

The [South Tahoe Public Utility District](#) (STPUD),



The [South Tahoe Public Utility District](#) (STPUD), (South Lake Tahoe, CA), established in 1950, is a two time winner of the U.S. EPA's Wastewater Treatment Plant of the Year award. Additionally, over the last ten years the district

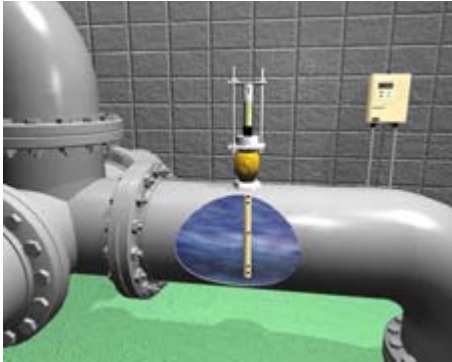
has won top honors for their wastewater treatment plant and collection systems from the California Water Environment Federation (CWEA). Accolades such as this can only be achieved through the dedication of skilled personnel in the district's Wastewater Operations Department. The department is comprised of knowledgeable individuals from numerous educational disciplines who work closely together to achieve one common goal. That is, to protect public health and the environment by maintaining accurate process control systems while simultaneously keeping treatment costs down for their community. The utility is wholly responsible for the drinking water supply as well as sewage collection and treatment for the surrounding community. With over 12,000 residential water connections and 16,800 wastewater connections, efficiency and preventative maintenance are critical components to their success.



The consistent monitoring of wastewater flows plays a significant role in the efficient operation of the entire wastewater treatment system. Phil Torney, Pump Station Supervisor, has worked on the flow monitoring side of the district's operation for quite some time. He states, "We need flowmeters to provide an indication of high inflows and infiltration to let us know if there is a potential problem at a particular pump station within our collection system." Flowmeters often times serve as "early indicators" of potential process system problems that can then be handled as preventive maintenance issues versus requiring an emergency response.

For years, the District has purchased the Marsh-McBirney Flo-System Full Pipe Flowmeters. The Flo-System is a cost effective solution for the accurate measurement of closed conduit flows. Unlike traditional magnetic meters, the meter cost is independent of pipe size. Velocity and pipe diameter information are utilized by the flowmeter to accurately determine flow over wide flow ranges. The insertable electromagnetic sensor can be easily installed via a hot-tap process eliminating the need to interrupt the flow process, a major concern for South Tahoe's applications. Regarding installation, Torney adds, "I like the fact that you can install the sensor through a hot-tap. It's a good feature. At sewer pump stations you cannot drain those force mains so the hot-tap makes installation easy without having to shut down the flow." The debris shedding, self cleaning sensor eliminates costly maintenance as well. Torney adds, "We now have about a dozen meters being used at eight of our pump stations including Trout Creek, Upper Truckee, Altahoe, Tahoe Keys, Bellevue, Bijou and Johnson pump stations. The meters were ordered as we needed them for new construction installations."

When a flowmeter was also needed to monitor the flow from a newly drilled well head, the



utility's Engineering Department began their search. The application included restrictive piping configurations and many meters would not be up to the task. Marsh-McBirney's local representative, Paul Troxell, President of Seltek, Inc., introduced the District to the Multi-Mag Magmeter. Troxell indicated that the Multi-Mag could provide the accuracy that was required for the job! Multi-Mag was designed to accurately monitor flow in ideal as well as less than ideal conditions including tight piping configurations experienced in the Districts latest flow monitoring application. The sensor is custom manufactured to exacting pipe diameter

specifications to ensure optimum accuracy. Until recently, expensive spool-piece magmeters, turbine meters, and other insertable flowmeters that only provided a single point measurement were utilized. Highly respected testing organizations attest to Multi-Mag's accuracy specification of 1%. The sensor also has a standard 5-year warranty. Torney adds, "When it comes to the accuracy of a flowmeter on the water side it's nice to have that 1% spec." The meter has now been installed for over two years and as promised, continues to accurately monitor flow in a very tight situation!

The celebrated reputation of this award winning utility was earned in part by their willingness to seek and apply new technologies including the selection of innovative flow instrumentation manufactured by Marsh-McBirney.



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