

# Colorado Springs Utilities

Improved worker visibility and safety during emergencies



As a provider of natural gas, electricity, water, and wastewater services, Colorado Springs Utilities faced a monumental task when a forest fire highlighted the need for improvements to its communications and workforce management systems. In the aftermath of the fire, it was clear that the utility would require an effective workforce management solution that would incorporate each of the utility's divisions, integrate its back office systems, and make overall work crew management more efficient.

Colorado Springs Utilities serves 228,000 electric customers, 135,000 water customers, and 190,000 natural gas customers in the Pikes Peak region. As a municipal utility, it is tasked with keeping rates as low as possible while maintaining safe and reliable services to its customers. As such, the utility sets rates only high enough to cover its cost of operating.

## Responding to the Waldo Canyon Fire

In June 2012, the Waldo Canyon fire—which started in the Pike National Forest—burned approximately 17,000 acres and destroyed 347 homes. Ultimately, the fire forced the evacuation of 32,000 people. Colorado Springs Utilities was required to coordinate the deployment of employees and third-party crews to ensure the gas and electric grids were under safe and predictable conditions, allowing emergency rescue crews to contain the fires and evacuate residents. To accomplish this, the utility had to manage multiple crews at multiple sites over numerous days, keep track of where every resource was located, and ensure crews were sent to fire sites where their skills were best suited.

## About Colorado Springs Utilities

- 228,000 electric customers
- 135,000 water customers
- 190,000 natural gas customers
- 1,800 employees
- 500mi<sup>2</sup> service territory



Colorado Springs Utilities  
*It's how we're all connected*



## Project Goals and Requirements

### Colorado Springs Utilities' goals

- Reduce restoration times
- Coordinate multi-party field operations
- Consolidate the separate mobile systems currently operating
- Move from paper-based field operations

### Colorado Springs Utilities' requirements

- Single platform for mobile operations
- Interfaces to the outage management system
- (OMS), customer information system (CIS), and enterprise asset management software (EAMS)
- Real-time work status updates
- Scalable work order configuration
- Geographic information system (GIS) integration
- Flexible mobile options
- Support in both connected and disconnected modes

During the firefighting efforts, more than 9.3 million gallons of water from the water distribution system were used to fight the fire, and every gas meter in the area had to be shut off. Qualified employees were tasked with providing disconnection services and repressurizing mains when necessary. Once the crisis was over, Colorado Springs Utilities was faced with the challenging task of performing more than 4,000 relights in a week, while 52 miles of gas main and 4,200 service lines required leak surveys.

The dramatic experience highlighted the need for Colorado Springs Utilities to update their workforce management system. Their existing system operated with little or no visibility over their grid, decreasing their ability to efficiently stabilize their utility networks. The lack of visibility over the grid also made it impossible for the utility to automate their operations, which meant work crews spent valuable time waiting for control centers to deploy them to work sites. Furthermore, using an older system meant Colorado Springs Utilities was sometimes working with outdated, missing, or conflicting information regarding customers and assets. The utility required a better way to manage crews and obtain real-time status updates, and an improved integration of their back office systems through an automated and mobile workforce management system.

The two biggest issues Colorado Springs Utilities faced with communications with field crews were that the utility company used paper-based geographic information systems (GIS) maps, paper-based field operations, and phone-based communications; and they used separate mobile systems for electric OMS, customer service and AVL, which were not linked together. Complicating matters, there was no mobile workforce management system for gas work, while their internal communications relied on tabular data.

To make management of their grids more efficient and more effective, Colorado Springs Utilities needed a single, configurable workforce management solution that they could customize to interface with their outage management, customer information, and asset management systems. And they needed the solution to work well for all their utility divisions.



## Cost effective workforce technology

With these goals and requirements in mind, Colorado Springs Utilities ultimately chose IFS Mobile Workforce Management to manage its electric, natural gas, water, and wastewater operations. IFS's software has been fully integrated with the utility's GE Power ON OMS system and the Verizon Network Fleet automatic vehicle location (AVL).

"After a rigorous nine-month selection process to find a solution to replace our existing system, we chose IFS for all four of our lines of business based on the strength of its reliable, feature-rich, intuitive and highly configurable product," said Mathew Wells, Distribution Operations Superintendent, Colorado Springs Utilities. "The fact that IFS has both on-premise and cloud-based options and can readily accommodate moving from one deployment model to the other was also appealing."

Given the utility company's focus on keeping customer rates low and only undertaking critical projects, cost was another important factor in Colorado Springs' decision.

"The Mobile Workforce Management solution provided us with the lowest overall cost of ownership as we transition our legacy capabilities to modern technology," said Wells. "IFS has met our aggressive deployment schedule and we're very pleased with the results."

## Implementation Stage

Colorado Springs Utilities enlisted IFS to implement the software solutions that would coordinate field operations during emergency outages. The implementation process began the following month, and the electric outage go-live occurred less than a year later.

The solutions provided included IFS Mobile Workforce Management with Oracle CC&B interface to the outage management solution, Enterprise Scheduling, Appointment Booking, custom reporting, AVL interfacing, street level routing, and weather overlays.

## More Efficient Work Orders

Among the results obtained by Colorado Springs Utilities was an improvement in outage restoration times due to more efficient management of work crews. The single mobile solution allowed for:

- Simplified coordination of field operations during emergencies
- Visualization of crew locations via an online map
- Real-time work crew availability information
- Distribution and redistribution of work as additional crews arrive
- Access to asset data and outage orders
- Routing of work crews
- Real-time updating to estimated time of restoration (ETOR data, completion data, and follow-up orders)
- Restoration orders

Because the system is paperless, IFS Mobile Workforce Management offers a more efficient way to manage work orders while remaining operational in situations where data connectivity is limited or non-existent – extremely beneficial in a region where 80% of the area has either limited connectivity or no connectivity at all.

In situations with no connectivity, workers are able to access order data and geographic information systems data and, after periods of disconnection, the system autosyncs as soon as connectivity is restored. Back office users can see whether or not crews are connected to the system. This allows Colorado Springs Utilities to automate operations and to monitor worker safety in high-risk zones by having constant visibility and communication with onsite work crews.

Other benefits include the elimination of asset and customer data discrepancies, simplified field operation coordination during emergencies, and real-time access to asset data and outage orders. Interface workers and back office teams can access customer information such as account numbers, appointment history, and notes relevant to each task.

## Find out more

Further information, e-mail [info@ifs.com](mailto:info@ifs.com), contact your local IFS office or visit our web site, [ifs.com](http://ifs.com)

