

High-Density Weather Network and Advanced Visualization Tool Helps Collier County, Florida, Stay Ahead of Hurricane Isaac

- Hot spot for lightning activity and severe storms
- Coastal areas flooded by storm surge from Hurricane Isaac
- County selected Earth Networks' StreamerRTSM weather monitoring tool
- StreamerRT provided county officials with live weather and lightning data

BACKGROUND

Located along the gulf coast in southern Florida and covering more than 2,300 square miles, Collier County is the second-largest county in the state. The Everglades, which is located at sea level, reaches the southern part of the county and is vulnerable to flooding.

WEATHER CHALLENGES

Collier County officials must remain vigilant when it comes to severe weather. The county has seen its share of major storms, tornadoes and hurricanes, and is one of the nation's hot spots for lightning activity. Additionally, extreme heat and high winds make fighting wildfires, which are one of the county's biggest and most frequent challenges when rainfall is below average, more difficult. Like all counties, ongoing communications with officials and emergency managers is more challenging during weather events.

REAL-TIME WEATHER VISUALIZATION

To help track severe weather, Collier County uses StreamerRTSM, a web-based weather visualization and alerting application for monitoring storm cells, lightning and changing conditions. StreamerRT combines real-time data from neighborhood-level weather sensors from more than 35,000 locations – including 10,000 stations that are exclusive to Earth Networks-WeatherBug.

Collier County uses StreamerRT to access live weather data from 20 weather sensors in the area. The sensors, located at the county's Emergency Services Center, county fire stations and other locations, report important atmospheric conditions such as temperature, humidity, wind speed and direction, and more.

StreamerRT also displays information from the Earth Networks Total Lightning NetworkTM, which is the largest lightning detection network for severe weather prediction and warning. When lightning rates exceed a threshold that indicates an increased threat for severe weather, Earth Networks' Dangerous Thunderstorm Alerts – in addition to watches and warnings from the National Weather Service – are delivered.

TRACKING ISAAC

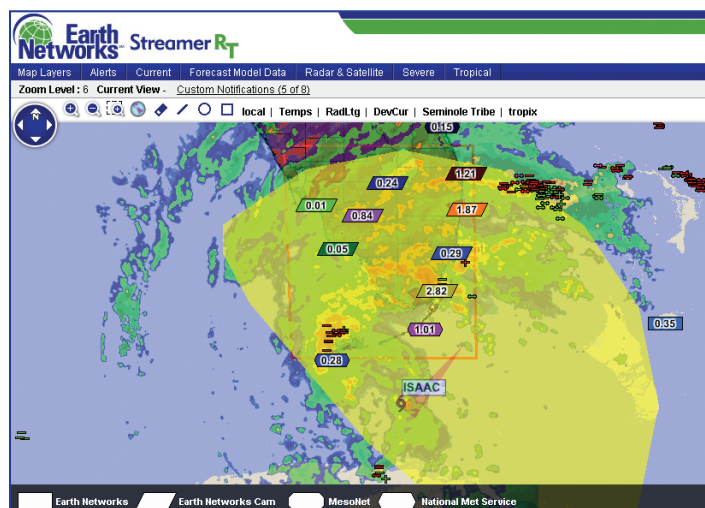
As Hurricane Isaac approached in August 2012, Collier County utilized StreamerRT around-the-clock in its Emergency Operations Center. Displayed on the Center's main screen, StreamerRT provided instant situational awareness by showing the storm's location, speed and reach. By turning on various layers in the application, county officials obtained current weather data to understand what was happening across the county. The information was then used to update emergency response teams.

"Specifically for Isaac, we were looking where the bands were, how fast they were approaching and the timing to get a good, clear picture of what was in store," says Rick Zyvoloski, Emergency Management Coordinator at Collier County Emergency Management.

As Isaac arrived, it brought lightning, strong winds and heavy rains. On Marco Island, a popular tourist destination located off the county's southwestern coast, storm surge rose over seawalls. Inland, county roads were covered with water.

"Isaac was a storm surge event for us, with the Everglades receiving 3 to 4 feet of water," says Zyvoloski. The coastal areas down south had the biggest impact with hundreds of thousands of dollars of direct damage due to flooding." Fortunately, Isaac stayed west of Florida's Gulf Coast and spared the county from more sustained damage.

Says Zyvoloski, "StreamerRT allowed us to have the big picture of what is local and low in the atmosphere, in real-time, that we could not see any other way. The localized view of real-time weather provides us with the ability to see what is happening with the weather, depending on the hazard scenario."



StreamerRT shows the center of Hurricane Isaac approaching South Florida, along with rainfall totals, live radar and lightning, and the area covered by tropical-storm force winds (yellow shading).