



Southern Nevada Water Authority

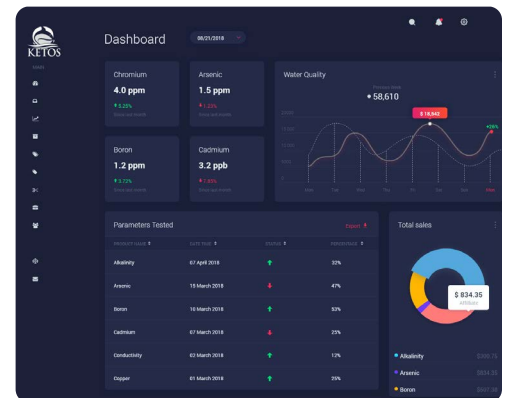
SNWA monitors arsenic and chromium levels with the KETOS SHIELD and the KETOS Smart Water Intelligence Platform.

Background

The Southern Nevada Water Authority (SNWA) was founded in 1991 to address regional water issues, and its member agencies serve more than 2.2 million residents in Southern Nevada. As the wholesale water provider, SNWA is responsible for water treatment and delivery, as well as acquiring and managing long-term water resources for Southern Nevada.

Including in its scope of responsibility, SNWA manages the Searchlight water treatment and distribution system which services Searchlight, Nevada - a small town roughly 50 miles from Las Vegas.

Given Searchlight's geological characteristics, along with its past and current land use, the Searchlight Wells produce arsenic. To ensure that only high-quality, potable water is being served to the Searchlight community, a chromium/arsenic ion exchange process is in place - including several arsenic canister contactors. The canisters must be consistently and frequently monitored for arsenic breakthrough so that media regeneration can be scheduled and performed. Monitoring the Searchlight system requires an operator to travel the 100 miles roundtrip to collect a water sample, send the sample to a lab, and review the results.



- **Cost Reduction**
 - » Transportation
 - » Instruments
 - » Calibration
 - » Cleaning
 - » Sampling
 - » Lab Test
- **Lab Accurate Results in**
- **Real-Time**
- **Real-Time Threshold-based Alerts**
- **Data-Driven Decision Making**
- **Lower carbon footprint**
- **Safety net for compliance concerns**
- **Enhanced consumer confidence**

Challenge

Conventional water monitoring relies on manual sampling and lab testing. Particularly in high-frequency testing scenarios (like Searchlight), the expense required, and lengths to which operators went, to test water at the Searchlight water treatment facility meant that SNWA:

- Did not have real-time data about Searchlight's water quality
- Was incurring significant expenses for time and travel to and from the facility
- Did not have data-driven process controls or alerts in place

Solution

The KETOS Smart Water Intelligence Solution, which included the flagship KETOS SHIELD was installed at the Searchlight arsenic/chromium ion exchange facility. The solution was easily configured to accommodate SNWA's high-frequency testing requirements. Water quality was monitored remotely and the data collected was aggregated in a centralized database so that real-time reporting and alerts could be automated.

After installing the KETOS Solution, SNWA was able to review real-time results on critical contaminants - multiple times a day and have better controls in place for internal processes on Arsenic removal. Both chromium and arsenic are regularly monitored with a lower sensitivity level of 2ppb by the KETOS Shield solution. As a result, SNWA is able to pre-empt potential compliance issues through real-time feedback and alerts, and significantly reduce the time and expense associated with manual sample collections and lab testing.

In addition, a system was set-up in a lab setting and monitored several physical parameters like pH, EC, TDS, Salinity, DO, and temperature at a 60sec level continuously while Nitrates were measured on an hourly basis as a scheduled test. Several other inorganics and heavy metals were also measured as desired.

"The KETOS team has been proactive and responsive in ensuring that solution meets the value propositions we've identified as an agency."

