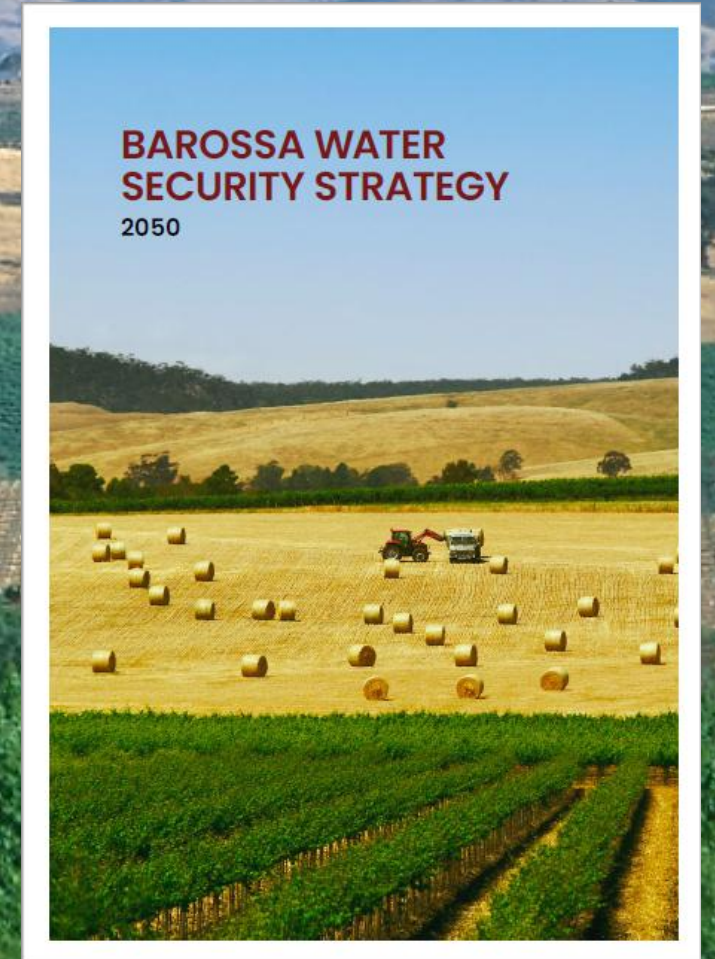


Barossa Water Projects

Peta Brettig
Principal Policy Officer
Water Security Team
**Department for Environment
and Water**



Many water projects underway including....

Water Allocation Plan Review

- Manages the take and use of surface water and groundwater
- Considers water requirements for ecosystems
- **Objective:** achieve an equitable balance between environmental, social and economic needs for water

Barossa Water Security Strategy

- Considers all sources of water available
- Vision for a water secure Barossa in 2050
- Strategic actions to achieve the vision in a changing climate
- **Objective:** ensure future policy, regulation and infrastructure aligns and achieves water security

Barossa New Water Project

- Investigating feasibility of new water to Barossa Valley and Eden Valley
- Recycled water from Bolivar WWTP or River Murray Water (for Eden Valley)
- **Objective:** seek to increase the volume of water available to Barossa Valley and Eden Valley

Water management issues

- Water resources and ecosystems already under stress – recent period of dry years
- Climate change – hotter and drier future, further stress on native water resources
- Imported water already a key supply source
- Historical impediments to flows through the system – impacting on water users, amenity, ecosystems and cultural values
- Many actions needed to address these, within and outside the water allocation plan

Barossa Water Use

Water Use (GL)

25

20

15

10

5

0

2010-11

2011-12

2012-13

2013-14

2014-15

2015-16

2016-17

2017-18

2018-19

2019-20

SW

SW (Unlicensed)

GW

Bunyip

SA Water off-peak

BIL



Government of
South Australia

Why a Barossa water security strategy?

- Because there is a need for water for water users, community, viticulture, industry and the environment of an appropriate quality that is affordable now and into the future.
- To support sustainable regional economic growth.
- To complement “traditional” water allocation planning undertaken by government, and deliver solutions to water management challenges.
- To ensure infrastructure and/or **policy solutions** are aligned and will contribute to regionally beneficial outcomes.

Barossa Water Security Strategy

Stakeholder Input and Ownership

- Co-development of a regional water security vision
- Portfolios of policy, infrastructure and water use actions to deliver long-term water security and sustainable economic growth

Policy and Regulation

- Barossa Water Allocation Plan
- *River Murray Water Allocation Plan*
- Protection of water quality
- Regulation of wastewater

Supply Infrastructure

- Recycled Water
- Pipelines
- Desalination
- Storage

Water use and Technology

How individuals, communities, industry and the environment use water.
Improved water use efficiency

Long-term Resilience

Assessment of the impacts of uncertainties, including climate change, on water security and a strategic response

Water Allocation Plan Review

SA Water Network Capacity Assessment

Barossa New Water Project

Standpipes
Eden Valley,
Moculta
Mount Pleasant (upgrade)

Research - Climate Resilience Analysis

- A 30-year time horizon
- A shared vision of water security
- Climate analysis and stress-testing supply and demand options
- Strategic actions to achieve 30-year vision
- Relates to supply infrastructure, policy and regulation, technology

Vision: Barossa is

- *an internationally-recognised food, wine and agricultural region that supports diverse businesses, communities and ecosystems*
- *enabled by access to affordable, reliable, fit-for-purpose water for people and industry*
- *home to healthy flowing waterways*
- *supported by the use of renewable energy, adoption of regenerative agricultural practices and improved biodiversity*
- *strengthened by its unique Indigenous and non-indigenous cultural heritage*
- *resilient and innovative, and able to effectively adapt to future opportunities and challenges.*

Climate Change Impacts

- Water availability from rainfall and native water sources in Barossa is projected to decline.
- Water security across the last decade provides a guide to projected water security challenges projected under a mid-range 2050 climate.
- If the current planted area and viticultural practices are maintained, the average irrigation water demand is projected to increase by approximately 23% (3 GL a year) by 2050.



Climate Change Impacts

- Mid-range estimate for the 2050s irrigation shortfall for the existing planted area in the driest of years
 - Barossa 5.7 gigalitres
 - Eden Valley 2.4 gigalitres.
- Without action to address water security the reliability of water for irrigation will decrease and environmental flows will decline.



**WATER-RELATED
PILLARS**

Integrated
supply and
demand
management for
water security



Regenerative
land
management
for water security



Healthy
waterways
and water-
dependent ecosystems



A 30-year time
horizon

A shared vision
of water security

**SUPPORTING
PILLAR**

Business innovation
and diversification



Education and knowledge
management for adaptive
water management



Utilisation of
scenarios to
explore key
uncertainties

**FOUNDATIONAL
PILLAR**

Collaborative adaptive governance



Identification of
strategic actions



Integrated supply and demand management for water security

Management of water resources integrates strategies that manage demand, offer flexible use of multiple sources and ensure reliable, affordable, fit-for-purpose and climate resilient water is available for the region

- 1.1 **Increase availability of imported water to improve system reliability and support sustainable economic growth**
- 1.2 Establish an equitable region-wide distribution network that ensures critical needs can be met
- 1.3 Implement sustainable and integrated management of groundwater, surface water and imported water
- 1.4 **Optimise water storage to balance environmental impacts, water supply infrastructure costs and reliability of supply**
- 1.5 Implement on-farm demand-side management strategies
- 1.6 Undertake further research on the effectiveness of potential water security actions
- 1.7 Update the region's sustainability and climate change plans and collaborate for delivery of priority actions



Healthy waterways and water-dependent ecosystems

Water is flowing
seasonally in
creeks and the
environmental health
of ecosystems is
improved

- 3.1 Improve understanding of ecological condition and needs of local ecosystems
- 3.2 **Develop and implement a healthy waterways plan to increase flows through the system**
- 3.3 **Explore and leverage access to alternative sources of water to encourage and enable the return of flows to the environment and to support amenity and cultural values**
- 3.4 Undertake actions to improve catchment health, including managing pest plants and animals in and around waterways and fencing off watercourses

What does this all mean for the Water Allocation Plan?

- Seeking to include policy options that facilitate actions to achieve the water security vision
- Managing water resources in a changing climate – adapting to climate variability
- Regulatory document – there are constraints to what can be included
- Operating alongside other water-related projects – also aiming to address impacts of climate change
- Protections for existing users and water-dependent ecosystems

Contacts and Further Information

OFFICIAL

www.environment.sa.gov.au/topics/water/water-security/barossa-water-security-strategy

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