


# Water Adaptation

## The Barossa Valley A Practical Regional Plan



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**Andy Chambers**  
Director  
Seed Consulting Services Pty Ltd







*"There are risks and costs to a program of action. But they are far less than the long-range risks and costs of comfortable inaction"*  
**John F Kennedy**

### Water Adaptation

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#### The Barossa Valley

Lessons learnt from 25 years of local water allocation planning

The complexity of water sources – there are many!


- Groundwater
- Surfacewater
- Watercourse Water
- SA Water
- Barossa Infrastructure Limited (BIL) Water
- Recycled Water

**Creates Challenges for:**


- Integration
- Water Users
- Administration
- Flexibility

### Water Adaptation

#### The Barossa Region



#### EDA Barossa Region (Barossa, Light and Lower North)



**Water Adaptation**

The Barossa Valley

Variability  
Complexity

**Water Adaptation**

**What were the Project Objectives?**

- Consulting with the region
- Key water demand & use drivers
- Regional Water Projects – what?
- Opportunities
- A vision for Resilience and Water Security
- Connect with Key Climate Change Adaptation issues

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**What did we specifically look at?**

- Key issues raised by local stakeholders
- Water regulation – National & State
- Water Supply and Demand Issues
- A Review of the Revision 2045 plan
- Barossa Sustainability Drivers
- Consideration for a framework for local governance
- Recommendations for a stepped plan approach to water adaptation **based around the Revision 2045 document.**

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**Relationship to Recent Barossa Region Climate Change Adaptation Work**

- linking** new actions with existing programs;
- some actions provide **benefits beyond** just climate change adaptation;
- a **clear business case** to address concerns that the cost of acting is too high;
- adaptation strategies as part of a **broader plan** to build economic **resilience**;
- review policies to ensure that they **support emerging** adaptation **actions**;
- educating** professionals about new and **innovative responses** (e.g. building design); and
- community awareness raising** to address **perception issues**, such as fit for purpose water quality requirements.

**Water Adaptation**

**Water Adaptation**

**What did the region say ?**

- Consideration for **variability** rainfall, stream flows, environmental flows
- Aquifer storage and recovery (**ASR**) – how **elastic** is the aquifer system?
- Water Allocation Policy – **legislative flexibility**
- Adapting to **extreme heat** events
- **Water retention** strategies
- **opportunistic** behaviour – **maximising** storage potential
- **Local resources – thresholds – there is no more!**

**Combine various sources, technologies & strategies**

**Adelaide, South Australia**  
January 2014

13 - 42.1 °C
14 - 45.1 °C
15 - 43.7 °C
16 - 44.2 °C
17 - 42.7 °C

Source: Bureau of Meteorology, Government of Australia, 2014

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**What were some of the Plan's key recommendations?**

- More industry and community collaboration required
- Wider discussion forums for ideas "brokering and testing"
- Explore mechanisms to determine any legislative changes required to create greater flexibility for water allocation and use
- Inter basin transfers – planning to do this sustainably and effectively
- Maximising water availability through re-use
- Creating more flexible delivery arrangements

**ISSUES**



**Water Adaptation**

**The Barossa Region**

Barossa Prescribed Water Resources Area


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**What does it mean for Business?**

- Adaptation needs **resilient long term thinking**.
- Sustainable **business** principles – "thriving and surviving"
- Water is a pivotal component of **environment, economic, social and wellbeing** factors
- Water is a strong "positive feed-back" loop systems factor – **when we get water wrong negative change can happen very rapidly.**

**ADAPTATION**



**Water Adaptation**

Spectacular world examples of poor water management

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A Pathways Approach - Example

**Issue**  
Water security

**Key decision**  
How do we manage water security in the Barossa RDA Region given known impacts such as increasing user demand but declining availability such as from climate change?

**ADAPTATION**



**Water Adaptation**

A Pathways Approach

Current practice

- Consult more widely
- Build leadership capacity
- Modify legislation
- Increase stormwater recycling
- Increase wastewater recycling
- Inter basin transfers
- Aquifer storage and recovery

Now Future – increasing demand for water, greater run-off from hard surfaces, reducing average rainfall, high temperatures and rates of evaporation

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## Water Adaptation

A Pathways Approach



### Key messages

- There is **work to be done** now i.e. leadership capacity, engage more broadly.
- **Within 5 years** a decision needs to be made on new legislation, however, work must begin on this now if this is to occur.
- A major **investment decision is required within 10 years** e.g. ASR, stormwater recycling. Planning for this is required within 5 years.
- There is **no clear way forward at this stage with respect to major new investment.**

**Regional and cross sectorial collaboration is a key.**

## Water Adaptation

Resilient and Vibrant Businesses, Community and Environment



## Thank You & Questions



**Andy Chambers**  
Director  
Seed Consulting Services Pty Ltd

[www.seedcs.com.au](http://www.seedcs.com.au)  
106 Gilles St. Adelaide SA  
(08) 8232 4823