



Kangaroo Island
Long-term Plan
2018 – 2043
Summary



Our Kangaroo Island Long-term Plan ensures a secure water supply to meet residential and commercial needs into the future.

In developing the plan, we use the best analytical and scientific methods for South Australian weather and climatic conditions. These are matched against long-term forecasts of resources availability and customer demand.

Acknowledgement of Country

We acknowledge that Kangaroo Island, its land and waters are of cultural significance to a number of Aboriginal Nations. We acknowledge and pay respect to the Traditional Owners of the lands and waters of Kangaroo Island and we recognise their ongoing cultural and spiritual connection and its importance to cultural vitality, life and identity. We also recognised the cultural heritage, knowledge and skills are of critical value and importance to Australia’s people, lands and waters.



Acknowledgements

A Reference Group was established to actively inform and support our work reviewing our Long-term Plan for Kangaroo Island. The Reference Group comprised representatives from a wide range of key stakeholders and Kangaroo Island community groups. We acknowledge the significant commitment, collaboration and passion from our Reference Group throughout the process of updating the plan.



Figure 1: Timeline of activities to update the Plan.

Based on the findings of our stakeholder engagement and the analysis undertaken together with our Reference Group, the recommended option to be further explored is an additional desalination plant at Penneshaw.

In updating our Kangaroo Island Long-term Plan, we worked together with the local community to ensure they had significant input into the review.

Seventy ideas were collected and assessed throughout the process. Through our meetings with the Reference Group we analysed a number of options and identified those that best met the projected future water supply and demand.

We held a number of drop-in sessions, presentations and opportunities for the Kangaroo Island community to review the preferred option, provide comment and identify any additional issues and opportunities relating to the security of the water supply for Kangaroo Island.

Our plan to serve Kangaroo Island

The demand and supply projections used in this Long-term Plan are reviewed yearly.

Our adaptive approach to planning ensures the decisions we make, and how we make them, are informed by a rigorous continual learning process. This recognises the complex and changing environment in which we operate and provide services to our customers and the community.

Future opportunities identified in this planning process may be considered as part of adaptive planning either in yearly reviews of the Plan or if triggered at any time are:

- connection of new communities
- introduction of non-drinking/irrigation water customers
- recreational access to Middle River reservoir in the Middle River catchment
- alternative uses of water by the community in the Middle River catchment
- alternative renewable energy supplies
- partnership and/or collaboration with the Kangaroo Island Council on an integrated energy and distilled water opportunity.

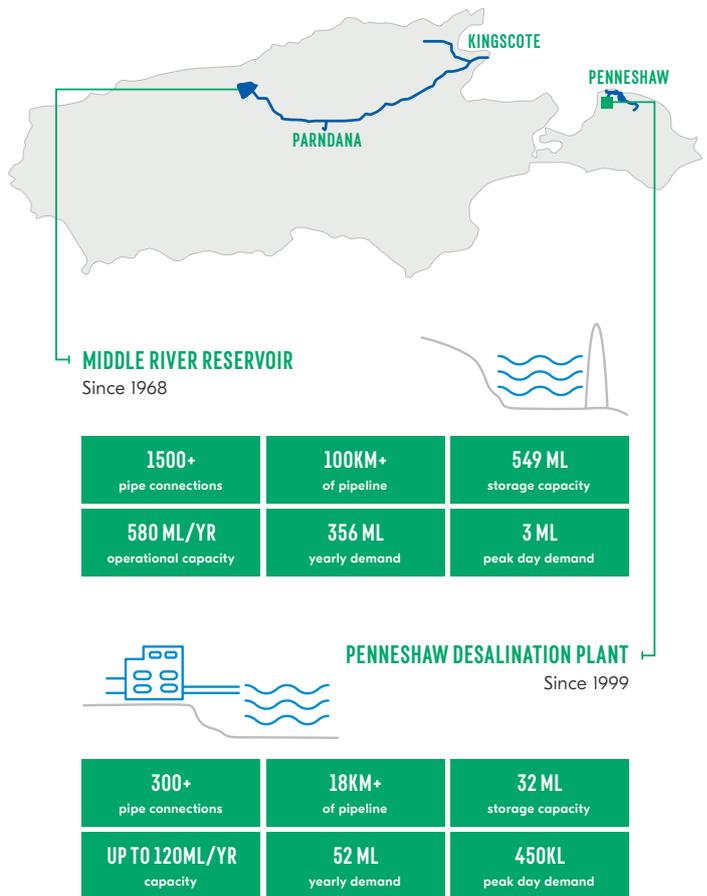
How the options were analysed

Working together with the Reference Group, we used a multi criteria analysis to assess the various options. This approach provides a framework to consider four categories – environment, social, economic and technology – to indicate the most sustainable and practical solution. Six viable options were analysed:

- 1 Continue operation with the existing system configuration
- 2 Expand Penneshaw to serve the entire island with an additional desalination plant
- 3 Desalination to meet all Middle River demand
- 4 Desalination to supplement existing Middle River supply
- 5 New raw water storage – Middle River
 - 5a new storage near Water Treatment Plant
 - 5b upgrade Middle River reservoir
- 6 New storage – treated water covered lined storage.

See the full Kangaroo Island Long-term Plan for more details about the options and analysis.

Supply on Kangaroo Island



Demand and supply

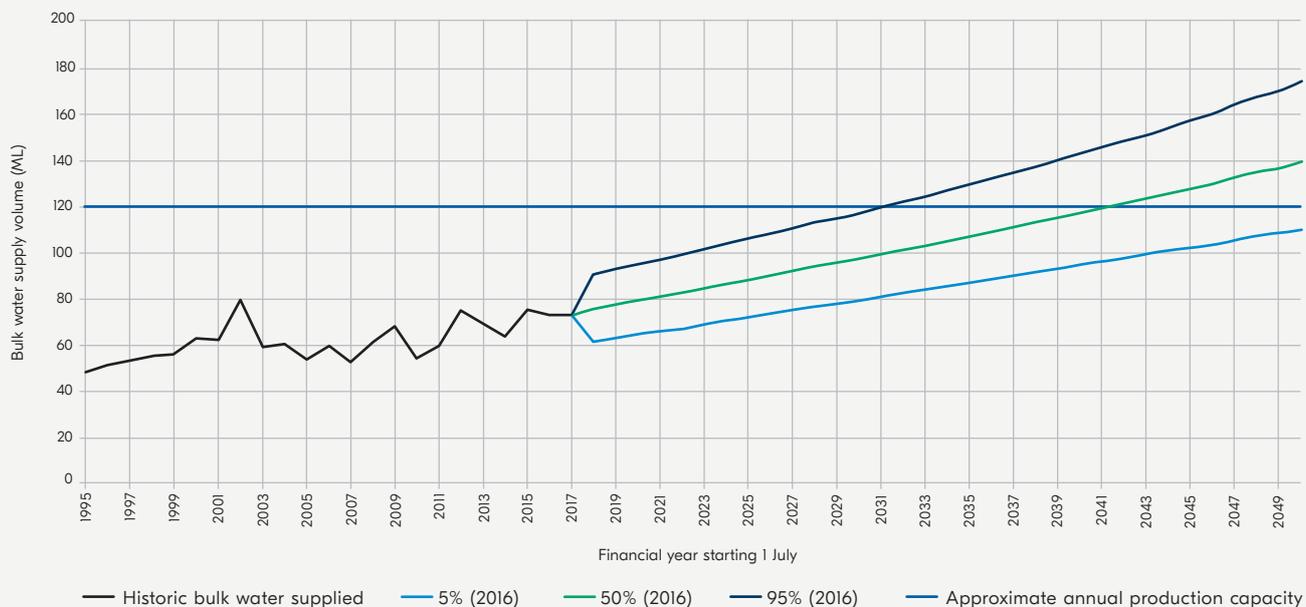
We consider a wide variety of potential influences to water demand patterns and use these to build models to forecast demand in each water supply system.

Our model provides a range of demands that can be expected between dry and wet years, and accounts for a range of potential climate change futures. Asset planning and water systems must be capable of delivering the upper limit of the range (the 95th percentile).

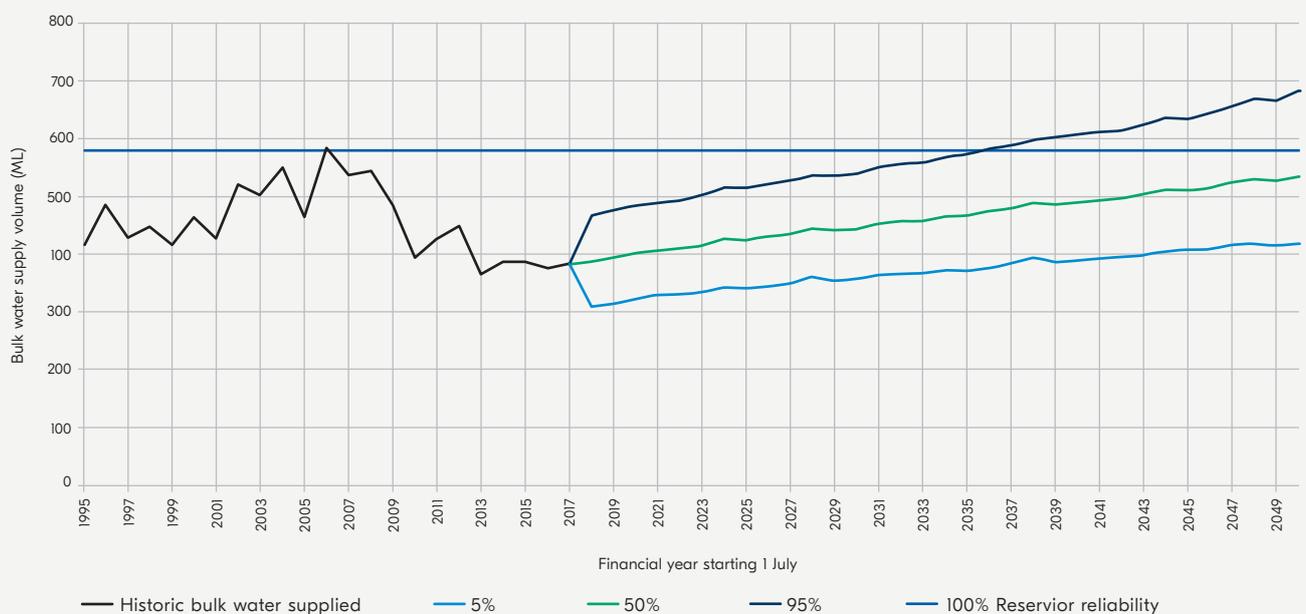


Figure 2: Criteria we need to understand and balance in our Long-term Plans.

PENNESHAW FUTURE DEMAND PROJECTION - ORGANIC GROWTH



MIDDLE RIVER FUTURE DEMAND PROJECTION - ORGANIC GROWTH



The full Kangaroo Island Long-term Plan is available from sawater.com.au.