

# COLORADO FLOODS REQUIRED IMMEDIATE RESPONSE

By Tawny Quast

This fall, heavy rain and historic flooding ravaged the state of Colorado. The powerful waters caused widespread damage to critical infrastructure and transportation networks, washing out hundreds of miles of roads, cutting off access to many small mountain towns, and damaging nearly 2,000 square miles.

The City of Loveland, which is south of Fort Collins in the Colorado Front Range region, was hit particularly hard. Raging flood waters damaged two of the three water lines feeding the City, and the sole remaining line was at risk after the Big Thompson River changed its course.

With no time to waste, City officials quickly contacted Ayres Associates for assistance.

“We have a long relationship with Ayres and Ayres’ staff members, including Chris Pletcher, Sam Lowe, Jim Schall, and others,” said Chris Matkins, water utilities manager for the City’s Water & Power Department. “Chris (Pletcher) has worked integrally with us over the previous few years on many different water and wastewater topics. He is trained in emergency management, is quick to respond, and offers a strong sense of reasoning. He’s a natural fit for the culture of our utilities and was one of the first people I reached out to.”

In the ensuing days, Pletcher, along with a team from the City of Loveland and Ayres Associates, developed and executed a plan to push the river back to its original location, a feat that Schall, vice president in Ayres Associates’ Fort Collins office, had never come close to encountering in his 33-year career.

“To be able to come up with a plan, mobilize resources, and get to work in that short amount of time is pretty incredible,” Schall said. “Normally it would take at least six months just to get a design and permits approved.”

Pletcher joined the City’s Emergency Operations Center to troubleshoot problems, particularly to utilities, and Ayres Associates soon signed a contract with Loveland to provide emergency support.

Ayres Associates also quickly mobilized for the City of Fort Collins. With the Poudre and Big Thompson rivers just past peak flood stage, a group of 10 employees from the Fort Collins office volunteered for the City to take high water mark readings on the Poudre River. This work involved staking high water marks, taking pictures, and recording field notes at locations along the river. Later about half the group went to the City of Loveland to do the



same work on the Big Thompson River.

Dusty Robinson, a civil engineer in Ayres Associates’ Fort Collins office, along with Jason Krueger, a geospatial project manager in the firm’s Madison, Wisconsin, office, had a conference call with the City of Fort Collins’ floodplain administrator and the state administrator of the Colorado Water Conservation Board. On that call, Robinson and Krueger began making arrangements to schedule aerial photography of the flooded areas.

Ayres Associates’ Fort Collins municipal engineering group worked nonstop in the field to assess damage to utility lines. The group assessing Loveland damage worked seven days straight, from 6 a.m. to 9 or 10 p.m. during the peak of the emergency. But Pletcher said the long hours and time away from family is just part of that deep-rooted client relationship.

“To me the City of Loveland is part of my family. When your family is in trouble, you don’t count your personal costs. You do what you need to do to help out,” he said.

Although the emergency has now passed, much work remains.

“Our water and wastewater utilities have completed the emergency actions and repairs necessary to keep our customers in service,” Matkins said. “We’ve now begun our long-term recovery efforts. This will include design and reconstruction of significant infrastructure over the next year or two.”

He commended the Ayres Associates team for its effective response to a monumental flooding event.

“The City was fortunate in this event to have access to such helpful technical experts, especially with expertise in river geomorphology and flooding,” Matkins said. “Equally important, our success as a utility during this emergency was due largely to personal relationships and trust between our staff and Ayres.” ■