

Mayfield Utility Leads Resilient Recovery Efforts Following Devastating Tornado

PROACTIVE PLANNING AND COMMUNITY SUPPORT HELP KENTUCKY UTILITY SERVE CUSTOMERS DURING WIDESPREAD OUTAGE

The night seemed like any other night. Families in the quiet town of Mayfield, Kentucky went about their regular routines. They got home from work, made dinner, streamed their favorite shows and went to bed. Nothing could have prepared them to wake up to a nightmare.

On December 10, 2021, at 9:27 p.m., a tornado with winds of up to 190 mph touched down in Mayfield, creating widespread outages and mass devastation throughout the community. The town is still working to rebuild what was lost over a year ago.

An icy past

Flashback to Mayfield's first encounter with a major weather emergency in 2009: a severe ice storm that caused 10,000 people to lose power. All communication capabilities were severed, and they had no outage restoration plan in place. The service provider hobbled their way to recovery.

Marty Ivy, General Superintendent of [Mayfield Electric & Water Systems](#), was adamant that he and his team be more prepared next time. He created a list of challenges they faced, mistakes they made in their response efforts and ideas for improvement to ensure a better way forward.

Devastation strikes

Twelve years later, Ivy's preparedness paid off. Grave uncertainty and mounting grief filled the community as the swath of destruction was more than a mile wide. The tornado tragically took 22 lives, leveled 481 homes, businesses or structures – all within three minutes to forever change the small town.

The devastation was shocking. Yet, the team at Mayfield Electric & Water Systems turned their grief into action.

"My first thought was, 'are my employees okay?'" said Ivy. "I connected with each of my managers, and they began making calls to the rest of our team members."

Once everyone was found safe, Ivy reserved 100 hotel rooms in neighboring communities so his employees would have electricity, running water and a temporary home for their families.



CHALLENGE

Restore power and water systems after devastating damage from a tornado in Mayfield, Kentucky

SOLUTION

Create and follow an emergency plan that prioritizes safety and customer needs

REACH FARTHER

Sensus recognized as reliable utility partner during restoration efforts



Crews had this substation back online within one week. For a city that was nearly leveled, all power was restored within one month for those customers who could be reconnected to the grid.

“It’s invaluable to have an AMI system. Knowledge is power, and we used this information to understand our remaining workload and to share status reports with the community.”

Marty Ivy, General Superintendent of Mayfield Electric & Water Systems

The next step was evaluating their systems and equipment. They checked water and sewer plants, electrical substations and more. What they found? Rubble. Everything was destroyed.

Their fleet of bucket and digger trucks was totaled. They had to purchase new trucks to begin recovery efforts. Even the utility’s main office was struck. Their servers and computers were gone.

An invaluable support network

With \$45 million worth of damage, it was clear the City of Mayfield needed helping hands.

“It all happened so quickly,” said Ivy. “On Friday, we had a company of 42 employees. On Monday, we had 250 people helping us. From linemen to water operators and pipe fitters, people from all over the Tennessee Valley and Kentucky were there to pitch in.”

Vendors, friends and strangers alike supported Mayfield without hesitation.

“Everyone in the utility industry helps each other out,” said Ivy. “One of the first groups to call and offer support was Xylem’s Sensus. We’ve been a Sensus customer for 12 years now, and I consider them my friends.”

Within 48 hours, Xylem engineers visited Mayfield to check equipment and ensure both electric and water meters along with the [FlexNet® communication network](#) continued robust, reliable operations in the aftermath. Other employees volunteered through a local church and put on their boots and gloves to help in the massive cleanup effort. Xylem also partnered with Americares to set up a charitable campaign that yielded \$28,000 in relief funds.

Relationships mean a lot to Ivy. He looks back on the tornado in 2021 and says close-knit relationships with partners like [Sensus](#), a Xylem brand, were key to his team’s [resilience](#).

“You can’t do it yourself,” said Ivy. “So many people poured their hearts out to help us and I will never be able to repay them.”

Redeeming results

Using their [advanced metering infrastructure \(AMI\)](#) and meter data management system, Mayfield could remotely track each time someone’s power was restored.

“It’s invaluable to have an AMI system,” said Ivy. “We used ours to export visual graphs of our electric restoration progress. Knowledge is power, and we used this information to understand our remaining workload and to share status reports with the community.”

Within 30 hours, Mayfield’s water system was fully operational and pressurized. The AMI system helped speed up the team’s response to repair leaks in the tornado zone so they could tackle the biggest water issues first.

The neighboring utility, West Kentucky Rural Electric Cooperative, pitched in to assist and just five days after the disaster, Mayfield had three circuits operational and restored power to the local hospital. Crews continued to work diligently and the outage restoration timeline happened with incredible speed for a city that was nearly leveled:

- By one week, the substation was back online
- In two weeks, more than 80 percent of the city was reenergized
- Within one month, all power was restored to customers who could be reconnected to the grid



The tornado completely destroyed Mayfield's 600,000-gallon elevated water tank, but a new one stands in its place with the spirited tagline "Mayfield Strong" as the community continues to rebuild.

Ivy gives all the credit to slowing down, planning and committing to not push his team too hard. They worked tirelessly but with strict instruction not to work overtime.

The team's discipline and precision ensured a safe environment and an efficient recovery. Mayfield now has a thoroughly documented process for crisis response. Should another weather emergency strike, they will be ready to tackle it again along with their partners.

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