



Definitions of common water terms referenced in the Greater Sydney Water Strategy



The draft strategy includes references to various water sources and uses. Some of the common terms are explained in the diagram and boxes below.

Major cities around the world source their water supplies from a variety of different means. In Greater Sydney, our current water supplies are predominantly sourced from surface water collected via dams, with water also sourced from seawater desalination for drinking purposes and from recycled water for non-drinking uses.

The draft Greater Sydney Water Strategy identifies the need to build a more resilient and sustainable water supply now and into the future, with increased and new uses of recycled water and potential new desalination options. We need to ensure our region has enough water to cater for growth and provide water security in the event of drought.



Figure 1.

Depicts a range of water source options that are used in water supply systems around the world. The labels in this picture are explained in more detail in the glossary on the following pages.

Dams

A dam is a barrier or structure built across a waterway so that water is stored for supply. In metropolitan areas dams typically provide the bulk of water supplies. Water from dams is dependent on rain and is increasingly being supplemented in major cities by rainfall independent water sources.

Seawater desalination

Seawater is treated to remove salts to create water suitable for drinking. This method provides a reliable, rainfall-independent source of water. Although it is energy intensive, many desalination plants are powered by renewable energy.

Enduring supply

An amount of water that can be supplied confidently, to meet demand for water in a city or region, irrespective of the duration and intensity of a drought.

Purified recycled water for drinking

Sourced from wastewater and stormwater treated to meet relevant health and drinking water guidelines through multiple levels of treatment and disinfection for drinking water use.

Unplanned reuse

Unplanned reuse of wastewater occurs when treated wastewater is discharged into a river or other large waterbody, and is extracted further downstream for water supply purposes. This treated wastewater, mixed with a high proportion of river flows forms part of the water supply for towns further downstream. Unplanned reuse of wastewater is common around the world in river systems that are home to multiple communities and cities, but it only represents a very small portion of the source water that supplies Sydney now. When extracted downstream the water is treated to drinking water standards before being used for water supply.

Recycled water for non-drinking

Recycled water is sourced from wastewater and treated to provide water for non-drinking purposes including irrigation, industrial and household uses such as toilets and washing machines. Using recycled water reduces demand on drinking water systems and limits discharge of wastewater to the environment.

Rainfall independent water supply

Sources of water for drinking and non-drinking uses that are not dependent on rain. The two key sources of rainfall independent supply are seawater desalination and recycled wastewater.

Groundwater

Groundwater is the water below the land surface. Groundwater slowly moves between gaps in rocks and sediments. In some instances it connects to rivers, streams, lakes and wetlands and in some cases it does not interact with surface water. Treated groundwater can also be extracted and used to supplement water supplies for drinking and non-drinking purposes.

Resilient water supply

A water supply that is able to withstand or recover quickly from difficult conditions, such as prolonged and intense droughts.

Water restrictions

Mandatory or enforceable controls on the way we use water during times of drought.

Water sharing between regions

Pipelines, canals and rivers connecting two or more major water sources to transport water from one catchment to another. This allows water supply in a region to be optimised by moving water between catchments to communities with less water.

Water efficiency

Projects to reduce water use, including the supply of water efficient appliances, leak repairs, and behaviour change. While not a source of water, using water wisely will always be an important part of maintaining Australia's water security.

Surface water

Water collected from rivers, dams and weirs and then treated and transported for drinking water and non-drinking water uses, is an important part of our existing water supply portfolio. Dams and reservoirs store water for future use, but they rely on rainfall and are less resilient to climate change.

Rainwater tanks

A water tank used to collect and store rainwater runoff from a property's rooftop via pipes, used for non-drinking water purposes in metropolitan areas and to supplement drinking water supplies in semi-urban and rural areas. Using rainwater can provide multiple benefits, including reduced demand on drinking water and environmental benefits.

Stormwater harvesting and reuse

Collecting, storing and treating stormwater from urban areas for reuse, typically for non-drinking purposes. Stormwater harvesting schemes provide multiple benefits to communities, including improving environmental and social benefits through the provision of green open space and healthier waterways.



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