

## **STORAGE systems**

Definition of storage tank: a vessel that holds, manages or stores liquid for use or disposal.

## **STORAGE TANKS**

Storage tanks are used to contain pre or post treated water (raw water or potable water). Settlement tanks used for raw water can reduce the load of sediment clogging up filtration systems and affecting treatment of a water supply.

A minimum of 24 hour storage should be used as a buffer when considering household or community usage and in case of emergency. Storage for fire supply is normally kept separate from drinking water in rural areas or for marae (consult your nearest Fire Officer for requirements).

Capture and storage of rainwater in urban environments is a requirement by Regional Councils in certain areas. This is necessary to reduce pressure on stormwater reticulation/management and to conserve use of treated water consumption. Be careful to choose urban tanks that are practical and cost effective, including ability to modulate.

## **TYPES OF TANKS**

### Polyethylene water tanks:

- Light weight and maneuverable (excellent for remote areas)
- Zero light penetration (little algae growth)
- Multi inlet/outlet points capable
- Susceptible to wind when empty
- Available in numerous colours

Normally provided with a manhole of 455mm but lid diameters of 600mm are available (certain tank manufacturers).

Wall thickness and uniformity, and ability to install an outlet partway up tank wall – should be considered prior to purchase.

### Concrete tanks:

- Can be buried below ground
- Zero light exposure
- Not susceptible to wind
- Costly to transport and install
- Maintenance - colour user applied

### Timber water tanks:

- Custom sizing
- Easily removable
- Replaceable liners – check the life of liners
- Aesthetic value
- Potential timber treatment leaching

### Fiberglass water tanks:



- Becomes brittle over time
- Light weight maneuverable
- Allows light in (promotes algae growth)

Maintenance:

All tanks of any shape size or material should be cleaned regularly to maintain safe drinking water supply and clear any sediment.

A reputable Merchant or Installer will have methods and instructions available for tank installation and maintenance best practices.

Rainwater harvesting systems installed with a properly calculated first flush diverter helps to provide safe drinking water without the need for costly consumables.

**\*\*All potable water storage tanks should be made secure (free from entry of contaminants)\*\***

Next months topic PUMPS.

By Damian Lawsen [source2tap@alphapipelines.co.nz](mailto:source2tap@alphapipelines.co.nz)