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Wednesday 17 July 2019

Comments on Draft Namoi Alluvium Water Resource Plan

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 welcomes the opportunity to provide comments on the Draft Namoi Alluvium Water Resource Plan (draft WRP).

Background

IRN submitted substantial comments to the Status and Issues Paper on the Namoi Alluvium Water Resource Plan released in 2017.

We noted with concern that recovered groundwater levels have declined from the pre-development levels and that rules for reducing extraction in the Lower Namoi Alluvium were not being met.

The decision that ‘*groundwater levels can stabilise at a lower level under a new pumping equilibrium*’¹ has not been discussed in the draft WRP.

The draft WRP is based primarily on the attempt to match water sharing plan rules with the requirements of the Basin Plan without recognising that groundwater levels in some places have already permanently declined from the pre-development levels.

IRN considers that the proposed introduction of a ‘variable’ rule for extraction limits in the Lower Namoi, Upper Namoi and Peel Alluvium groundwater sources will cause the continued decline in recovery of groundwater levels in these aquifer systems. This is not sustainable water management.

¹ Namoi Alluvium Status and Issues Paper p20

The draft WRP states that the long-term average annual extraction limits (LTAAEL) specified in the Namoi Alluvium Water Sharing Plan (WSP) *represents a fraction of this water in these groundwater sources*.²

However, this does not explain why there has been a permanent drawdown of the water levels in the Namoi Alluvium caused by over-extraction.

The fact that the Sustainable Diversion Limit (SDL) in the Basin Plan for the Namoi Alluvium is equal to the LTAAEL in the WSP requires a strong set of management rules to prevent further permanent drawdown of the groundwater sources and loss of planned environmental water.

Groundwater Dependent Ecosystems (GDEs)

The Namoi Alluvium has been assessed to support high and very high value GDEs.

These include a high number of threatened flora and fauna species and high habitat diversity for a range of species, especially of birds and mammals.

The Lower Namoi Alluvium area is dominated by river red gum riparian and coolabah-river coobah-lignum woodland wetlands GDE communities. These communities are generally characterised by having a high number of threatened species, endangered ecological community, extensive connected riparian corridors and basin target vegetation species (MDBA, 2014) of coolibah, lignum and river red gums.

We do not support the direction being taken with proposed rule changes in the WSP. These will not protect the level of groundwater in the aquifer system identified as environmental water or prevent drawdown near high priority GDEs.

The 'variable' rule will impact on planned environmental water (PEW) near GDEs during dry times. This may have long term impacts on the health and resilience of these significant ecosystems.

Connectivity

The Namoi Alluvium resource description recognises the high level of connectivity with surface waters in most of the alluvium zones.

The Peel Regulated River Alluvium, Cockburn River Alluvium and Goonoo Goonoo Creek Alluvium management zones of the Peel Valley Alluvium as well as the Namoi and Manilla Regulated Rivers Alluvial Management Zone in the Manilla Alluvium are considered to be highly connected to their associated creek and rivers.

Depending on geology, topography, and local conditions these systems are likely to change between losing and gaining conditions.

The high level of hydraulic connection is recognised in the WSP rules. However, there is no consideration of rules to protect Held Environmental Water (HEW). The rules limit the extraction of groundwater but increase the reliance on surface water to meet the groundwater allocations.

² Namoi Alluvium Water Resource Plan p 35

The proposed rule change to ‘variable’ rules allowing 120% SDL extraction in the Upper Namoi and Peel Alluvium groundwater sources is likely to cause greater drawdown of surface water in lengths of the river systems that have losing conditions.

This will have an impact on PEW in the surface water sources and will not meet the Basin Plan objective of no net loss of PEW.

The remainder of the management zones in the Manilla Alluvium and Peel Valley Alluvium and as well as the Upper Namoi Tributary Alluvium are also considered highly connected to surface water however these systems are not managed as highly connected in the WSP because they are ephemeral.

These systems are likely to be further impacted in dry times with no rules to protect surface water connectivity.

Parts of the Upper Namoi Alluvium and Lower Namoi Alluvium are in varying degrees of hydraulic connection to surface water and are currently managed independently of the surface water sources.

However, it is noted that, if assessed, necessary local scale management options can be applied via Section 324 of the Water Management Act 2000 to address impacts on surface water from groundwater extraction.³

IRN considers this to be an inadequate response to the objectives of the Basin Plan.

The proposed rule change to ‘variable’ rules allowing 120% SDL extraction in the Upper Namoi and Lower Namoi does not recognise the fact that during dry times areas with hydraulic connections are likely to impact on surface water flows and the use of HEW to manage fish habitat and other purposes.

This proposed rule change will not protect groundwater PEW, connected surface water PEW or the use of HEW through hydraulically connected systems.

Risk Assessment

We note that the Lower Namoi Alluvium has a high risk to structural integrity, a high risk of groundwater extraction inducing connection with poor quality aquifers, a high risk of local drawdown reducing access by consumptive users and a high risk of groundwater extraction causing local drawdown impacting GDEs and instream ecological values.

The proposed rule changes in the WSP will not mitigate these risks but will further exacerbate them.

This is also the case for the various high and medium risks identified for the Upper Namoi and Peel Alluvium.

The proposed ‘variable’ rule does not reserve all water above the LTAAEL for the environment as PEW.

³ Namoi Alluvium WRP: resource description p 35

IRN does not consider these risks to be tolerable because the proposed mitigation measures and proposed rules in the WSP are not consistent with the objects of the Basin Plan.

The impacts of over-extraction of the Namoi Alluvium must be recognised and mitigated in the WRP.

Water Quality

The Water Quality assessment identifies that the Lower Namoi and Upper Namoi Zones 3,4,5 and 8 are at high risk of extraction causing a change in the beneficial use category, while the Peel Alluvium and Upper Namoi Zones 1,2 6 & 9 are at medium risk.

The measure for mitigating this risk is to limit seasonal drawdown in high risk areas.

A water management action and mechanism is to reserve all water above the LTAAEL for the environment as PEW.

The proposed 'variable' rule will achieve neither of these measures.

We note there is a knowledge gap for management of nutrient mobilisation, pesticides and other contaminants including pathogens entering the groundwater source.

There are no measures identified in the WRP to improve knowledge of these key water quality issues. Assessment of contamination by pesticides in the highly concentrated areas of irrigated cotton should be a key measure to improve knowledge of risks to water quality in the Namoi Alluvium.

Water Sharing Plan Objectives

IRN supports the broad environmental objective of the Namoi Alluvial Groundwater Sources WSP 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 maintain salinity levels and protect the structural integrity of the aquifers.

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 should also be included in the economic, social and cultural objectives.

Proposed Rule Changes

1. Variable rule

The Fact Sheet on proposed changes to the Namoi Alluvium WSP indicates that:

‘The annual permitted take for the Lower Namoi, Upper Namoi and Peel Alluvium groundwater sources is the sustainable diversion limit, modified each year based on rainfall at Narrabri, Gunnedah, and Tamworth respectively. The amount of actual rainfall is compared to average annual rainfall at each of those locations, and used to vary the annual permitted take by up to twenty percent of the sustainable diversion limit. In general, extraction exceeds the sustainable diversion limit in dry years and is below it in wet ones, and the variation aims to manage this effect.’

IRN understands that this rule change will allow for 120% of SDL to be extracted in dry years and 80% of SDL to be extracted in wet years.

However, this proposed new rule does not appear to be included in the draft Namoi Alluvium WSP on public exhibition for comment.

This proposed rule change occurred in Part 6 under the clause titled ‘Assessment of compliance with Basin Plan long-term annual diversion limit’, in the draft Murrumbidgee Alluvium WSP, draft Lachlan Alluvium WSP, draft Gwydir Alluvium WSP and the draft Macquarie-Castlereagh Alluvium WSP.

IRN has objected to this complex arrangement of climate adjusted annual permitted take because we consider it is not in keeping with the concept of LTAAEL and SDL and the protection of planned environmental water.

The proposed rule change that does not seem to appear in the draft Namoi Alluvium WSP, allows for a greater level of extraction during dry times, an action that paves the way for further permanent drawdown in the Namoi Alluvium.

The draft WRP claims that rules in the water sharing plan will manage high and medium risks in the Alluvium⁴. However, permanent drawdown of the water source is a direct reduction in planned environmental water.

This risk will not be managed through the implementation of the ‘variable’ rule in the Namoi Alluvium.

This proposed rule change has major implications on the availability of planned environmental water to support GDEs during dry times.

As noted above, the Lower Namoi Alluvium has a significant number of high risks including structural integrity, induced connection with poor quality aquifers and local drawdown impacted on consumptive users, GDEs and instream ecological values.

The measure for mitigating the risk of a change in the beneficial use category is to limit seasonal drawdown in high risk areas. The proposal to increase extraction beyond the SDL during dry times is counter to this mitigating measure.

The ‘variable’ rule will also not manage the risk of climate change. If there are an increasing number of dry years, the extraction of SDL plus increased take will become more the norm than the exception.

This rule relates entirely to irrigator behaviour between wet and dry years and has no role in managing risk or protecting planned environmental water in the Namoi

⁴ Namoi Alluvium Water Resource Plan Table 3-2 p 32

Alluvium. The water is generally not needed in wet years but must be shared carefully in dry years.

The application of the variable rule in the Namoi Alluvium is likely to increase a range of identified high risks, as outlined above.

IRN strongly objects to this proposed climate-adjusted annual permitted take because it will not meet objectives to protect environmental water or the integrity of the aquifers.

The annual permitted take for the entire Namoi Alluvium water source must remain at the SDL.

The variable rule is insupportable.

2. AWD Upper Namoi Zone 1

IRN is concerned that a local water utility has forfeited town water supply to be used for annual extraction at levels above the rules for other water sources in the Namoi Alluvium.

The severity of the drought and impact on town water supply (that has a higher priority under the NSW Water Management Act 2000) is a key issue for human critical needs.

IRN does not support the proposed rules in the WSP that allow for a unit share of 2.3ML and carry over up to 4.6ML in the Upper Namoi Zone 1.

This is not sustainable use of a scarce water resource.

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 alluvial aquifers was a subject of great importance when the first water sharing plans were being developed.

The fact that the Lower Namoi Alluvium has been impacted by a permanent drop in water levels heightens the importance of protecting recharge. The actual volume of planned environmental water has already decreased in these groundwater systems.

The timing of the availability of planned environmental water is critical during dry periods and the protection of a percentage of recharge is an important factor in protecting the integrity and water levels in alluvial aquifer systems. It is also critical for supporting high priority GDEs.

4. Increase in time period for LTAAEL compliance

IRN does not support the proposal to increase the time period over which compliance to the LTAAEL is assessed, to provide consistency across water sources. It is proposed to increase the compliance period from three years to five years

The Namoi Alluvium has a high level of risk across a number of criteria and needs to be monitored for compliance to rules more regularly, not less.

This proposal is particularly concerning in light of the proposed variable rule.

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

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

We do not support the Department of Industry proposal that LTAAEL compliance be standardised to a five-year rolling average period in all Murray–Darling Basin water sharing plans.⁵

This should be standardised to a three-year rolling average period.

5. Compliance triggers

IRN does not support the current triggers for requiring action to ensure compliance with the long-term average annual extraction limit:

5% for the Upper and Lower Namoi groundwater sources,
10% for the Manilla Alluvial, Quipolly Alluvial, Currabubula Alluvial and Quirindi Alluvial groundwater sources, and
15% for the Peel Alluvium groundwater source.

The trigger should be 5% in all water sources to ensure compliance with the SDL.

Conclusion

IRN does not consider that the draft Namoi Alluvium 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:

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⁵ Frequently Asked Questions Fact Sheet p 2