



THE SPIGOT

from the NORTH DAKOTA RURAL WATER SYSTEMS ASSOCIATION

Rural Water Assists North Dakota Utility After Tank Freezes

– Submitted by National Rural Water Association

When ice blocked the intake of the Hannaford water tower, the pumps cycled erratically, pressure spiked in the distribution system, and malfunctions threatened to leave the community without water. Assistance from the North Dakota Rural Water Systems Association (NDRWSA) helped avoid disaster and restore water service.

“We had some insulation in the tank that slid down,” explained Hannaford City Auditor Ed Everson. “When we had several days of cold temperatures and high wind, the tank started to freeze.”

Unfortunately, Hannaford wasn’t aware of the ice in their tank when the demand pumps started cycling

erratically and pressure spiked in the distribution system. The rapid cycling threatened to burn up the pumps and high pressures risked main breaks, all with Hannaford’s usual tank service contractor unavailable for two days.

“We knew we couldn’t use our regular contractor because it would take two days,” Everson said. “We’d be without water for two days.”

That’s when he contacted NDRWSA for assistance. “The pumps were cycling on and off faster than they should, and customers were complaining of extremely high pressure,” NDRWSA Circuit Rider Jeremy Sheeley said. “As soon as he described it, I figured it was ice over the intake.”

The ice over the tank intake confused the system and interrupted the normal filling process. “The water tower sensors were calling for water, but since the intake was blocked, the demand pumps were pushing straight into the distribution system,” Sheeley explained.

The circuit rider advised the community to shut down the demand pumps and call a contractor from nearby Devils Lake. Sheeley and the tank contractor would be able to assist the next day.

The following day, Hannaford Water Works Superintendent Roger Rondestvedt was cycling the pumps manually to maintain appropriate levels of pressure in the system. The contractor climbed into the tower and started cutting through the ice with steam. Once the contractor cut a sizable hole in the ice, Sheeley opened a fire hydrant on the edge of town to get more water moving through the system.

“The water from the well is warmer,” Sheeley explained. “Plus, moving water won’t freeze.”

Moving water through the system helped cut through more ice. By about 4 p.m., the standpipe was thawed, and the tower was back in service. Sheeley advised Hannaford



The contractor climbing into Hannaford tank to steam the frozen intake.

to move water through the tower the next day and to set the water level as low as they were comfortable with to keep the water cycling.

The quick action helped keep the water flowing and prevented significant damage to the water system.

“We were lucky we didn’t lose our pumps,” Everson said. “Hannaford has a relatively new distribution system, so the higher pressure didn’t cause any breaks or leaks,” Sheeley added.

Hannaford has been running without any further issues and has plans to repair the tank insulation in the summer.

“Jeremy stayed until the work was done. He put in a pretty full day,” Everson said. “I really appreciate it, we all do.”

Flushing a Hannaford fire hydrant to get warmer water into the system.



Rural Water Sewer Cam Helps Locate Blockage

– Submitted by National Rural Water Association

When the community of Granville couldn’t locate a sewer blockage that was causing sewage backups for residents, they contacted the North Dakota Rural Water Systems Association (NDRWSA).

“We jetted the main, but the contractor hit a dead end and couldn’t go any further,” explained Granville System Operations Specialist Paul Rosencrans. “We requested rural water bring the sewer camera just to see what was going on.”

Sewer jetting uses high-pressure water sprayers connected to high-pressure water jets to clear obstructions in residential and commercial drain pipes, as well as larger municipal sewer systems. The jetting removed some ice in the sewer but didn’t solve the backup problems.

“The customer on the end of the line was still having sewer problems,” said Les Sigette, a NDRWSA wastewater technician. “I brought the association sewer camera to try to find the obstruction.”

The sewer camera uses cables and a rolling mount that moves through pipes, transmitting and recording video of any possible obstructions. He started moving the camera through the sewer main at the nearest manhole.



“About 10 feet down, we found some misaligned tile,” Sigette said. “It wasn’t severe enough to cause the blockage, though.”

A few feet farther, Sigette found the dead-end obstruction the sewer jetting could not remove.

“The residential sewer line was shoved in completely through the main to the other side,” he said. “I’ve seen pipes shift before, but I’ve never seen it go all the through the city sewer main.”

It’s uncertain what caused the pipe to shift, but Sigette suspects it moved when the ground thawed and shifted. The line will have to be dug up and reinstalled with a saddle to prevent separation. Sigette’s assistance helped the community quickly locate the source of the problem and begin working on solutions, something that would not have been possible without NDRWSA assistance.

“His knowledge and his equipment were very helpful,” Rosencrans said of Sigette. “It’s great that rural water is there to help us.”