Protect Critical Infrastructure with Asset Management

How a California irrigation district used integrated solutions to monitor resources

When disaster strikes, it's not just public safety personnel who must react quickly. Utility districts, public health agencies, departments of transportation and other critical service providers must do their part to ensure effective response and recovery.

The El Dorado Irrigation District (EID) is the largest water supplier in El Dorado County, California. It owns and operates five dams in the Sierra Nevada region and provides drinking water, wastewater, recycled water, hydropower and recreation operations for 130,000 people.

When the massive Caldor Fire broke out in August 2021, EID had to move fast to protect water access and communicate with the public.

The Right Technical Solutions

Disaster resilience is about more than managing resources and coordinating staff during a crisis. It means equipment, systems and other assets must be properly catalogued, managed and maintained. Having the right data about those assets helps agency leaders make the best decisions.

"Asset management is critical to the disaster recovery process, both for restoring function and enabling economic recovery," says EID Director of Operations Dan Corcoran. "Having that information allows us to hit the ground running with our design teams to restore function. Then we can work with our legal, financial and claims teams to properly document that loss and restore community services."

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EID has had an asset management solution in place for more than 25 years. The district implemented the Infor Hansen Asset Management for Utilities tool in 1997 and continues to refresh it, eventually modernizing with cloud-based solutions as they became available. Corcoran's team uses the solution daily to identify and document assets, schedule and complete preventive maintenance, track details on maintenance work, and prioritize asset replacement.

Over time, the district has integrated Infor's customer information system, billing, and community development and regulation solutions. With a complete, cloud-based solution, Corcoran and his staff can efficiently manage the crews, equipment and systems that maintain water quality and availability.

Protecting Water During a Crisis

Having an integrated solution was vital for disaster management during the Caldor Fire. During weeks of fire suppression activities, the system provided data-driven insights that allowed EID staff to manage water resources more efficiently, proactively identify leaks and water quality concerns, and send targeted disaster communications to residents.

As the wildfire raged, maintaining water resources was critical. Fire suppression efforts spiked demand far higher than normal. In addition, to protect their homes, some residents turned on sprinklers before they evacuated.

"If everyone on the street turns on the sprinklers at the same time, your demand goes through the roof," Corcoran says. "It was important for us to manage that so we could maintain the integrity of the system not only for the firefighting efforts, but to maintain drinking water standards the whole time."

The solution's integration with ESRI-GIS software enabled Corcoran's team to easily map water usage and needs in specific geographic areas. With that information, the team could prioritize next steps and address potential issues before water availability or quality became a problem.

Meanwhile, EID used rapid notification tools integrated into the customer information system to push text, email and phone alerts asking residents not to run their sprinklers.

"The water levels in our storage tanks started recovering soon after our messages went out," Corcoran says. "We knew the outreach had worked."

Supporting the Workforce

Deploying modern, digital solutions also helps EID adapt to its changing workforce needs.

"We have one of the higher ratios of customers to employees," Corcoran says. "But we still must have reliable services, and that means we must be as efficient as possible with our time and staff. You can't do that without technology."

The cloud-based solution helps employees work more efficiently in the field. EID covers parts of three different watersheds across 220 square miles. If crew members don't bring the proper equipment or the right replacement when they go on a service call, they must make another trip. That's inefficient and costly on an average day. In a crisis, it could be disastrous.

With the integration of asset management and GIS data, work crews can use their mobile device to click on a location, see the assets and load their truck with the right parts before heading out. They can

complete work orders and inspection details onsite instead of going back to the office and manually re-entering data into the system.

"All that is done in one step. When you do that 650 times per year, the efficiency gains are obvious," Corcoran says.

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Easy access to a contextual view of asset management data enables supervisors to make quick, data-driven decisions. They see when an asset was installed, the last preventive maintenance, how much money the district has spent on it and whether it is scheduled for capital replacement. They can also easily track work completion, close work tickets or plan next steps from anywhere.

Keeping Innovation a Priority

EID is currently exploring methodologies that will provide additional information to the district and allow staff to plan capital investments beyond the current five-year horizon.

Plans to implement Infor's permitting and planning module are also in the works. The module will allow the district to track housing growth and more accurately anticipate future water needs.

A cloud-based asset management solution means the district can respond to disasters faster and more efficiently; communicate with residents more effectively; and manage its infrastructure needs now and for years to come.

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