

WATER RESOURCES NORTHERN TERRITORY



Swimming Pools & Water Use

On average, homes with swimming pools use more than twice as much water outdoors than homes without pools.

In Alice Springs approximately one third of homes have a backyard pool, which use a lot of water. This factsheet provides advice on ways to minimise the water use of arid zone pools.

The climatic conditions of Central Australia that create high water evaporation are the same conditions that make a backyard swimming pool so attractive: high temperatures, dry wind and long summers.

Evaporation

As we know from boiling water and seeing it turn into steam, a simple definition of evaporation is the process whereby liquid water becomes a gas and dissipates as the water temperature is increased. During summer, evaporation rates increase and the water level in the pool begins to drop rapidly.

In a single day up to 300 litres of pool water can evaporate under the harsh sun, which is about 30 buckets. Over the year almost the entire pool volume will evaporate away if not topped up. Environmental conditions such as humidity, wind, over night air temperatures and higher pool water temperature, all affect the rate of evaporation. The size of the pool is also a factor: bigger pool = more water loss.

Topping Up

Do you know how much water flows from your backyard hose per minute? The average supply is around 17 litres a minute. Topping up the pool every day or second day in summer can work out to a lot of water: 17 litres x 30 minutes x 30 days = 15,300 litres a month! Combine this top-up with the water lost through evaporation (approx. 9000l/month) and your pool's water use could be up to 24 000 litres per month.

Check for leaks – increased water loss or the need for more chemicals are clues to unseen leaks.

Pool Covers

Pool covers work by insulating the pool water from wind and heat evaporation. Cover the pool in winter and non-swimming periods and you will have lower maintenance costs and water loss all year around.



Using a pool cover reduces evaporation by 90 to 95%. Pool blankets and 'liquid' pool covers are not as effective but do still reduce evaporation rates by 40+%. The added benefits of covering the pool when not in use are:

- Reducing the cleaning time by preventing debris from falling on the pool surface; and
- Reducing the amount of chemicals needed to keep the pool clean.



Backwash, Cleaning and Draining: Pool maintenance must be done regularly to make sure that the water is safe to swim in, however there are ways to minimise the amount of water needed to clean the filters.

- Sand filters are common and require backwashing once every 4-6 weeks. Only backwash until the glass goes clear - backwashing for longer periods will waste excessive amounts of water. Consider implementing a backwash minimisation system.
- Other filters can be manually cleaned. Cartridge filters are maintained by rinsing out and soaking in solution if needed and only need to be replaced every two to three years.

Remember: Proper chemical balancing can prevent and cure most water clarity problems and pools can often go 10 or more years without draining and refilling.

- Waterwise Pool Rules: No bombing or excessive splashing. Drip dry on the top step so the water goes back into the pool;
- Ask pool users to top it up with a bucket so they are aware of the amount of water being used;
- Only run pool fountains and waterfalls when you're entertaining, as they increase evaporation;
- Avoid overfilling the pool: the water level should be about half way up the skimmer box opening for the filter to function properly;
- Think about lowering the water level to reduce losses from splashing; and
- Plant or install windbreaks around the pool as even light winds will increase evaporation rates.

Pools on average, pools represent 3% of Alice Springs household water use, however, those with a pool use an average of 18% of their household water use in the pool.

- Shade pools and protect from wind to reduce evaporation; and
- Minimise backwash times. Try collecting backwash water in a tank, allow dirt to settle and siphon clear water back into the swimming pool.

Useful References:

http://www.recreonics.com/swimming_pool_energy_conservation.htm

<http://www.savewater.com.au/how-to-save-water/in-the-home/pools-and-spas>

Greenhouse Friendly Action in Central Australia, DesertSMART COOLmob, (2nd edition)