

Business Relations e-Bulletin

Issue 18 – July 2015

Technical Series

Pressure and flow supplied to your property

On occasions the Business Relations Group will receive enquiries regarding the pressure and flow being supplied to a customer's property. In this article we aim to give you an introduction into the relationship between pressure and flow and how it may impact your operations.

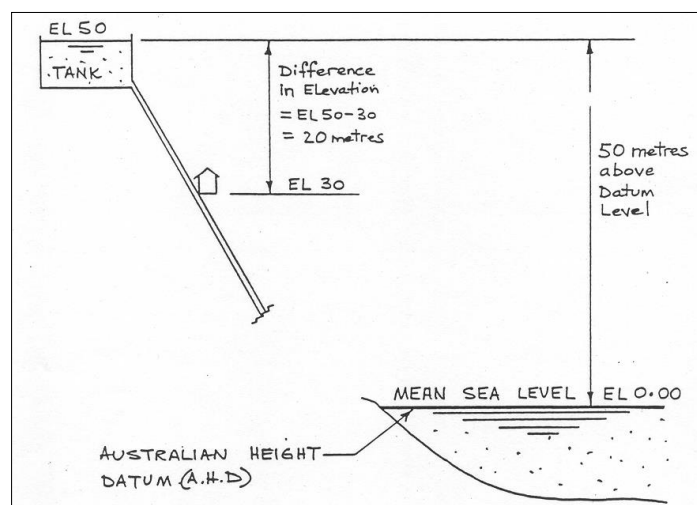
Flow:

The flow of water refers to the motion of a fluid, in this case water, and is commonly expressed in a volume over a defined time period such as minutes, e.g. litres per minute. The flow in closed pipes depends on the pipe diameter, length of pipe, roughness of the pipe wall (friction) and the upstream pressure.

Pressure:

Water pressure is the force acting on an area and is commonly expressed in kilopascals (kPa) or meters head (m). Within the SA Water water supply network the pressure at your connection will, in most cases, originate from an elevated tank upstream from your property. One meter of elevation (1 meters head) equates to approximately 10kPa of pressure. **Figure 1** is a typical example illustrating the pressure head created by an elevated tank. In this example the pressure supplied to the house is 20 meters which is approximately 200kPa.

Figure 1 – Example of the pressure being supplied to a property created by the elevation (EL) tank



Pressure and Flow Relationship:

The flow and pressure supplied to your property will depend on a number of factors. The size of your connection(s) and water main abutting your property, your location in the localised network from the elevation tank and whether there are pumping stations or pressure reducing valves near your property will all impact the supply to your property. The flow and pressure will also be impacted by the demand from other water users drawing from the same water main. If there is significant demand on the localised network you may notice a pressure reduction at your property during this time. Conversely, there will be greater supply conditions available during times where demand is lower. When we assess a new water connection application, we will consider the extent of demand already on the localised network and plan accordingly. In areas where the water demand is approaching the capacity of what the localised network can supply, we will propose augmentation solutions to allow for growth and potentially add these projects to our capital works plan.

SA Water's Obligations:

Whilst we will use our best endeavours to provide you with a water flow rate to meet your reasonable needs we do not guarantee specific values for either flow or pressure. We acknowledge that the flow rate and pressure may not be sufficient for all purposes without provision of additional onsite infrastructure. The customer will assume the responsibility of providing such additional infrastructure. For more information on this please refer to the SA Water [Standard Customer Contract](#).

How do you manage pressure at your property?

- Re-pressurise your supply by installing a tank. Water can then be pumped from the tank into your internal plumbing network. This allows you greater control over the pressure and flow of your water supply;
- Reduce the pressure by installing pressure reducing valves through your internal pipework;
- Maintain pressure by reducing pressure losses through better plumbing designs, reducing the number of bends and elbows and rising mains, reducing the distance water travels across your site as well as managing water consumption and efficiency across the your site; and
- Maintain appropriate pipe sizing and ensure pipes are clear of obstacles.

How do you manage flow requirements at your property?

- Installing a tank on your property and pumping from the tank;
- Increase the size of internal pipes at your property if your internal pipes are restricting flow; and
- Implement flow restrictors in the internals of your pipe to decrease flow.

It's important to remember to use a licensed plumber when making changes to your plumbing and ensure you are meeting all the appropriate regulations. Hydraulic Engineers are also useful to assist in the design and improvement of pressure and flow conditions at your property. If you'd like to know specific details regarding the pressure or flow at your property please contact us on the details in the banner below.

Business Relations

New Trade Waste Prices/Charges for 2015/16

As we enter a new financial year, it's important to stay up to date with any SA Water charges that may affect your Business. This week, we look at Trade Waste charges, some of which are stated below:

Fee Name – Trade Waste	Fee 2015-16*
Trade Waste	
Trade Waste Application Fee - Complex *	\$579.00
Trade Waste Application Fee - Non-Complex *	\$206.00
Trade Waste Audit Fee - Complex (per inspection) *	\$274.00
Trade Waste Audit Fee - Non-complex (per inspection) *	\$121.00
Waste Macerator Discharge (per macerator)	\$645.00 per unit
Trade Waste VLB - Volume	\$0.158 per kL
Trade Waste VLB - Biochemical oxygen demand (per kg) <1000 mg/L	\$0.259 per kg
Trade Waste VLB - Biochemical oxygen demand (per kg) >1000 mg/L	\$0.391 per kg
Trade Waste VLB - Suspended solids (per kg) <500 mg/L	\$0.230 per kg
Trade Waste VLB - Suspended solids (per kg) >500 mg/L	\$0.332 per kg
Trade Waste VLB - Total dissolved solids (per kg) >650 mg/L	\$0.131 per kg
Trade Waste VLB - Nitrogen (per kg)	\$0.405 per kg
Trade Waste VLB - Phosphorus (per kg)	\$1.971 per kg
Sampling & Monitoring Charges *	Estimated cost to deliver service
Trade Waste Administration Charges *	\$70.50
Trade Waste Cost Reflective	
Trade Waste Cost Reflective VLB - Volume	\$1.349 per kL
Trade Waste Cost Reflective VLB - Biochemical oxygen demand (per kg)	\$0.754 per kg
Trade Waste Cost Reflective VLB - Suspended solids (per kg)	\$0.826 per kg
Trade Waste Cost Reflective VLB - Total dissolved solids (per kg)	\$1.389 per kg
Trade Waste Cost Reflective VLB - Nitrogen (per kg)	\$2.951 per kg
Trade Waste Cost Reflective VLB - Phosphorus (per kg)	\$12.203 per kg

All charges have increased for 2015/16. An important change to note is the addition of 2 new Trade Waste Cost reflective charges: Nitrogen (per kg) and Phosphorus (per kg). If you are a business that discharges Nitrogen or Phosphorus in its trade waste, then please consider these new charges carefully. Please discuss any concerns or questions you may have regarding these new charges with your Business Relations Consultant, or Trade Waste Officer. Alternatively, please send an email to the SA Water Business Relations email address, and we will endeavour to respond to your query:

Business.Relations@sawater.com.au

Disclaimer:

SA Water's Business Relations Group provides recommendations and suggestions only. It is advised that further investigations and detailed studies are completed before any projects are implemented. All applicable standards & guidelines (Australian, EU, AQUIS, HACCP, Australian Drinking Water Quality Guidelines etc.) should be adhered to, and care should be taken to ensure water and wastewater minimisation programs do not negatively impact health or processing operations.