

Catchment

Factsheet (Secondary Learners)



What is a catchment?

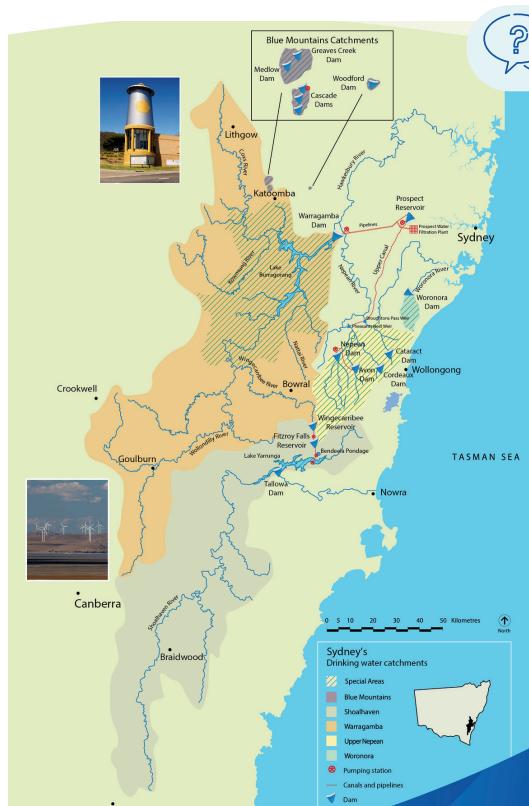
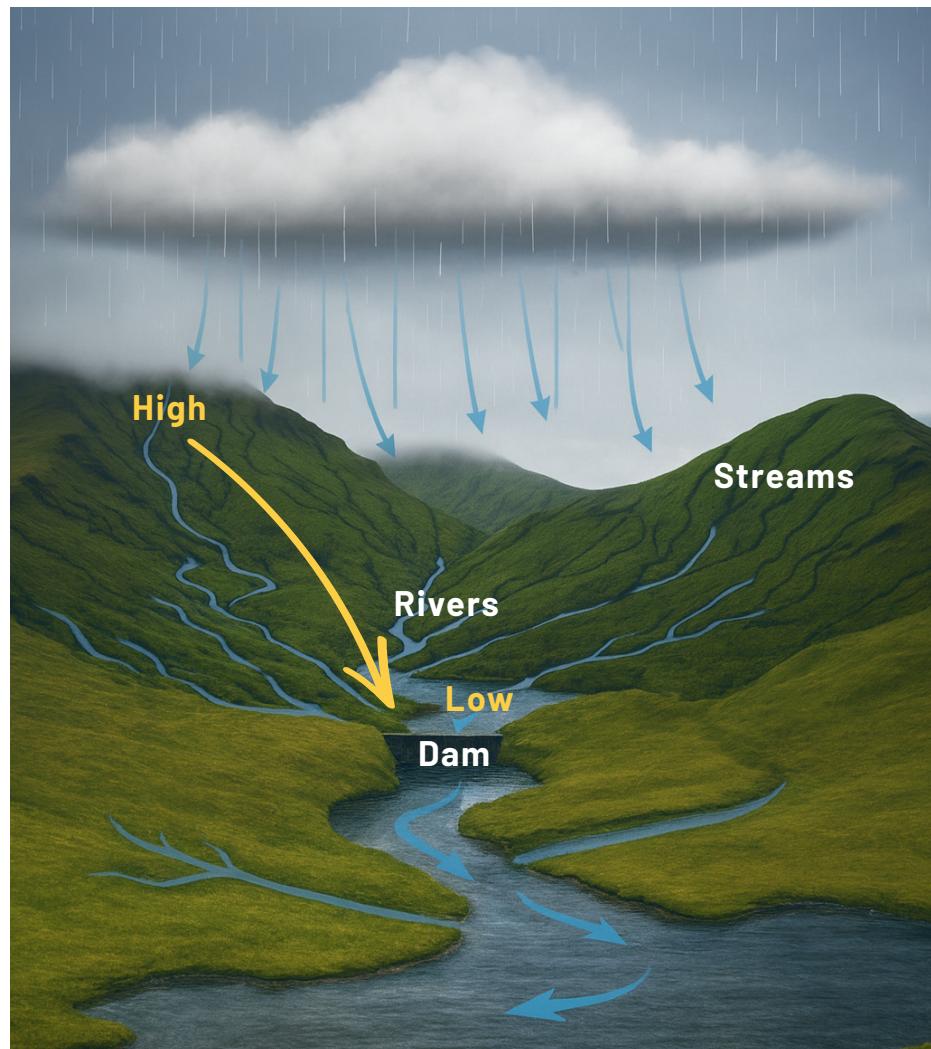
A catchment is an area where water is collected in the natural landscape.

Gravity causes rain and run-off to flow downhill from high (mountains) to low (valleys) places.

The water collects in the low parts of the catchment (streams, rivers, lakes, and the ocean).

Sometimes we use dams or weirs to manage the flow of the water through the catchment and capture the water for people to use.

Some water doesn't get caught in a catchment, instead it seeps below ground and is stored in the soil or in the space between rocks. This is called groundwater.



Everyone lives in a catchment. What is your catchment?

Why are catchments important?

We need freshwater to survive. We use the water collected in catchments to help supply water for our needs by building dams and weirs or tapping into groundwater. This is called the water supply system. The rain must fall into the drinking water catchment for it to travel into the corresponding dam or weir.

Greater Sydney's drinking water catchment

Greater Sydney's drinking water catchment is made up of five catchments: Warragamba, Shoalhaven, Upper Nepean, Woronora and Blue Mountains.

The five water catchments cover only 2% of NSW's land area ($16,000 \text{ km}^2$), but supply drinking water to 60% of NSW's population (5.5 million people).

Warragamba provides about 80% of Sydney's drinking water.

Catchments in the Murray-Darling Basin



Keepit Dam captures 419 gigalitres of water in the [Namoi catchment](#) that is used for hydroelectricity, irrigated agriculture, town supply (Walgett), flood mitigation, environmental flows, and recreation.



Wyangala Dam captures 1,217 gigalitres of water in the [Lachlan catchment](#) that is used for irrigated agriculture, town supply, landholders, industry, flood mitigation, hydroelectricity, & environmental flows.



Copeton Dam captures 1,346 gigalitres of water in the [Gwydir catchment](#). This water is used for irrigated agriculture, town supply (Inverell & others), industry, flood mitigation, hydroelectricity, & environmental flows for the Gwydir Wetlands.

How does the health of a catchment affect the health of waterways?

Healthy catchments have flourishing waterways with clean (high quality) water. Humans, native plants and native animals need high quality water to survive and thrive.

Natural events and human activities affect catchments and can cause pollutants to enter waterways. A pollutant is an unwanted substance that causes harm. Pollutants lower the quality of our water.

Natural events

- Floods can wash debris and sediment into waterways.
- Repeated, hot, dry, and sunny days can warm water and cause toxic, blue-green algae (cyanobacteria) blooms.
- Bushfires can kill plants, increasing weathering and erosion. They also create ash. The soil and ash then enter waterways via rain.

Human activities

- Households, farms, and industries can release pesticides and herbicides that kill aquatic animals and plants.
- Fertilisers and detergents can cause nutrients (eg. phosphorus and nitrogen) to enter waterways and increase cyanobacteria blooms.
- Removal of trees and other plants increases weathering and erosion and causes soil to enter waterways.
- Faeces from humans, farm animals and pets can introduce pathogens (disease-causing microorganisms) to waterways.

What can you do to care for your catchment and its waterways?

- ✓ Manage your rubbish and recycling properly to keep it out of our waterways.
- ✓ Plant native grasses, flowers, bushes and trees (their roots hold onto soil to keep it out of our waterways).
- ✓ Never put anything, especially chemicals used in and around your home, in stormwater drains as stormwater isn't treated and directly enters your local waterway.
- ✓ Keep your pets and farm animals away from waterways to reduce weathering and erosion and prevent their faeces (and its pathogens) from entering the water.

The Gwydir Wetlands in the Gwydir catchment are Ramsar sites.



These internationally significant, unique wetlands are the country of the Kamarillo people and include more than 160 cultural heritage sites. They are important for many waterbirds (including threatened species) and help maintain grass/sedge meadows, cumbungi beds and collibah wetland.