

## **All Leaks Surface Don't They?**

As most of you know by now Nebraska Rural Water Association and the Nebraska Health and Human Services has joined forces to help water systems in Nebraska operate more efficiently and conserve water. The Nebraska Health and Human Services purchased a Leak Correlation system and Nebraska Rural Water Association trained its staff in its proper use. We have been busy using the new equipment around the state, which has led to some interesting discoveries. Not all leaks surface!

A York County community contacted Nebraska Rural Water to assist them with a possible leak. A resident on the south side of the street had complained that his yard felt spongy. The complaint was checked out and it was discovered that there was water pouring into a sanitary sewer manhole. The systems operator said the only water main was in the yard on the north side of the street. It was determined with the leak detection equipment that there was a leak on this water main. The correlation equipment was used to pinpoint the leak and it was excavated. As it turned out an 8" water main was trenched though an old storm sewer. The storm sewer was associated with an old railroad that had been abandoned years earlier. The storm sewer was connected to the sanitary sewer manhole with a 4" pipe. The 8" water main broke (you guessed it) right on top of the storm drain. The system was losing approximately 500,000 gallons of water per day. The water was going to the wastewater treatment plant.

A small water system in Sherman County was losing approximately 1,500,000 gallons of water per month. This leak had been leaking for 2 months and the operator was unable to find the leak because it was not surfacing. The operator contacted Nebraska Rural Water Association for assistance. It was discovered that a water pipe had froze and then thawed in a house that was under renovation. This water service was not checked because the service was supposed to be off. This house had an old cistern just behind it. The basement and the cistern were completely full of water.

A leak was located in a small town in Polk County. The operator contacted Nebraska Rural Water Association for assistance because the leak was not surfacing. It was found to be a broken line under an old lumberyard office. The system was losing about 22,000 gallons per day.

Nebraska Rural Water Association assisted a city in Gage County to locate a water main break. It was discovered that the water had found its way into the sanitary sewer system. By using the correlation equipment the leak was discovered over a block away from where the city crew was going to begin excavating. The leak was estimated at 216,000 gallons per day.

An operator from a small town in Fillmore County requested assistance to find a suspected leak that was coming into a resident's basement. No leak was found at the home. During the investigation a different leak was found down the street. This leak had found its way into a storm drain and was not surfacing. The operator requested that the entire town be surveyed for leaks to see if there were any other leaks that were not surfacing. During the survey another leak was found. A quick check in a nearby manhole indicated this leak had found its way to the sanitary sewer system.

An operator in Dixon County conducted a water audit of his system and determined that the system was losing around 50 percent of their water. Leak detection was performed and a 2" water main stub was found to be broke. This particular break had found its way into the basement of a home that was a block away. The homeowner assumed their problem was ground water infiltration and had tiled around the basement and ran sump pumps to keep the water out. After the break was repaired their basement dried up.

This is just a sampling of the water leaks that didn't surface.

Since February of 2003 Nebraska Rural Water has logged over 211 hours traveling to assist water systems with leaks and 377 hours onsite finding leaks. So far 109 leaks have been found and the equipment has been used 184 times.

If your water system is experiencing unusual water loss please give us a call here at Nebraska Rural Water Association. We will be glad to help you find those leaks that may never surface.