

# Kangaroo Island Water Demand and Supply Statement

## WATER DEMAND AND SUPPLY STATEMENT 2015

### WHAT ARE THE MAIN FINDINGS OF THE KANGAROO ISLAND WATER DEMAND AND SUPPLY STATEMENT?

The Kangaroo Island Water Demand and Supply Statement summarises water information from across the region to identify and estimate future supplies and demands and to assess when water shortfalls may be expected to occur. The Statement integrates information from individual water catchments and population centres to deliver a whole of region summary. It also outlines data and assumptions used to develop projections for water supply and demand to 2050.

The main finding of the Statement is that, for both drinking and non-drinking quality water, sufficient supplies exist and no shortfalls are expected to occur before 2050.

In terms of its supplies, Kangaroo Island is heavily reliant on surface water, typically captured through farm dams, and in many parts of the region rainwater is the main source for household drinking supplies. SA Water provides reticulated water within the bounds of the Middle River Water Supply System (WSS) and from the Penneshaw Desalination Plant on Dudley Peninsula. The combined systems supply water to around half the KI population.

SA Water supply is expected to remain relatively constant and, with some pre-planned augmentation measures in the Middle River WSS, will remain sufficient to at least 2050. Rainwater collection is anticipated to increase in line with building construction as the total roof area increases across the Island.

The main demands for drinking quality water include the residential population (283 ML per annum), non-residential uses (215 ML per annum) and tourism (95 ML per annum). Growth in residential water use will be driven by population growth, with flow-on impacts for non-residential uses. Following residential and non-residential demand, visitors to the Island are the major users of drinking-quality water, accounting for approximately 14 per cent of yearly potable water demand. It is also estimated that on average around 70 ML of drinking quality water is used per annum for firefighting and by the Council as well as being lost to leakages and theft. It is estimated that on average approximately 10 ML of water annually is used from standpipes across the Island.

Total potable water supplies currently available on the Island amount to 875.6 ML annually and this compares to

potable water demand of approximately 673.4 ML. Therefore, on average, there is a surplus of approximately 202 ML of drinking quality water on the Island per year. Due to anticipated growth in demand, the surplus is expected to reduce to around 22 ML by 2050.

The impact of climate change on potable water supplies is relatively minor. Safe yield from the Middle River Reservoir is assumed to remain constant with climate change impacting mainly on the amount of spill. Reducing rainfall will impact on the amount of rainwater collected however this is more than offset by building construction and the increasing total roof area of buildings on Kangaroo Island. The output of the Penneshaw desalination plant is independent of the climate and weather conditions.

The current demands for non-potable water are driven by plantation forestry (23 GL per annum), irrigated crops (2.3 GL per annum) and livestock (1055 ML per annum). The current supply of surface water is estimated at 76.3 GL. The surplus for non-potable water is therefore around 50 GL.

The Statement projects surface water supply to 2050 on the basis of two climate change scenarios for high and low greenhouse emissions. The scenarios deliver a wide range of possible outcomes depending on the rate at which the emissions of greenhouse gases are managed and range from an increase to 79.4 GL or decrease to 62.4 GL. In 2050, non-potable water demand is projected at 28.4 GL, future surplus is therefore estimated to range between 51 GL and 34 GL in 2050.

Copies of the Kangaroo Island Water Demand and Supply Statement and other statements can be obtained from: [www.environment.sa.gov.au/managing-natural-resources/water-use/water-planning/regional-demand-and-supply-statements](http://www.environment.sa.gov.au/managing-natural-resources/water-use/water-planning/regional-demand-and-supply-statements).

### WHO DEVELOPS THE STATEMENTS AND WHY?

The statements are developed by the Department of Environment, Water and Natural Resources (DEWNR) in consultation with key regional stakeholders such as Natural Resources Management Boards, Regional Development Australia, local government and SA Water. Government agencies such as the Department of Primary Industries and Regions SA, Department of Planning, Transport and Infrastructure and the Department of State Development are also engaged to provide critical information about the



regions in addition to the information obtained from other sources including the Australian Bureau of Statistics.

The KI Water Demand and Supply Statement was developed with the assistance of the Water Resources Task Force, an advisory committee to the Kangaroo Island Natural Resources Management (NRM) Board. Chaired by the KI NRM Board Presiding Member the Task Force includes representatives from the KI NRM Board, KI Council, AgKI, Eco-Action KI, SA Water and SA Environment Protection Authority.

Water security across the State is a priority for the Government. The development of demand and supply statements for the regions is a requirement of *Water for Good*, South Australia's water plan and the *Water Industry Act 2012*.

The development of the statements ensures that the Government remains vigilant about water security in South Australia. The statements ensure that projections of future water shortages are identified with sufficient lead time to avert the shortfalls by developing regional demand and supply based solutions.

## WHAT IS A DEMAND AND SUPPLY STATEMENT?

Demand and supply statements outline the state and condition of all water resources in a region for drinking and non-drinking quality water, list major demands on these water resources, and identify likely timeframes when water demand exceeds supply.

Where sufficient data is available, the statements project all water supplies and demands for a region and any possible future demand-supply imbalance so that sensible decisions can be made to secure a region's water supply prior to actually realising a shortfall.

Demand and supply statements summarise all available information about water demands and supplies in the region. They are based on historical data and projections on future demands and supplies.

## HOW ARE DEMAND SUPPLY STATEMENTS DIFFERENT FROM OTHER WATER PLANNING PROCESSES?

Regional demand and supply statements are separate from other water planning processes such as SA Water's Long Term Plans and NRM Plans.

While the statements use a broad range of data, including that developed through other processes, their aim is to discuss water supplies and demands over the long term (40 years) and to report on drinking and non-drinking water for the entire region.

The statements are high level, strategic documents that allow regions to remain vigilant about the adequacy of all their water supplies.

SA Water's Long Term Plans have a more focussed approach for augmenting SA Water's assets and guiding capital works programs with the aim of meeting customers' potable water requirements.

The statements are also different from regional NRM Plans and water allocation plans which ensure that water resources are used fairly taking into account the needs of all water users and the environment.

See [www.environment.sa.gov.au/managing-natural-resources/water-use/water-planning](http://www.environment.sa.gov.au/managing-natural-resources/water-use/water-planning) for more information.

## WHAT WILL THE STATEMENTS BE USED FOR?

In accordance with *Water for Good* a planning process will be initiated 5 years before the projected shortfall in water supplies identified by a demand and supply statement.

The planning process will evaluate demand management and supply augmentation options to address any future supply shortfalls.

## HOW MANY DEMAND AND SUPPLY STATEMENTS WILL BE DEVELOPED?

A demand and supply statement will be developed for each of South Australia's eight NRM regions.

The Eyre Peninsula Regional Demand and Supply Statement is the first to be completed. The Northern and Yorke Demand and Supply Statement was released in 2011 followed by statements for Alinytjara Wilurara and the South Australian Arid Lands released in 2013. The Kangaroo Island Water Demand and Supply Statement was released in November 2015.

Statements will be comprehensively reviewed every 5 years.

## For more information

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