

The war on water leaks

Once again Nebraska Rural Water association will be partnering with the Nebraska Department of Health and Human Services to provide the most advanced leak detection equipment available.

In January of 2003 the Department of Health and Human Services was able, through the drought relief effort, to purchase a leak correlator. In the very near future we hope to have new survey equipment available that are known as data loggers.

The data loggers are designed to be placed directly onto the valve stem with a powerful magnet. We hope to get forty data loggers and be able to monitor up to forty valves through out the water system.

The device is placed on the valve over night and it will automatically turn it's self on during the night. If the device doesn't hear a leak noise it will turn it's self off and go dormant. If the device hears a leak noise it will turn it's self on several times through out the night to confirm what it is hearing is an actual leak and not a service draw. The next morning we will pick up the devices. We will then be able to determine if there is a leak, and at which valves the leak was heard. Our hope is that the data loggers will help to determine if you have a leak and also narrow down the area where the leak might be.

In the past two years we have been to numerous systems across the state. Some systems know they are losing water and want to survey the entire distribution system to determine where the leak is. Others might have water coming up through the street and want to pin point the leak to minimize the cost of excavating and repairing the street. As you all are aware, water leaks may or may not surface. When using the correlator it is imperative that we center the leak between the two out stations. When water is surfacing it makes that task much easier. When water is not surfacing it can be very difficult to determine where the leak is and therefore very difficult to know where to set up the correlating equipment.

In the past we have used our sound amplifiers to listen to every fire hydrant in the system to identify leaks. As you can imagine larger systems were quite difficult to survey in this manor. Some leaks are hard to hear because of the distance between fire hydrants. Traffic noise can also mask the leak noise.

Our hope is to conduct a more thorough leak survey and be able to cover larger systems with less man hours with the data loggers.

I can see a couple of drawbacks to the data loggers. The devices must be on the operating stem of the valves, therefore the valve boxes must be clean. In some cases this will require the valve boxes be cleaned prior to setting out the devices. Also, most lawn irrigation systems are set to operate at night. It may be difficult to conduct an accurate leak survey in the summer when customers are watering lawns.

If you suspect your water system is losing water and would like to try the data loggers to find those hard to find leaks please let us know. We hope to have them available in the very near future.