



Lachlan Valley Water Inc
Sustainable, productive and efficient water use in the Lachlan Valley

**Submission to
Department of Planning and Environment
Draft NSW Groundwater Strategy**

August 2022



SUBMISSION ON THE DRAFT NSW GROUNDWATER STRATEGY

Executive Summary

The draft Strategy is a very high-level document. LVW recommends there should be regional plans below it which incorporate the comprehensive groundwater management that is already in place across the groundwater regions. We also submit that the Strategy would be more informative if it included up-to-date groundwater usage data, including the 2021/22 figures, to provide a more accurate representation of how groundwater usage changes depending on climate conditions and surface water availability.

In relation to the protection of groundwater dependent ecosystems (GDE) it is essential to accurately verify the level of reliance of these ecosystems on groundwater, particularly in relation to deeper aquifers, and to identify whether groundwater extraction poses any risk to GDEs which is not already being managed by the existing WSP rules. Additionally, the Strategy should recognise that while the climate risk is based on a very dry future climate scenario, this may not materialise, and that the management strategy should be guided by actual climate data.

Groundwater management processes to handle compliance with long-term average annual extraction limits have already been implemented through Water Sharing Plans, and there has been good engagement between the Department and licence holders in developing these processes. In addition, we note that while some groundwater sources are 'over-allocated', the actual yearly use can vary significantly, the average annual use in most of these sources remains below the extraction limit, and there are rules already in place in the WSPs to manage compliance with extraction limits.

The draft Strategy also notes that demand for groundwater by towns is forecast to increase by close to 300% over the next 20 years. The Strategy should be more explicit about regionally where this town water supply demand increase will occur, and to what extent, and express it as a proportion of the total groundwater availability in that source.

The draft Strategy recommends investigating the feasibility of managed aquifer recharge as a strategy, and that the technical, economic and environmental limitations must be considered. Managed aquifer recharge is an expensive process so LVW concurs this investigation needs to fully understand the aquifer system, and also factor in the demand for water and the ability of licence holders to pay for it.

1. Introduction

Lachlan Valley Water (LVW) welcomes the opportunity to make a submission on the draft NSW Groundwater Strategy. Lachlan Valley Water is an industry organisation representing surface water and groundwater licence holders in the Lachlan and Belubula valleys. Membership of LVW is voluntary and our members represent all categories of licences except for those held by environmental water managers. While this submission is made on behalf of our members, individual members may also make their own submissions.

2. Overview

As this is a very high-level strategy, LVW recommends there should be regional plans below it which incorporate the comprehensive groundwater management that is already in place, particularly in groundwater zones where there has been a high level of usage. The regional plans need to recognise that the water level management process must have flexibility appropriate to the different regions, in terms of the type of groundwater system, the actual usage and forecast increase in usage.

We recommend that greater face-to-face engagement with the community, and particularly with regional communities, would assist with input on this draft Strategy.

Additionally, given that the draft Strategy was only published in July 2022, we question why the usage data included in the report only goes up to 2019/20? We believe an essential component of the Strategy is to provide the most current information on usage, which is readily available from the Department's website¹, and which shows usage declining in 2020/21 and 2021/22, as conditions became wetter and surface water availability increased.

3. Strategic Priorities

Priority 1 – Protect groundwater resources and the ecosystems that depend on them

The overall approach with Regional Water Strategies has been to use one of the driest future climate scenarios for assessing climate risk. However, it should also be recognised that this worst possible scenario may not occur, and therefore the management strategy should acknowledge this and should also be guided by actual climate data as it occurs rather than worst possible forecast data. In relation to Figure 9 and the possible change in future average annual recharge, LVW considers it is essential that further review of the preliminary modelled results is required to more accurately understand the likely change in recharge.

Action 1.3 Improve management and protection of groundwater dependent ecosystems

A critical factor to Action 1.3 is that the Department should undertake a verification process to understand the actual level of dependence of these ecosystems on groundwater. In Figure 12, many of the areas where there is "high probability to find high priority groundwater dependent ecosystems" are along existing rivers and creeks, especially in the southern half of NSW, so it is anticipated these ecosystems will also have significant dependence on surface water. Consequently the extent of dependence of ecosystems on groundwater and the depth of the aquifer formations are important factors in assessing the potential impacts of groundwater usage on ecosystems, particularly in regard to deeper aquifers.

¹ <https://www.industry.nsw.gov.au/water/allocations-availability/tracking-groundwater>

In relation to Action 1.3.1, the methodology to identify GDE's should explain how the level of dependence on groundwater and the aquifer formations on which the GDEs may be dependent will be identified. LVW is concerned that this is a significant knowledge gap, and agrees that Action 1.3.2 is essential to determine the degree of reliance of ecosystems on groundwater and to identify whether groundwater extraction poses any risk to a GDE which is not managed by the existing WSP rules.

Additionally, it should be recognised that existing Water Sharing Plans already contain rules requiring that a specified distance is maintained between water supply works and groundwater dependent ecosystems, groundwater dependent culturally significant areas and contamination sources.

Action 1.4 Review and update approaches to sustainable groundwater extraction

The Strategy should acknowledge that groundwater management processes to handle compliance with long-term average annual extraction limits have already been implemented through Water Sharing Plans, and that this management has been undertaken by the Department through engagement with licence holders and is generally well accepted. These management processes require flexibility appropriate to the different regions in terms of the type of groundwater system and the actual and forecast usage.

In relation to Action 1.4.2 regarding managing impacts of extraction at a local level, we note that the assessment of applications for new bores is also more detailed and rigorous now than it was prior to the development of Water Sharing Plans, and the conditions applied on new bores are more stringent in relation to the bores being drilled consistent with bore quality standards, and that there are requirements for grout seals etc.

The draft Strategy states that there are 24 groundwater sources where the number of shares for issued licences is significantly higher than the groundwater extraction limit. This is a result of previous policy implementation. We also note that average annual use in most of these sources remains below the extraction limit. For example, in the Upper Lachlan and Orange Basalt the actual extraction has not reached the compliance trigger, even during the severe drought conditions in 2018/19 and 2019/20. In the Upper Lachlan the average usage since the WSP commenced in 2012/13 has been 61% of the extraction limit. There are already rules in place to manage compliance with the extraction limits and these have been well communicated to licence holders.

In addition, the Department has already undertaken consultation with licence holders in localities where drawdown in some monitoring bores exceeds 30% of total available drawdown, in order to flag the future risk and potential restrictions on access if drawdown continues to increase. Therefore, in relation to Action 1.4.3, the Strategy should not simply assume that groundwater usage in sources where the issued shares exceed the extraction limit will continue to increase, and LVW recommends that there must be a better understanding of what degree of risk there is that extraction will actually exceed the extraction limit.

The Strategy should also recognise that groundwater usage in the different regions can vary significantly from year to year depending on surface water availability, because in some regions a proportion of licence holders will hold both groundwater and surface water licences, so there will effectively be conjunctive usage. The management strategies should be designed to accommodate this.

Action 1.5 Protect groundwater quality within natural limits.

LVW supports this requirement. We note that there are already requirements in WSPs to prevent water supply works approvals being granted if the work is close to contamination sources.

Priority 2 – Build community and industry resilience through sustainable groundwater use

Action 2.1 Support towns and cities using groundwater to improve urban water planning

LVW supports this requirement. While exploring innovative licensing options for groundwater-based drought resilience, these processes must also recognise the existing long-term average annual extraction limits and avoid breaching them.

The draft Strategy also notes on p 38 that general demand for groundwater by towns is forecast to increase by close to 300% over the next 20 years. It is vital that towns have secure water supply, but the Strategy should be more explicit about the locations where this town water supply demand increase will occur, and to what extent. It should also identify the volume that this forecast increase represents in each groundwater source and express it as a proportion of the total groundwater availability in that source.

Action 2.2 Support economic growth using groundwater

The draft Strategy recommends investigating the feasibility of managed aquifer recharge as a strategy. LVW agrees that the issues raised in Box 8 regarding the technical, economic and environmental limitations must be considered. Managed aquifer recharge is an expensive process so the investigation will need to understand the aquifer system very well, and also factor in the demand for water and the ability of licence holders to pay for it before going down this track. It will be necessary to fully investigate the aquifer and identify the quality of the water injected, and to be able to ensure that if groundwater is injected into the aquifer it can be pumped out.

Priority 3 – Improve groundwater management decisions with better information

LVW supports actions to better share and integrate groundwater information, although we also note that there have been improvements in this over the last 2 years with tools like the *Tracking groundwater extraction against groundwater limits* on the Department's website. LVW also supports Action 3.3 to improve the understanding of groundwater resources, and upgrading models as required. We consider these actions will have community-wide benefit for towns, licence holders, Aboriginal communities, environment and industry.

Please feel free to contact me for further information on any of the issues in this submission.

Yours faithfully

