

SUBMISSION

Draft NSW Groundwater Strategy

August 2022



NSW Irrigators' Council

The NSW Irrigators' Council (NSWIC) is the peak body representing irrigation farmers and irrigation farming communities in NSW. NSWIC has member organisations in every inland valley of NSW, and several coastal valleys. Through our members, NSWIC represent the holders of over 32,000 water access licences in NSW, across regulated, unregulated and groundwater systems.

NSWIC members include valley water user associations, food and fibre groups, irrigation corporations and commodity groups from the rice, cotton and horticultural industries. As an apolitical entity, the Council provides advice to all stakeholders and decision makers.

NSWIC is a leader in sustainable and productive water policy solutions, and advocates for and advises on best-practice water management. Our vision is for the secure, sustainable and productive management of water resources in NSW.

NSWIC welcomes this opportunity to provide a submission to the draft NSW Groundwater Strategy. Each member reserves the right to independent policy on issues that directly relate to their areas of operation, expertise or any other issues that they deem relevant.

Irrigation Farming

Irrigation provides more than 90% of Australia's fruit, nuts and grapes; more than 76% of vegetables; 100% of rice and more than 50% of dairy and sugar (2018-19).

Irrigation farmers in Australia are recognised as world leaders in water efficiency. For example, according to the Australian Government Department of Agriculture, Water and the Environment:

“Australian cotton growers are now recognised as the most water-use efficient in the world and three times more efficient than the global average”¹

“The Australian rice industry leads the world in water use efficiency. From paddock to plate, Australian grown rice uses 50% less water than the global average.”²

Our water management legislation prioritises all other users before agriculture (critical human needs, stock and domestic, and the environment with water to keep rivers flowing), meaning our industry only has water access when all other needs are satisfied. Our industry supports and respects this order of prioritisation. Many common crops we produce are annual/seasonal crops that can be grown in wet years, and not grown in dry periods, in tune with Australia's variable climate.

Irrigation farming in Australia is also subject to strict regulations to ensure sustainable and responsible water use. This includes all extractions being capped at a sustainable level, a hierarchy of water access priorities, and strict measurement requirements.

¹ <https://www.agriculture.gov.au/ag-farm-food/crops/cotton>

² <https://www.agriculture.gov.au/ag-farm-food/crops/rice>



Executive Summary

The NSW irrigation industry has serious concerns about the draft NSW Groundwater Strategy.

Current groundwater management is already equipped to deal with many of the issues raised in the strategy and a significant amount of the work suggested has already occurred, but the strategy recognises neither. This has left many stakeholders questioning the purpose of the Strategy in its current form.

NSWIC is concerned that the document reads like a desktop study or academic document, detached from the practical on-ground issues and opportunities. In particular, NSWIC has heard from many irrigation stakeholders that they were not engaged (until now) in the development of the document. They see missed opportunity for the strategy to reflect the issues and opportunities from the perspective of water users, from a ground-up approach.

Whilst NSWIC appreciates the document is intended to be a high-level strategic document, it is too high-level to be meaningful. It has little detail on what specific action items would entail in practice, nor does it clearly establish a case for change. The lack of specific detail makes it difficult for stakeholders to provide meaningful feedback to DPE.

NSWIC is concerned that the Strategy focuses on many issues and challenges, while not paying sufficient attention to the many positive developments for groundwater management in recent times. NSWIC is concerned that this perpetuates the negative populist rhetoric about NSW water management, particularly in the absence of any detailed explanation in the strategy of current groundwater management systems and processes. In particular, the emotive and sensationalist tone is not appropriate, and this should be replaced by objective, factual and evidence-based language. The story-telling approach, with significant focus on historical events, also establishes a narrative that no longer reflects current circumstances. A forward-looking strategy should focus on current and future circumstances.

NSWIC sees missed opportunity for the strategy to inform people (in detail) on the current management of groundwater in NSW, share the recent developments and positive achievements in groundwater management, provide data on groundwater use and patterns, establish an evidence-base for emerging issues to establish a case for change (if required), and provide specific practical ways forward on outstanding challenges that are not otherwise already addressed under current arrangements.

Given the importance of getting this right, the strategy requires significant change.



Submission

Strategy should begin with a description of what has been achieved in groundwater management in recent times to address issues, not just what the issues are

- Significant changes have occurred in water management in NSW in recent times, and this should be acknowledged at the beginning of the Strategy.
- Examples include significant water recovery under the Basin Plan, the setting of SDLs, new metering reforms, and the creation of a new, independent regulator of water compliance (NRAR), just to name a few.
- There is a risk of people reading the strategy, without knowledge of the above, having concerns about NSW water management approaches if the focus is only on the issues. This diminishes publicly confidence unnecessarily.
- DPE has a key role in rebuilding confidence, by sharing the many positive reforms in NSW water management in recent years. It is important to raise legitimate issues, but it must be in the context of current management arrangements and recent changes.

Strategy should include an improved focus on current groundwater management

Information on current groundwater management

- NSWIC is concerned that the strategy **does not adequately explain current groundwater management**.
- The section on groundwater management does not provide sufficient detail on operational aspects, such as: Available Water Determinations (AWDs) and how they are made; Water Sharing Plans (WSPs) including key rules; extraction limits (such as SDLs in the Basin), how take is managed to those limits, how compliance is monitored and enforced; measurement requirements; as well as the hierarchy of use, and the policy levers (existing and available) to ensure those priorities are prioritised.
- The strategy **focuses too much on historical arrangements**, which are now redundant, while current arrangements are inadequately detailed.
- This section is one of the most critical sections of the strategy and should serve as a guide for those less familiar with current arrangements.
- The section on current groundwater management **should be at the forefront**, rather than page 30. It is problematic looking into the 'issues' before explaining current systems.
- A groundwater strategy does not necessarily need to be only about changes in management; in fact, explaining how groundwater is already managed is a key part.
- It is critical that stakeholders have knowledge of existing management arrangements in order to make informed decisions on any proposed future changes.
- The risk of omitting this detailed and operational information is people not understanding the status quo, unnecessarily eroding confidence, and basing action items on a misinformed understanding.

Current management framework already equipped to be responsive to issues raises

- NSWIC is of the view that current groundwater management is already equipped to deal with many of the issues raised, but this is not acknowledged in the Strategy.
- NSWIC is of the view that better detailing current management arrangements will demonstrate the State is already equipped to deal with many of the issues raised.



- Where DPE believes there to be gaps/problems with the current management arrangements, these should be specifically highlighted.
- A case for change needs to be demonstrated, rather than making high-level, generalised statements detached from current approaches.

Statements regarding groundwater management not being adaptive are incorrect

- The Strategy makes several statements such as *'our policy framework for sustainable groundwater management is not adaptive enough'*. NSWIC disagrees with this proposition and asks DPE to justify this statement in the context of current management arrangements.
- The NSW policy framework is highly adaptive, mostly through the use of AWDs. The framework enables allocations and water use to be continually varied and adjusted based on a number of factors, including water availability.
- This system enables the framework to also be highly adaptive to climate change, given AWDs can and do vary usage based on water availability in real time, and thus water availability over time reflects, for example, warming, drying trends.
- The impacts of climate change will impact water licence reliability. Through explanation of how groundwater is currently managed, readers will be able to identify the way the current water management arrangements already respond to climate variability and climate change, how that will impact water users (such as reliability), and management actions can be informed by that context.
- Sweeping statements should be avoided, particularly where they are inaccurate or misleading. For example: *'refresh and expand our approach to sustainable groundwater management'*.

Reviewing extraction limits is a major issue

- The actions relating to *'review and update approaches to sustainable groundwater extraction'* including *'new knowledge is now available to update our groundwater source extraction limits'* has caused significant concern in the irrigation sector.
- NSWIC is of the position that the flexibility of current arrangements to manage take enables many of these issues to be addressed. The strategy should recognise that management strategies are already in place to handle compliance with extraction limits. This management has been developed by engaging with licence holders and is well accepted.³
- NSWIC is concerned that little evidence is presented to demonstrate why change to the extraction limits themselves is required, given current management arrangements.
- NSWIC notes significant recent, and ongoing, reforms to change extraction limits (such as, but not only, the Basin Plan SDLs). We do not see a case for further change given these relatively recent reforms (i.e. SDLs only coming into effect in 2019, subsequent to various earlier extraction limits).
- Reviewing extraction limits is a sensitive issue and raises uncertainty and anxiety for the communities already affected by water reforms. This should only be put on the table based on evidence supporting a case for change beyond what current settings can manage.

³ The assessment of applications for new bores is also more detailed and rigorous than 20 years ago, and the conditions applied on new bores in terms of grout seals, that the bores must be drilled consistent with required standards etc, are also more stringent.



For groundwater sources in the Murray-Darling Basin, the strategy needs to align with the Murray-Darling Basin Plan

- NSWIC is concerned that the strategy does not accurately consider the Murray-Darling Basin Plan.
 - For example, the Basin Plan is omitted from Figure 8 ‘NSW groundwater management framework’, when it really should be included as the critical overarching framework for Basin water resources.
- The linkages to Basin Plan reforms and processes must be better demonstrated.
 - For example, the actions relating to ‘*review and update approaches to sustainable groundwater extraction*’ including ‘*new knowledge is now available to update our groundwater source extraction limits*’ seems inconsistent with the agreed multi-jurisdictional processes for determining SDLs under the Basin Plan, and the 2026 Basin Plan Review.
 - NSWIC would be highly concerned if DPE is seeking to go around those processes, given the importance of multi-jurisdictional co-operation under the Plan.
 - NSWIC is also of the understanding that for Basin resources, the Commonwealth government sets the SDLs. We question whether the NSW Government has the powers to implement some of the suggested actions.
 - While DPE staff informed NSWIC staff at the consultation webinar that this was not the intent, and the strategy was seeking to provide better information to inform the 2026 review, this is not stated in the strategy. Clarification is required to show alignment.
- The focus should be on ensuring NSW compliance with SDLs.
 - DPE has constructively engaged with the irrigation industry in recent years on methods to manage take to comply with extraction limits (i.e. using AWDs vs account limits etc), and notes that that work is ongoing (NSWIC would like to hear more about the progress of this). This work receives little mention in the strategy. NSWIC seeks clarification on whether this DPE team was involved, or had input, to reflect that work program in the strategy.
 - NSWIC members in the Murrumbidgee have raised concerns that current State-based rules in that valley allow for more than 102% of sustainable extraction where the Basin Plan needs a 10-year average of no more than 100%. This should be a priority, as the irrigation sector takes compliance with extraction limits as a matter of top importance.

Care must be taken regarding statements on compliance with extraction limits

- The strategy contains statements which (incorrectly) correlate the number of entitlements on issue with compliance with extraction limits. While this may not be the intended message, it is hard to interpret it any other way at face value.
- For example, the strategy states:
 - “*We can see that the total groundwater access rights (the entitlements of both BLRs and access licences) currently exceeds the combined extraction limits in the inland alluvial groundwater systems.*”
 - “*There are 24 groundwater sources where the number of shares for issued licences is significantly higher than the extraction limit*”
- This implies widespread non-compliance with extraction limits.
- However, the number of entitlements on issue is generally no indication of compliance with extraction limits. In fact, it only poses a problem to extraction limit compliance in the scenario of 100% AWDs, 100% of the time, and with Annual Actual Take (AAT)



equalling Annual Permitted Take (APT), a highly unrealistic scenario. The use of AWDs to manage take enables compliance with extraction limits.

- The way the strategy presents this issue – such as “*currently exceeds the combined extraction limits in the inland alluvial groundwater systems*” – would cause the lay reader to believe there is an issue with exceeding extraction limits. This causes unnecessary public alarm and concern, further eroding confidence in water management.
- Due to the mechanisms in place, the impacts of this issue are reliability risks to entitlement holders, rather than exceeding extraction limits. This is still an issue for those systems and does require raising in that context, however, that is a very separate issue to the way it has been portrayed in the strategy.

Strategy is too broad and does not provide sufficient detail on what is proposed; a region-specific focus is also needed

- While NSWIC acknowledges that the document is a state-wide strategic document, NSWIC is concerned it is too high level to be purposeful.
- For example, ‘*refresh and expand our approach to sustainable groundwater management*’ does not actually contain details of what a ‘refreshed and expanded’ approach means in practice, or what is intended.
- To address this, perhaps regional plans below this Strategy are needed, to acknowledge that the water management process must have flexibility appropriate to the different regions, in terms of the type of groundwater system, the actual usage and forecast increases. To avoid creating even more strategic documents, perhaps the Regional Water Strategies should provide coverage of both surface and groundwater (which NSWIC understands is the case).
- NSWIC and our members have found it challenging to provide feedback on the strategy in the absence of any specific proposals or detailed information.

The role of changing social expectations needs to be re-considered

- NSWIC notes the emphasis in the strategy regarding ‘*review definition of sustainability with changing social expectations*’.
- NSWIC is concerned that an emphasis on social expectations is moving towards political or populist decision making, rather than evidence-based and scientific decision-making based on data.
- NSWIC is concerned that social perspectives on water management are generally shaped by misinformed or inaccurate media reporting and reflect poor water literacy. DPE must exercise caution that social expectations are well-informed. DPE should prioritise educating the public on how the resource is managed in those instances where social expectations may be the product of misinformed and misunderstood perspectives.
- Evidence-based policy, shaped by scientific and policy technical expertise, is critical.

Tone of the strategy should be factual and objective, not emotive or sensationalised

- NSWIC is concerned that the strategy tone is emotive and sensationalised, and recommends the tone be changed to be factual and objective, focused on key facts, and details of the specific actions which are being considered.



- For example, a number of highly generalised sweeping statements such as ‘*our policy framework for sustainable groundwater management is not adaptive enough*’, sounds alarming, but lacks specific details of what this means or what is the problem in practice.
- NSWIC is also concerned that the strategy perpetuates a false dichotomy between water users and others, such as the environment. The strategy should be upfront that water users also value compliance with extraction limits, a robust and fit-for-purpose groundwater management framework, and sustainable management particularly in the context of climate change. While changing social expectations/values of the broader public is highlighted, there is no mention of the industry values and positions, such as the priority of water use (which is a core principle of NSWIC and its members).

Further work required on GDEs

- More detailed work is required on GDEs, including to understand the level of dependence.
- A critical factor to Action 1.3 is that DPE needs to 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 GDE’s*” are along existing rivers/creeks, especially in the southern half of NSW, so it is anticipated these ecosystems will also have significant dependence on surface water.

Strategy should include additional factual information to assist people understanding groundwater management and use

- The data in the Strategy is presently only up to 2019/20, however, more recent data is available which should also be included.⁴
- There is opportunity for the Strategy to show changing demand for groundwater based on climatic variability, such as by showing groundwater usage during the drought.

Lack of industry engagement

- NSWIC has heard significant feedback from the industry that there was no engagement on the development of the Strategy, until now, which has resulted in it not reflecting the major concerns and opportunities from the industries perspective.
- NSWIC recommend that DPE engage with water users at a water-source scale to better understand the issues / challenges / opportunities from their perspective, to scale it up to the state-wide strategy level.
- NSWIC is concerned by the approach of a desktop study, which comes across as an academic-exercise, detached from the on-ground practical realities for water users.
- For example, under Action 1.4 (review and update approaches to sustainable groundwater extraction), it says:
 - “*The NSW Government has already begun researching and assessing different methods to inform the definition of groundwater source extraction limits in NSW. This work is based on a review of the historical context for defining sustainable groundwater source extraction limits as well as a comparative analysis of international best-practice cases.*”
- This misses opportunity to be informed by the people to which this work actually affects. Further, Australian water management is often considered as global best-

⁴ <https://www.industry.nsw.gov.au/water/allocations-availability/tracking-groundwater>



practice, and data and experiences from on-the-ground should inform this work. Care must also be taken that Australian water sources (and demands) are unique.

Other

- NSWIC seeks clarification of whether there is a changing risk-approach / risk-appetite, such as because of climate change. If this is the case, it should be raised in the strategy, including how it would be factored in, what it practically would involve, what it would mean for water users, etc.
- Care needs to be taken to prevent misinterpretation or misunderstandings being derived from the strategy. The social and political context must be considered. While this is in no way intended to prevent issues being presented, they need to be in context, and avoid eroding confidence unjustifiably.
- Further work is required to better understand groundwater and surface water connectivity in certain locations.
- Coastal regions need to be considered as unique from the inland regions.
- Further work is required on Managed Aquifer Recharge – this is an expensive process so DPE needs to understand the demand for water and the ability to pay for it before going down this track. DPE also needs to understand the aquifer sufficiently to be able to ensure that if groundwater is injected into the aquifer it can be pumped out, and DPE needs to know the quality of the water injected. This work also needs to be region-specific to take account of different systems.

Conclusion

Thank you for the opportunity to provide this submission. NSWIC staff, or representatives of our member organisations, are available to discuss these issues and recommendations further upon request.

Kind regards,

NSW Irrigators' Council.