

SAGE WINDS

NATIONAL WEATHER SERVICE – BOISE, ID

<http://www.weather.gov/boise>

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Hurricane Irene: In Case You Missed It

On Thursday August 25th, forecasters at the National Hurricane Center in Miami, Florida issued the first Hurricane Warning for the impending Irene. At this point, Irene was a Category 3 Hurricane positioned over the Bahamas and was expected to curl northwest toward the Carolinas, then continue north along the eastern seaboard.

On Saturday August 27th, Irene made its first U.S. landfall as a Category 1 hurricane (with 85 mph winds) near Cape Lookout, North Carolina. After temporarily veering east of the mainland, Irene reemerged on the New Jersey shore on the morning of Sunday, August 28th. By the time it made

landfall for the third time, near Brooklyn, it had weakened to tropical storm status.

The Effects:

- An estimated 40 lives were lost due to Hurricane Irene.
- Heavy precipitation caused river flooding records to be broken in 26 rivers across NJ, NY, and VT.
- 2.3 million people were under mandatory evacuation orders.
- Approximately 9 million people were temporarily without power.

The Facts:

- Hurricane Irene was the first hurricane to make landfall on the contiguous U.S. since Ike struck Texas in 2008.
- Irene was the first hurricane to make landfall in New Jersey since 1903.
- Hurricane Irene was weaker, but similar in sheer size, to Hurricane Katrina in 2005.
- Irene was the first tropical storm (or stronger) to threaten New York City since Hurricane Gloria in 1985.



Above, a NOAA visible satellite image of Hurricane Irene at 730 a.m. EDT on August 27, 2011.

The Saffir-Simpson Scale

For all intents and purposes, the Saffir-Simpson Scale is to hurricanes what the Enhanced Fujita Scale is to tornadoes. It is a tool to assess and communicate the intensity of a storm. In this case, a hurricane.

It was developed in 1971 by (you guessed it) civil engineer Herbert Saffir and Bob Simpson, a meteorologist and the then head of the National Hurricane Center. The original scale accounted for wind, storm surge, and central pressure. Saffir assessed the wind needed to cause damage, minor to catastrophic, to structures. The wind scale was then sent to Simpson, who added the parameters of central pressure and storm surge. With these parameters, hurricane intensities were then categorized from weakest to strongest, or Category 1 to Category 5.

In 2010, the scale was reassessed. Years of empirical evidence had shown that extreme storm surges and

central pressures were occurring with weaker winds, and vice-versa. To avoid confusing the public, the scale was therefore altered to remove storm surge and central pressure parameters. Today, the Saffir-Simpson scale relates hurricane intensity to wind speeds only, but storm surges continue to be forecast by the National Hurricane Center.

Saffir-Simpson Hurricane Wind Scale		
<i>The National Hurricane Center will no longer attribute storm surge with hurricane category. This is due to previous storms that have had storm surges well outside of the expected criteria in the past few years. The non-tropical Nor'easter of 09' is a good example. Its wind gusts were up to 70mph, but Hampton Roads experienced flooding that was akin to a category 2 hurricane. Water rise will now be determined on a case by case situation.</i>		
Category	Winds (MPH)	Damage
1	74 - 95	Minimal: Significant damage to mobile homes. Large trees blown down. Major roof damage to homes. Typically, significant flooding. Moderate damage to home exteriors. Large area of power outages.
2	96 - 110	Extensive: Significant damage to mobile homes. Large trees blown down. Major roof damage to homes. Typically, significant flooding. Moderate damage to home exteriors. Large area of power outages.
3	111 - 130	Devastating: Now it is a major hurricane and structural damage can occur to homes and small buildings. Large buildings can also sustain damage. Mobile homes largely destroyed.
4	131 - 155	Catastrophic: Structural damage to numerous buildings. Roof failure on many buildings. Flooding and wind damage can extend far inland. Storm surge generally over 13 feet will lead to widespread flooding, but height can vary.
5	More than 155	Catastrophic: All trees blown down. Some buildings removed from their foundation. Nearly total roof failure. Flood damage to lower floors less than 15 feet above sea level. Devastating wind damage can extend far inland. Especially if system is quick moving.

Weather In the News

["Tropical Storm Lee Soaks New Orleans" \(Reuters via Yahoo News\)](#)

["Disasters in US: An Extreme & Exhausting Year" \(AP\)](#)

["Irene: Flooding Cuts Off Towns in Vermont, New York" \(ABC News\)](#)

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Winter Outlook: La Nina Watch Issued

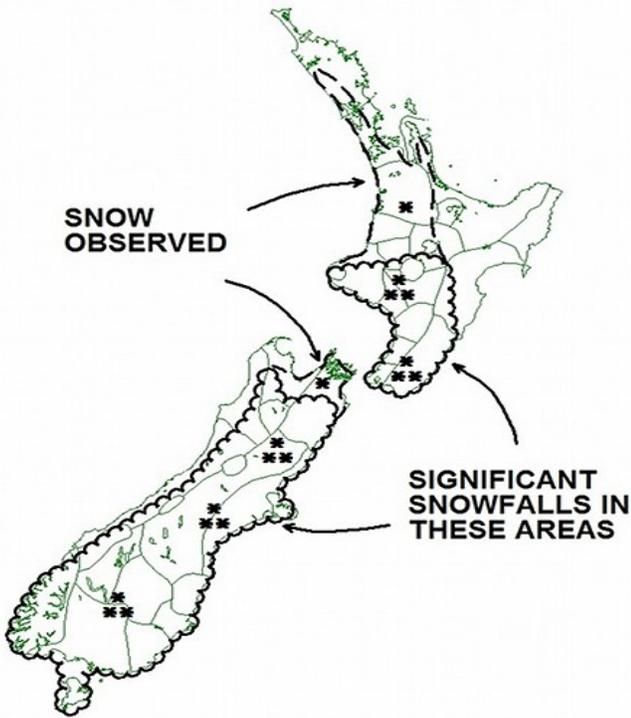
ENSO-neutral conditions are currently present across the equatorial Pacific. However, sea surface temperatures (SST) have started to trend cooler, which is indicative of an emerging La Nina pattern.

CPC climatologists still believe that ENSO-neutral conditions will continue through this fall. However, they believe ENSO-neutral or La Nina conditions pose equal chances of prevailing this coming winter.

Alternatively, El Nino conditions have been deemed far less likely for the 2011-2012 winter. In light of this forecast, the Climate Prediction Center (CPC) has issued a La Nina Watch. A more detailed discussion of this watch can be read here:

[ENSO Diagnostic Discussion](#)

Rare Winter Storm Hits New Zealand



The last time Auckland, New Zealand saw snow it was 1939. That's right, 72 years ago! A strong Antarctic front moved north into New Zealand on August 14th, bringing record-breaking snowfalls, gusty winds, and freezing temperatures. The storm caused school, airport and road closures, mail cancellations, and intermittent power outages.

In Wellington, New Zealand the storm brought the first snowfall seen in over 40 years. Below is a link to a video compilation of citizens, on the Cuba Mall in Wellington, catching their first glimpse of this awesome snowfall. (Video filmed and edited by Ro Tierney.)

[First Wellington Snow in 45 Years](#)

<<< Map of NZ snowfall as broken into two categories: "significant" and "observed". The map time frame is from the event onset on Sunday, August 14th to 2 pm local Tuesday, August 16th. Map courtesy of MetService.

September Outlook

<< Temperature Outlook

Precipitation >> Outlook

<http://www.cpc.noaa.gov/>

