



Data Logging & Network Integrity Testing

With ongoing drought, water supply shortages and escalating water charges in Australia, monitoring water usage is becoming critical. Under Level 6 Water Restrictions in South East Queensland monitoring and reporting water usage is a regulatory requirement for large water users (10ML/ yr or greater).



The introduction of water restrictions in SEQ which are both stringent and permanent will require a new approach to water usage in business. Increasingly water is being seen as a raw material, rather than an unlimited resource. As with all raw materials, usage requires monitoring to eliminate inefficiencies.

Data logging and network integrity testing involves checking a site's water supply pipe network and water consuming infrastructure for leaks, unusual water consumption patterns, inefficiencies in water consumption as well as water use trends.

Depending on the set up the information can also be used for the generation of high water use alarms.

This is done by installing a data logger connected to a pulse enabled water meter to monitor and record flow rates in real time.

If the purpose of data logging is leak detection, 1 week of monitoring may be sufficient to locate the leak. Sometimes further monitoring of sub meters is required to pinpoint the location of the leak.

If the purpose of the data logging is to identify process inefficiencies and monitor water as a raw material, data loggers may be permanently established.

The data logging can provide:

- Peak flow rates and periods
- Minimal flow rates and periods
- Daily flow patterns on a 60sec or hourly frequency
- Base flow rates
- Confirmation of leaks
- Size of Leak (L/min)



We deliver sustainable water management strategies which do more than meet regulatory requirements, they add value to your business.

How SSI Data Logging Works:

The pulse recording data logger (right top) is connected to a pulse enabled water meter. The pulses are set at 5L/pulse or 10L/pulse depending on line size and expected peak flow. There are then 2 options for collecting and reporting on the data collected:

Option 1. Real Time Monitoring.

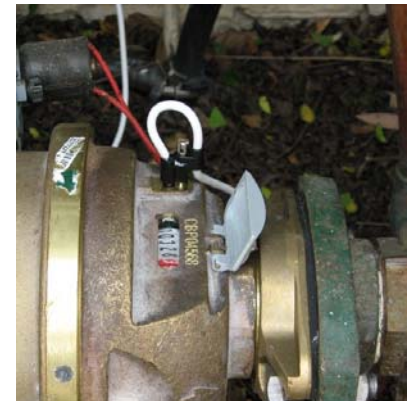
Flow data is then transmitted to the wireless base station (middle right). The base station can receive data from numerous data loggers. From the base station data is transmitted to a personal computer where it is uploaded onto a secure website. The data is then downloaded into the **SSI "Water Watch" software** for compilation and data validation before being published to the secure website in a format available for clients to view and download.

Option 2. Historic Monitoring.

The data is down loaded from site on a time frame requested by the client—monthly, 3 monthly, 6 monthly or annually. The data is processed by SSI and a report on the sites historic water use is presented to the client.

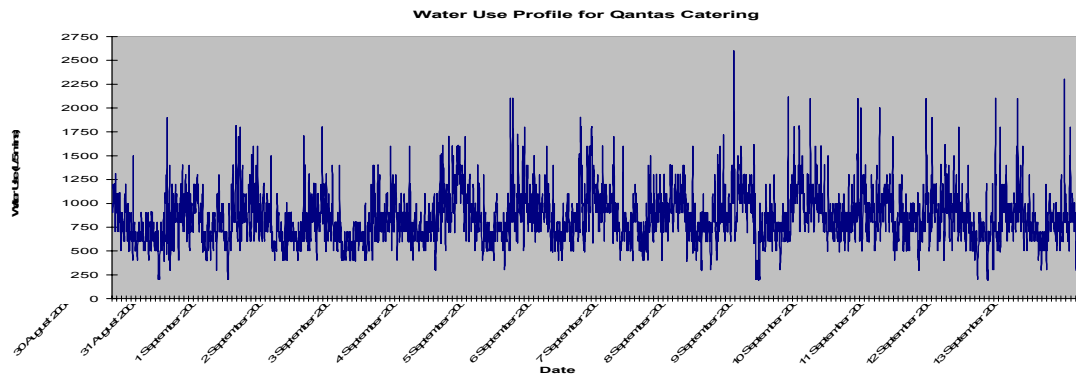
Reporting.

SSI can use the data collected under either option to produce a compliance report required under SEQ Level 6 Water Restrictions.

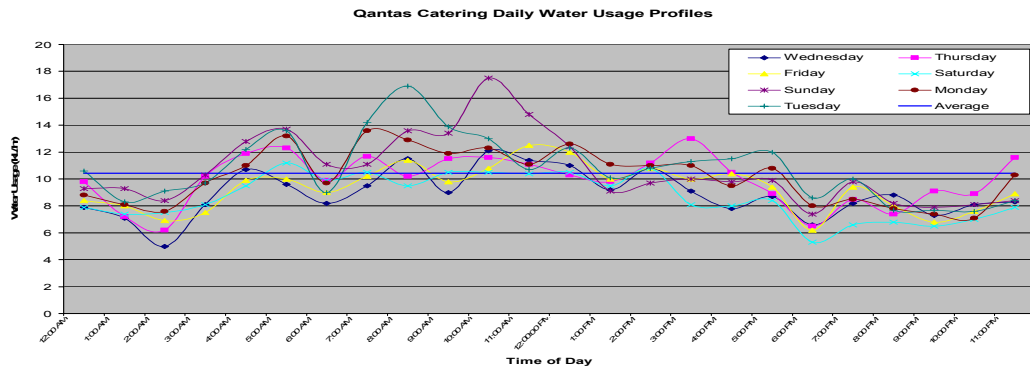


With appropriate inputs, data logging results can be reported to the client to provide:

- Total water use and trends in water use for the entire site over a specified time period
- Total water use and trends in water use for each sub-meter over a specified time period
- Actual water use graphed against benchmarks or water reduction targets
- Comparison of all sub meters on the site or amongst groups of sub meters
- Graphs of water use charges for the entire site or for groups or individual sub- meters
- Results over specified time periods (in the case of compliance reporting under the SEQ water restrictions, this would be 3 monthly)
- Leak detection and inefficient water use events
- Alarms for high water use events



Example of graphs obtained from data logging of water meters



SSI can tailor data logging to your site to ensure:

- Data is read at intervals appropriate to your business requirements by requesting a report from SSI or logging on to a secure website,
- The number and location of data loggers are tailored to the requirements of the site,
- Flow information is easily accessed and reported on remotely, without the need for a person to inspect water meters regularly,
- **SSI "Water Watch"** software is able to monitor and graph the data received and provide data in a format suitable for the client to login and download their own data directly from the secure website.

Based on SSI experience, the savings in water consumption achieved from conducting data logging and network integrity testing range from 10% to 50% annually.

Best practice resource management requires you to monitor in order to properly manage.

For more information please contact:

Dominic Xavier, Ian Spruce or Jim Mitchell
Sustainable Solutions International

Phone: 07 3255 0000

Fax: 07 3255 0066

Email: office@SustainableSolutionsInternational.com