

# City of Farmington operations team emergency response – Gold King Mine incident

Water Heroes award submission  
Water Environment Federation

2017



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**2017 WEF Award Nomination Form**  
**Nominations Open: January 15- April 1, 2017**

**Award Name:**        Water Heroes Award

**Nominee Name:**     Farmington operations team—Ron Rosen and Monica Peterson

*(Provide Full Name)*

**NOTE:**    *For Innovative Technology Award, list the Product Name followed by the Company Name;  
For Published Papers, provide the article name, publication and issue number in addition to the Name(s) of the author(s).*

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**WEF Membership #** 00016182

**WEF Member Association:** Rocky Mountain Water Environment Association

**Supporting Facts for Nomination:** *(Required – maximum 50 words):*

**Farmington’s operations team, led by Ron Rosen and Monica Peterson, was instrumental in protecting the city’s water supply and public health when the Animas River was contaminated after the Gold King Mine incident in August 2015. The team has helped the City with upgrades and monitoring since the mine spill.**

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**Nominated By:**     CH2M Operations Management Services – Brent Temmer

**WEF Membership #** 00016182

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Mail or e-mail complete nomination package

**to:**

**Water Environment Federation  
Awards Program  
Attn: Kelsey Hurst  
601 Wythe Street  
Alexandria, VA 22314-1994**

**[khurst@wef.org](mailto:khurst@wef.org) or [awards@wef.org](mailto:awards@wef.org)**

# Nominee biographical sketches

## Farmington operations team

A skilled and safety-driven team of 49 professional operators, functional leaders, technicians, maintenance personnel and support staff keeps the City of Farmington’s water, wastewater and stormwater utility systems operating—managing wastewater, supplying clean water to homes and businesses and maintaining consistent regulatory compliance. This team carried out all the operations and system monitoring necessary to assure the city’s success in responding to the Gold King incident. At CH2M, we refer to these hardworking people as Everyday Heroes. They’re the heart, soul and backbone of our world-class services. We rely on their experience and abilities to bring the very best to our clients every day.

## Ron Rosen, Project Manager

Ron has more than 30 years of water and wastewater treatment operations, management, laboratory, and supervisory experience. Because he has operated and managed utility systems employing a wide variety of technologies and unit processes, his expertise and leadership was integral to emergency response and incident management after the Gold King Mine spill. He has served as liaison and technical advisor to federal authorities and regulatory agencies nationwide. He has developed financial, safety and staffing strategy and policy, managed plant startups and upgrades, and guided quality assurance and quality control. Ron’s extensive training in water and wastewater technology also helped Farmington manage emergency response and select technology and instrumentation to help address future incidents. He holds a Bachelor of Science degree in Biology and Zoology, and is certified in New Mexico as a Grade III Water Operator and Grade IV Wastewater Operator.

## Monica Peterson, Assistant Project Manager and Laboratory Director

Monica has managed laboratory operations, sample collection and analysis, data management and reporting for more than 27 years. At Farmington, she directs laboratory analysis for Safe Drinking Water Act and National Pollutant Discharge Elimination System compliance. During Farmington’s response after the Gold King Mine incident, Monica and Ron collected and tested water samples at the request of the New Mexico Environment Department and for the U.S. Geological Survey. She also helped interpret test results for the U.S. Environmental Protection Agency. For her efforts above and beyond the scope of her duties, the City of Farmington presented her with a special recognition during the 2015 New Mexico Municipal League annual meeting.

## Nomination rationale

CH2M has operated the City of Farmington, New Mexico's water, wastewater and stormwater utilities since 2000, and we have developed a strong and trusting working partnership. On August 5, 2015, three million gallons of water and debris spilled from the Gold King Mine in southwestern Colorado, releasing a plume of mine wastewater containing heavy metals and sediments into Cement Creek, a tributary of the Animas River. Farmington, 100 miles downstream from the spill site, relies on the Animas for its water supply. The waste plume from the Gold King threatened to impact public health, agriculture and the local economy.

When they found out about the spill and the coming waste plume the day after the spill, Ron Rosen, Monica Peterson and the Farmington operations team took action to maintain a safe water supply during and after the incident. Using a makeshift flow meter, they determined the approximate arrival of the waste plume near the City's water intakes. They closed off the intakes at river pump stations, and estimated the raw-water supply still available in the City's storage reservoir. They also set up clean-water stations at the community center and a fire station to supply local residents concerned about the safety of their water wells.

The Farmington facility includes a well-run, and trusted, laboratory. The state-certified Farmington laboratory is a regional analysis facility that tests water for numerous nearby communities. Local, state and federal regulatory agencies asked Ron and Monica to collect, test and interpret water samples throughout the incident. Government officials established a command center in Farmington, and relied on Ron, Monica and team to help monitor water quality. The duo also attended meetings and public briefings as advisors.

The work didn't stop after the passing of the waste plume. Water quality in the Animas River returned to a usable, treatable state a few weeks after the event. Our team and Farmington continue keeping a close eye on water quality during heavy rains and runoff. CH2M and the City worked together to select and install an automatic monitoring system at the river pump stations. This probe system detects elevated levels of key contaminants and shuts off pump intakes when needed. We also have lent our expertise as Farmington considers options for alternative water supplies, and improvements to the Lake Farmington storage system. CH2M renewed our operating partnership with the City in 2015 with a pledge of continued support and world-class service. We look forward to maintaining and growing our beneficial working relationship with Farmington for many years to come.

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## Client focus, crisis response strengthens ties in Farmington

CH2M is often recognized for responding effectively to client needs in crises and emergencies, and the team at Farmington, New Mexico, is the latest example. In August, the Farmington City Council unanimously approved a new eight-year, \$63.6 million contract for continued Operations Management of the city's water and wastewater facilities.

"We have delivered 16 years of excellent customer service and have provided many outside resources to support the project," said Project Director Ron Rosen. "Consistent service and additional value are principal reasons for our re-selection. We respond to client's needs immediately when an emergency happens and we've established important relationships within the community."

Most recently, Farmington's project team was instrumental in protecting the city's public health and water supply after a waste stream from the Gold King Mine near Silverton, Colorado, in August impacted the Animas River, Farmington's main water supply.

The day after the spill, Ron started receiving calls from City Hall, and without hesitation, Ron headed down to the river with a group of engineers who had been working on a design review for some upcoming plant improvements. They fashioned a makeshift flow-rate meter by pacing off a 100-foot section of river and timing how long it took for a water bottle tossed into the current to cover the distance. Some quick calculations suggested the waste plume would get to Farmington in about 48 hours. The team and the city needed to act fast.

Farmington operators shut off the two pump stations that draw raw water from the Animas for the city, and turned station keys over to the City Manager. Ron and Assistant Project Manager Monica Peterson collected and analyzed water samples for regulators, and worked with the city and their project staff to set up clean-water stations.

City officials recognized the team's efforts, and their work played a key role toward securing the new contract, which goes into effect on Jan. 1, 2016. The scope of work includes management of two surface water filtration plants, three raw water pumping stations, 10 treated water pumping stations, 15 storage tanks and approximately 340 miles of transmission and distribution grid.

CH2M has been Farmington's Operations Management services provider since 2000.

The Farmington City Council approved an eight-year, \$63.6 million contract for continued Operations Management of the city's water and wastewater facilities.

## A community responds – extending support to Oregon shooting victims

CH2M is extending a helping hand to the Roseburg Urban Sanitary Authority (RUSA) project team following the tragic shooting on Oct. 1 at Umpqua Community College (UCC). A long-term client, RUSA was directly impacted by the tragedy as they lost summer intern, Lucas Eibel. Lucas recently graduated from Roseburg High School and was studying chemistry at UCC.

In order to provide support to the victims and their families, the United Way and Umpqua Bank have established a relief fund. CH2Mers have already provided an outpouring of support as \$610 was collected during the western regional meeting, increasing the amount raised to a little less than \$2,000.

For those wanting to donate, you can donate to the United Way at [GDUWay.org/UCCgive](http://GDUWay.org/UCCgive) or to the Future Farmers of America at [FFA.org](http://FFA.org).

CH2M's RUSA project team will provide \$5,000 to match any eligible employee donation up to \$100 per employee in order to assist victims and their families. To qualify for a matching gift, email a copy of your donation receipt to Mark Madison at [Mark.Madison@ch2m.com](mailto:Mark.Madison@ch2m.com) with the subject line "RUSA Relief Fund."



People kayak in the Animas River near Durango, Colorado, on August 2015 in water colored from a mine waste spill. Source: AP.



An officer with the La Plata Sheriff's office takes a water sample after the spill in 2015. Source: AP.

## Dealing with the aftermath of the Gold King Mine spill

On August 5, 2015, three million gallons of water and debris spilled from the Gold King Mine, releasing a toxic plume of mine waste into Cement Creek, a tributary of the Animas River.

While the river currently flows a typical monsoon-season brown, in August last year it was an ominous-looking shade of yellow. Although a year has passed since the accident, our project in Farmington, New Mexico, says concern about the city's water-supply remains.

Farmington is located in the northwest corner of the state, and receives all of its water supply from the Animas.

The City of Farmington and CH2M have been working together to get ahead of, and prepare for, any type of event that may impact drinking water... again.

"One of our most important activities is measuring water quality and looking for contaminants," said Project Director Ron Rosen. "We have a state-of-the-art probe system in the river that continuously measures the turbidity, pH, dissolved

oxygen, conductivity and other contaminants. If any of these measurements indicate contamination, the system immediately shuts down the pumps that divert water to the City."

During high-turbidity events, caused by the spring melt earlier this year and heavy rain in the watershed, sediments in the river bed are stirred up and flushed down stream and still contain high levels of lead and other heavy metals from the Gold King Mine spill.

As recently as August 24, during one of these events, the city's pumps had to be shut off. The Environmental Protection Agency notified the team that the treatment ponds below the Gold King Mine were overflowing due to heavy rains. The river had to be monitored for significant changes, and Farmington drew water from its stored reserves, rather than directly from the river.

"In addition, after heavy rains on August 1, the team tested the water and lead results came back at 53-micrograms per liter," said Ron. "The drinking water standard is set at 15-micrograms per liter. We made sure this water wasn't making its way into residents' homes."

Ron added, "We are working to be proactive, to make sure we have alternative resources and to make sure we have a contingency plan."

This sense of proactivity has given the team the opportunity to do more work for the city, including a bathymetric survey of Farmington Lake, the city's reserve water supply, to determine its true capacity. CH2M also is conducting an analysis to determine whether the city can raise the dam to increase capacity. A third project includes testing of the city's raw-water conveyance lines.

"Our commitment is to provide safe drinking water to the residents of Farmington," Ron added.

In Farmington, CH2M provides OM services of the city's water and wastewater systems. Forty-eight employees serve a population of more than 50,000.

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