

The Well

Enjoy. Explore. Preserve our reservoir reserves

We invite you to discover your local reservoir reserve and use this workbook to support student learning.



Welcome



Niina Marni,

Today I am visiting _____ reservoir reserve, which is on _____ land.

SA Water acknowledges and respects the unique connection of the traditional custodians of the land and waters and thank them for their custodianship and leadership in the past, present, and future.

We need your help to preserve these special places and protect the quality of our drinking water. Here are some important things to remember, to protect the environment and stay safe during your visit:

- Wear sunscreen and a hat, closed-in shoes, and bring plenty of water to drink, especially on warm days.
- Explore the reserve by safely by sticking to the walking paths and watching your step.
- Enjoy spotting birds and wildlife and be mindful of snakes.
- Leave only footprints – take all rubbish with you.
- Keep our drinking water safe do not swim or enter the water.
- Pets are not allowed to visit the reservoir. Assistance dogs are accepted.
- Be responsible and considerate of others using the reserve.
- Have fun and take plenty of photos.

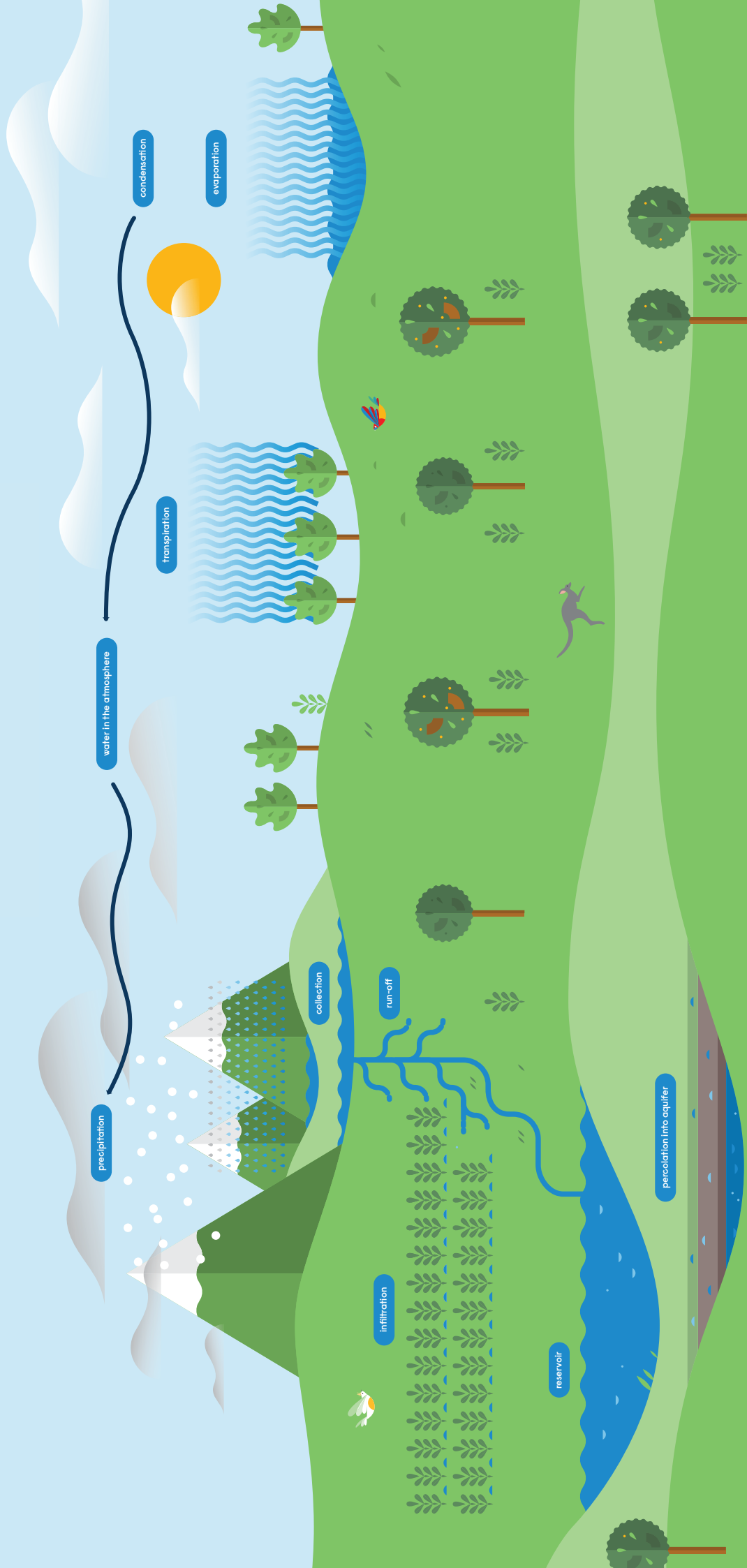


Did you know, access to nature has been found to improve sleep and reduce stress, increase happiness, and reduce negative emotions, promote positive social interactions, and even help generate a sense of meaning to life.



Share your experience at the reservoir today by tagging SA Water and Reservoirs South Australia on social media posts, or email our education team: thewell@sawater.com.au.

The water cycle



What is a reservoir?



A reservoir is a large natural or artificial lake used to collect and store fresh water from the surrounding catchment.

A catchment is an area where water is collected by the natural landscape, by running downhill and collecting in creeks, rivers, lakes, or oceans.

That process of water draining across the land influences the quality of the water in each catchment. As it flows across different parts of a catchment, it can pick up different contaminants along the way. As a result, the types of properties, infrastructure and activities within the catchment area will greatly affect water quality.

Questions to consider and discuss:

- How does a reservoir fill with water?
- What kinds of contaminants might be collected as water runs down into a catchment area?
- What kind of catchment area would result in the best quality water source?

Visit our website (sawater.com.au) and look up reservoir data

1. What is the capacity of the reservoir you are visiting today?
2. How many litres of water are in the reservoir today?
3. What is the volume today as a percentage?
4. What is the difference in volume between today and this day last year?
5. How much rain has fallen in the catchment area this week?



Reservoirs help provide a sustainable water supply

Reservoirs act as invaluable spaces to store fresh water. When at capacity, South Australia's 16 reservoirs can store almost 200,000 million litres of water – just under a year's supply for metropolitan Adelaide.

Why is it important to be able to store fresh water?

What times of year are we more likely to rely on those water stores?

South Australia is the driest state, in the driest inhabited continent on earth. Our environment, combined with a changing climate and growing population means our water resources are precious, and water security needs to be planned and considered for the future.

We manage this issue by developing innovative technologies and relying on a broad range of water sources and treatment methods.

What kind of technologies do you think we could utilise to ensure water security for our state?

What can you do to conserve water at home?

How could you influence your friends, family and community to conserve water?

First impressions

What are the features of the reservoir reserve you are visiting today?
Write a description or draw in the box below.

Environmental management

Our reservoir reserves are comprised mainly of remnant native vegetation.

Native vegetation provides an ideal land use in reservoir reserves as it:

- produces surface water with fewer contaminants such as pesticides, nutrients, and bacteria, compared to surface water that runs off farmed and urban land
- is more resilient as it recovers quickly from natural events such as bushfire
- limits erosion
- supports native fauna
- reduces water treatment costs.

You might have seen some of the following native flora while exploring the reservoir reserve.
Tick the photo if you spot them.



Red river gum tree



Native pig face



Golden Wattle



Twiggy bush pea



Silver banksia



Chocolate lily



Pink-lipped spider orchid



Swamp daisy bush

Find at least one native plant at the reservoir reserve to draw and label in the box. It may be one of the species pictured above or another one you know.

What kind of issues with vegetation do you think Reservoir Rangers might have to manage on this reservoir reserve?

Consider what kind of conditions create a bushfire risk. Have a go at rating the bushfire risk in this area and explain why you have chosen that rating.

1 - no risk to 10 - imminent threat of bushfire

What could Reservoir Rangers do to manage the risk of bushfire in the reservoir reserve?



Biodiversity

Our reservoir reserves are home to significant biodiversity, including a range of rare, threatened, and endangered flora, fauna and ecological communities. For example:

- Happy Valley is home to the nationally endangered Grey Box Grassy Woodland.
- Mount Bold supports approximately 10,000 flora and fauna species including 94 flora species of conservation significance such as the pink-lipped spider orchid, and 25 fauna species of conservation significance including the Southern Brown Bandicoot and the Chestnut-rumped Heathwren.
- The Barossa Reservoir is home to over 30 plant species of conservation significance including the Silver Daisy Bush.



Chestnut-rumped heathwren

What is biodiversity, and why is it important?

Search our website (sawater.com.au) to read about the **Myponga reservoir bird sanctuary** and learn more about how we are protecting threatened flora and fauna, including the Australasian Bittern, and the Mount Lofty Ranges Southern Emu Wren.

What kind of wildlife have you seen at the reservoir reserve today? Write a list or draw the species you have been in the box. Are they native species?

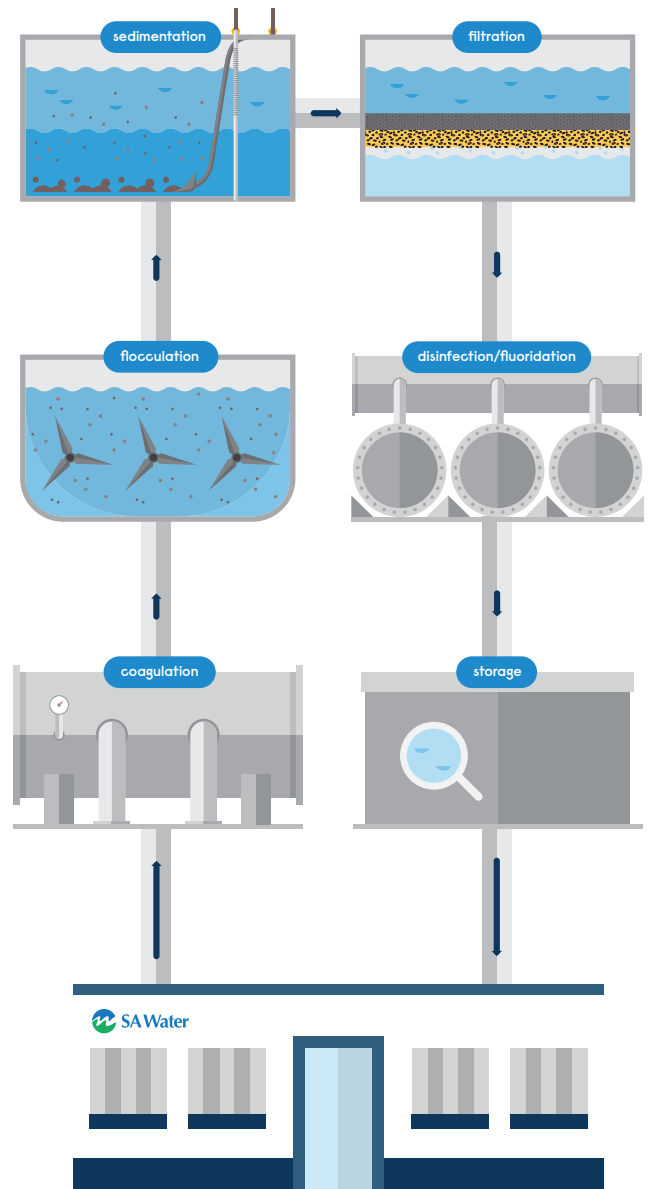
Reservoir infrastructure

Some reservoirs have a water treatment plant on site. This is where water from the reservoir is filtered and disinfected before being sent through our pipeline network to surrounding homes and businesses. On the right you can see the six stages of the water treatment process.

What materials do you think would make an effective water filter?

Why does water need to be disinfected before distribution?

Water Treatment Process



Other buildings on site may include offices and other facilities used by Reservoir Rangers.

Another common site at a reservoir is a dam. A dam is a wall constructed to block a waterway, allowing water to collect and create a reservoir.

These structures are impressive feats of engineering, constructed to be sturdy and strong enough to hold back millions of litres of water, but flexible to adjust to changing water levels.

Opening reservoir reserves to the public

A reservoir is not a regular lake or pond; think of it as a natural storage space for drinking water. There are challenges involved in ensuring the space is used so that the environment and water quality is protected.

What kind of challenges do you think there are for public use of reservoir reserves?

Why do you think SA Water manages these challenges, so the public can access these spaces?



The Well

Explore. Interact. Learn

Our education program meets curriculum links for students of all ages.

For more information about any of our education programs please visit sawater.com.au/thewell.

