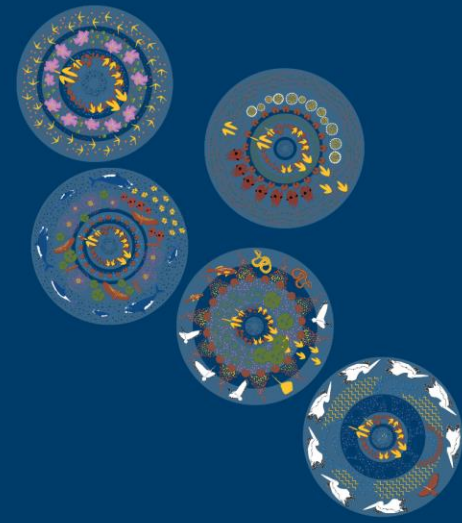


# SA Water

SA Water in the community



Government of  
South Australia



Acknowledgement  
of Country

# Humble beginnings - 1856

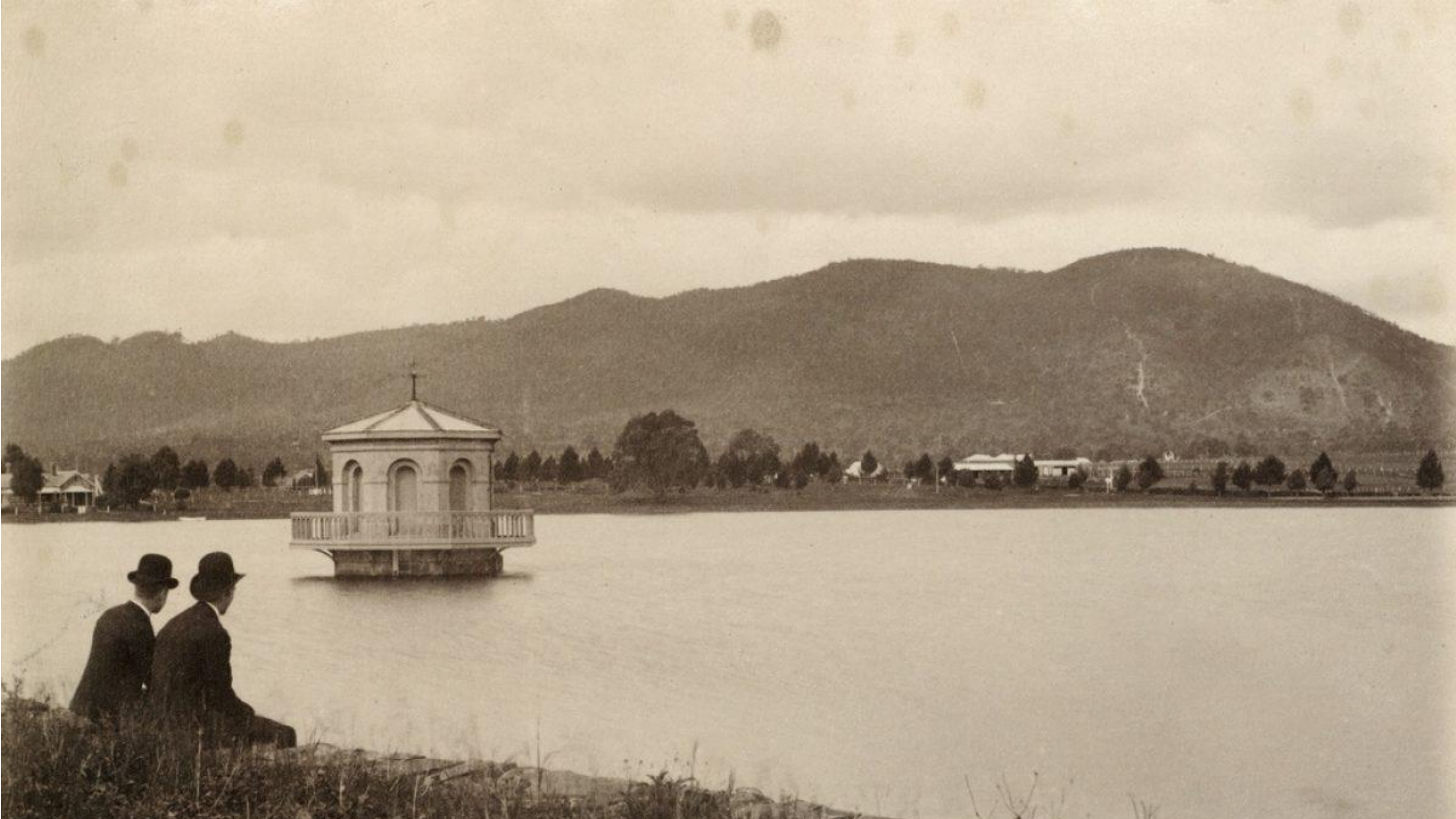
- Earliest version of SA Water was the Waterworks & Drainage Commission.
- By 1860, the first supplies of reticulated water reached Adelaide homes from the Kent Town Valve House.
- In 1862, the first reservoir water was piped from Thorndon Park Reservoir.









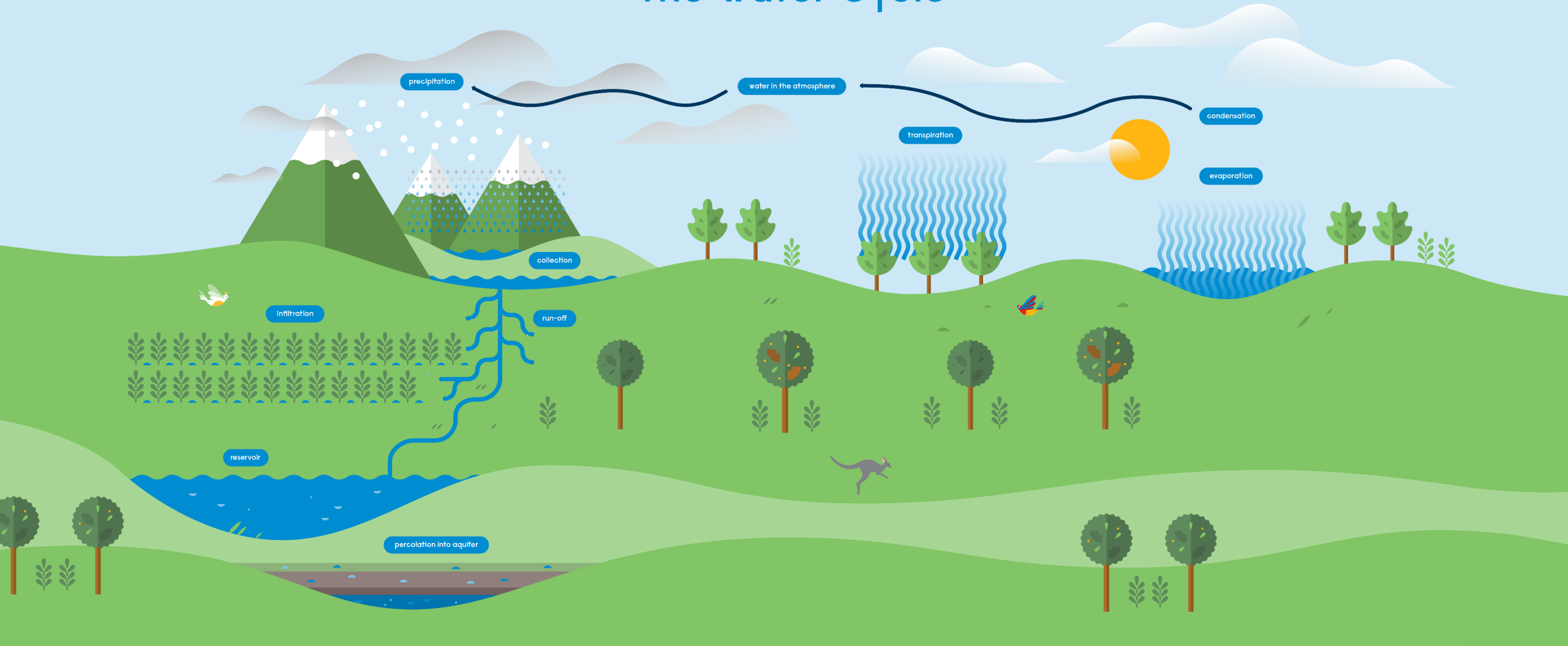


# What does SA Water do?

- Ensure we all have access to clean, safe drinking water
- Look after the longest water network in Australia – over 27,000km
- 1 day = 600 million litres across SA
- 1 year = 220 billion litres across SA
- Water testing = every 100 seconds throughout the year
- 44 Water Treatment Plants
- 28 Waste Water Treatment Plants
- 16 Reservoirs
- Managing water resources and planning for a water-secure future

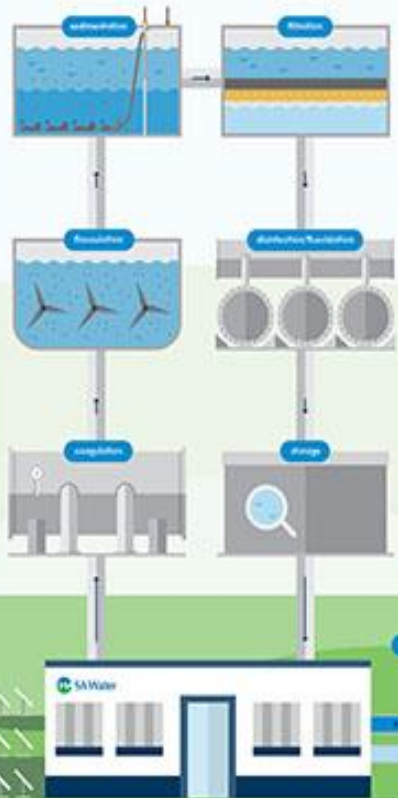


# The Water Cycle





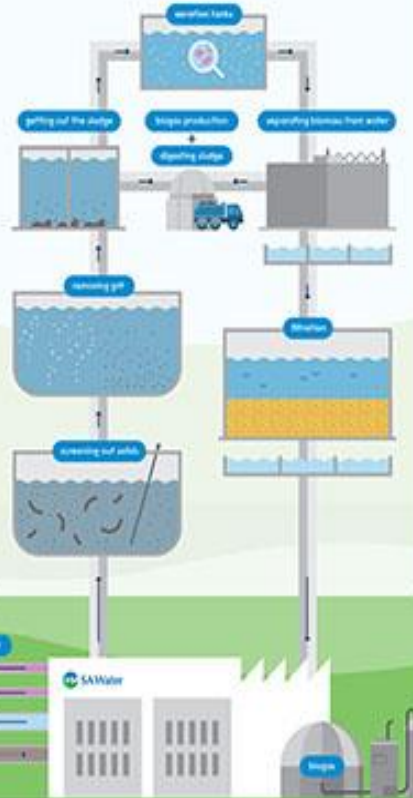
## Water Treatment Process



## The Water Cycle



## Wastewater Treatment Process





# How do we use fresh water?



**How much water is used to produce 1kg of chocolate?**

**How much water does it take to produce a 1L plastic drink bottle?**

# Water on Earth:

**97% oceans**

**2% ice**

**1% fresh**

**.1% fresh AND  
accessible**



# Our water sources

What are South Australia's main water sources?



1  
1



# Why do we treat water?



Government of  
South Australia

## The Well

# Water treatment

## 7 steps of the conventional water treatment process:

1. Oxidation
2. Coagulation
3. Flocculation
4. Sedimentation
5. Filtration
6. Disinfection & Fluoridation
7. Storage



# Water Monitoring

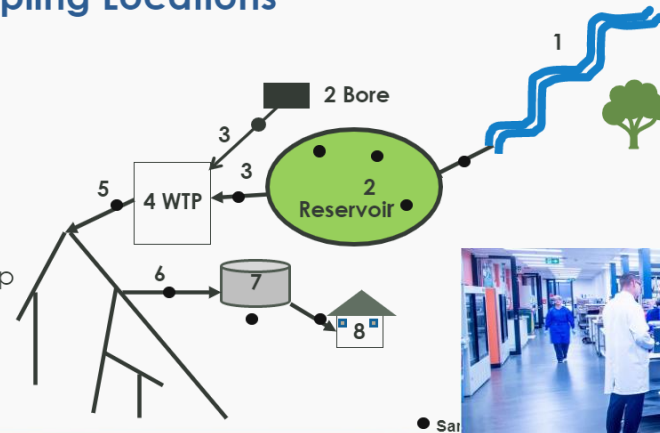
AWQC collects and tests water at many stages of the process from source to tap.

Approximately \$5 million is spent completing about 400,000 water samples, tests and analysis each year.

This is essential to our water quality as our source water is constantly changing, influenced by things like temperature, pathogens, water treatment conditions, environmental events.

## Key Sampling Locations

- 1) Catchment
- 2) Source
- 3) WTP Inlet
- 4) Inside WTP
- 5) Outlet WTP
- 6) Distribution
- 7) Supply Tanks
- 8) Customer tap

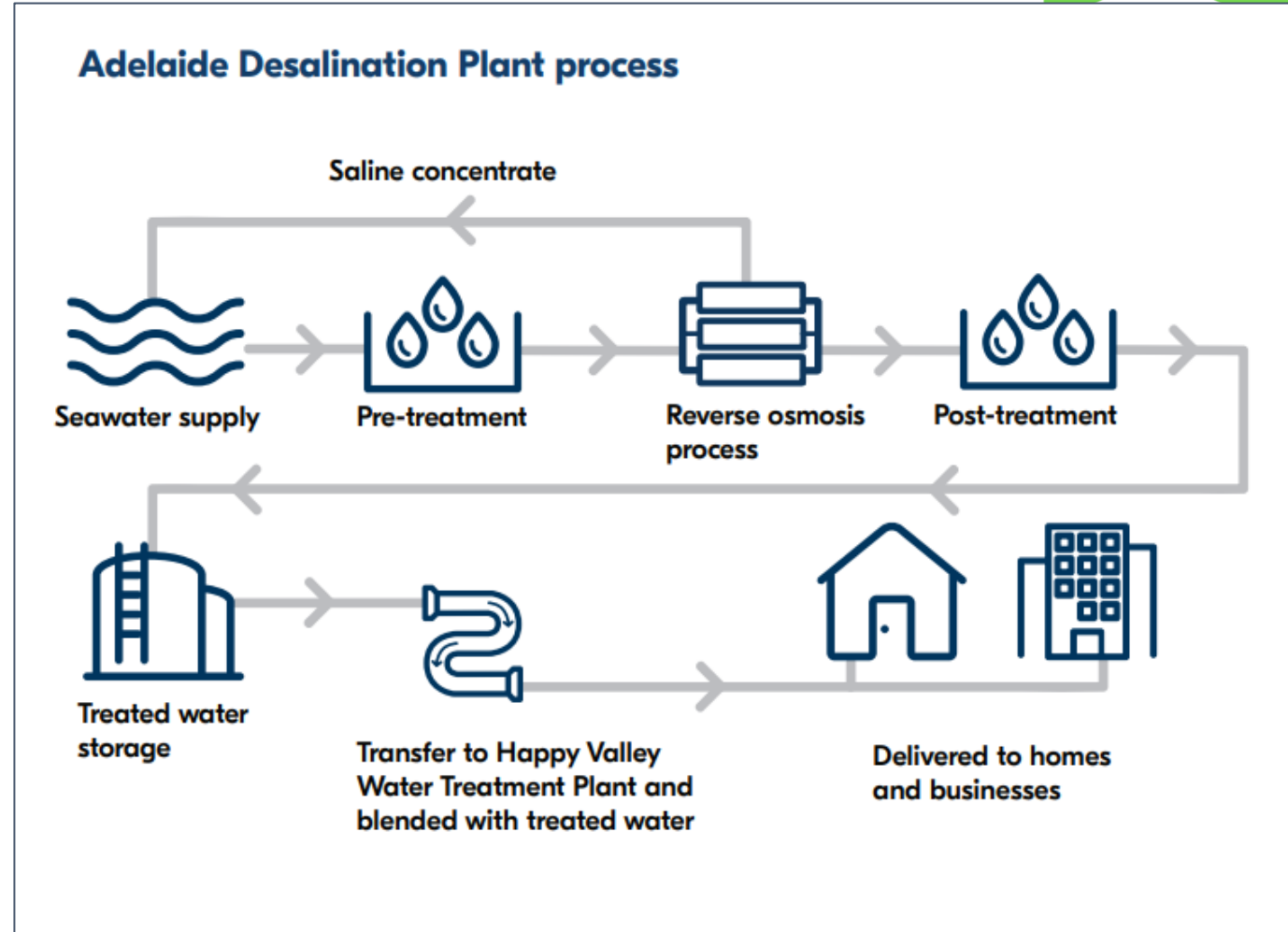




# Desalination

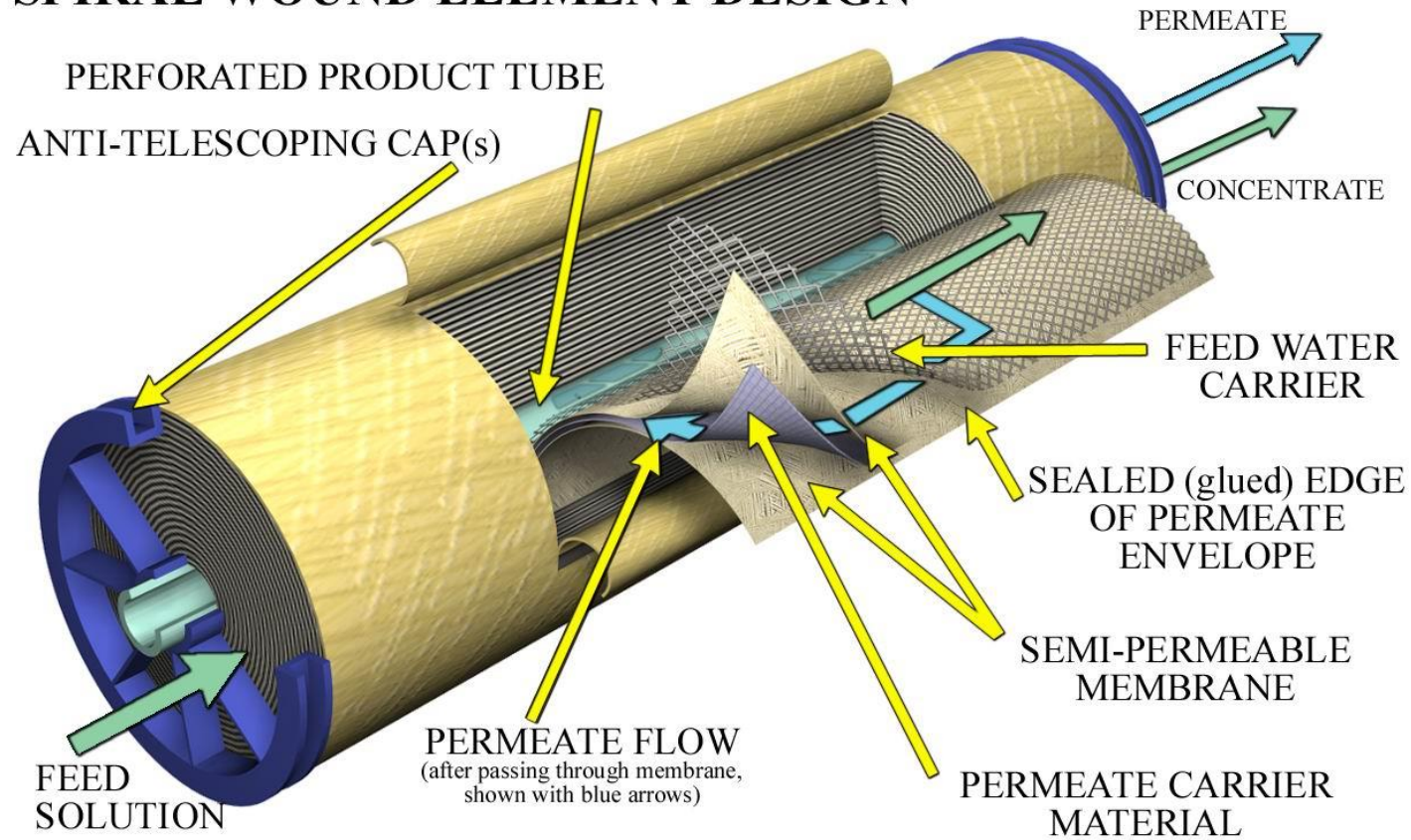
Desalination is an alternative water treatment method.

It is a process that removes dissolved salts and impurities from a water source, such as seawater or groundwater, and turns it into fresh water.



# Reverse osmosis

## SPIRAL WOUND ELEMENT DESIGN





# Inside the ADP



1  
7



# Your drinking water profile

Go to the SA Water website and search for  
*“my drinking water profile”*.

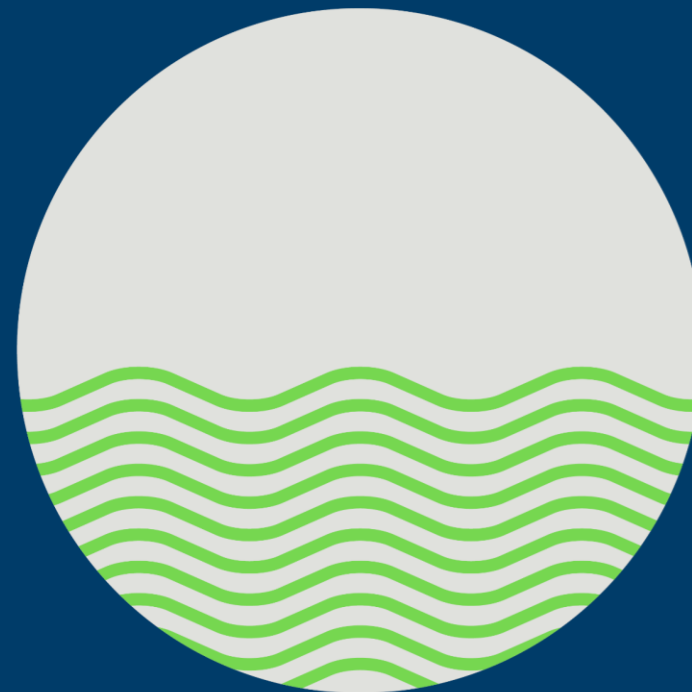
Enter a postcode and view current data about where your water comes from, and the balance of various minerals in your water.

You can even compare your water to water somewhere else in the state.



*Did you know:*

We live in the driest state, in the driest inhabited continent in the world. Water is an incredibly valuable resource, and South Aussies understand that better than most.



# Water efficiency

Although water may be a renewable resource, plenty of fresh, clean water is not easy to find or produce.

Using water efficiently helps protect our valuable water supply.

How can you be more efficient with water use?





# Water efficiency tips



# Water efficiency tips



# Check for leaks!



1. Check your water meter
2. Don't use any water for 2 hours
3. Check meter again
4. If numbers move, you may have a leak
5. Contact SA Water

0 0 1 2 6 4 8 7



# Check for leaks

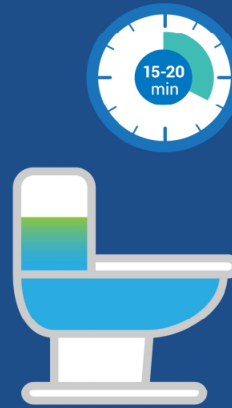
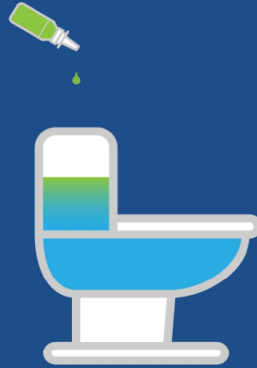
## Is your toilet leaking? It's easy to check!

1 Remove the tank lid.

2 Drop several drops of food coloring into the toilet tank.

3 Wait about 15-20 minutes.

4 Check the toilet bowl. If the water is colored, you have a leak.



# Water efficiency in the garden



# Recycled Water



Treated wastewater has multiple second lives.

We recycle more than 30% of our wastewater for reuse.

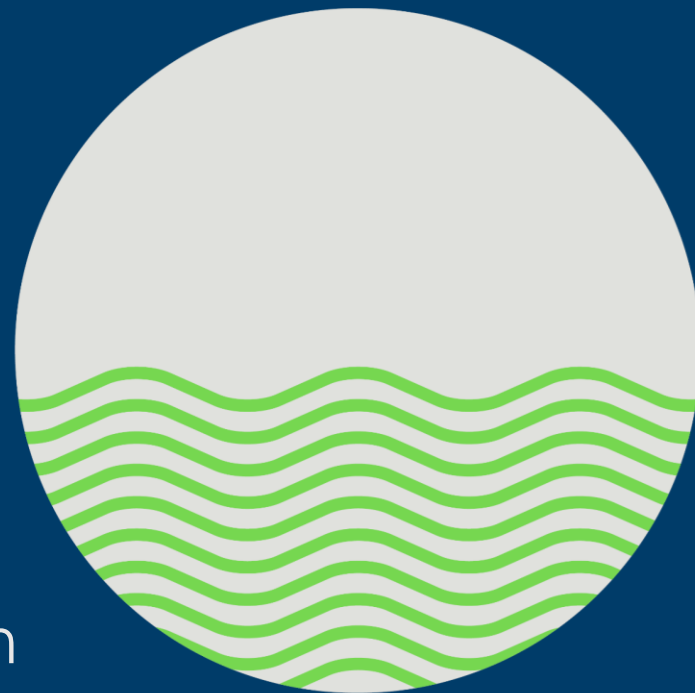
It can be used for irrigation, washing cars, flushing toilets, watering gardens and more.

## Case Study:

Singapore's drinking water is what they call, NEWater. This speeds up the natural water cycle and ensures water security for the city.

After water is used, is it treated in a wastewater treatment process, then processed further through reverse osmosis, then mixed with water reserves before going through conventional water treatment again. The result is above the standard for water quality and safety.

What do you think of recycling water in this way?





# Zero Cost Energy Future

- We are one of the state's largest electricity users
- 2019-20 electricity bill was \$86 million
- Our goal is to achieve zero net electricity costs and improve environmental outcomes
- Sustainably reducing our operational energy expenses = keeps customer charges as low and stable as possible
- Renewable resources
  - Biogas and biosolids
  - Hydroelectricity
  - Solar panels



# SA Water in the community



Government of  
South Australia

## The Well

# BYOB Campaign





# Artwork on Infrastructure







Pause (k)



# Adelaide Desalination Plant Tours



**Join our next  
Community Open Day  
Tuesday 25 July**

3  
3

# Reservoirs



# Questions?

