

PO Box 216, DUBBO NSW 2830 ph 0428 817 282 email inlandriversnetwork@gmail.com web inlandriversnetwork.org ABN 34 373 750 383

Department of Planning and Environment – Water PO Box 717 Dubbo NSW 2830 northwestern.wsp@dpie.nsw.gov.au

Wednesday 9 August 2023

Submission on the Draft North Western Unregulated and Fractured Rock Water Sharing Plan

Introduction

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

IRN notes that a number of reserves have been gazetted in North Western NSW with significant water features including Groundwater Dependent Ecosystems (GDEs). IRN has major concerns that a sufficient share of water has not been dedicated to benefit environmental assets in the region, particularly in the context of climate change impacts.

The Water Sharing Plan (WSP) for the North West area of NSW is complex and unlike any other WSP:

- 1. The area is outside the Murray Darling Basin yet not a coastal catchment.
- 2. The WSP shares part of the same area with two other WSPs the Great Artesian Basin (GAB) WSP, and the GAB Shallow WSP. Over part of its area the Plan is like a sandwich, with a slice of surface water on top, a filling of GAB in the middle and a thick slice of fractured rock underneath. The GAB filling is not part of this Plan, but the alluvium over it and the fractured rock under it are parts of the Plan.
- 3. The NW WSP covers the most arid part of NSW.
- 4. There are no named rivers, only named creeks and lakes that are generally dry.

RECOMMENDATIONS:

1. The WSP map be amended to show the exposures of fold belt rock (basement) in the Tibooburra-Milparinka area (confer with the Geological Survey of NSW).

2. The Groundwater Dependent Ecosystems map be amended to show GDEs associated with the Tibooburra-Milparinka basement exposures.

3. IRN supports the merging of the fold belt rocks, but the Devonian porous aquifer rocks of the Bancannia Trough should be treated separately.

4. Surface water LTAAEL should be specified for each of the 5 separate catchments.

5. The groundwater LTAAEL of 60,000 ML has been wrongly calculated. The volume has been rounded up from a calculation of 4% of 212.4 mm multiplied by 64,960 squ km, the entire area of the NW WSP. In fact infiltration into fractured rock aquifers will only occur in about a quarter of that area. In the remainder the infiltration will be into the shallow GAB or GAB, not part of the NW WSP. The current usage of 10,203 ML may be close to maximum. 6. A map showing the boundaries of the Cooper Ck, Bulloo and Lake Frome catchments is needed in Part 8.

7. Part 8 needs an introduction to explain its aims. The legalese language in Part 8 is opaque.8. Consultation with Aboriginal people needs to be completed, in particular in the Tibooburra area.

9. The Background document should be updated (include conferring with the Geological Survey of NSW, and study of stream flow directions).

Key Issues:

1. Area of Fractured Rock Outcrop

In the map that accompanies the existing (2011) NW WSP, the fractured rock aquifers are defined as parts of the Adelaide, Kanmantoo and Lachlan Fold Belts. That nomenclature is 30 years out of date. Sensibly the 2023 draft merges the 3 fold belts into a single fractured rock entity that can be referred to as "basement". Almost all of the basement (fold belt) areas have similar characteristics in terms of acting as fractured rock aquifers. The exception is the Bancannia Trough which is discussed below.

It is important to know where the basement rocks come to the surface and also where they are at very shallow depths, because these are the areas where groundwater will be taken from the fractured rock aquifers.

In discussions with DPE officers on 18 July and 25 July 2023, IRN member Brian Stevens pointed out that there are extensive outcrops of basement rocks in the Tibooburra-Milparinka area that are not shown on the map that accompanies the 2023 draft WSP. In addition to potential for fractured rock groundwater, these outcrop areas have implications for groundwater-dependent ecosystems and for sites of Aboriginal significance and in the case of Depot Glen, great historical significance.



Figure 1: the basement inliers near Tibooburra and Milparinka.

2. LTAAEL Surface Water

The current annual extraction of surface water in the NW WSP area is very small (787 ML basic landholder rights and licenced), mostly stock and domestic. The limit of take proposed in the 2023 draft is significantly larger (2859 ML).

The LTAAEL is based on 10% of the mean average rainfall measured at the Tibooburra airfield. Mean average rainfall at Tibooburra airfield is 212.4 mm per year, while modal average is 167.4 mm. The difference results from the uneven nature of the rainfall, with years of drought and occasional years of deluge. The limit on annual take of surface water should not be calculated using mean average in such an environment. Nor should it be based simply on rainfall since some rain does not produce runoff and extreme evaporation needs to be allowed for. In view of the shortage of data on surface water volumes in the streams of this region and the Water Management Act's requirement to put environmental needs ahead of extractive users, a very conservative approach to setting LTAAELs is needed.

3. The Various Catchments and LTAAEL

In the 2023 draft the NW area is treated as a single water source for surface water and for groundwater from fractured rocks. But it is made up of at least 5 separate catchments:

- 1. the Cooper Creek catchment
- 2. the Lake Frome catchment
- 3. The Bulloo catchment
- 4. the Lake Bancannia catchment

5. the Salt Lake-Lake Yantara-Cobham Lake catchment, which might in fact comprise more than one catchment.

There is a huge gap between the current volume of extraction and the proposed LTAAEL, especially for groundwater. If land use continues as at present there is not likely to be any problem. However, the most probable change in land use would be a mine or a gas plant. In either case that new user would be situated in one catchment but would be eligible to take the amount of surface water and groundwater available for the entire NW area. This would most likely cause huge environmental damage in that particular catchment.

Each of the catchments should be defined and a locationally appropriate LTAAEL calculated and assigned to each catchment.

4. LTAAEL for Groundwater

Annual extraction of groundwater from the fractured rock aquifers is 10,203 ML (basic landholder rights and licenced). The proposed limit is 60,000 ML, a huge increase.

There is a <u>major omission/error</u> in calculating the LTAAEL for groundwater. It is based on 4% of average annual rainfall infiltrating into the fractured rock aquifers (2023 Background document). To calculate the volume available it is necessary to multiply the 4% rainfall in mm, by a measurement of area. Taking the whole area of the NW WSP, i.e. approximately 65,000 squ km, multiplied by 8.5 mm gives a volume of approximately 55,000 ML.

The problem is that only about a quarter of the WSP area is occupied by outcropping rocks of the fold belts. It is only those areas in which infiltration will occur into fractured rock aquifers. The rest of the area is covered by the GAB, which on DPE's own statement does not connect with the underlying fold belt aquifers. Any infiltration will go into the GAB, a different WSP. The LTAAEL should be reduced to no more than 15,000 ML or less. Also it is only the exposed or very shallow areas of the fold belt rocks that will be pumped, so allowing 60,000 ML in only a quarter of the WSP area would be most inappropriate, or disastrous.

5. Inadequate Maps

The single map supplied with the 2023 draft does not show the basement inliers of the Tibooburra-Milparinka area.

The GDE map in the background report does not show GDEs in the Tibooburra-Milparinka area.

Part 8 specifies limitations on the hydrological catchments of: Cooper Creek, Lake Frome, and Bulloo, but there is no map showing the boundaries of these catchments.



Figure 2. The configuration of Orogens (Fold Belts), from Burton (2010).

6. Connectivity and Confusion

In the 2023 Background document it is stated that there is little connectivity between the GAB and the basement rocks. Convincing evidence is the difference in water quality between the two. There is another statement that is not so convincing:

"There is likely to be only minor movement of groundwater to the fold belts from alluvium associated with surface water systems within the plan area because of the relatively low permeability of the fold belt rocks."

If this is true then the water in the fractured rock aquifers is fossil water that is not being replenished. But there is another statement in the Background document, see below, that discusses recharge for the fractured rock aquifers. So, does this infiltration avoid the alluvium?

"We have determined recharge for the plan area based on an infiltration rate of 4% of the long-term average annual rainfall"

7. Critical False Statement in the 2023 Background Document

"Surface water flow in is intermittent and drainage is towards central Australia and Lake Eyre."

The above incorrect statement is repeated from the 2011 Background document. Only the watercourses in the Lake Frome catchment drain towards Central Australia. In the other 4 or more catchments listed above, the drainage is internal, the water goes nowhere outside the catchments, certainly not towards Central Australia. This statement creates doubt about the level of understanding of DPE officials.

Another statement that is not false, but outdated:

"The plan also manages the groundwater resources within the rocks of the Adelaide, Lachlan and Kanmantoo fold belts. Most of these rocks are buried beneath younger sediments that form the Great Artesian Basin (GAB) and an area of porous rock that forms the Bancannia Trough, a sub-basin consisting of sandstone and siltstone (Figure 2). Unconsolidated sediments associated with surface water features also extend over the Adelaide and the Kanmantoo fold belts as well as the adjacent water sharing plan areas of the GAB and GAB Shallow."

The configuration of fold belts (now referred to as orogens) was radically up-dated in the 1990s after aeromagnetic data were obtained. The Lachlan Fold Belt (Orogen) does not extend into the NW WSP area. Much of the area is occupied by the Thompson Orogen. This does not matter in a practical sense since all of the fold belts are now merged in terms of groundwater source.

The quote above also raises the subject of unconsolidated sediments over fold belt rocks and over GAB sediments. These are a potential water source, but not dealt with in this WSP. In fact it would have been better if all of the rocks and sediments in the NW area had been dealt with in a single WSP, including the GAB and GAB shallow aquifers.

8. Misleading Figure 2 of the Background Document

A schematic (Figure 2 of the Background document) showing layering of groundwater sources is quite misleading, especially as it shows the Bancannia Trough. A better depiction of the Bancannia Trough is shown below.



Figure 3. A more realistic view of the Bancannia Trough

9. The Bancannia Trough

Drill hole Bancannia South No. 1 was drilled in 1968 through the whole thickness of the Bancannia Trough sedimentary sequence. The hole intersected 128m of Cainozoic sediment, then 33m of Cretaceous GAB sediments. Both the Cainozoic and the Cretaceous sediments included much porous sand. From 161m to almost 3400m the hole went through Devonian sedimentary rocks. These are flat-lying and there are porous intervals down to 2134m. Fresh and brackish water was found between 1234m and 1295m.

In terms of the NW WSP, the Cainozoic sediments are included in this plan, the Cretaceous GAB sediments are not, and the porous Devonian sedimentary rocks are also included in the NW WSP:

"all rocks of Devonian age and older within the buried areas of the groundwater source boundaries shown on the Plan Map".

This is obviously a complex situation with most of the 3400m depth included in the NW WSP, but a 33m interval not included. In addition the Devonian section is porous rock, not fractured rock, and has not been specifically regulated.



Figure 4. Location and extent of the Bancannia Trough.

10. Floodplain Harvesting

The NW WSP provides no regulation regarding floodplain harvesting. Such activity is likely to have very detrimental effects on ephemeral watercourses and lakes, of which there are many in the region.

11. Consultation with Aboriginal Groups

IRN has been informed that consultation with Barkantji has taken place recently, after the publication of the draft WSP, but there has so far been no consultation with other Aboriginal groups. IRN expects that such consultation should take place before a draft WSP was released, and that the outcomes of the consultation would appear in the draft. Consultation with other Aboriginal groups with an interest in parts of this region should occur before the WSP is finalised. One outcome of such consultation would be identification of specific water sources of particular Aboriginal significance.

There is no specific allocation of water rights to Aboriginal groups in the draft WSP. However we know that the Aboriginal-owned Mutawintji National Park is at the source of a number of watercourses and the Devonian rocks there are the upturned edge of the Bancannia Trough, undoubtedly the intake beds for groundwater in the Trough. There are possibly Aboriginal people who should have rights to water in or from watercourses and to groundwater in this or other parts of the region.

12. Distance from Ramsar Sites vs distance from nationally-significant GDE Sites

The setbacks for groundwater take should be the same for nationally significant GDEs as it is for Ramsar sites unless a scientific basis for site-specific setbacks is available. IRN requests that any potential risk to the groundwater-dependent values of these ecosystems be avoided.

Similarly, the WSP should require substantial setbacks from any Aboriginal sites with values dependent on groundwater that are identified before or after making of the WSP.

13. Part 8 Confusing

Part 8 specifies restrictions in trades in and out of certain catchments (without defining the catchments or providing maps). The legalistic language involves double or triple negatives and is very difficult to understand. There should be an introductory paragraph to explain the aims of Part 8, and/or the lawyer who constructed this should be required to simplify the language.

14. Issues that are Unclear

The draft WSP does not clarify the status of town water for Tibooburra, nor does it provide any estimate of Harvestable Rights.

15. Monitoring, Evaluation and Reporting

Required under the Water Management Act, but has there been any in NW NSW?

For more information on this submission please contact IRN at: <u>inlandriversnetwork@gmail.com</u>

References

Burton G.R. 2010. New structural model to explain geophysical features in the northwestern New South Wales: implications for the tectonic framework of the Tasmanides. Australian Journal of Earth Sciences 57, 23-49.

Glen R.A., Korsh R.J., Hegarty R., Saeed A., Poudjom Djoumani Y., Costelloe R.D. and Belousova. 2013. Geodynamic significance of the boundary between the Thomson Orogen and Lachlan Orogen, northwestern New South Wales and implications for Tasmanide tectonics. Australian Journal of Earth Sciences 60, 371-412.

Stevens B.P.J. 1991. Northwestern New South Wales and its relationship to the Lachlan Fold Belt. Geological Society of Australia, Abstracts 29, 50.



Pastoralists' Association

of West Darling Inc.

Registered under NSW Government Fair Trading

10th August, 2023.

Draft water sharing plan for the North Western Unregulated and Fractured Rock Water Sources 2024

The Pastoralists' Association of West Darling (PAWD) has represented the interests of pastoralists in western NSW since 1907. Western NSW is a low rainfall semi arid environment, and our members typically graze livestock on native pastures, made possible by access to limited surface and underground water sources for stock and domestic use. It is imperative that the water resources are shared equitably between all stakeholders, including the environment, as there is not sufficient water availability to overcome the impact of excessive extraction of water by any one stakeholder. Accordingly, PAWD offers the following feedback on the Draft water sharing plan for the North Western Unregulated and Fractured Rock Water Sources 2024 (Draft Plan), and water use in western NSW more generally.

Stock and domestic water in western NSW is typically drawn from excavated earth dams or sub artesian bores (and wells) ranging in depth from 50 feet to more than 500 feet. Earth dams outnumber bores by a ratio of approximately five to one. There is a small number of artesian bores from 1,100 to 2,200 feet deep that flow water to the surface from Great Artesian Basin aquifer in the North Western area. Other sources of water include repurposed mine shafts, large waterholes in creeks, ephemeral lakes and natural springs. Bores and wells typically draw water from porous rock aquifers and alluvial aquifers. In all probability, bores and wells that draw water from fractured rock aquifers in the North Western area are in the minority, which raises the question as to whether water extracted from bores and wells that do not penetrate fractured rock water sources are accounted for in the Draft Plan.



Figure 1: typical excavated earth dam in western NSW.

ADELAIDE ROAD, BROKEN HILL, NEW SOUTH WALES 2880 POSTAL ADDRESS: P O BOX 279, BROKEN HILL NEW SOUTH WALES 2880 TELEPHONE: (08) 80873322 Email <u>pawd01@bigpond net.au</u> As a starting point, the <u>Objects</u>, and more specifically the <u>Water management principles</u> of the Water Management Act 2000 are an excellent guide for the implementation of fair and reasonable water sharing arrangements right across NSW, including the area covered by the North West Water Sharing Plan. The water management principles are as follows:

(1) The principles set out in this section are the water management principles of this Act.

(2) Generally-

(a) water sources, floodplains and dependent ecosystems (including groundwater and wetlands) should be protected and restored and, where possible, land should not be degraded, and

(b) habitats, animals and plants that benefit from water or are potentially affected by managed activities should be protected and (in the case of habitats) restored, and

(c) the water quality of all water sources should be protected and, wherever possible, enhanced, and

(d) the cumulative impacts of water management licences and approvals and other activities on water sources and their dependent ecosystems, should be considered and minimised, and

(e) geographical and other features of Aboriginal significance should be protected, and

(f) geographical and other features of major cultural, heritage or spiritual significance should be protected, and

(g) the social and economic benefits to the community should be maximised, and

(h) the principles of adaptive management should be applied, which should be responsive to monitoring and improvements in understanding of ecological water requirements.

(3) In relation to water sharing—

(a) sharing of water from a water source must protect the water source and its dependent ecosystems, and

(b) sharing of water from a water source must protect basic landholder rights, and

(c) sharing or extraction of water under any other right must not prejudice the principles set out in paragraphs (a) and (b).

(4) In relation to water use-

(a) water use should avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, acidity, waterlogging, decline of native vegetation or, where appropriate, salinity and, where possible, land should be rehabilitated, and

(b) water use should be consistent with the maintenance of productivity of land in the long term and should maximise the social and economic benefits to the community, and

(c) the impacts of water use on other water users should be avoided or minimised.

(5) In relation to drainage management—

(a) drainage activities should avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, acidity, waterlogging, decline of native vegetation or, where appropriate, salinity and, where possible, land should be rehabilitated, and

(b) the impacts of drainage activities on other water users should be avoided or minimised.

(6) In relation to floodplain management—

(a) floodplain management must avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, acidity, waterlogging, decline of native vegetation or, where appropriate, salinity and, where possible, land must be rehabilitated, and

(b) the impacts of flood works on other water users should be avoided or minimised, and

(c) the existing and future risk to human life and property arising from occupation of floodplains must be minimised.

(7) In relation to controlled activities—

(a) the carrying out of controlled activities must avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, acidity, waterlogging, decline of native vegetation or, where appropriate, salinity and, where possible, land must be rehabilitated, and

(b) the impacts of the carrying out of controlled activities on other water users must be avoided or minimised.

(8) In relation to aquifer interference activities—

(a) the carrying out of aquifer interference activities must avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, acidity, waterlogging, decline of native vegetation or, where appropriate, salinity and, where possible, land must be rehabilitated, and

(b) the impacts of the carrying out of aquifer interference activities on other water users must be avoided or minimised.

PAWD suggests that all Water Sharing Plans in NSW should adhere to the water management principles in the Water Management Act 2000, as this action would automatically ensure equitable resource sharing between all stakeholders, including the environment.

Water supply infrastructure and pastoral enterprises in western NSW have been built on the basis of a reliable supply of water from creeks, of which there are many in the North Western Water Sharing Plan area. These creeks are critically important sources of water for stock and domestic supply for many pastoralists, and in times of drought a timely flow event that fills water storages greatly reduces the impact of drought on family faming businesses. Excessive extraction of water in the upper reaches of creek catchments can have a negative impact on the volume of water that reaches downstream stakeholders and ecosystems.

Surface water capture can proceed in the Western Division without any consideration of downstream stakeholders due to the oversight of failing to apply harvestable rights provisions in line with those applied in the Central and Eastern Divisions of NSW (where respectively 10% and 30% of rain that falls on a property can be captured). PAWD absolutely supports and encourages pastoralists' efforts in improving their land and businesses, but this should not come at the expense of other stakeholders or the environment. Accordingly, it is recommended that regulations concerning harvestable rights in the Western Division be reviewed, with the intent being to ensure equitable water sharing between all stakeholders.

For many years surface water use regulations in western NSW (including the area covered by the North West Water Sharing Plan) were summarised in a document published as a hard copy and online by the NSW Government, titled "Farm Dams in the Western Division of NSW". This document in part stated:

"The size of farm dams is not restricted in the Western Division, unlike other areas of the State, for several reasons:

- in many places runoff water does not reach major rivers;
- runoff events are usually few;
- the amounts of water intercepted are not likely to significantly affect natural resources; and
- because most properties are already fully watered for stock and domestic purposes.

Therefore the harvestable rights provisions of the Water Management Act 2000 do not apply in the Western Division."

PAWD suggests that these dot points (above) are counterproductive when it comes to legislating to protect the interests of stakeholders and the environment in the Western Division.

The statement that *"runoff water does not reach major rivers"* demonstrates a lack of understanding of the environmental and agricultural importance that terminal floodplains and ephemeral wetlands have in the Western Division. There areas are ecological hotspots and highly productive from a pastoral perspective, but only if they continue to receive stream flows that are essential for life.

The statement that "runoff events are usually few" is why water extraction from minor (1st and 2nd Order) streams in the Western Division should be included in a regulatory framework, otherwise upstream stakeholders could harvest all minor stream flows (in association with Harvestable Rights provisions). The benefits potentially generated by excessive upstream extraction could be outweighed by the negative impacts on agriculture and the environment further downstream.

The statement that *"amounts of water intercepted are not likely to significantly affect natural resources"* is inaccurate. In stream gradients in the Western Division are generally gentle; therefore earthworks that can intercept a significant amount of water are easily constructed with modern earthmoving machinery which currently exists in western NSW.

The statement that *"most properties are already fully watered for stock and domestic purposes"* ignores the fact that construction of earthworks to extract surface water is ongoing in western NSW. There is no provision in the relevant Legislation to limit the number, concentration or design of water storages, or the volume of water that may be harvested. Consideration should be given to the volume of water required for stock and domestic purposes, and extraction of water from surface sources significantly in excess of reasonable stock and domestic requirements should be discouraged.

Whilst current Legislation affords a measure of control over construction of water storages on 3rd (and higher) Order streams in the Western Division, the cumulative impact of earthworks on 1st and 2nd Order streams is such that the volume and frequency of stream flows in 3rd (and higher) Order streams can be negatively affected. Stream flows may not make it past upstream structures in lighter rainfall events, and heavier rainfall events that facilitate stream flows along the full length of ephemeral streams in the Western Division are very infrequent. This necessitates the adoption of appropriate water sharing guidelines, in order that all stakeholders have the opportunity to share this limited and important resource.

"Farm Dams in the Western Division of NSW" also states "where [some] dams existing prior to 1 January 1999 now require licensing, the process has been streamlined by having advertising and objection provisions waived". This is unreasonable. Downstream water users should have the opportunity to object to the presence of upstream structures that unfairly impact on stream flows. Furthermore, as stakeholders cannot be expected to see advertisement of license applications in print media or find it online, it should be a requirement for the regulator to notify downstream stakeholders directly when applications for surface water licenses are received.

Inexplicably, "Farm Dams in the Western Division of NSW" is no longer available online, and clarification regarding its continuance as the relevant reference for stakeholders in the Western Division is required.

General recommendations pertaining to water use away from major rivers in western NSW:

- The region west of the Paroo Darling Rivers should be exempt from the requirement to have proposed water extraction works (eg: excavated earth dams) assessed for fishway installation by DPI Fisheries. Ephemeral streams (creeks) in western NSW typically do not run on more than a handful of days in any one year and do not contain fish. Potentially requiring pastoralists to install a fishway costing several hundred thousand dollars on an excavated earth dam where fish are not naturally present is completely nonsensical.
- Water taken from an ephemeral stream must be bywashed back into the same stream once the associated excavated earth dam is filled. Diverting water into another stream or across the landscape instead of allowing it to continue down the original watercourse will negatively impact downstream water users and water dependent ecosystems.
- NSW Water must ensure that licence applications are processed promptly. Pastoralists in western NSW have sometimes been frustrated by the length of time taken to approve a works application. The flow-on effects of lengthy approval times are delays in works completion and potentially missing an opportunity to fill a dam before a rain event or drill a bore whilst a drill rig is in the area.
- All downstream water users on ephemeral streams in western NSW must be contacted directly prior to
 issue of a licence. In remote areas without access to print media and poor digital connectivity it is
 unreasonable to expect that pastoralists will be aware of a water licence application that may affect
 their water security. Equally, it is unreasonable to expect pastoralists to monitor online portals for
 licence applications that may affect them on a regular basis for the rest of their working life. Some
 pastoralists have been disadvantaged because a water licence has been issued for upstream works
 without their knowledge, which is unacceptable.
- DPI Water must make a better effort to engage with and educate landholders. It is unreasonable to expect landholders to be compliant with water regulations when the regulators are not actively engaging with stakeholders in the community.

Feedback on the content of the Draft Plan:

PAWD notes that river redgums along major creeks were defined as a groundwater-dependent ecosystem in the <u>online information session</u> of the 18th of July, and that the Draft Plan proposes to restrict or prohibit new groundwater water supply works (bores) within 2000m of mapped groundwater-dependent ecosystems. This is a major stumbling block in the Draft Plan. In many instances landholders will seek to drill bores within 2000m of river redgum ecosystems along major creeks, and PAWD seeks to ensure that this clause is removed from the Draft Plan. In any case, a bore that will typically be several hundred feet deep will not have a negative impact on the wellbeing of river redgum trees.

With reference to existing surface and groundwater extraction in the North West Area, there remains a degree of stakeholder confusion as how the Draft Plan interacts or affects the extraction of water for stock and domestic requirements.

With particular reference to requirements for water to satisfy basic landholder rights in the Draft Plan, Part 3, Division 1, 12 (b) states that *"680 ML/year in the North Western Water Source"* is the amount of surface water required to satisfy domestic and stock rights. PAWD is concerned that existing surface water extraction in the North West Area may already exceed this volume. Accordingly, further clarification is required.

Given that the Draft Plan is not to come into force until 1 July 2024 there is time available to undertake further consultation with PAWD in order that a Water Sharing Plan that is fit for purpose is ultimately adopted. PAWD would welcome the opportunity to facilitate a meeting between the NSW Department of Planning and Environment - Water Group and affected stakeholders in Broken Hill to discuss the Draft water sharing plan and resolve any issues that arise.

PAWD supports the adoption of rules and guidelines that underpin the fair and equitable sharing of this scarce and critically important resource between all stakeholders. Thank you for the opportunity to make a submission on the Draft water sharing plan for the North Western Unregulated and Fractured Rock Water Sources 2024.

Councillor.