



## Healthy Rivers Dubbo



### Submission to draft NSW Great Artesian Basin Shallow Water Resource Plan

To: NSW Government

Department of Industry

By e-mail: [intersectingstreams.sw.wrp@dpi.nsw.gov.au](mailto:intersectingstreams.sw.wrp@dpi.nsw.gov.au)

FROM:



Name of organisation: Healthy Rivers Dubbo (HRD)

Who do you represent: Peak representative organisation

Who do you represent: Environment

I give permission for my submission to be publicly available on the NSW Department of Industry website: Yes

I would like my personal details to be kept confidential: Yes

### Draft Intersecting Streams Water Resource Plan

#### Introduction

Healthy Rivers Dubbo is a community grass roots group dedicated to providing a strong voice for our local rivers and wetlands, and for the Murray-Darling Basin as a whole. As ambassadors for healthy

rivers, wetlands and groundwater, we have been active in our community calling for transparency and accountability in all aspects of water management.

Healthy Rivers Dubbo pays our respects to the Traditional Owners, past, present and future, of the land we live on. We acknowledge that the land on which we live was never ceded.

Healthy Rivers Dubbo welcomes the opportunity to make a submission to the draft Intersecting Streams Water Resource Plan (WRP).

### **Consultation**

Of the eight First Nations groups who have country with the WRP area, only two groups – The Gomeroi and The Ngemba were consulted. Given this significant lack of consultation, this WRP should not yet be on display.

HRD has very low confidence that the NSW government has represented itself respectfully and appropriately with First Nations in relation to use of water from the intersecting streams resource.

### **Risk Assessment**

#### **Climate Change:**

HRD is extremely concerned that the risk of climate change on this water source is considered low in any water source in this WRP.

The planet's average temperature has already risen 0.9 ° C. The most exhaustive global analysis of rainfall and rivers was conducted by a team led by Professor Ashish Sharma at Australia's UNSW (University of New South Wales) in Sydney. It relied on actual data from 43,000 rainfall stations and 5,300 river monitoring sites in 160 countries.<sup>1</sup>

This study has shown that rainfall in already dry environments (like the environment of most of this WRP area) has decreased, and that the incidents of small to medium floods for all rivers has reduced by 10 – 15% per degree rise in average temperature. The global average temperatures are on track to increase further.

Even in wetter areas where rainfall has increased, because of the high impact of evaporation on parching soils, rivers are in decline around the globe.

The draft **Assuring Future Urban Water Security**<sup>2</sup> document produced by NSW DPI Office of Water in 2013 finds from a pilot study that by 2030 we can expect "reductions of almost 30% for the 3 inland utilities in mid and southern NSW". This includes a 50% reduction in one spot!

The data is in about the impact of climate change on rivers and streams, ignoring it constitutes a breach of the Commonwealth Water Act 2007, and puts the environments and communities of inland NSW at extreme risk.

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<sup>1</sup> <https://newsroom.unsw.edu.au/news/science-tech/long-dry-global-water-supplies-are-shrinking>

<sup>2</sup> [http://www.water.nsw.gov.au/\\_data/assets/pdf\\_file/0005/665609/assuring-future-urban-water-security-draft.pdf](http://www.water.nsw.gov.au/_data/assets/pdf_file/0005/665609/assuring-future-urban-water-security-draft.pdf)

### **Not-Tolerable Risks:**

HRD considers the risks to water not being available for the many high value environmental assets in the WRP area as unacceptable. The rules proposed in this draft Water Sharing Plan (WSP) are not going to be able to manage these risks.

#### SECTION 4.3 RISKS TO WATER AVAILABLE FOR THE ENVIRONMENT & CAPACITY TO MEET EWRS [E(W)] - UNREGULATED WATER SOURCES

44 of the 96 water sources within the WRP area are currently classified with a risk rating of not-tolerable.

#### SECTION 4.4 RISKS TO WATER AVAILABLE FOR THE ENVIRONMENT FROM EXTRACTION UNDER BLR [E(BLR)] - UNREGULATED WATER SOURCES ONLY

All 9 of the water sources listed under this risk have a risk rating of not-tolerable, 8 of them are high risk not-tolerable. This is extremely concerning.

#### SECTION 4.5 RISKS TO WATER AVAILABLE FOR THE ENVIRONMENT FROM INTERCEPTION ACTIVITIES

14 of the 25 of the water sources listed under this risk have a risk rating of not-tolerable.

#### SECTION 4.6 RISKS TO WATER AVAILABLE FOR THE ENVIRONMENT DUE TO CLIMATE CHANGE

8 of the 12 water sources listed under this risk have a risk rating of not-tolerable - climate change impact is here now and is definite across all water sources.

#### SECTION 5.3, 5.4, 5.5 RISKS TO THE HEALTH OF WATER DEPENDENT ECOSYSTEMS FROM POOR WATER QUALITY

16 of the 32 water sources listed under this risk have a risk rating of not-tolerable.

#### SECTION 7.3 RISKS TO WATER AVAILABLE FOR OTHER USES DUE TO INTERCEPTION ACTIVITY

The risk to this WRP area water sources from floodplain harvesting is considered low, and quotes: "Floodplain harvesting is restricted by the LTAAEL as all unregulated water take (including FPH) in the Intersecting Streams WRPA is licenced."

See below section **Floodplain Harvesting** (FPH) for details about our serious concerns about the impact of floodplain harvesting. HRD considers the risk of current and future increases to FPH take should be not-tolerable.

#### SECTION 7.4 RISKS TO WATER AVAILABLE FOR OTHER USES DUE TO CLIMATE CHANGE

Only 4 of the 9 water sources listed under this risk show as not-tolerable. HRD is very concerned that this risk assessment assigns more risk to water availability from climate change impacts to the environment than it does to other uses.

### **Strategies to manage risks:**

As an organisation that represents the environment, a study of the strategies to manage risk in this draft WRP leads us to conclude the strategies to manage risk are focused on providing certainty for water users over protection of the environment.

The strategies to manage risk in this draft WRP are inadequate, and will not meet the objectives of the Basin Plan.

The very high percentage of risks classes as not-tolerable will only be mitigated through improvements to the Planned Environmental Water (PEW) rules in this WRP. The current rules for protecting PEW are inadequate, and must be improved during the development of this draft WRP.

### **Floodplain Harvesting (FPH)**

HRD does not support the licencing of floodplain harvesting in this water source. All capture of floodwaters should be prohibited.

The draft WSP Cl 15 (2) (c) defines PEW as water that is not committed after the commitments to basic landholder rights and for sharing and extraction under any other rights have been met. The provision for new access licences in the draft WSP is a net reduction in the protection of PEW. A reduction of PEW is not allowed under the Basin Plan (as per Basin Plan 10.28 "No net reduction in the protection of planned environmental water").

HRD does not support the draft WRP at 4.5.1 demonstrating no net reduction in the protection of PEW.

Clearly, the long-term average annual planned environmental water under this plan (schedule A) will be less than the long-term average annual planned environmental water that was in place at 23 November 2012 if new FPH licences are granted.

### **Interstate Trade**

HRD is very concerned that there is a proposal in this draft WRP to include provisions for interstate trade with Queensland. Extraction in Queensland is already having a considerable impact on this water source - provisions for interstate trade will exacerbate problems in the water source that are already considered intolerable in this documents' own risk assessment.

The risk assessment in this WRP identifies high risk to water availability to the environment from base flows and low flows in the Culgoa and Warrego Rivers. Strategies for managing these risks are compromised by extraction in Queensland. Allowing any transfer of water upstream to Queensland can only further exacerbate risks that are already high.

HRD is strongly opposed to the minor change to the wording of the WSP amendment provision relating to interstate trade. "Trade will only be progressed in water resource planning if NSW water users are interested in interstate trade." The environmental impacts of trade should be the determining factor, not user preference. We consider this to be an example of the NSW government preferencing the wants of users over the needs of the environment.

## **Assessment of compliance with LTAAEL**

WSP CI 29 (1) seeks to allow for compliance with LTAAEL to be assessed over a five year period. HRD strongly disagrees with this proposal, and considers consistency of compliance to LTAAEL remain at three years rolling average across all water sources in NSW.

All models used to inform decisions should be up to date and accredited against standards. There should be no change to the baselines, rules and assumptions without a systematic, independent and publicly available review (as per Basin Plan 10.49: "A water resource plan must be based on the best available information.").

HRD considers assessing compliance over five years instead of three to be a reduction in the quality of available information, thus will not satisfy the requirements of the Basin Plan.

## **Connectivity**

The Barwon Darling is an ecosystem in crisis<sup>3</sup>.

All WRPs for tributaries to the Barwon Darling must do more than they currently do to ensure connectivity to downstream systems and wetlands.

Visible flow heights must be protected, along with first flush flows in all intersecting streams.

Planned Environmental Water (PEW) and Held environmental Water (HEW) need protection with stronger rules in the WSP.

FPH has a significant impact on downstream aquifer recharge and flow connectivity, HRD strongly opposes provisions in the draft WSP that will allow FPH to be licenced in this water source.

If surface flows are protected, this will also benefit groundwater systems that are hydraulically connected.

This draft WSP needs to include rules that protect, maintain and enhance connectivity with the Barwon-Darling River, and include connectivity as an objective of the WRP.

## **High Ecological Value Aquatic Ecosystems (HEVAE) and Protection of Environmental Water**

This draft WRP identifies 914 HEVAEs and 20 key hydrological indicator sites in the intersecting streams area. The area clearly has important environmental and cultural significance within the Murray Darling Basin.

It is a contradiction within this WRP that in most regions in this WRP area, shortfalls for environmental watering have been identified (up to 795 GL is still required), and yet this WRP proposes no strengthening to rules protecting HEW, and inadequate rules to protect PEW.

CI 45 shows that flow classes have only been instated in management zones in the Narran River. This is unacceptable. All the river systems that make up the Intersecting Streams water source and have access licences extracting water must have nominated flow classes with access rules.

The draft WSP CI 15 (2) (a) defines PEW as the commitment of the physical presence of water in these water sources. HRD considers the protection of visible low flows in this water source as a

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<sup>3</sup> <https://www.nrc.nsw.gov.au/2018-2019-wsp-reviews>

critical element of protection of PEW. The low flow heights provided in CI 45 Table A are inadequate for protecting instream ecological values and key hydrological indicators.

HRD does not support the NSW Government position that the current environmental protection rules in the draft WRP should remain unchanged until the end of the initial WSP ten year lifespan. This will prevent the draft WRP from meeting its objectives. (as per Basin Plan s10.26: (1): "A water resource plan must provide for environmental watering to occur in a way that: (a) is consistent with: (i) the environmental watering plan; and (ii) the Basin-wide environmental watering strategy; and (b) contributes to the achievement of the objectives in Part 2 of Chapter 8").

The lack of rules protecting HEW that enters the system from Queensland is a major failing of this WRP. All environmental water ('planned' and 'held' under entitlement) must be protected within and between valleys, including over state borders (as per recommendation 10 and 11 of the MDBA's Murray Darling Basin Water Compliance Review, Recommendation 10 of the independent Review Panel's report (Nov 2017), and Chapter 5 of the Independent investigation into NSW water management and compliance interim report (Ken Matthews, Sept 2017).

## **Water Quality Management Plan (WQMP)**

Risks to aquatic ecosystems in this water source include salinity, turbidity, total nitrogen, total phosphorous, dissolved oxygen and pH. As identified above in the section **Not-Tolerable Risks**, the number of these high intolerable risks is very high.

The most important way to reduce the risks to water quality in unregulated intersecting streams is to protect low flows above no visible flows and pool habitats.

HRD is concerned there is not enough information available for all areas of the water source for the objective of the WQMP to *Protect, maintain or enhance connectivity between water sources to support downstream processes including priority carbon and nutrient pathways.*

All models used to inform decisions should be up to date and accredited against standards. There should be no change to the baselines, rules and assumptions without a systematic, independent and publicly available review (as per Basin Plan 10.49: "A water resource plan must be based on the best available information.").

HRD feels more needs to be done to gather and collate scientific and cultural data so that the rules in this draft plan are based on the best available information.

## Conclusion

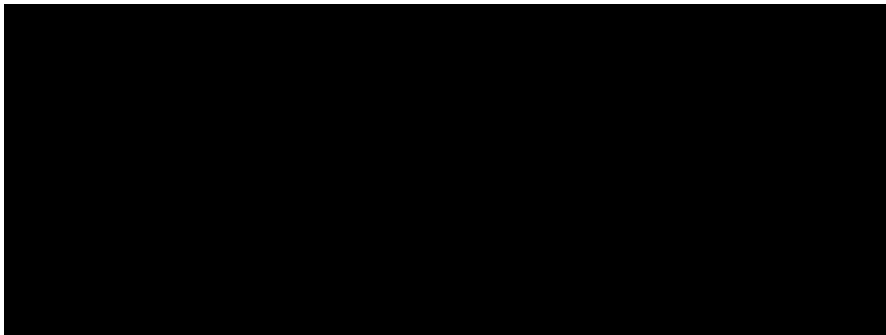
The current water access rules cause prolonged no flow and drought conditions in this water source, prohibiting the maintenance of flow connectivity, re-oxygenation of pools, flushing of poor water quality and providing fish passage.

Healthy Rivers Dubbo is very concerned that this draft Water Resource Plan appears to favour extractive users over the environment, often in contradiction with its own risk assessment.

The purpose of the Basin Plan and the draft WRPs is to improve the health and functionality of water sources in the Murray Darling Basin, we regretfully conclude that this WRP will not meet the requirements of the Basin Plan.

For more information please contact:

Melissa Gray





[REDACTED]

Monday 19 August 2019

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## **SUBMISSION**

### **Draft NSW Great Artesian Basin Shallow Water Resource Plan GW13 Water Resource Plan Area**

#### **Introduction**

The Inland Rivers Network (IRN) is a coalition of environment groups and individuals concerned about the degradation of the rivers, wetlands and groundwaters of the Murray-Darling Basin. It has been advocating for the conservation of rivers, wetlands and groundwater in the Murray-Darling Basin since 1991.

IRN appreciates the opportunity to comment on the draft NSW Great Artesian Basin (GAB) Shallow Water Resource Plan (draft WRP).

#### **Background**

IRN submitted substantial comments to the Status and Issues Paper on the GAB Shallow WRP released in 2017.

We raised the issue of the high level of unallocated water in this water source and the need to protect water availability near Groundwater Dependent Ecosystems (GDEs).

We also raised the issue of the connectivity of this water source with river systems and the deeper GAB, the partial and sporadic nature of monitoring water extraction and the importance of consultation with the traditional owners.



The draft WRP is based on a number of conflicting approaches in regard to connectivity and recharge.

IRN considers that hydrological connectivity to surface waters and adjacent groundwater sources is a significant consideration for this water source. Areas of recharge through infiltration from rainfall and downward leakage from rivers and areas of discharge in the form of mound springs, swamps and other wetland types need to be clearly recognised and protected.

IRN is also concerned that consultation has occurred with only two First Nations groups of the 15 First Nations groups with country in the WRP area. The draft WRP should not be on exhibition for comment with this significant lack of information.

The Sustainable Diversion Limit (SDL) and Long Term Average Annual Extraction Limit (LTAAEL) are far too high in this groundwater source and have no relationship to the historic level of take or current entitlements.

IRN does not support the draft WRP and accompanying Water Sharing Plan (WSP) because of the information gaps and failure to adequately protect the environmental values supported by this groundwater source.

### **Groundwater Dependent Ecosystems (GDEs)**

A significant number of very high value GDEs occur in the WRP area. These include wetlands listed under Ramsar and the Directory of Important Wetlands in Australia, karsts, springs, endangered ecological communities, threatened species, Basin target vegetation, extensive riparian vegetation corridors and base flows.

IRN does not support the basis of the draft WRP that this groundwater source does not have significant hydrological connectivity to surface waters or adjacent groundwater sources.

Base flows in unregulated river systems, instream ecological values and riparian vegetation are important GDEs that need support from groundwater sources during times of drought.

The significant number of springs listed in Schedule 2 of the WSP, which is not an exhaustive list, provide extremely important ecological values and water supply in an arid landscape. This water must be protected from drawdown.

IRN does not support that the proposed rules in the WSP will protect high value GDEs in this groundwater source. The rules for protecting GDEs in the current WSP will be significantly changed.

The current rules are:

To protect bores located near sensitive environmental areas:

No water supply works (bores) granted or amended within:

- 500 m of a high priority GDE and a distance of greater than 500 m if the bore is likely to cause drawdown at the perimeter of the GDE
- 40 m from the top of the high bank of a river or stream

Proposed new rules include:

1. Cl 38 (1): Reducing the minimum set back from 500m to 200m

2. Cl 38 (2): exemptions from the 200m set back further reduces the protection for GDEs
3. Cl 38 (3): this clause is highly contradictory. A high priority GDE, as mapped, has groundwater dependence. This clause is a threat to the protection of GDEs.
4. Cl 40: the decrease to the basic rights bore set back from 200m to 100m reduces the protection from drawdown to GDEs.
5. Cl 40 (2) (b): there should be no impact on high priority GDEs.
6. Cl 41: replacement bores should be at least 200m from high priority GDEs.

As a member of the Groundwater Stakeholder Advisory Panel, IRN opposed the proposed reduction of the setback distance from GDEs for basic landholder rights bores from 200m to 100m in all Groundwater Sources. This is a reduction in protection for GDEs because basic rights bores are unlicensed and unmetered and there are no restrictions on the number of basic rights bores.

The risk assessment identifies a medium risk to GDEs in the Surat resource unit. This unit has the highest number of water licences in the WRP area. These include 100 ML stock & domestic, 50 ML of town water supply and 5,662 unit shares of aquifer access licences.

However, the SDL/LTAAEL for this resource unit is 15,500 ML. The potential for development up to this level of take would constitute a considerably larger threat to GDEs.

This risk will not be managed by the proposed rules in the WSP. A reduction in the SDL is the best way to manage any risk to the ecological values supported by this groundwater source.

The water quality in the GAB Shallow groundwater source is highly saline in many areas. Management of salinity levels is critical for maintaining resilience of GDEs.

### **Connectivity**

The draft WRP contains description of the GAB Shallow groundwater source that indicate connectivity to surface water and other groundwater sources.

The draft WRP states that groundwater sources generally store large volumes of water, often accumulated over thousands of years, and this stored water is also replenished from time to time by rainfall, river and flood flows, and through flow from other groundwater sources.

It also states that limits to extraction have been determined with consideration of historic extraction and groundwater levels, rainfall and groundwater connectivity to streams.

IRN is concerned that the draft WRP maintains that this groundwater source does not have significant hydrological connectivity to surface waters or adjacent groundwater sources.

If this is the case then any level of extraction is likely to be drawing down water that has been accumulated over thousands of years with only intermittent recharge.

However, in the Surat resource unit it is described that within the alluvium there is expected to be more continuity in the distribution of local aquifers connected with the major rivers and that local supplies of potable water from bores drilled near creeks or rivers can be obtained.

The water quality analysis for the groundwater source identifies occasional low salinity water in isolated pockets near the Macquarie, Barwon, and Gwydir Rivers.

This indicates a level of connectivity with surface water.

The importance of this connectivity during periods of intense and prolonged drought is significant in regard to maintaining the ecological values of base flows, instream health and riparian vegetation.

IRN considers that the SDL/LTAAEL for this water source is too high and will cause future impacts on dependent high priority GDEs.

These include the Ramsar listed Macquarie Marshes, Gwydir Wetlands, Narran Lakes and Paroo Wetlands.

Any connectivity with this groundwater source is important and must be protected.

## **Recharge**

If this groundwater source does not have significant hydrological connectivity to surface waters or adjacent groundwater sources and contains water accumulated over thousands of years, the protection of recharge is highly significant for long term sustainability.

The slopes area of the Surat resource unit has been identified as an important area of recharge for this groundwater source.

Recharge through infiltration from rainfall and downward leakage from rivers must be protected from extraction. The identified poor water quality from brackish to saline will deteriorate further if fresh recharge water is captured before replenishing water supply.

Recharge from flood waters plays an important role in topping up this aquifer system. This is demonstrated by the monitoring bore GW036883 located near the confluence of the Macquarie and Castlereagh River<sup>1</sup>.

The impact of floodplain harvesting on recharge to the GAB Shallow groundwater source in the overlying NSW Border Rivers, Gwydir, Namoi, Macquarie and Barwon-Darling catchments must be assessed. This is a significant issue that must be addressed while calculating final volumes for licensing and in improving the management of floodplain harvesting in these river systems.

IRN strongly opposes the proposed removal of the protection of recharge by changing the definition of planned environmental water as specified in WSP.

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<sup>1</sup> Status and Issues paper Fig 3 p 12

Protection of aquifer recharge is essential for the long term sustainability of the groundwater source. Recharge is important for maintaining water quality and quantity and the structural integrity of aquifer systems.

### **Risk Assessment**

IRN considers that the risk to the groundwater source and its dependent ecological values will be very high if developed up to the proposed SDL/LTAAEL.

The proposed lack of protection for aquifer recharge and proposed standardised distance rules for water supply access will cause a ‘net’ reduction in planned environmental water and increase the risk of poor water quality.

The high priority GDEs relying on this groundwater source are at considerable risk under the proposed WRP.

### **Water Quality**

We note that Water Quality Management Plan (WQMP) aims to provide a framework to protect, enhance and restore water quality that is fit for purpose for a range of outcomes that:

- Fulfil First Nation peoples spiritual, cultural, customary and economic values
- Protect and improve ecological processes and healthy aquatic ecosystems
- Provide essential and recreational amenities for rural communities
- Assist agriculture and industry to be productive and profitable

We also note that there is no quantitative water quality information available for the Surat, Central or Warrego resource units of this groundwater source.

The draft WRP reports that the groundwater is brackish to saline in most areas with occasional low salinity water in isolated pockets near the Macquarie, Barwon, and Gwydir Rivers. This demonstrates surface water connectivity and sources of recharge.

The draft WRP also identifies that a combination of low hydraulic gradients associated with the low topographic relief of the landscape, low permeability of resource units, low rainfall and high evaporation rates results in the poor quality of the groundwater in these SDL resource units.

Figure 4<sup>2</sup> shows significantly high levels of salinity in some areas of the groundwater source. These levels of salinity do not meet the above objectives of the WQMP.

IRN considers that the proposed changes to rules in the WSP will not support the objectives of the WQMP to protect, enhance and restore water quality in the GAB Shallow groundwater source.

### **Water Sharing Plan Objectives**

IRN supports the broad environmental objective of the NSW GAB Shallow Groundwater Sources WSP.

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<sup>2</sup> Schedule F Draft WQMP p 13

This is to protect the condition of the groundwater sources and their groundwater-dependent ecosystems over the term of the plan.

This support includes the targeted objective to protect the extent and condition of high priority groundwater-dependent ecosystems that rely on the groundwater sources. Also to protect the structural integrity of the aquifers.

We note that there is no targeted objective to improve salinity levels in the groundwater source. This should be included.

The performance measures need to include the maintenance of the structural integrity.

A targeted objective to contribute to the maintenance of the structural integrity of the aquifer and improved salinity levels should also be included in the economic, social and cultural objectives.

### **Proposed WSP Rule Changes**

#### 1. Minimum distance rules

As stated above, IRN does not support the proposed standardisation of minimum distance rules for water supply works.

The protection of mound springs in this groundwater source is critical. The 500m minimum distance for water supply works to protect GDEs must be maintained.

#### 2. Increase in time period for LTAAEL compliance

IRN does not support the proposal to increase the time period over which compliance with the LTAAEL is assessed from three years to five years.

IRN considers that consistency of compliance to LTAAEL should be a three year rolling average across all water sources in NSW.

This will give much greater assurance that planned environmental water is protected.

#### 3. Removal of protection of recharge

IRN does not support the proposed rule change for the protection of planned environmental water. The protection of recharge inflows to this groundwater source is critical for the reasons outlined above.

### **Other comments on draft WSP**

#### 1. Concurrence with Minister for the Environment

IRN is concerned that the draft WSP states that *'The concurrence of the Minister for Environment and Energy was obtained **prior** to the making of this Plan.'* This may be an interpretation issue but raises the question about the process of obtaining concurrence as required under the NSW Water Management Act 2000.

## 2. Operation of water allocation accounts

IRN does not support the 1.25 ML per unit share for access licenses in the Surat resource unit. Maximum water account debit in a water year must not exceed 1 ML per unit share.

IRN does not support carry over on any license in this groundwater source.

## 3. LTAAEL

IRN does not support the LTAAEL in CI 23 for the GAB Shallow groundwater source. The volume for the Warrego resource unit is particularly over inflated in regard to the history of use in this water source. A significant number of the high priority GDEs listed under Schedule 2 occur in the Warrego resource unit. These will not be protected by the rules in the draft WSP.

The SDL/LTAAEL for the GAB Shallow water source needs to be reviewed and lowered.

## 4. Compliance triggers

IRN supports that triggers for requiring action to ensure compliance with the LTAAEL remain at 5%.

## 5. Amendments to WSP

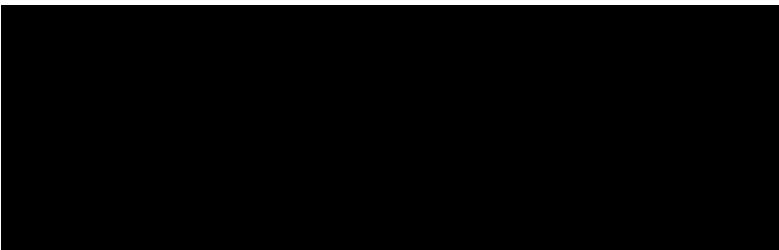
IRN supports CI 59 that allows adjustment to the SDL/LTAAEL as per the Basin Plan. We recommend that this adjustment occur at the commencement of the WSP so that the SDL/LTAAEL is lowered.

## **Conclusion**

IRN does not consider that the draft NSW GAB Shallow WRP will meet the requirements of the Basin Plan.

The proposed changes to WSP rules will not protect planned environmental water, achieve management of risk, or improve water quality.

For more information please contact:



27 August 2019

## **DRAFT NSW GREAT ARTESIAN BASIN (GAB) SHALLOW WATER RESOURCE PLAN**

Dear Lyndal,

The NSW Irrigators' Council (NSWIC) welcomes the opportunity to comment on the above draft plan. The Council represents irrigation farmers and the irrigation industry with over 25 member organisations many of whom rely on groundwater resources. The Council supports the development of a comprehensive and effective groundwater management framework for this water resource as it does for the Murray Darling Basin.

Our Council always stresses the importance of prudent and sustainable management of water resources for agriculture and, of course, for other industries. We therefore laud the Department in drafting the plan for the NSW Great Artesian Basin (GAB) Shallow Water Resource.

After consultations with several relevant members of our Council, several issues were identified for further consideration for the revision of the plan. These are briefly explained below.

### ***Relevance to the Basin in NSW***

It seems the NSW GAB is being treated as a part of the MDB with the development of the NSW-GAB Shallow WRP. Although the map in Figure 1-1 (Schedule E) shows an overlaying network of Water Resource Plan Areas (WRPA) present in this section of the basin, we expect the Department to have tested its assumption (page 20 of the plan) that indeed there are no significant hydrological connections with either surface waters or the adjacent groundwater sources. This is because Schedule I (Section 1.2) states that “The NSW GAB Shallow WRP will cover all groundwater that is contained within the unconsolidated alluvial deposits regardless of depth and all other geological formations to a maximum depth of 60 metres below the surface of the ground.”

*We seek clarification on why the GAB is being brought into MDB Plan process at this time given it has always been treated as a discrete aquifer and a separate water source.*

### ***Objectives, strategies, performance indicators and definitions***

The current description of the environment objectives in the plan is not clear enough to enable later evaluation. Furthermore, the definition of Planned Environmental Water (PEW) is too loose and poorly defined. It also possibly impacts property rights in restricting options for the license holder rights (as contained in the Water Act) in extending the distance for bore installation from new water supply work or GDEs.

The definition of PEW as “all water remaining in excess of the Long Term Average Annual Extraction Limit (LTAAEL) for each groundwater source on a long-term average annual basis” (page 36) does not make clear that it, and presumably Held Environmental Water (HEW), also includes Cultural Water (page 38).

*Definitions should be succinct and performance indicators should be quantifiable*

*It is our position that all water take, including environmental and cultural, should be quantified and accounted for*

### ***Alignment with WSP and Basin Plan***

The three discrete Sustainable Diversion Limit (SDL) units are specified in the draft plan to be consistent with both WSP and Basin Plan (Section 5.2.1) and are also equivalent to the long-term average annual extraction limits (LTAAELs) for the groundwater sources. These underpin the criteria for quantifying actual take (AT) either directly using meters or indirectly where no metering installed (Schedule I, Section 1.1). The requirement for all new and replacement meters to be pattern-approved and meet the requirements of the Australian Standard 4747 by December 2020 will be a challenge for our members as there are outstanding issues such as the absence of ministerial endorsed loggers, lack of water for calibration, limited number of duly qualified installers, amongst others. NSWIC believes the Department needs to embark on engagement activities to inform license holders on attaining compliance within the timeframe.

*At a minimum, by 1 December 2019, ensure that all Water Access Licence (WAL) holders have had an initial meeting with a Duly Qualified Person, or have had their paperwork assessed, to ensure that progress is made towards meeting the new requirements*

### ***Compliance methodology***

It is explained in Section 5.2 that for the NSW GAB Shallow SDL resource units, the SDLs are taken to be equivalent to the LTAAELs, this would reduce confusion. Furthermore, we support in principle the adoption of a five-year rolling average for determining the LTAAELs with 5%



trigger. In our view, it allows for the likely impacts of climate variability. It is however not clear if the process for determining permitted take is also variable based on climate or just based on fixed shares.

*Clarify how compliance of permitted take with the Basin Plan will be assessed*

*NSWIC suggests further engagement with water users to explore viable options to effectively address inadvertent non-compliance*

### **Other comments**

Given the complexity of aggregating WSP into one WRP and other Water Management Strategies, the Department should consider developing an easy tool to guide water users in understanding their responsibilities (and/or opportunities) regarding groundwater. Many farms have multiple groundwater sources underneath them and it is not always easy to discern which WSP and, therefore, which rules are applicable. Such a tool will be especially valuable to new users or those looking to trade in new licences. The tool can be as simple as a map showing possible groundwater sources and their characteristics.

NSWIC welcomes this public consultation on the Draft NSW Great Artesian Basin Shallow Water Resource Plan. It is important that consistency is maintained in developing plans for the various valleys, also making sure that local expertise is utilised in their design.

NSWIC is always pleased to work with the Department on the above issues. We look forward to your feedback on the issues presented in this letter.

Yours sincerely,



Luke Simpkins  
CEO

Department of Planning, Industry and Environment  
[water.relations@dpi.nsw.nsw.gov.au](mailto:water.relations@dpi.nsw.nsw.gov.au)

**RE: Draft NSW GAB Shallow WRP**  
29.08.19

Dear Sir/Madam,

I wish to express my concern that the Draft NSW GAB Shallow WRP genuinely achieves its objective to protect both the sources of groundwater and groundwater ecosystems dependent on this water. It is my concern that it fails to recognize that this ground water area is over allocated and used.

No amount of rule changes will effectively reduce the well recognized salinity problems in some areas or restore dying RAMSAR listed wetlands as required by this WRP. The amount of water targeted for removal in this draft plan is too high.

It should be reduced to an amount underpinned by proper considerations of the interconnectivity of surface and groundwater systems and the importance of recharge for ground waters accumulated over millennia.

Whilst drought conditions may be stated as prevailing currently in NSW it is likely that this will be the way of the future as our Murray Darling Basin dries out further with predicted reduced amount of rainfall. All draft Water Resource Plans, including the NSW GAB Shallow must have the capacity to take account of changing climatic conditions and work as well integrated plans to manage these changing conditions.

The WRP fails to properly protect planned environmental waters as it moves along the river. In its current draft I have no confidence that the intent of Murray Darling Basin management objectives to achieve sustainable water use and restore good ecological function to the whole system will be met.

The final NSW GAB Water Resource Plan must recognize that this is a long term process after years of European over use of water and polluting land uses both in surface and ground systems. In the interest of all Australians, I trust that the final NSW GAB Water Resource Plan will fully reflect the objects of the legislation that guides it for the benefit of both current and future residents along the river and for visitors.

Yours sincerely

Cathy Merchant

PS There is some confusion on your website as on one page this WRP is stated as on exhibition but not on the documents page so I hope you can accept my late submission.