



# Draft NSW Groundwater Strategy

NSW Minerals Council Submission – August 2022

## Introduction

The NSW Minerals Council (NSWMC) welcomes the Government’s commitment to improving the management of groundwater resources in NSW through the Draft NSW Groundwater Strategy (Draft Strategy).

NSWMC represents the state’s \$26 billion minerals industry and has approximately 80 members including mining companies, mineral exploration companies and associated service providers.

### The mining industry is a major economic driver in regional NSW

Minerals are NSW’s highest value export and the mining industry underpins regional economies across the state. The recent strength in commodity prices will deliver record royalty revenue to the NSW Government, estimated to be \$3.6 billion last financial year and a further \$11 billion out to 2025-26.

The latest results from NSWMC’s annual economic survey demonstrate the economic significance of the mining industry in regional NSW. During 2020-21, the 28 companies surveyed directly spent \$14.6 billion on wages and payments to more than 30,000 full-time equivalent workers and 7,300 supplier business across the state.

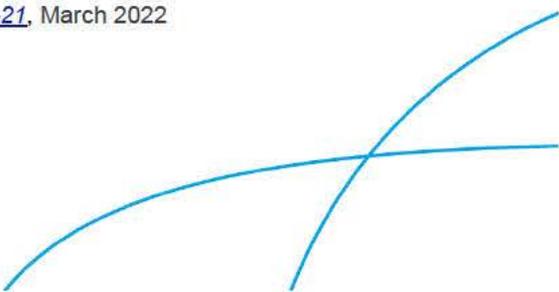
This direct expenditure generates a large proportion of overall regional economic activity in NSW, with selected regions highlighted in the table below.

Mining’s contribution to Gross Regional Product<sup>1</sup>

Region	Mining’s contribution to Gross Regional Product (GRP)
Hunter	28.9%
Central West	19.2%
Far West	42.9%
Illawarra	7.3%
North Western	12.5%

An effective framework for the management of groundwater is crucial to support this economic contribution.

<sup>1</sup> Lawrence Consulting, *NSW Mining Industry Expenditure Impact Survey 2020-21*, March 2022



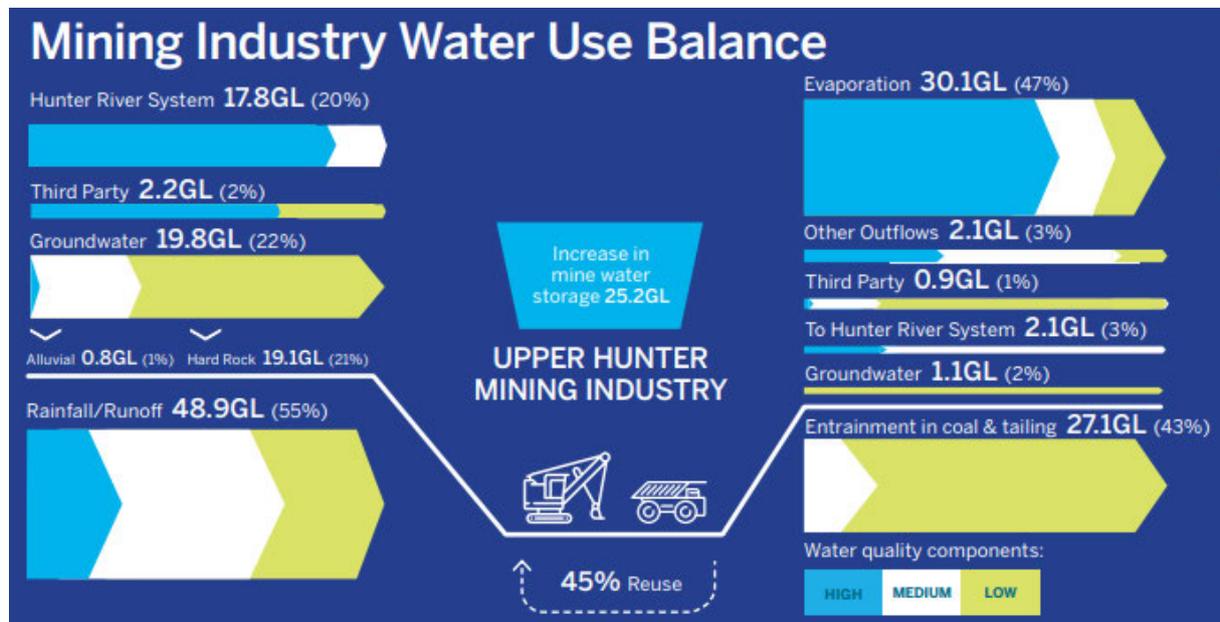
## Mining typically uses lower yielding, poorer quality groundwater

The majority of groundwater taken by mines is due to the excavation of material in the process of mining, known as incidental take. The depressurisation of surrounding aquifers caused by mining leads to groundwater inflows into the resulting voids and the movement of water in connected water sources.

The majority of this incidental take comes from fractured and porous rock aquifers that generally have lower yields and lower quality water and are unsuitable for other uses such as town water supply and irrigation, but can be used for operational mining purposes such as dust suppression.

Smaller volumes of groundwater are directly extracted from productive borefields to supplement water supplies from onsite rainfall and runoff, recycled water, licensed take from surface water resources and incidental take. Mines preferentially use lower quality water, recycled water and water collected on site to reduce demand on freshwater resources.

The infographic below provides a consolidated snapshot of the water supply inputs and outputs for mining operations in the Upper Hunter Valley during 2020, which shows the vast majority of groundwater taken by mines comes from low-medium quality water from the hardrock aquifers, with a small proportion (less than 5% of overall groundwater take) from the alluvial aquifers.



The interaction of mining with groundwater resources is a key consideration in the assessment of mining development applications at both the State and Commonwealth levels. Mines are required to be licensed for their take of groundwater, whether it is direct or incidental take, just like other water users.

## Comments on the Draft Strategy

NSWMC has engaged with the water agencies over an extended period to highlight issues in the policy and regulatory framework for groundwater in NSW and to suggest improvements.

It is pleasing to see that many of the issues that the industry has discussed with the water agencies have been captured in the Draft Strategy.

Overall, NSWMC is supportive of the set of actions outlined in the Draft Strategy and looks forward to working constructively with the Department of Planning and Environment's Water Group (DPE Water) as the actions are implemented.

NSWMC's comments and recommendations on selected actions of specific relevance to our members are outlined below.

### Action 1.2 – Better integrate groundwater management with other land and water management processes

This section of the Draft Strategy states:

*"While the current regulatory framework is largely proving effective, policy and coordination gaps remain and more targeted action will help to reduce the impacts of large infrastructure projects and industrial activities on aquifers."*

The specific measures listed in Action 1.2.3 include:

- refresh the Aquifer Interference Policy, including the endorsement of a regulatory framework
- develop a policy and technical approach to characterise and address unlicensed legacy groundwater take and ongoing management of groundwater following mine closure
- improve how we assess major projects, including consideration of cumulative impacts.

Mining projects are subject to rigorous environmental assessments and groundwater is central to these assessments. The regulation of water in the context of mining is complex given the nature of mining projects and the number of parties involved in the assessment process including DPE Water, previously the Natural Resource Access Regulator, the Independent Expert Panel on Mining in the Catchment, the Commonwealth Independent Expert Scientific Committee (IESC), DPE assessments, independent experts commissioned by DPE, and the Independent Planning Commission.

Given this complexity, clear policy and its consistent application is needed and the industry would welcome further engagement to discuss perceived gaps and potential improvements in the policy and regulatory framework.

One element of the regulatory framework that could benefit from greater clarity is the use of miscellaneous works approvals in relation to incidental take at mining operations.

#### Recommendations

- Engage with the mining industry to discuss the perceived gaps in policy and coordination and potential solutions
- Consider the opportunity to clarify the framework for miscellaneous works approvals for incidental take in any future regulatory reforms.

## Action 1.4 – Review and update approaches to sustainable groundwater extraction

The Draft Strategy states that:

*“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.*

*The draft method will consider groundwater risk assessments undertaken, incorporate the most up-to date hydrogeological and ecological information, and consider these in the context of new climate change data and risks.”*

NSWMC has previously highlighted our concerns with the approach to setting the LTAAEL in the Sydney Basin North Coast Groundwater Source. A technical review commissioned by NSWMC found that the LTAAEL is conservative and contains duplication of accounting for environmental risk at various stages of the risk assessment. This has the potential to unnecessarily limit the availability of water, constraining the ability of groundwater to support economic growth in the region and has impacted the ability of the water market to operate in an efficient and effective way.

### Recommendation

- DPE Water should consider NSWMC’s previous submissions on groundwater risk assessments when undertaking its review of sustainable groundwater source extraction limits.

## Action 2.2 – Support economic growth using groundwater

The economic contribution of the mining sector to NSW, particularly in regional areas, is significant and is summarised in the introduction to this submission. Groundwater is crucial to support this economic contribution.

Action 2.2.1 states that DPE Water will

*“provide clear guidance to mining and other State Significant Developments (SSDs) about their groundwater opportunities, constraints and protection responsibilities through all phases of the developments, including the management of future legacy quality and quantity impacts after closure.”*

### Recommendation

- NSWMC supports clearer guidance for the mining industry and seeks further engagement on the scope of this work.

Action 2.2.2. is to *Enable the increase of sustainable groundwater use in targeted areas*. This action appears to seek to resolve some of the issues that NSWMC members have raised regarding tight water markets in some water sources, despite low utilisation of entitlements.

NSWMC supports further discussions around potential solutions to these issues. We also emphasise the need for initiatives to improve water market information and transparency that have been highlighted in previous submissions, such as ensuring the accuracy of licences and the water register, and measures to better connect buyers with potential sellers.

Action 2.2.2 also flags a review of the controlled allocation orders. NSWMC supports this review as the policy imposes inappropriate constraints on the controlled allocation of unallocated water, even in circumstances where it is unlikely there will be future growth in demand from stock and domestic or town water supply, such as in low yielding, poorer quality aquifers.

The policy framework for accessing buried groundwater sources should also be clarified.

In many cases, incidental groundwater take by mining operations is surplus to operational requirements. Creating incentives for this water to be returned to the environment or made available to other water users should be pursued through both a return flow policy and managed aquifer recharge policy.

#### Recommendations

- Ensure that measures to improve water market information and transparency are also considered to enable the increase of sustainable water use
- Reform the controlled allocation policy to ensure it caters for a broader range of water source characteristics
- Clarify the framework for accessing buried groundwater sources
- Develop both managed aquifer recharge and return flow policies to encourage beneficial use of surplus water at mining operations.

### Action 3.1. Develop a groundwater knowledge plan to improve how we use groundwater information to make decisions

NSWMC supports the sharing of data, models and other information to ensure water users can manage their water using the best available information.

The accuracy of water information is an issue that NSWMC members have raised concerns with, including errors and inconsistencies between certificates of title, the government's internal licensing system, and the water register.

For example, the *Draft Guide to Groundwater Resources* released with the Draft Strategy states that Sydney Basin North Coast Groundwater Source entitlements are 68,932.5 GL, which is consistent with what the water register has stated since the water sharing plan was introduced in 2016. However, NSWMC was informed by DPE Water in 2019 that actual entitlements are higher than this and the water register would be updated. It is concerning that five years since the water sharing plan commenced, the register still appears to be out of date.

NSWMC is aware of licensing conversion errors that remain unresolved from when the water sharing plan came into effect in 2016, and of one example where two parties applied to have a transfer registered, only to be told that the share component had been converted in error and the actual entitlement was zero.

These errors and inconsistencies erode the confidence of market participants and the efficiency of market to support economic growth under Action item 2.2.

Sufficient resources are also needed for effective and efficient decision making. NSWMC's members are frequently faced with extended delays in having licences processed, issues resolved, or in obtaining feedback and approval on management plans required under development consents, including groundwater management plans.

### **Recommendation**

- Ensuring the accuracy and consistency of water market information should be added as a priority action to build market confidence and support efficient trading
- Sufficient resources should be allocated to the delivery of the NSW Groundwater Strategy and in the day to day administration of the regulatory framework.

**NSW Minerals Council  
August 2022**

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Fw: NSW Groundwater Strategy  
**Date:** 11 August 2022 10:57:58

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[REDACTED]

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**From:** [REDACTED]  
**Sent:** Wednesday, 20 July 2022 12:53 PM  
**To:** [REDACTED]  
**Subject:** NSW Groundwater Strategy

[REDACTED]

I tuned in to the webinar today and I've had a look at the draft strategy. I thought I'd highlight a few areas of interest to our conference audience. There might be some other aspects you think are worth highlighting that I haven't picked up on as well.

I appreciate there isn't much time before the conference and you're unsure as to whether you'll have policy reps coming in support, so it's completely up to you how much detail you want to get into in these areas.

Overall, it looks like the draft strategy picks up a range of issues that we've raised with DPE Water over the last 5-10 years, which is positive.

The conference audience is fairly knowledgeable, so I'd suggest that a lot of the first 12 slides from the webinar could be left out or condensed (e.g. around the consultation process, what is groundwater, how humans impact it etc) and focus on what the strategy is aiming to address and the supporting actions.

### **Action 1.2 Better integrate groundwater management with other land and water management processes**

This section states *"While the current regulatory framework is largely proving effective, policy and coordination gaps remain and more targeted action will help to reduce the impacts of large infrastructure projects and industrial activities on aquifers."* It might be useful to expand on this statement and the specific actions under **Action 1.2.3**

### **Action 1.4. Review and update approaches to sustainable groundwater extraction**

For your information, we've previously lodged a submission to DPE Water regarding what in our view is the overly-conservative approach to setting the LTAAEL in the Sydney Basin North Coast Groundwater Source, which was accompanied by some technical advice prepared by SLR Consulting. DPE's response is that these issues will be considered in the 10 year review of the scheme. This action appears to capture this?

### **Action 2.2 Support economic growth using groundwater**

Action 2.2.1 (*"Provide better information on groundwater opportunities and constraints to*

*communities and industries") states "provide clear guidance to mining and other State Significant Developments (SSDs) about their groundwater opportunities, constraints and protection responsibilities through all phases of the developments, including the management of future legacy quality and quantity impacts after closure". It could be useful to expand on what is intended here.*

Action 2.2.2. (*"Enable the increase of sustainable groundwater use in targeted areas"*) appears to capture some of the concerns we have raised around the tight water market in the Sydney Basin North Coast Groundwater Source, despite low utilisation of entitlements.

It also flags a review of the controlled allocation orders, which we have previously raised concerns with in the context of the Sydney Basin North Coast Groundwater Source given it limits controlled allocations beyond 80% of the LTAAEL, despite the WSP rules providing for supplementary water allocations over and above 100% of the LTAAEL.

**Action 3.1. Develop a groundwater knowledge plan to improve how we use groundwater information to make decisions**

As a comment, the accuracy of water information is an issue our members have raised concerns with, including errors and inconsistencies in and between licences and databases. For example, the draft guide states that Sydney Basin North Coast Groundwater Source entitlements are 68,932.5 GL. However, we have been told by DPE several years ago that actual entitlements are 81,000 GL. It's concerning that these numbers still don't match.

Thanks again for your contribution to the conference and I'm happy to discuss.

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