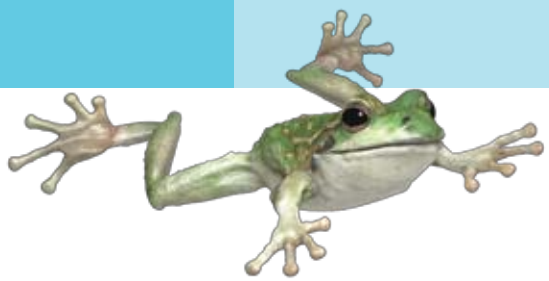
Case Study

Dec 2009



Monitoring Usage

Trends to identify opportunities to save water

123 Smith St, Jonestown is an office building that uses around 13000kL of water each year. There are two readings taken each year, one at the end of January and one at the end of July. Both readings generally come to a similar figure around the 6500kL mark.

Management decided they wanted to take a more proactive approach to water management. They instructed the maintenance manager to take monthly readings of the water meter over a one year period to see if any trends were obvious. The following table tracks the water used each calendar month as a result of the readings taken.

	Meter Reading		Total Water Used kl's	
	Month Start	Month End	Monthly	Year Progressive
Jan	12000	13400	1400	1400
Feb	13400	14900	1500	2900
Mar	14900	16300	1400	4300
Apr	16300	17400	1100	5400
May	17400	18400	1000	6400
Jun	18400	19200	800	7200
Jul	19200	20000	800	8000
Aug	20000	20700	700	8700
Sep	20700	21500	800	9500
Oct	21500	22500	1000	10500
Nov	22500	23700	1200	11700
Dec	23700	25200	1500	13200

Management were surprised by the data that had been gathered as they were previously unaware of the increase in water use through the summer months. It was suggested that the increased water use may be as a result of garden reticulation that is turned off throughout the winter months.

This idea was quickly dismissed as all garden reticulation is by way of an on-site bore.

Two further possible areas of concern were raised, the first being the cooling towers and the second being the staff Gymnasium/ showers. A decision was made to install two onsite sub-meters, one on the line that services the cooling towers and one on the line that services the Gym/showers so that their individual usage patterns could be monitored. The maintenance manager obtained the Gym log books to ascertain the patronage patterns throughout the year. He found out that the Gym is a lot more popular with staff members during the summer months and, therefore, the showers are used more frequently.

He also conducted a staff survey and the results showed him that several of the staff members either walk or ride their bikes to work over the summer period leading to a further increase in the use of the showers. The ongoing monitoring of the sub-meter re-enforced this. A decision was made to install Waterwise shower heads in all of the showers as a measure to decrease the use of water.

The sub-meter on the line that services the cooling towers was monitored closely. It revealed that during the summer months the cooling towers were using noticeably more water than during the winter months. To a degree this was to be expected due to evaporation rates being higher during summer as a result of increased demand for cooling and the weather being hotter. As any attempt to reduce the rate of evaporation would decrease the performance of the cooling tower, they decided to look at other aspects.