

# water reuse in the Alice



The 'Water Reuse in the Alice' project will stop dry weather overflows from the Alice Springs wastewater stabilisation ponds into Ilparpa swamp. The project will allow for the reuse of the reclaimed water, rather than letting this precious resource go to waste. Stopping the overflows also mean less weeds and fewer mosquitoes in the area.

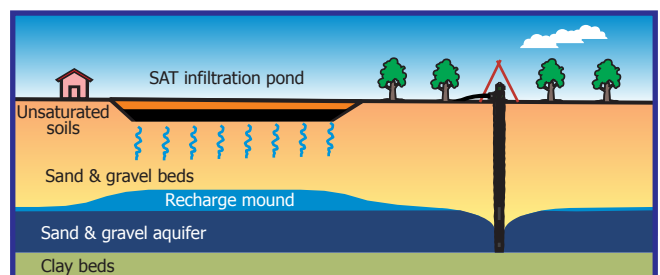
Power and Water has committed \$10.4 million to this project using leading edge technology and state-of-the-art infrastructure. Water from the wastewater stabilisation ponds will undergo treatment in a Dissolved Air Flotation (DAF) plant before it is pumped 6.2km to the Arid Zone Research Institute (AZRI). The DAF plant is capable of treating up to six megalitres of water per day.

Once the water arrives at AZRI it will be infiltrated through Soil Aquifer Treatment (SAT) basins and stored in an underground aquifer before it is pumped back to the surface and reused for horticultural purposes.

The benefits of using the SAT system include:

- Increased treatment for the recycled water as it is naturally purified to a better standard because it is filtered through the earth;
- The basins will fill and dry so mosquitoes can't breed;
- Water is not wasted through evaporation; and
- Water can be stored underground for years.

This innovative project is a joint initiative between Power and Water, Department of Primary Industry, Fisheries and Mines, Department of Natural Resources, Environment and the Arts, and CSIRO.



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Call 1800 245 092 | ABN 15 947 352 360

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## Frequently Asked Questions

### Is recycled water safe?

Yes – when used appropriately. Recycled water is wastewater that has undergone a high level of treatment and purification and is then monitored to ensure it meets stringent guidelines regarding its characteristics. These guidelines have been developed to protect public health and the environment.

Recycled water can be used in a range of applications depending on its classification. These include horticultural and agricultural purposes, irrigation of playing fields and other open areas and even non-potable urban uses such as toilet flushing and garden watering.

Class	Range of uses
A	<ul style="list-style-type: none"> <li>• Primary contact in recreational facilities</li> <li>• Residential (non-potable): toilet flushing, car washing, garden watering, sports fields</li> <li>• Unrestricted crop irrigation</li> <li>• Dust suppression with unrestricted access</li> </ul>
B	<ul style="list-style-type: none"> <li>• Secondary contact in recreational facilities</li> <li>• Restricted crop irrigation</li> <li>• Irrigation of pasture and fodder for grazing animals</li> <li>• Washdown and stockwater</li> <li>• Fire fighting</li> </ul>
C	<ul style="list-style-type: none"> <li>• Passive recreation</li> <li>• Municipal use with restricted access</li> <li>• Restricted crop irrigation</li> <li>• Irrigation of pasture and fodder for grazing animals</li> </ul>
D	<ul style="list-style-type: none"> <li>• Restricted crop irrigation</li> <li>• Irrigation for turf production</li> <li>• Silviculture</li> <li>• Non-food chain aquaculture</li> </ul>

Source: South Australian Reclaimed Water Guidelines

The Alice Springs wastewater stabilisation ponds currently produce Class C recycled water. The Alice Springs Water Reuse Project includes improvements to treatment processes that can ultimately deliver Class A recycled water.

### Will using recycled water cause any environmental problems?

All reuse projects and sites using recycled water must have management plans which include ongoing monitoring systems and incident response procedures to ensure the use of recycled water has no adverse environmental effects.

Management of nutrients, salinity and sodicity levels of recycled water produced from the Alice Springs wastewater stabilisation ponds will be key features of the management plan developed for the Arid Zone Research Institute (AZRI) and any other sites.

### Will any odour be associated with the recycled water?

Depending on the treatment processes used to treat sewage, odour can be an issue at the site where the treatment is occurring. However the Class A water to be produced from the Alice Springs wastewater stabilisation ponds and the underground storage system will not have odour issues. In fact it would be difficult to differentiate the Class A recycled water from other water sources. Signage is used to overcome this issue at sites where the recycled water is used.

### How will the project avoid increased mosquito breeding?

The reuse project will not produce increased mosquito breeding habitats. In fact it will reduce it by reducing flows into Ilparpa swamp and St Mary's Creek.

The transport of recycled water from the wastewater stabilisation ponds to AZRI will be in underground pipelines and storage on site will also be underground. The only limited opportunity for mosquitoes to breed will be in the infiltration basins of the Soil Aquifer Treatment System. To address this issue, the infiltration basins are being designed so that the wetting and drying cycles of their operation ensure water is not ponded for a period of time sufficient to allow a mosquito breeding cycle to occur.

### How long will the water take to infiltrate through the SAT basins and where will it be stored?

The water will take three to five days to infiltrate through the basins and underlying soils to the aquifer below. The aquifer is a "palaeochannel" (a buried ancient stream bed) composed of sands and gravels, located between approximately 18 and 30 metres below ground level.

### How long is the water stored before it is extracted for use?

The water quality is such that it could be withdrawn at any time. The groundwater gradually flows southwards within the aquifer, with storage time dependent on the distance that extraction bores are located from the basins.

### How can I find out more?

For further information about the 'Water Reuse in the Alice' project phone 1800 245 092.

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