addition to the outreach events, WFO LIX also strives to give back to the community. Never is this desire more apparent than during the holiday season. Every year WFO LIX participates in the Combined Federal Campaign (CFC) —the federal governments annual fund raising drive. This year, employees from WFO LIX pledged over \$8500 to a number of local and national charities through participation in the CFC. As part of the fund-raising effort, the managers of both WFO LIX and the LMRFC agreed to be the targets of a pie-throwing contest if each office met its fundraising goal. On December 14th, they held up their end of the bargain (see picture center).



This year, WFO LIX also chose to adopt a family through the St. Tammany Project Christmas organization. This particular organization collects toys and clothes for families who cannot afford to provide their children with Christmas presents due to tough economic times. Together with the LMRFC, WFO LIX provided this family with a Christmas meal, toys, clothes, winter coats, and even bikes for a single

mother and her 4 children. The family was invited to the office for our annual Christmas party. At the party, employee children and our adopted children were elated when Santa and Mrs. Claus stopped by for a visit. Santa handed out one gift to each child while Mrs. Claus read the children stories (see picture on right).

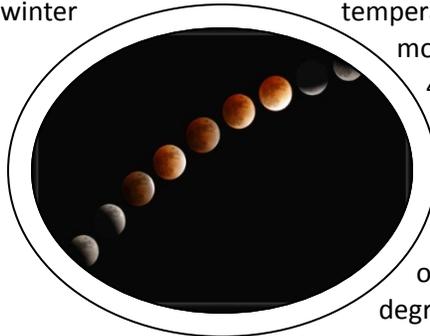
The adopted children each received their brand new bikes. The rest of the toys were given to the Project Christmas organization and will be waiting under the children’s tree on Christmas morning.



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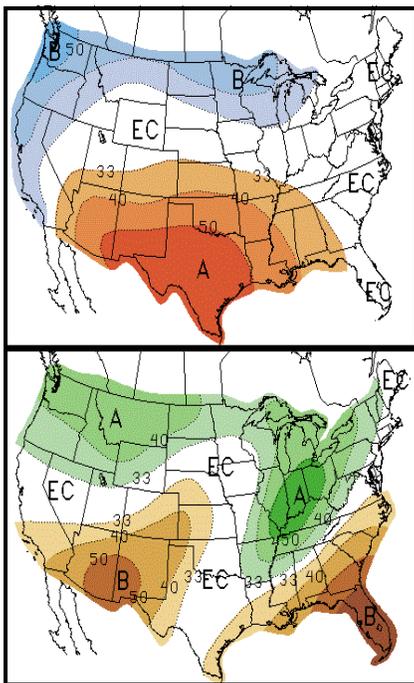
## Climatology Corner: What to Expect for the Rest of Winter

While climatological winter consists of the months of December, January and February, winter technically doesn't begin until the winter solstice—the shortest day of the year. This year the winter solstice occurred on December 21st and was also coincident with a full lunar eclipse. The last time the two events coincided was 372 years ago, and it won't happen again until 2094. Mostly clear skies over southeast Louisiana and southern Mississippi provided an ideal viewing of the eclipse.



You may be asking what “normal” means for the winter months across southeast Louisiana and southern Mississippi. See the tables below for a listing of average temperatures and precipitation for the winter months. Temperature ranges are given in the 4-5 degree increment that best captures the values for the entire area (using New Orleans, Baton Rouge, McComb, and Gulfport as the basis). Actual normal values and record values fall slightly outside of this range. Temperatures are given in degrees Fahrenheit and precipitation is given in inches.

This winter will continue to be dominated by a La Nina pattern—a phenomenon indicated by cooler than normal water temperatures off the coast of Peru. La Nina typically results in warmer and drier than normal conditions across the southeast United States. Thus far,



the climatological winter has been colder than normal with several arctic cold fronts moving through the area. However, the winter outlook issued by the Climate Prediction Center indicates that there is a 40% chance that temperatures will rise to above normal levels for the remainder of winter.

least a 33 percent chance that this winter will remain drier than normal. This is in stark contrast to last winter when record rainfall was recorded across much of Southeast Louisiana and southern Mississippi.

Likewise, the Climate Prediction Center is also indicating that there is at

As would be expected, winters in the gulf south are much milder than winters in northern climates. Many days can actually be refreshingly warm for areas along the Gulf Coast. Through the winter months, most precipitation is associated with cold fronts that move through the area. Some of these cold fronts can also produce severe weather with strong damaging winds, hail and even tornadoes.

The winter months can also bring several dense sea fog episodes to the area. This type of fog can be extremely dangerous as it reduces visibility to one quarter mile or less. Sea fog develops when light southerly winds bring higher dew points back into the area between cold fronts. When dew points are high enough, the cold water temperatures can cool the air down to the dew point resulting in dense fog.

| DECEMBER |       |       |         |
|----------|-------|-------|---------|
|          | High  | Low   | Precip  |
| Norm     | 62-65 | 41-46 | 4.8-5.8 |
| Record   | 82-85 | 5-10  | 10-24   |

| January |       |       |         |
|---------|-------|-------|---------|
|         | High  | Low   | Precip  |
| Norm    | 59-62 | 38-43 | 5.9-6.7 |
| Record  | 81-86 | 8-13  | 15-23   |

| February |       |       |         |
|----------|-------|-------|---------|
|          | High  | Low   | Precip  |
| Norm     | 52-56 | 63-64 | 5.1-5.5 |
| Record   | 84-85 | 10-15 | 13-15   |



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## A Look Back at Hurricane Season 2010, cont.

developing in the Caribbean. Alex made its first landfall in Belize and continued to move across the Yucatan peninsula. Once it emerged into the Bay of Campeche, Alex reintensified and made a second landfall—as a category 2 hurricane—in Soto la Marina, Mexico.

The next named storm, Tropical Storm Bonnie, was named on July 22 while it was located over the Southeastern Bahamas. Local residents may remember that Bonnie was forecast to move through the oil spill area and make landfall in Southeast Louisiana. Luckily, Bonnie never regained its intensity after emerging into the Gulf from the southern Florida peninsula. The remnant circulation of Bonnie eventually made landfall in southeast Louisiana, bringing rainfall and a few strong wind gusts to the area.

The first major hurricane of the 2010 season was Hurricane Danielle. Danielle was named on August 22 and later strengthened to a major hurricane (category 3) on August 27, peaking in intensity at category 4 later that same day. Luckily Danielle remained at sea over the open waters of the Atlantic Ocean and didn't threaten any major land masses.

On August 25, while Hurricane Danielle was intensifying, Earl was named. Earl would eventually become the third hurricane of the 2010 season and would peak at category 4 intensity. Unlike Danielle, Earl's track took the storm very close to the United States, threatening portions of the US East Coast. While Earl did not



**Hurricane Igor**

cause any significant damage in the U.S., it did result in near \$150 million in damage as it passed through the Caribbean.

By the first week of September, the disturbance that would become the strongest storm of the season was taking shape. Igor

was named on September 8. On the 11th, Igor rapidly intensified and developed an eye. By September 12, Igor had strengthened to a category 4 hurricane with maximum sustained winds of 155 mph—nearly a category 5. As with most of the tropical cyclones that developed during the 2010 season, Igor did not threaten any major land masses. While it was forecast to hit Bermuda as a moderate to strong category 2 hurricane, Igor weakened to a category 1 before battering the tiny island.



**Hurricane Paula**

The active 2010 season continued with another five storms being named during the month of September. By early October, Hurricane Paula had developed in the Southern Caribbean. This marked only the fifth time that the "P" name had been used in the Atlantic basin. (The other "P" storms were Pablo in 1995, Peter in 2003, Philippe in 2005 and Paloma in 2008). Paula reached its peak intensity as a category two hurricane on October 12 before coming under the influence of stronger wind shear. The wind shear caused the storm to weaken and eventually dissipate by the 16th.

There would be three more named storms—all of which would become hurricanes—before the official end of the 2010 Atlantic hurricane season. Hurricane Richard developed over the central Caribbean on October 21st and intensified to a category 2 hurricane before making landfall in Belize on October 24th. Hurricane Shary was named on October 29 and quickly strengthened into a hurricane. After strengthening, Shary interacted with an upper level trough and quickly transitioned to an extra-tropical cyclone by the 31st. Lastly, Hurricane Tomas was named on October 29—only the third time the "T" name had been used. Tomas brought strong winds and heavy rains to Haiti and other Caribbean Islands. In all, Tomas was responsible for 41 deaths and \$527 million in damage.

# The Bayou Observer: Winter 2010 Edition

National Weather Service New Orleans/Baton Rouge...  
Where Science Impacts Decisions and Decisions Save Lives



## Snowfall Trivia for Southeast Louisiana and Southern Mississippi

### New Orleans

|                              |                     |
|------------------------------|---------------------|
| Period of Record:            | 157 years           |
| Years with snow:             | 57                  |
| Years with measureable snow: | 17                  |
| Largest Snowfall:            | 8.2" (2/14-15/1895) |
| Earliest Snowfall:           | 12/11/2008 (1.0")   |
| Latest Snowfall:             | 3/10/1932 (Trace)   |
| Most Recent Snowfall:        | 12/11/2008 (1.0")   |



### Baton Rouge

|                              |                      |
|------------------------------|----------------------|
| Period of Record:            | 128 years            |
| Years with snow:             | 51                   |
| Years with measureable snow: | 15                   |
| Largest Snowfall:            | 12.5" (2/14-15/1895) |
| Earliest Snowfall:           | 11/28/1976 (Trace)   |
| Latest Snowfall:             | 3/3/1968 (Trace)     |
| Most Recent Snowfall:        | 12/4/2009 (0.3")     |

### McComb

|                              |                    |
|------------------------------|--------------------|
| Period of Record:            | 62 years           |
| Years with snow:             | 51                 |
| Years with measureable snow: | 41                 |
| Largest Snowfall:            | 4.7" (2/23/1968)   |
| Earliest Snowfall:           | 11/13/1976 (Trace) |
| Latest Snowfall:             | 4/3/1987 (Trace)   |
| Most Recent Snowfall:        | 12/4/2009 (2.0")   |



The above images are from the most recent snowfall in New Orleans (12/11/2008). On that day, plentiful moisture wrapped around the backside of a low pressure system moving away from the area. The low had already brought a cold front through the area with a cold air mass in place over the lower Mississippi River Valley. Due to the cold temperatures already in place, all of the precipitation fell as snow—with some places receiving up to 8 inches of snow that day!

## A Note From the Editor...

As 2010 comes to a close, I hope that you've enjoyed this year's editions of the Bayou Observer. We've had a busy year on the Gulf Coast dealing with the oil spill, a couple brushes with tropical cyclones, and even few severe weather episodes. Through all of these events, we strived to provide southeast Louisiana and southern Mississippi with the best weather information possible, and we look forward to doing the same in 2011.

On behalf of myself and the rest of WFO LIX, I extend our warmest wishes to you and your family for a happy and safe holiday season.

*Danielle Manning*  
Editor, The Bayou Observer

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