



NSW DPI  
State Groundwater Strategy Team

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### **Submission: Draft NSW Groundwater Strategy**

Healthy Rivers Dubbo is a grass roots community network dedicated to providing a strong voice for our local rivers, aquifers and wetlands in the Murray-Darling Basin for the benefit of wildlife, plants and people. We pay our respects to Elders past and present and acknowledge that this land was never ceded.

We are pleased to have the opportunity to provide comment on the draft NSW Groundwater Strategy

#### **Recommendations**

- Improved modelling should identify Planned Environmental Water
- An assessment of the condition of aquifers be undertaken so the current level of drawdown, risk of subsidence and contamination is understood
- Carryover allowances in groundwater water sharing plans should be removed
- Extraction limits have to be scientifically established as environmentally sustainable levels of take
- A project be established to study and protect Stygofauna
- Actions 2.1 and 2.2 be replaced with actions that reduce the demand for groundwater by towns and industry

#### **Strategic priority 1: Protect groundwater resources and the ecosystems that depend on them**

Healthy Rivers Dubbo supports environmental protection being the highest priority of the strategy document. However we feel there are important actions missing and more detail required for the actions that are listed.

##### **Action 1.1 Refresh and expand our approach to sustainable groundwater management**

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

Healthy Rivers Dubbo supports actions 1.1 and 1.2.

The impact of floodplain harvesting on reducing aquifer recharge must be assessed.

The cumulative impact of mining projects on aquifers must be better assessed. Loopholes in the NSW Aquifer Interference Policy that allow mining and fracking developments to avoid approvals need to be closed.

Groundwater and surface water must be managed together, so that the movement of planned environmental water can be understood. A requirement of the Murray Darling Basin Plan is that there's to be no net reduction of planned environmental water.

Groundwater recharge areas should be protected from development. In Dubbo, the suburb of Southlakes was built on top of a groundwater recharge area, and has led to a decrease in groundwater quality due to garden fertilizer and herbicide.

### **Action 1.3 Improve management and protection of groundwater dependent ecosystems and baseflows to streams**

A program to map groundwater dependent ecosystems and cultural values with public funds is missing from this strategy.

Stygofauna are classified as High Ecological Value and are protected under the Fisheries Management Act 1994. Further studies are needed to protect these important creatures, who are a sign of a healthy aquifer.

Current conditions of groundwater sources need to be assessed.

During the recent drought it was discovered that some aquifers under Dubbo are contaminated with PFAFS. This was discovered in the scramble to search for more water during the severe 2017-2020 drought, when Dubbo was staring down the barrel of day zero.

Assessing the condition of groundwater sources as a base line would increase preparedness for severe conditions.

The NSW Government has declared that Central West NSW is Australia's first Critical Minerals Hub. More than 20 exploration projects in the Central West have been deemed investment ready. Everywhere that rare earth minerals are found, so are radioactive materials.

Before this expected increase of mining activity starts, it is important that the condition of aquifers is assessed.

The ASM Toongi rare earth mine proposal, 25km south of Dubbo has been approved, but work has not commenced due to a lack of investment. This project poses a risk to groundwater sources from toxic salt contamination and radioactive waste. There is no plan for the safe management of the liquid waste containing 6.7 million tonnes of salt that would be created by this project beyond the 20 year life span of the mine. While there are monitoring bores planned to detect a leak of restricted radioactive solid waste soaking in to the groundwater, there is no plan for how that contamination would be addressed.

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

There are 24 groundwater sources where the number of shares for issued licences is significantly higher than the extraction limit. Shares must be trimmed in these water sources.

The valleys where most groundwater is used: Gwydir, Namoi, Macquarie, Lachlan, Murrumbidgee, and Murray, are also areas identified as 'at-risk'<sup>1</sup>

Carry over allowances should be removed from groundwater water sharing plans.

Long Term Annual Extraction Limits should be based on a scientifically determined environmentally sustainable diversion limit, which takes climate change predictions into account.

### **Action 1.5 Protect groundwater quality within natural limits**

Healthy Rivers Dubbo is supportive of actions protect groundwater quality.

Stygofauna improve the quality of groundwater by creating a nutrient cycle, and are protected under the Fisheries Management Act 1994. This strategy could offer actions that increase the understanding and protection of stygofauna.

## **Strategic priority 2: Build community and industry resilience through sustainable groundwater use**

Healthy Rivers Dubbo strongly objects to this strategy encouraging the increased use of groundwater for economic development and town drinking supplies.

### **Action 2.1. Support towns and cities using groundwater to improve their urban water planning**

Healthy Rivers Dubbo strongly opposes increasing the reliance of towns to groundwater.

Climate change predictions presented in this draft strategy are that groundwater recharge will decrease by 15% by 2060.

Between 2017–18 and 2019–20 reliance on groundwater rose from roughly 11% of the state's overall metered water use to 27%.<sup>2</sup>

Use of groundwater by Dubbo was curtailed by the Government during the millennium drought.

Rather than rely heavily on groundwater in times of drought, Healthy Rivers Dubbo would support measures that reduce demand for water. Improved urban water planning, water tanks, alternative water sources, and water purification should be prioritised in this document.

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

Healthy Rivers Dubbo strongly objects to Action 2.2.

Water in the Wambuu Macquarie Valley is over allocated, and a correction is required to pull down various types of entitlement levels.

There is low compliance among groundwater users, with the Natural Resources Access Regulator finding in August 2021 that about one in ten groundwater users (NSW wide) are non-compliant.<sup>3</sup>

In the Upper Macquarie Alluvial Groundwater Source, extraction exceeded permitted take by 22.3% in the 2019-2020 water year.

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<sup>1</sup> WaterNSW, September 2021. At-risk groundwater sources

<sup>2</sup> NSW SoE Report p 90

<sup>3</sup> <https://www.smh.com.au/environment/sustainability/one-tenth-of-groundwater-users-in-breach-of-licences-investigation-finds-20210805-p58g8e.html>

The risk to structural integrity of the groundwater system in the Lower Macquarie Alluvium and Upper Macquarie Alluvium in the risk assessment included in the Macquarie Castlereagh Alluvium Water Resource Plan is:

**H** High – not Tolerable

Aquifer collapse and subsidence has a catastrophic impact, as experienced in Turkey:

*“The underlying factor for so many new sinkholes in the last decade has been drought, which has become more intense with climate change. Yearly rainfall has waned, leaving crops parched.*

*To cope, many farmers have turned to wells that pump water from natural underground reservoirs to irrigate their farmland, which in turn weakens the earth and can lead to sudden collapse.”<sup>4</sup>*

Actions that reduce the use of groundwater by industry are required. The use of groundwater to flood irrigate is a very inefficient use of water, alternative irrigation methods should be found.

### **Action 2.3 Support Aboriginal rights, values and uses of groundwater**

Healthy Rivers Dubbo is strongly supportive of actions that address the dispossession of First Nations people from water, and promote self-determination.

### **Strategic priority 3: Improve groundwater management decisions with better information**

Healthy Rivers Dubbo supports public investment in improving groundwater knowledge. This is needed to protect groundwater dependent ecosystems and the integrity of aquifers.

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

#### **Action 3.2. Better share and integrate groundwater information**

#### **Action 3.3. Improve our understanding of groundwater resources**

Healthy Rivers Dubbo supports public investment in data, systems and tools as required to increase knowledge about groundwater that does not have the objective of increasing the economic output from increased use of groundwater.

For more information about this submission contact:

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<sup>4</sup> <https://www.abc.net.au/news/2022-08-12/sinkholes-in-turkey-are-swallowing-up-fertile-farming-land/101310474>