Montezuma Monitors Meters to Find Missing Water

Dolores, CO. Montezuma Water Company has launched a new ambitious project to track down water losses in their potable water distribution system. The plan anticipates that the additional funds spent on expanding the number of metering stations/remote telemetry sites will be offset by reduced water loss.

Five years ago Montezuma Water Company implemented a long term plan for upgrading their radio telemetry system and the computerized central control of their potable water distribution. The ultimate goal of these technological upgrades was to reduce the water system loss rate from 21% to 8%.

Where's the leak?

Conrad Hover at SCADA computer

The district has diligently implemented their plan by adding licensed-frequency Motorola Moscad L telemetry units to 10 remote sites, and upgrading their iFix control software. With the backbone of the telemetry system now providing a reliable data stream, the Montezuma staff has been able to estimate that they currently lose a retail value of $246,000 worth of revenues per year due to system leaks.

"The 22 new meter stations that we are planning to install will help us to track down leaks in several ways," stated

Conrad Hover of Montezuma Water. "The first thing we will do is to trend nightly low flow levels to try to isolate small, consistent leaks. Once we have baseline flows for each of the zones, we can also recognize larger leak events and react to them quickly."

Reaction time is an issue for Montezuma because the district covers 500 square miles, encompassing parts of Dolores, Montezuma and San Miguel counties. "Being able to narrow down the location of a leak has the potential of saving 250 man-hours per year! It is too bad we cannot run backhoes and shovels remotely over telemetry!" notes Hover.

The district plans to add pipe pressure transmitters at the new metering sites. Via the radio telemetry, the computerized central will be programmed to recognize high-pressure alarms (caused by PRV failures), and to

Radios to the rescue!

Ron Roggenback at Moscad Unit

instigate an alarm-dial-out sequence to call for help. Reducing the response time for these failures will help reduce the potential for pipe leaks and catastrophic pipe damage.

To further utilize the information that will be gathered, the district has plans to purchase iHistorian report software. Randy Sullivan from Timber Line Electric and Control, Montezuma's telemetry integrator, said, "This software stores one year of data on all selected system parameters such as plant effluent flows and zone flows. This data can be printed out in a table, graph or chart form, or stored on a disk for future year comparisons."

The technology tools that Montezuma has put in place and their well-thought-out long term plan will help to save the district close to $100,000 per year in water processing costs, man-hours, and equipment wear and tear. This is an excellent example of water conservation and fiscal conservation coming together!