Healthy Rivers Dubbo

Dubbo NSW 2830

heathyriversdubbo@gmail.com

NSW Department of Planning, Industry and Environment
NSW Great Artesian Basin Groundwater Sources WSP Comments
Locked Bag 10, Grafton NSW 2460

By e-mail: gab.gw.wsp@dpie.nsw.gov.au

6th April 2020

Submission to: Draft NSW Great Artesian Basin groundwater water sources water sharing plan 2020

Introduction

Healthy Rivers Dubbo (HRD) is a grass roots community group 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.

HRD is grateful for the opportunity to comment on the draft NSW GAB water sharing plan 2020 (WSP).

Aquifer Interference Access Licences

Allowing aquifer interference approvals to be issued under this Plan will facilitate the expansion of Coal Seam Gas (CSG) in the GAB. CSG expansion is highly contested in the GAB local communities and beyond.

No aquifer interference access licences have been issued during the life span of the GAB Groundwater Plan, so they should not be included in this draft WSP.

HRD very strongly objects to provisions in the draft WSP that allow new aquifer interference approvals to be granted.

Metering

HRD strongly objects that the only requirement for recording take by access licence holders is by logbook. NSW is currently implementing a no meter no pump policy after accepting the

recommendations of the Ken Matthews report in 2017 and the GAB should not be exempt from this policy.

First Nations Engagement

HRD strongly objects to a lack of strategies to encourage the granting of access licences for Aboriginal cultural and community purposes.

More should be done by all governments in Australia to gain the trust of First Nations groups. Australia's recent history since colonisation from a First Nation's perspective must be a bloody and horrifying one. More stories of torture and massacres - in contrast to the history taught in the mainstream education system - have become public in recent years. Meaningful reconciliation can only come when the Government acknowledges and apologises for atrocities done to our First Nations people.

Application of the WSP

HRD supports the merging of the NSW GAB Shallow and NSW GAB water sharing plans. Their hydrological connection is greater understood now, and the simplistic boundary setting of 60m depth doesn't reflect the actual thickness of the unconsolidated sentiments. In the Lower Namoi Alluvium, the artesian contribution to the alluvium is as high as 70%, with a continuum of exchange between the alluvial aquifer and the GAB. [1]

HRD objects to the boundaries of the Warrego groundwater source not being redefined as per the Natural Resources Commission recommendation # 7, based on latest available knowledge.

Compliance with long term annual average extraction limits (LTAAEL)

HRD objects to the average annual extraction being assessed over five years, and recommend that is be changed to every three years. As the climate warms, surface water will become less reliable, and more pressure will be placed on groundwater supplies, especially in the over extracted Eastern Recharge GWS. In the Southern Recharge GWS, there are a lot of sleeper licences, which if reactivated all at once, would cause a spike in extraction. A shorter assessment period would capture this if it were to happen, and allow measures to bring the extraction back to within limits.

Setback rules

More work should be done to determine set back rules for new works from springs that are based on science, not standardisation.

No exemptions should be made for shorter set back rules for new works where it is considered that the impact on springs would be minimal. No impact is acceptable.

[1] Ransley et al. (2015). Hydrogeological Atlas of the Great Artesian Basin. Geoscience Australia, Canberra and Kellet et al (2012). Water Resource Assessment for the Surat region. A report to the Australian Government from the CSIRO Great Artesian Basin Water Resource Assessment. CSIRO Water for a Health Country Flagship, Australia.

The NRC recommended that there be provisions in the new WSP to rehabilitate works that pre-date set back rules. HRD agrees, and objects to the omission of provision.

Capping and Piping

HRD welcomes NSW policy direction of working towards 'water tight bores' by continuing capping and piping projects.

We are supportive of the provision for conveyance access licences in the Surat, Warrego and Central GWSs that will cover water wasted in open bore drains, and constantly running bores (uncontrolled flows).

These access licences must not be tradable.

LTAAELs in the Surat, Warrego and Central GWSs

HRD is supportive of setting the extraction limits in the three artesian GWSs to 2008 water take levels.

We strongly object to including 30% of water 'savings' made under future cap and pipe projects being added to the extraction limit.

There is no scientific basis for this additional extraction.

Water that is considered 'savings' under capping and piping is really less water being wasted.

Efforts to increase pressure in the Basin will be compromised by allowing an additional 30% of water savings to be extracted.

HRD strongly objects to the issuing of any new aquifer licences in any area of the GAB. Highly publicised public objection to an auction of new water access licences in 2009 made it clear to all how objectionable the creation of new access licences in the GAB is.

LTAAELs in the Eastern and Southern Recharge GWSs

HRD strongly objects to the raising of the LTAAELs in the Eastern and Southern Recharge GWSs.

Keeping the current formula of assigning 70% of net estimated recharge volumes to extraction when the recharge volume has been estimated up means the allowable average take will increase by 22% in the Eastern Recharge, and 30% in the Southern Recharge.

HRD strongly recommends revising the 70% figure down so that the LTAAELs in both Recharge area do not rise.

There is no scientific reasoning that we could find behind keeping the same 70% as is used in the current 2008 WSP.

Carry Over Rules

HRD strongly objects to any carry over provision in groundwater water sources. We recommend carry over provisions be revised to zero allowance.

Water Allocation Account Debiting

HRD strongly objects to 1.3 ML per unit share of the access licence share component. We recommend changing the per unit share to 1.0 ML.

Combined with the 60% carryover allowance, the unit per share being higher than 1.0 ML means that users have been able to extract well over their licenced account volume in a given year. In dry years when there is little surface water around, there is a very high risk for extraction form ground water to spike very high. We have seen this occur during the last several very dry years.

Over extraction in the Eastern Recharge GWS

The Eastern Recharge is already very over allocated system. Extraction has exceeded the current LTAAEL 3 out of the last 5 years, even with the available water determination reduced.

The Groundwater Resource Description provided by DPIE to accompany this WSP tells the impact of already very high extraction in the Eastern Recharge – hydrographs of monitoring bores show groundwater levels in a declining trend over 5 years, with drops of about 25m during the irrigation season.

Facilitation of Coal Seam Gas in the Southern Recharge GWS

Several rules in this draft WSP could facilitate the expansion of CSG in the NSW GAB. They have all been discussed in this submission, are summarised here.

Allowing new aquifer interference access licences to be issued – HRD objects to new aquifer interference access licences being able to be issued.

There should be greater transparency of water taken through aquifer interference activities, so they can be distinguished from volumes typically extracted.

Increasing the LTAAEL in the Southern Recharge GWS by 30% - HRD objects to the LTAAEL in the Southern (and Eastern) Recharge GWS being increased at all.

Maintaining the five year period of assessment for compliance to the LTAAEL. There is a risk that a lot of sleeper licences could be activated if CSG expansion were to occur, extraction could spike and a five year assessment period is too long to catch and correct the excessive take. HRD recommends reducing the assessment period from five years to three years.

Allowing log books as the method of record keeping of extraction, especially given past practices of sporadic reporting of extracted volumes (as referenced in the NCR review of the 2008 WSP) would mean any expansion of extractive activities in the GAB could continue to operate under the same loosely recorded methods currently practiced in the NSW GAB.

Set back distance rules for new works from springs should be based on updated science, not uniformity.

There should be no provision for exemptions for new works within established set back distances form springs under any circumstances.

Stygofauna

Stygofauna are any fauna that live in groundwater systems or aquifers. Most stygofauna in Australia are crustaceans, but they also include worms, gastropods, beetles, mites and fish. Stygofauna are an indicator of healthy groundwater - they create an important nutrient cycle. Where groundwater is low quality, they are usually absent.

Never seeing the sun, they have no circadian rhythms. They grow slowly, don't have many young, live long lives and stay close to home. Stygofauna have extremely long lineages, with ancestors dating back 200 million years. They comprise an inconspicuous but important component of world biodiversity, and contain many ancient lineages of high scientific value and conservation significance. [2]

Because they don't travel far from home and are of incredible age, a lot of stygofauna species are extremely rare and localised.

Stygofauna cannot exist without water, therefore when the water table in the Eastern Recharge drops 25 meters during an irrigation season, local extinctions of stygofauna would be inevitable. Given many species are localised and therefore extremely rare, it is likely that unique species of stygofauna have become extinct in groundwater sources where extraction causes the water table to drop every irrigation season.

In the Southern Recharge GWS, stygofauna are present in the Lowland Darling Aquatic Endangered Ecological Community (EEC) listed under the *Fisheries Management Act 1994*, meaning that the areas where stygofauna are present (the groundwater of the Pilliga recharge area) is classified as of High Ecological value.

The Environmental Protection and Biodiversity Conservation Act 1999 listed species associated with GAB discharge spring wetlands ecological community as critically endangered, endangered and vulnerable.

Springs

Springs in the GAB provided water for megafauna dating back around thirty thousand years, and continue to sustain internationally significant Ramsar listed wetlands. They are a critical life support system for wildlife in the arid extremes of the GAB areas.

The springs formation at Peery Spring Complex are recognised as one of the rarest landforms in Australia and of the largest active complexes in the Basin, and deserves protection. They are listed as supporting endangered ecological communities under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, critically endangered ecological communities under the *NSW Biodiversity Conservation Act 2016*, areas under High Ecological Value under the *Fisheries Management Act 19994*, and as a site of significance under the *Ramsar Convention*.

[2] http://subterraneanecology.com.au/knowledge-publications/about-stygofauna

Over development of the GAB since colonisation has seen an estimated thousand spring sites become extinct. There are many anecdotal stories about more recent spring extinctions in the Southern and Eastern recharge area - towns and properties that have 'Springs' in their name, but the spring has since stopped running.

Conclusion

The *Commonwealth Water Act 2007* and the *NSW Water Management Act 2000* both legally compel the rules that manage water sharing to give the protection of the environment the highest priority. Endangered and threatened ecosystems and associated fauna are protected under various commonwealth and state legal instruments, as discussed above.

This draft WSP does not protect the springs and the life that relies on them, as it is legally required to do.

This draft WSP is not an improvement on the last WSP, it will actually make the environment (and therefore all water users in the NSW GAB eventually) worse off than under the rules of the 2008 WSP.

For more information, please contact

Peter Duggan

Healthy Rivers Dubbo Committee

healthyriversdubbo@gmail.com