

Managing the confined aquifer

Lower Limestone Coast Water Allocation Plan | November 2013 | Factsheet 7

The groundwater resources of the Lower Limestone Coast are unique and precious, and underpin the region's people, townships, industries and environment.

The Minister for Sustainability, Environment and Conservation adopted the Lower Limestone Coast Water Allocation Plan (the WAP) to ensure the long term sustainability of the region's water resources, bring certainty for water users, and protect water resources into the future.

Developing the WAP has involved significant research and stakeholder consultation, resulting in what is believed to be a world-first approach to sustainable water resources management in that it now includes commercial forests as a licensed water user.

This fact sheet outlines key aspects of the WAP that apply to users of water from the confined aquifer.

CHANGES TO HOW WATER IS ALLOCATED

Under the WAP, allocations from the confined aquifer (and the unconfined aquifer) will be converted into volumes rather than area-based allocations.

In recognition that much of the water in the confined aquifer is over 25,000 years old and has minimal modern day recharge, new water allocations from the confined aquifer will be limited to the following uses:

- public water supply;
- bridging volumes (temporary allocation);
- geothermal energy generation (temporary allocation);
- co-produced water from petroleum and carbon dioxide production (temporary allocation); and
- mining (temporary allocation).

Other new enterprises or expansion of existing enterprises that seek water from the confined aquifer will need to obtain it via transfer of an existing allocation, under the rules of trade and transfer set out in the WAP.

PROTECTING VULNERABLE WATER RESOURCES

In the WAP, the term Target Management Level (TML) is used to define the sustainable level of extraction in each management area.

In all management areas except Kingston, the TML is set at the Permissible Annual Volume (PAV) as set out in the previous (2001) WAP. These PAV values were determined using a numerical flow model and consultation with licensees on the acceptable level of regional drawdown in pressure levels in the confined aquifer over time.

Under the WAP, Kingston's TML will be set at the current level of allocation (40,089 ML). If extraction exceeds 25,000 ML/year and the level of risk increases significantly, it is proposed that allocations be reduced to 25,000 ML/year, with 1/4 of the required reduction occurring in the next water use year, followed by 1/4 of the required reduction every two years after that. Past extraction data indicates that this magnitude of increase is unlikely to occur.

Bridging volumes, which are temporary water allocations available to some irrigators who need time to improve their irrigation practices, will not be available in the Kingston management area (confined aquifer).

A risk assessment to determine the level of risk to the confined aquifer groundwater and its users from current levels of demand and allocation, indicated that no management areas were at a high or very high level of risk. Further details on the risk assessment for the confined aquifer are included in section 4.5 of the WAP.



SURRENDER OF ALLOCATION

A confined aquifer licensee may surrender their confined aquifer allocation and be allocated the same volume from an unconfined aquifer management area where there is an equivalent volume of unallocated water available.

This “re-allocation” is subject to a hydrogeological assessment within the unconfined aquifer management area in question, and requirements for the protection of water-dependent ecosystems.

TRADE AND TRANSFER

As is the case for the unconfined aquifer, transfers of allocations from the confined aquifer are subject to hydrogeological assessment in most circumstances.

However, the WAP provides for transfers without hydrogeological assessment in some circumstances, as described below.

Should the Kingston management area be required to undergo reductions in allocations in the future, the WAP allows for licensees to apply to transfer a volume up to 75% of the volume of their reduction from anywhere in the management area, with no form of hydrogeological assessment. Additional volumes, in excess of 75% of the volume of the reduction, can also be transferred, but these transfers are subject to assessment.

Confined aquifer licensees are eligible for seasonal carry-over of unused allocations of up to 25% of their annual allocation. In addition, licensees can apply for temporary transfers to manage seasonal variability of up to 20% of their annual allocation, without hydrogeological assessment. The sum of any carry-over and temporary transfers cannot exceed 40% of the licensee’s allocation.

Some elements of the WAP relating to transfer of allocations apply specifically to allocations from the confined aquifer as follows:

- allocations may not be transferred between confined aquifer management areas, only within;
- allocations for public water supply, industry, geothermal energy generation, mining, petroleum or carbon dioxide production may only be transferred for the same purpose of use.

WHAT’S CHANGED AS A RESULT OF COMMUNITY CONSULTATION?

The transfer rules for delivery supplements from the confined aquifer have been made consistent with the

unconfined aquifer. As a result, delivery supplements can now be transferred to a different allotment, as long as they continue to be used for the same purpose.

HYDROGEOLOGICAL ASSESSMENT

Some policies in the WAP require new allocations or transfers to be the subject of a hydrogeological assessment.

For the confined aquifer, the assessment will seek to confirm that the allocation of water shall not cause or have the potential to cause an increase in groundwater salinity or have a detrimental impact on the structural integrity of the aquifer, as well as not resulting in excessive seasonal variations or long term declines in water levels (measured as potentiometric level, that is, the level to which water rises in a confined aquifer well due to water pressure in the aquifer).

WHAT IF I NEED MORE INFORMATION ON THE WATER ALLOCATION PLAN?

If you have questions about the WAP and how it will operate, you will find further information on our website: www.senrm.sa.gov.au

If you are a licensee, you will also shortly receive further information including application forms from our licensing staff.

Assistance is also available from Natural Resources South East. Contact **08 8735 1177**.

FURTHER READING

Guide to the WAP

- Factsheet 1 - Sustaining our region through water allocation planning
- Factsheet 2 - Changes to how water is allocated
- Factsheet 3 - Forest water use
- Factsheet 4 - Protecting vulnerable water resources
- Factsheet 5 - Water trade and transfer
- Factsheet 6 - Protecting groundwater dependent ecosystems
- Factsheet 7 - Managing the confined aquifer
- Factsheet 8 - Managing water in the Border Zone
- Factsheet 9 - Farm forestry

