

## Saving Water: Make it Your Business

### General maintenance, leaks and monitoring

Over the lifetime of any business its facilities will inevitably experience water leaks. These leaks will vary in size and have an impact on the overall water consumption for your site. An effective maintenance program should incorporate regular water consumption monitoring and on site preventative maintenance inspections. A proactive approach to monitoring and maintenance could easily save your business in water and energy cost each year.

#### General maintenance and leak identification

Several audits conducted as part of SA Water's Business Water Saver Program identified leaks as a significant culprit for water losses. Often leaks go unnoticed due to a lack of regular inspection and leaks not being reported for repair.

Common areas for leaks to occur include piping joints, toilets, pumps seals, hose nozzles, showers, taps, shutoff valves and cooling systems.

#### To avoid and locate leaks:

- Track your water consumption with a data logger and check for an unusual trend of increasing water consumption which cannot be associated with your business activity.
- Take a reading of your water meter at night and check it again in the morning before any water has been used. If the meter reading is higher in the morning you may have a leak that needs to be traced and fixed.
- Conduct monthly inspections of your business focusing on piping joints, toilets, showers, taps, pump seals, hose nozzles, shutoff valves, cooling towers etc.
- Check for leaking toilets by adding a few drops of food colouring to your toilet cistern. Don't flush the toilet for at least an hour. If colouring shows up in the toilet bowl after an hour, you have a leak.
- Educate staff and cleaners to report leaks directly to maintenance or management and ensure leaks are fixed immediately.
- Poorly maintained and old equipment can often be prone to leaks. Check water using equipment on a regular basis and develop preventative maintenance schedules to help avoid potential issues.
- Install a sub metering systems that are set to alarm for specific high use limits, these will alert during excessive flow events.
- For underground or concealed pipe work, ultra sonic leak detection units and pressure testing is available through leak detection companies.



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#### Monitoring

Monitoring your water consumption is a simple way of determining your business's water efficiency & identifying any possible leaks or unexplained water use on site.

#### Keep an eye on your water meter

Checking your water meter regularly will help you to identify any issues or leaks quickly so you can act on them. It's a good idea to maintain a daily, weekly or monthly graph of your water use and always investigate

any rapid changes in consumption. It is imperative that identified leaks are followed up swiftly; a leak of just a quarter of a litre per second can cost you more than \$19,500 every year.

### **Establish your average daily consumption**

The average daily consumption for a business is a point of reference for normal water consumption. For businesses in which consumption volumes are steady, you can easily determine the average water consumption per working day by dividing the consumption by the number of days. For a business which operates 365 days a year this figure can be determined by dividing your quarterly water consumption by 91 (the average number of days in 3 months). Once the daily average use is established, fluctuations above or below this average will become apparent and highlight water saving improvements or indicate costly leaks, inefficiencies and overflows.

For a business which undergoes seasonal production changes and/or growth demands the best method for tracking water efficiency is to measure your water consumption against a unit of production. The unit of production will depend on your business activity. For example a manufacturing facility may measure water efficiency by the litres of water per item produced.

### **Sub meters**

If your business facility has multiple high water use areas, it is beneficial to isolate and meter each production area to track water consumption. Isolating individual production areas will help track water efficiency improvements as you make them and also pinpoint potential problem areas. Individual areas of high water use can then become the focus of immediate water saving actions.

Our '**Sub meters and Smart metering**' fact sheet provides detailed information on how to identify and minimise water wastage within your business.

### **Data loggers/Smart meters**

Although reading your water meter on a regular basis is recommended, a more efficient means of tracking your consumption is to install a data logger. A data logger connects directly to the meter and records continuous water consumption electronically. It removes the need to manually read each meter which is helpful if you are tracking multiple sub-meters on site. Records from the data logger can be downloaded over set periods of time and water consumption information can easily be graphed & analysed.

Data loggers also highlight actual consumption at regular intervals and can determine baseline flows. If the data logger shows the meter has no down time (i.e. water is constantly flowing through) this indicates there is a baseline flow and potentially you have a leak.

Some data logger systems (smart meters) can be programmed to generate alarms for excessive use. Alarm points are established after determining the average water use. The system has the ability to track real time consumption and can therefore identify problems as they occur and alert staff to take action immediately to avoid costly water wastage.

Having an ongoing accumulation of data will help you understand your water consumption trends and highlight areas where savings can be made. This helps to justify spending on water efficiency projects as expected savings are based on actual, accurate data and not estimations.



**Monitoring your water meter**