



Water Reuse in the Alice

The Water Reuse in the Alice project will provide the capacity to treat up to 1 800 megalitres* (ML) of waste water a year, which will be stored in underground aquifers and used in horticultural projects at the Arid Zone Research Institute (AZRI).

Water Reuse in the Alice Project

Power and Water Corporation, with the support of the Northern Territory Government, has developed the Water Reuse in the Alice project. This project will allow a portion of wastewater from the stabilisation ponds to be treated to a standard that is fit for use in irrigated agriculture (horticulture).



Local plumbers viewing the wastewater treatment plant under construction during Green Plumber training in July 2007

Initially the treatment process will recycle up to 600 ML of wastewater per year. Eventually it is hoped that more than half of wastewater produced in Alice Springs, equal to 1800 ML, will be recycled.



Remote-controlled pumps, pipes and valves distribute treated water evenly into the infiltration basins for underground aquifer storage and later recovery and use

The treated wastewater will be piped to the Arid Zone Research Institute where it is released into basins and allowed to infiltrate through the soil into natural underground storage systems or aquifers.



Alice Springs Waste Stabilisation Ponds

Underground storage is an inexpensive, long-term solution that has added benefits of preventing evaporation and mosquito breeding, while allowing further treatment as the water filters through the soil.

Overall benefits of the Water Reuse in the Alice project include:

- providing an accessible and renewable water resource for new horticultural projects and employment opportunities
- stopping dry weather overflows into Ilparpa swamp allowing it to return to its natural state as an ephemeral claypan
- reducing mosquito breeding; and
- creating wise use of a precious resource and business opportunities.

Waste Water Treatment

Each year the average Alice Springs household uses 0.53 ML of water and produces 0.257 ML of wastewater, or effluent. Effluent must be treated to remove contaminants that may harm people or the

environment, such as disease-causing organisms, nutrients, foul odours and toxic substances such as heavy metals.

Power and Water Corporation is responsible for providing water and sewerage services in the Northern Territory. Traditionally, effluent is treated through a series of open Waste Stabilisation Ponds. In Alice Springs the treated effluent is used to irrigate Blatherskite Park and a tree farm, while the rest evaporates or overflows into Ilparpa swamp.

Ilparpa Swamp

In its natural state Ilparpa swamp is an ephemeral claypan (short-lived wetland only flooding occasionally). Since construction in the 1960s, overflows from the Waste Stabilisation Ponds into Ilparpa swamp have changed the ecology of the swamp so that it regularly experiences long periods of flooding. This has altered the vegetation at the swamp and has had the unwanted effect of increasing mosquito breeding.

* One megalitre (ML) equals one million litres or one thousand kilolitres. One kilolitre equals one thousand litres.

Other websites

Ilparpa Swamp Rehabilitation Plan
<http://www.nt.gov.au/nreta/water/ilparpa.html>

Water Reuse in Alice
http://www.powerwater.com.au/about_us/major_projects/water_reuse_in_the_alice

CSIRO
http://www.clw.csiro.au/research/urban/reuse/projects/soil_aquifer_alicesprings.html

Further Information:

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Ilparpa Swamp