



Business

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Knowing the flow

*By Paula Aven Gladych
The Daily Times-Call*

LONGMONT — Along the Southern U.S. coast, heavy rains flung by a succession of hurricanes have led to flooding, power outages and tragedy.

But for one Longmont-based company, that rain represents liquid gold.

With hurricane after hurricane hammering the Southern and Eastern seaboard, many municipalities and emergency personnel are relying on information gathered by OneRain Inc. to tell them where and how much rain is falling and where flooding will occur.

Using state-of-the-art ground detection equipment, combined with radar, the company helps areas prepare for and respond to large quantities of rain.

Of course, when a hurricane as large as Ivan hits land, real-time data “doesn’t make that much of a difference,” said Ilse Gayl, president and CEO of the company.

In such cases, all that municipalities can do is learn from the information collected and tweak their emergency networks to make them more effective in the future, she said.

OneRain was formed last year with the merger of Longmont-based DIAD Inc. and California-based NEXRAIN Corp.

DIAD — founded in 1992 by Gayl and her husband, Donald Van Wie — initially specialized in the design, operation and maintenance of automated flood warning systems, including networks of automated rain gauges and environmental sensors.



OneRain President and CEO Ilse Gayl sits in front of a screen displaying real-time national rainfall in the OneRain headquarters in Longmont. OneRain monitors satellites and rain gauges all over the country and informs municipalities and businesses about weather, rain and flooding. The company is helping the hurricane-ridden South determine how much rain is falling and where flooding could occur.

Times-Call/Coke Whitworth

In 1995, the company introduced STORM Watch, a real-time environmental data-collection software program aimed at the flood-warning and emergency services market.

NEXRAIN Corp., a California-based company founded in 1992, used radar images to determine where flooding would occur.

Together, the companies offer radar data that has been enhanced by the company's automated sensors on the ground. Those sensors measure rainfall and water flow, then automatically radio the data back to OneRain's headquarters.

Kevin Stewart, flood warning program manager for the Urban Drainage and Flood Control District in Denver, said his organization has worked with OneRain for about 12 years.

The district has 170 automated rain gauges, weather gauges and stream gauges in the seven-county Denver metro area and in the mountains along the Front Range.

OneRain uses the district's data in its rainfall analyses and is "instrumental in maintaining our network. They are quick to respond to radio problems in the field," Stewart said.

The urban drainage district uses OneRain's software to collect data from its automated rainfall gauges. OneRain also helped design the district's system and acts as a consultant to the district, Stewart said.

"They're a great group of people, very professional. They provide good services, or people wouldn't keep paying them, and they are unique in what they do," Stewart said. "Nobody provides this level of support."

OneRain's technologies allow agencies to detect rain early "and prepare to respond when something is going to happen, like Hurricane Ivan," Stewart said. "The data we receive in real time helps us quantify what is going on, where the worst problems are going to be and where we need to respond to that. Without that data, we're just guessing, looking at satellite or radar pictures."

The city of Louisville, Ky., uses OneRain's real-time data because its storm runoff and sewer systems are combined, said Gayl. By using early rainfall data, the city can decide to reroute sewage into a temporary storage facility to make room for storm runoff when a large amount of rain is predicted, Gayl said.

Louisville has had problems in the past with storm/sewer drains backing up during storms, spreading raw sewage around city neighborhoods, she said.

"It's much less expensive than building a new system, which would cost billions of dollars," Gayl said.

Engineers designing new water- or sewage-treatment plants use OneRain's historical weather data to make design decisions.

Tim Sutko, senior hydrologist for Clark County Regional Flood Control District in Las Vegas, Nev., said he and his staff love OneRain's software.

With 140 automatic rain gauges across 8,000 square miles, the flood-control district can determine how hard it is raining and gauge stream levels, wind speed, relative humidity and temperature, he said.

“Their software helps us collect all that data, get it into a database and helps us display that data in real time in our office,” Sutko said.

That’s critical in a desert situation where large amounts of rainfall can turn into flash flooding quickly, he said.

“If we can see (thunderstorms) building, and once it is raining if we can predict where it is going, we can get a 10- to 15-minute head start,” Sutko said. “Around here, that’s a lot.”

OneRain also sent representatives to help train Sutko’s staff on the software and conducted an audit of Clark County’s systems to “tell us what we were doing right and wrong,” he said.

“It was of great use to us to have an independent, objective set of eyes to look at our hardware and software and response time and tell us what was good and bad about it,” Sutko said.

Boulder County relies heavily on its flood warning system because there are seven major drainages here, said Larry Stern, emergency manager for the city and county of Boulder.

There are 46 rain gauges and about 14 stream gauges that OneRain monitors and maintains for Boulder County, he said.

“We’re 99 percent sure we can predict flooding using their equipment,” Stern said. “We’ve got warning sirens and a 911 callback system that has got all of the floodplains in a pre-plan, so all we have to do is pick a floodplain and send out a call, ‘Climb high or die,’” Stern said.

“A lot of our task is educating people that this information is available,” said Gayl.

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