

Water infrastructure

Dams

Darwin is the only main centre with a Dam for water supply. Darwin River Dam was built in 1972 and has a catchment area of 205km² and a capacity to store 265,000 megalitres of water.

Because of growth and high water demand, Power and Water is currently investigating the feasibility of raising the dam wall by 0.8 – 1.5 metres to increase its storage capacity.

Future dam sites are also being investigated to cater for further growth of the Darwin region.



Borefields

Alice Springs, Darwin, Katherine and Tennant Creek all have borefields to source water. Alice Springs and Tennant Creek are completely reliant on groundwater.

Alice Springs in particular is very costly to operate because the electronic bores source water from around 150 metres underground.

Regular maintenance on bores is required, and in Alice Springs, future options for relocating the Roe Creek Borefield have been investigated due to the extreme depth in which water is extracted from.

Pipes

There are thousands of kilometres of water pipes in the Northern Territory.

Pipes occasionally burst due to a range of reasons, mostly because of age or weather. Freezing periods in Alice Springs can cause extra stress on pipe systems and for them to burst.

Leaking pipes tracked down by Power and Water's Leak Detection Unit. The state of the art leak detection equipment uses sensors to electronically monitor pipe movements and track down leaks. The Leak Detection Unit has had a dramatic impact on ensuring the Territory has below the national average in water loss through leaks.

Sterilisation

All drinking water across the Territory, except in Tennant Creek, is sterilised to ensure it is safe to drink.

Sterilisation by adding chlorine to water supplies is a standard practice in the first world to ensure a safe drinking supply.

Although Tennant Creek's supply is not initially sterilised, their water is closely monitored and has a range of safeguards in place to ensure the water quality and hand sterilised when required. Tennant Creek residents voted not to chlorinate their water supply in 2004.

Waste Treatment

Often people don't think about where water goes once they have used it.

It is important to understand that the water cycle doesn't stop after the water goes down the drain. After the waste is treated it will either evaporate and literally turn into thin air, or it will be discharged into the surrounding environment.

There are many different ways to treat effluent that include:

Waste Stabilisation Ponds

All major regions in the NT have waste stabilisation ponds that treat wastewater, and then much of the effluent evaporates and literally turns into thin air.

Most regions have licences that allow these ponds to discharge excess effluent when they are at capacity. Overflows tend to go into surrounding creeks, estuaries, swamps and rivers and can only be done in strictly controlled conditions.

Excess effluent is also used in irrigation schemes in Alice Springs and Darwin too.



Recycling

Power and Water have two water recycling schemes in place in the Territory to help make the best use of our water resources.

Water Reuse in the Alice

This project will initially recycle 6,000 megalitres of effluent each year.

The water will be treated to a high standard at the Alice Springs waste stabilisation ponds before it is pumped into an underground naturally formed aquifer. By storing the water underground in this natural geological formation, the water will be further purified and won't be subjected to the hot sun and high evaporation rates of the Alice.

The water will then be used in a horticulture project aiming to boost the local economy and create employment opportunities.

Marrara Recycling Scheme

Some of Darwin's effluent is treated and reused at the Darwin Golf Course and Marrara sporting complex.

This includes irrigating some of the playing field at the Marrara sporting complex.