# KEP's ST1 Helps SNWS Pump Up To 900 Million Gallons Of Water Per Day Through The Nevada Desert

RATE    124.35    GAL/h
TOTAL        6784.3 GAL

The Southern Nevada Water System pumps up to 900 million gallons of water per day through the desert, enabling flourishing life where it would otherwise not exist. Operated, since 2001 by the Southern Nevada Water Authority, the system got it's start in 1971, as growth in the region boomed. The system utilizes water from the Colorado River, stored in Lake Mead to deliver supply to residents and businesses. And no destination is more demanding than the bright light city – Las Vegas.

Las Vegas is known for consuming 200 gallons per resident, per day—70 gallons more than nearby Los Angeles. And the city that some say "shouldn't exist" based on natural resources alone, is kept alive by the Southern Nevada Water System.

Such a marvel of infrastructure is made possible through the effective use of technology, and the KEP SUPERtrol 1 (ST1) computers installed have the scale and collective power to manage the many data points. With dozens of ST1's, SNWS is able to effectively measure the flow of water through the system. The ST1 is a multifaceted flow computer that is compatible with a wide variety of flow meters—in this case venturi meters. The SUPERtrol I is a multi-function flow totalizer, ratemeter and batch controller. With onboard data-logging, the flow computer also connects with HMI software.

Monitoring utilities is increasingly a remote and automated activity. The ST1 has enabled remote monitoring for over a decade with its RS-485 assignability enabling network connectivity. Gary Hinz, an engineer who installed Kessler-Ellis Products for the Dayton, Wyoming Water System describes an example of remote monitoring driving direct cost savings. Before using KEP (and his proprietary reporting software), readings were made manually, twice daily by a technician driving up gas and labor costs. But hardware such as ST1 and software such as Infilink-HMI help enable remote management with ease.

Jeffery Blue in Infrastructure Management for SNWS presented the totalizer solution a few years ago. Key to the presentation was that the ST1 replaced a 1982 edition of a Basic in Flow (BIF) Model 257-25 (the first install was a 1973 BIF 257-03).

As opposed to the ST1's remote measurement, data had to be collected manually which presents labor costs and also presented inaccuracies in flow total readings.

With the KEP SUPERtrol ST1, SNWS was able to meet and exceed stated requirements such as:

- High digit displacement for large totals
- Totals transmitting to the SCADA system
- Completely assembled package
- Software configurable
- Non-volatile accumulated totals (permanent registry)

ST1 out-competed alternative options for its features, quality and usability. Suddenly, remote data collection and monitoring was a reality. Furthermore, the data presents the opportunity for an audit trail which is important for analyzing costs, assessing quality, measuring performance, and isolating issues.

The results have been stunning. In addition to new capabilities, improved data and efficiency, ST1 lowered Totalizer failures by 89%. The system even minimized components in the control loop, enabling a simpler, more error-proof configuration.

KEP's ST1 has been helping utilities like SNWS automate, integrate and remote manage for over 15 years. Remote connectivity and simple design are two major features that drive its success. And with a proven use-case in a utility system as demanding as Southern Nevada, KEP has demonstrated an ability to work anywhere in any environmental conditions.

Next time you're visiting a casino or resort in Las Vegas, consider the odds against which the entertainment mecca has thrived. There has been fame and fortune, music, entertainment, gambling—but no factor has been so essential to its existence as water. And today, with unprecedented demand, the SNWS relies (in part) on KEP to control and calculate our most precious resource. And it can do the same for your utility system.