

Barossa Water Allocation Plan: Draft Objectives and Options

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Barossa WAP amendment

Needs to consider

- Changing, unpredictable climatic conditions
- Unreliable surface flows
- Groundwater levels and salinity
- Economic, environmental, cultural, social implications



Objectives to address

- Resource condition (accessibility, security, flexibility)
- Ecological condition
- First Nations interest



1 -4 Options being considered for WAP

- (1). Extraction limits & resource condition thresholds
- (2). How we could respond if reached
- (3) and (4). Possible actions to prevent

5 – 8 Other options considered

- (5): Voluntary options outside WAP
(6) – (8): Possible stronger future actions (entitlement reductions, dam reductions or removals)

DRAFT OBJECTIVE	Broad approaches under consideration
1. Ensure that surface, watercourse and underground water resources are managed within acceptable resource condition limits	• Identify maximum extraction limits for each zone • Consider resource condition measures and response options
2. Maximise security of access to prescribed water resources for current and future users within the constraints of the resource	• Existing entitlements retained • Use of variable annual allocations • Protective buffers
3. Maintain the current water-dependent ecosystems and their functionality at an acceptable level of risk	• Identify current water dependent ecosystems • Increased monitoring • Identify unacceptable ecological conditions • Consider potential responses
4. Provide for the flexible and variable use of water in response to seasonal climatic variability and availability	• Flexible policies • Variable annual allocations
5. Provide the ability to respond to declining resource condition at an appropriate scale	• Refine management zones - • Surface water - catchment based • Underground water - resource type
6. Recognise and incorporate First Nations cultural water interests	• Discussions with Kaurna, Peramangk and Ngadjuri representatives

Barossa WAP – Possible Management Options 1 – 4 for discussion

- **Option 1:** Set resource extraction limits at existing allocations & include thresholds that represent *unacceptable resource condition* (all resources)
- **Option 2:** Adaptive allocations in line with resource condition – act when resource condition thresholds are reached (all resources)
- **Option 3:** Require the provision of additional flows through the system (Surface and watercourse water)
- **Option 4:** Threshold flow rates for watercourse extractions (Watercourse water only)

Option 1: **Set resource extraction limits at existing allocations & include thresholds that represent 'unacceptable' resource condition (all)**

How it would work

Resource extraction limits set at existing allocations meaning

- Existing entitlements retained and
- No new entitlements and no net increase in dam storage

Unacceptable resource condition thresholds identified

- For groundwater based around water levels, pressure level changes or salinity
- For surface water based around flow regime
- For water dependent ecosystems based around flow regime and the condition of permanent pools

Allows for response only if thresholds reached

- Response specified in plan or
- Investigate cause & consider response.

Advantages

- Retains flexibility but allows for "safety net" if thresholds reached.
- If response detailed in the WAP provides more certainty
- If response is to review the cause & consider response at that time, provides flexibility to respond based up to date information

Disadvantages/challenges

- Difficult to identify appropriate thresholds for future conditions while resource in a state of change
- Difficult to identify appropriate response to resource decline while in a state of change

Considerations

- Could work in conjunction with other options
- Views on setting extraction limits at existing entitlements
- Views on using 'unacceptable' resource conditions as the trigger for taking any action

Related objectives:

1. Set acceptable resource condition limits
3. Protect water dependent ecosystems
6. Consider First Nations interests

Option 2: Adaptive allocations in line with resource condition – act if resource condition thresholds are reached (all)

How it could work

- Licences varied to new format with fixed entitlements with potential for variable annual allocations
- Allocations could be temporarily varied eg when a resource condition threshold is reached
- The permanent right to access water would not change
- Could initially be implemented for certain resources or just in areas of highest risk

Advantages

- Better reflects future variable availability of water
- Would retain existing entitlements while providing a 'safety net' to protect resource if needed
- Signals that there may not always be enough water to meet full allocation requirements
- If specified in Plan, provides transparency re what could happen if resource deteriorates

Disadvantages/challenges

- Many water users not using their full allocation, so may not always be effective.
- Would impact most on water users who use their full allocation (or close to it) each year.
- For surface water this option alone may not significantly increase flows through the system (blocking effect of existing dams).
- Specifying in Plan now would lock in response, however difficult to identify most appropriate response in a state of change

Considerations

- May be a good option to progress alongside other strategies within or outside of the Plan
- Would protect against extractions increasing to unsustainable levels.
- It would reflect future variable conditions, but flexibility and certainty need to be balanced

Discussion points:

- General views on this approach?
- Include specific details in this Plan or defer until better information?
- Consider separately for each resource type or areas of highest risk?

Related objectives:

1. Set acceptable resource condition limits
2. Minimise impact on security of access
3. Protect water dependent ecosystems
4. Allow for flexible and variable use
5. Manage at an appropriate scale
6. Consider First Nations interests

Option 3: Provision of additional flows through the system (Surface & watercourse water)

How it could work

Additional flows could be provided by

- release or diversion of flows around or from dams and watercourse diversions
- targeted environmental flow releases

Advantages

- Potential for significant improvement in flows through the system, particularly low flows
- Helps address the key risk facing surface water resources and ecosystems.
- Would lessen the impacts of blocking structures through the system
- Could start with the highest impact locations first.

Disadvantages/challenges

- Potential security of supply implications
- Infrastructure often logistically complex and expensive.
- Complex planning and coordination
- Difficulty setting specific low flow thresholds in a state of change
- Constraints to what the Plan can require

Considerations

- Modelling indicates would have the most significant positive impact on flow conditions.
- Initially general principles could be considered encouraging voluntary actions.
- Could be further enhanced via complementary programs outside of the Plan

Discussion points:

- General views on this option?
- Include in this Plan or consider later when better information?

If include:

- Voluntary or investigate feasibility of mandating?
- Specific threshold flow requirements or general requirement?
- All sources or targeted to those with the biggest impact?

Related objectives:

1. Set acceptable resource condition limits
2. Minimise impact on security of access
3. Protect water dependent ecosystems
6. Consider First Nations interests

Option 4: Threshold flow rates for watercourse extractions (Watercourse water only)

How it could work

Specified flows could remain in watercourses by requiring that volumes can only be extracted from watercourses when flows reach a certain threshold.

Advantages

- Would have direct benefits to the volume and timing of flows in watercourses.
- Would address the impacts of large blocking structures on some watercourses.
- Logistically simpler, cheaper than flows past dams.
- Has been implemented successfully in other areas

Disadvantages/challenges

- Could be seen as inequitable if the same requirement is not introduced for dams.
- Potential security of supply implications
- Benefits potentially limited if dams not also included
- Difficulty setting specific threshold in a state of change

Considerations

- Modelling indicates would have positive benefits for flows through watercourses.
- Could be a first step towards broader future requirements
- Could initially consider general principles without specific threshold flow rates.

Discussion points:

General views on the option of considering watercourse separately from dams?

If supported

- Included in this Plan or consider later when better information?
- Voluntary or mandated?
- Specific threshold flow requirements or general requirement?
- All sources or targeted to those with the biggest impact?

Related objectives:

1. Set acceptable resource condition limits
2. Minimise impact on security of access
3. Protect water dependent ecosystems
6. Consider First Nations interests



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