



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 and throughout Australia 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

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 consumption as well as water use trends. Depending on the set up, the information can also be used for to generate 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 data logging is used for leak detection, one week of monitoring may be sufficient to locate the leak. Sometimes further monitoring of sub meters is required to pinpoint the exact location of a leak within the network. If data logging is used to identify process inefficiencies and monitor water usage, data loggers may be permanently installed.

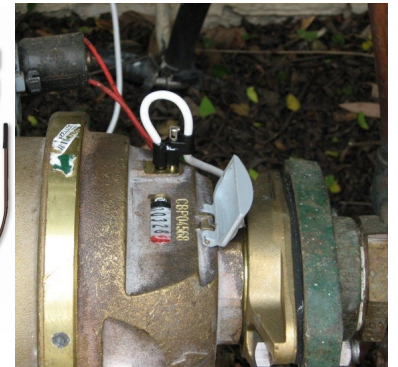
### Data logging can provide:

- Peak flow rates and periods;
- Minimal flow rates and periods;
- Diurnal flow patterns on an hourly frequency or shorter durations if required;
- Base flow rates;
- Confirmation of leaks; and
- Volume of Leak (L/min).



## SSI data logging process

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



### Option 1 - Real Time Monitoring:

Flow data is transmitted to a wireless base station. 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 onto 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. This report will enable users to understand all facets of water use within their operations.

Asset & Maintenance Management

Design Construction Management & Commissioning

Efficiency Audits & Cleaner Production

Environmental Compliance & Licensing

Master Planning

Plant Assessment & Optimisation

Sustainable Resource Management

Risk Assessments (HACCP & HAZOP)



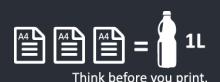
For more information please contact:  
**Sustainable Solutions International Pty Ltd**

07 3255 0000

office@ssi-bne.com

sustainablesolutionsinternational.com

**Water.Energy.Waste.**



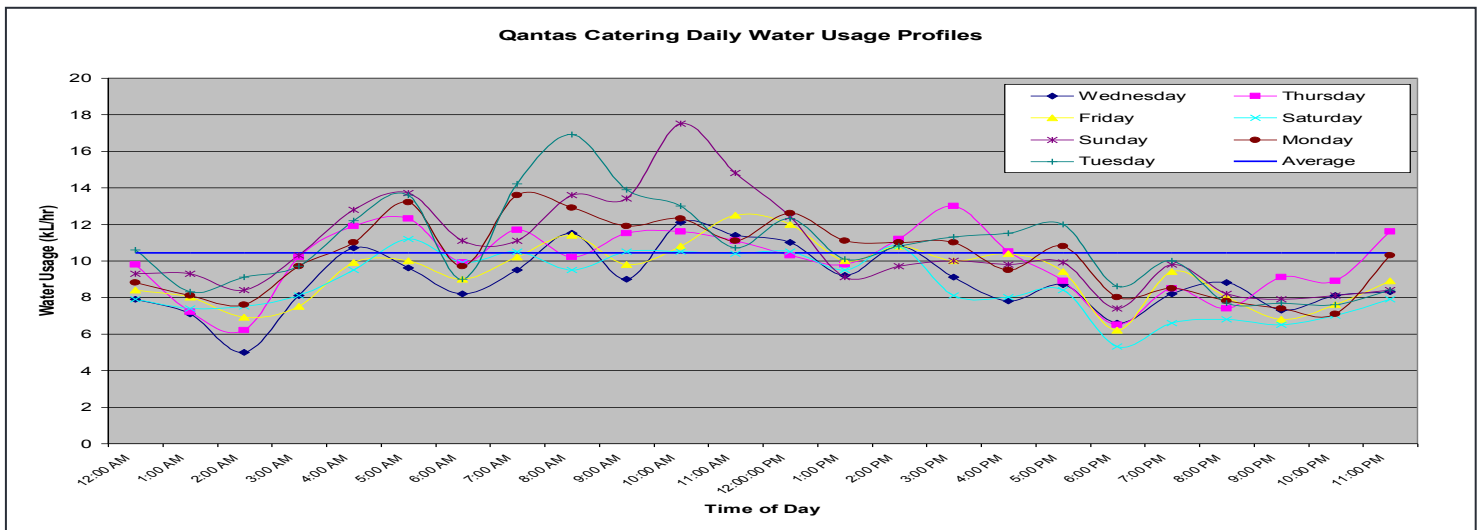
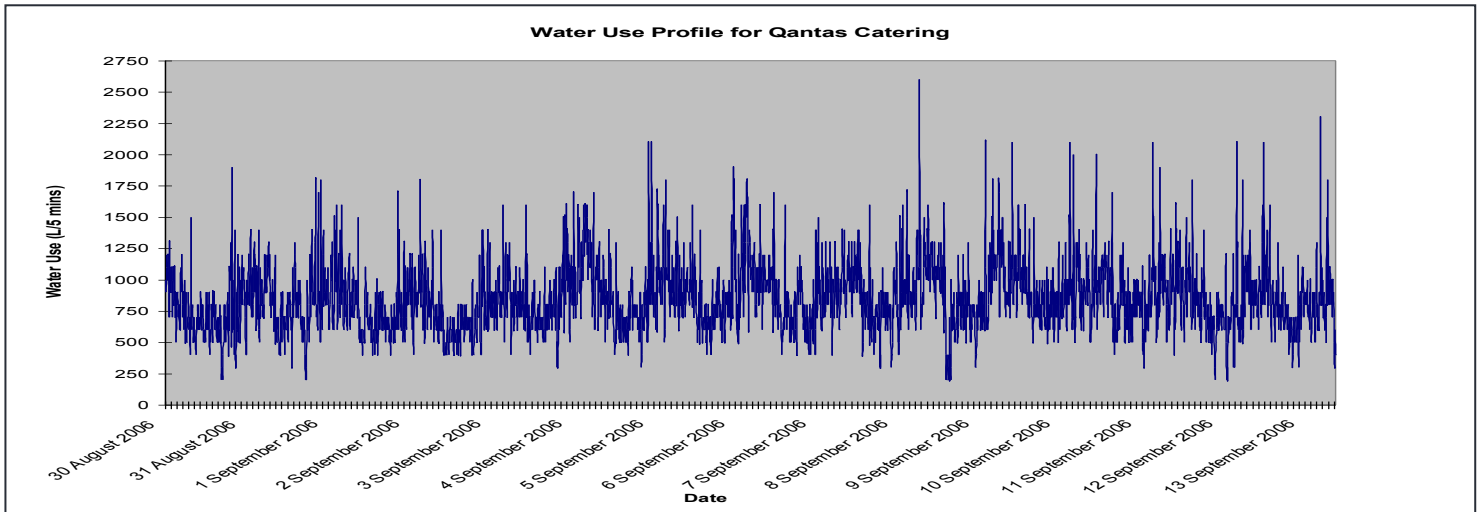
With the appropriate inputs and system understanding, data logging results can be reported to provide:

- 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;
- Water use graphed against benchmarks or water reduction targets;
- Comparisons 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; and
- Alarms for high water use events.

SSI can tailor data logging to your site to ensure:

- Data is read at intervals appropriate to your business requirements and tailor our report to your requirements;
- The number and location of data loggers are tailored to the requirements of the site;
- Flow information is easily accessed and reported 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 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.



Asset & Maintenance Management	Design Construction Management & Commissioning	Efficiency Audits & Cleaner Production	Environmental Compliance & Licensing	Master Planning	Plant Assessment & Optimisation	Sustainable Resource Management	Risk Assessments (HACCP & HAZOP)
--------------------------------	--	--	--------------------------------------	-----------------	---------------------------------	---------------------------------	----------------------------------