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SUBMISSION

Draft Lachlan Alluvium Water Resource Plan

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Introduction

The NSW Irrigators' Council (NSWIC) is the peak body representing irrigators and the irrigation industry in NSW. Our Members include valley water user associations, food and fibre groups, irrigation corporations and commodity groups from the rice, cotton, dairy and horticultural industries. Through our members, NSWIC represents 12,000 water access licence holders in NSW who access regulated, unregulated and groundwater systems.

NSWIC engages in advocacy and policy development on behalf of the irrigation sector. As an apolitical entity, the Council provides advice to all stakeholders and decision makers.

This submission represents the views of the Members of NSWIC with respect to the draft Lachlan Alluvium Water Resource Plan. However, each member reserves the right to independent policy on issues that directly relate to their areas of operation, expertise or any other issues that they deem relevant.

Overview

NSWIC welcomes the Draft Lachlan Alluvium Water Resource Plan (WRP) as part of the first tranche of WRPs in NSW to be released for public consultation. NSWIC acknowledges that the development of WRPs is a key commitment of the NSW Government's obligations under the Murray-Darling Basin Plan. This submission includes the viewpoints of both those in the Lachlan area who are directly impacted by this WRP, but also irrigators from across NSW potentially subject to the precedence or influence of this WRP. The focus of this submission will be on state-wide implications of this WRP.

WRPs are to outline how each region aims to achieve community, environmental, economic and cultural outcomes, but also ensure that state water management rules meet Basin Plan objectives. Thus, WRPs have important considerations at both a regional and state-wide level. The Basin Plan 2012 (Chapter 10) outlines the requirements for WRPs. The WRP must comply with Chapter 10 requirements for it to be accredited under Part 2 Division 2 of the *Water Act 2007 (Cth)*. This includes compliance with the Sustainable Diversion Limit (SDL), water trade rules, planning for environmental watering, water quality objectives, measuring and monitoring, and arrangements for extreme weather events. Whilst Water Sharing Plans remain as the key regulatory instrument, WRPs are of critical importance to irrigators and the irrigation industry as they also underlie operations and practices, and have potentially large economic and social impacts.

Submission

In this submission, we focus on the areas of most concern to our members, both in the Lachlan Valley and state-wide.



The overarching recommendation of this submission is that while NSWIC acknowledges the need for consistency in approach across the state, the methods, processes, standards and thresholds of one WRP should not be replicated inflexibly between valleys, as the issues, context and requirements of each valley are context-specific. Whilst there is neatness in applying a consistent methodology or format, extreme care must be taken to ensure that the methods are the most effective and beneficial, particularly in relation to water users. NSWIC strongly encourages DoI-Water to undertake an increased level of public participation in decision-making at a local level, and consult with local groundwater licence holders across the state to develop the most suitable practices for each area. This approach acknowledges that each aquifer and groundwater source (and usage of that resource) is unique, and values the local practical and operation knowledge held within these areas.

Based on this overarching recommendation, the key issues raised by NSWIC in this submission are:

1. Improved readability is needed to ensure clarity and reduced likelihood of misinterpretation
2. The risk assessment methodology may lead to inaccurate calculations of risk
3. Further studies into Groundwater Dependent Ecosystems are needed
4. The rainfall relation model may not be appropriate in all areas
5. Water users must be consulted if there are any impacts from ongoing consultation with Indigenous nations on the ability of entitlement holders to utilise their entitlements.
6. Basic Landholder Rights require clarification
7. Overallocation and Supplementary License Triggers must be tailored
8. Greater community participation is required, particularly in relation to Extreme Events Policy.

1. Improved readability is needed to ensure clarity and reduced likelihood of misinterpretation

To read this WRP requires extensive cross-referencing across a portfolio of relatively complex documents. NSWIC is concerned that this complexity will make it difficult for stakeholders to be cognisant of all requirements in the WRP. Although Water Sharing Plans are the main document governing licence holders in the management and utilisation of their entitlements, it is reasonable that all stakeholders should be able to readily understand and access information in a WRP. This would ensure there is comprehension, clarity and accessibility of the requirements of the WRP across stakeholders.

The complexity of the portfolio of documents also broadens the scope for interpretation. Since the purpose of the WRP is to provide definitive rules and plans, there is concern that large scope for interpretation may create uncertainty and confusion.

Whilst it is acknowledged that documents of this kind are inherently complex in nature, greater consideration is needed to simplify the format and availability of information to be accessible. NSWIC is concerned that the WRP as it currently stands appears overwhelming and confronting. NSWIC acknowledge, and appreciate, that the intention of the Fact Sheets and FAQs was to address this issue of readability. We encourage DoI-Water to continue



developing these fact sheets, but to also focus on readability of the WRP itself. As primary principles of any WRPs, NSWIC submits that WRPs should be communicated in a manner where it is able to be effectively, easily and clearly understood by water users.

Recommendation: Where ever possible reduce the complexity of the WRP and provide additional explanatory materials for stakeholders. To reduce complexity, NSWIC encourages DoI-Water to consolidate multiple documents by incorporating sections of key supporting documents into the WRP where length of text permits, or provide hyperlinks to more easily guide the reader. Explanatory materials should be plain English, and prioritise key principles of accessibility, clarity, comprehension and simplicity.

2. The risk assessment methodology may lead to inaccurate calculations of risk

The methodology for risk assessment used in the Lachlan Alluvium WRP may lead to overstated assessments of risks. This is because:

- The approach to categorising consequences in the risk assessment methodology (as low, medium and high) based on percentiles means that there will automatically be groundwater sources considered in the high category.
- The consequence rating is determined on a state-wide basis rather than the particular groundwater area.
- The metrics are based on the number of users and the volume of extraction. As a result, larger groundwater sources will likely fall within the high consequence rating category regardless of the actual risk in the aquifer itself.

The result of using this methodology for risk assessment is that the risk outcomes in some groundwater sources will be over-stated simply because there is a higher volume of extraction or larger number of users. We acknowledge that the risk treatment pathway outlined in the Consolidated Risk Tables (p. ii – xiii, Risk Assessment for the Lachlan Alluvium Water Resource Plan Area) does take into account the management rules applied in the Water Sharing Plan to ameliorate the risk and that in the cases where the risk outcome is classified as High, the residual risk is identified as High – tolerable.

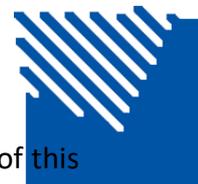
Recommendation: Amend the risk assessment methodology to reflect risk in the aquifer itself, using absolute rather than relative measures. Develop the most appropriate risk assessment methodology based on local recommendations.

3. Further studies into Groundwater Dependent Ecosystems are needed

NSWIC requests that all policy decisions regarding Groundwater Dependent Ecosystems (GDE) must be made through an evidence-based process, with evidence being appropriately reviewed, ground-truthed, and knowledge gaps filled.

NSWIC also requests clarification with regard to ‘high priority’ GDEs¹ compared to GDEs. This terminology is used in both the WRP and the proposed WSP but is not consistent. GDEs are

¹ Example - DRAFT Water Sharing Plan for the Lachlan Alluvial Groundwater Sources 2019, S9(2)(a)



defined and mapped, but there is no definition of 'high priority' GDEs. The inclusion of this terminology implies that there are some GDEs that are more important than others and get treated with a higher priority than others. If this is not the case, the term 'high priority' needs to be removed from all documents and only reference GDEs as defined in the dictionary and as identified in the attached map schedule.

Greater certainty in the methodology underpinning identification of GDEs is required before this method can be used to predict whether groundwater extraction poses any risk to a GDE which is not managed by the existing WSP rules.

Historically, provisions for further studies and reviews of recharge have been included in Water Sharing Plans but have not been completed. This has resulted in policy creep where the status quo has been maintained without justification. Consequently, any water greater than the extraction limit has become Planned Environmental Water by default.

The risk for water users is that if the Department does not undertake reviews (as have been committed to in the past) insufficient information is known about GDEs to be able to determine how GDE management should interact with water users. Specifically, the degree of reliance of GDEs and which specific aquifer system that GDE depend upon, are crucial pieces of information in order to best manage both the GDE and water usage. **The result of delaying reviews is that a precautionary approach is taken which does not pay equal caution to the potential social or economic impacts of the rules of groundwater extraction.**

NSWIC recommends that the WRP should facilitate further reviews to:

- Improve knowledge gaps
- Validate existing data
- Quantify the degree of reliance

Unless the evidence-base is ground-truthed, water users should not be impacted, and GDE identification should be removed. NSWIC is respectful that if water extraction is proven to have a significant impact on groundwater, then water extraction rules will need to be amended. However, the onus to prove whether groundwater extraction poses any risk to a GDE should be on government agencies. Precautionary action should only be an interim measure whilst sufficient information can be captured. The longevity of this issue creates concern that precautionary principles may lead to policy creep where policies lack a robust methodology, and consequently have unreasoned social and economic impacts. Decisions made primarily based on vegetation mapping which are not ground-truthed are insufficient. Further reviews are urgently needed to better understand the nature and magnitude of the linkages between groundwater extraction and GDEs.

Recommendation: DoI-Water undertake an investigation into GDEs to improve the certainty of the evidence-base (improve knowledge gaps, validate existing data and quantify the degree of reliance GDEs have on groundwater) within the timeframe of the WSP to be implemented in 2019, and amend GDE provisions in the WRP accordingly.

4. The rainfall relation model for SDL compliance may not be appropriate in all areas



The proposed method for determining Annual Permitted take (APT) in the Lower Lachlan is the variable method of using the rainfall relationship model (with the annual extraction limit method being used in the Upper Lachlan and Belubula). NSWIC feels this is a logical proposal in some instances as many people (particularly in the Lachlan) use surface and groundwater conjunctively. However, this model is new and relatively untested, and may not be suitable to be applied to other valleys given that we are witnessing significant changes in the irrigation sector in some valleys. For this reason, **NSWIC does not endorse replicating this method to other valleys**, as consistency of methodology is not as important as ensuring accuracy and appropriateness of the method in each case. For future WRPs, NSWIC recommends that the method for determining APT must be valley-specific and determined based on consultation with local stakeholders.

The important considerations for this model, both within the Lachlan and if adopted in other areas of NSW, are outlined below.

Underlying crop type

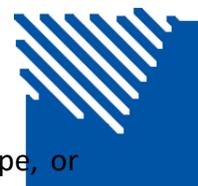
The irrigation sector is constantly evolving. Some areas (including the Lower Lachlan) are experiencing changes to the underlying crop type, which directly influences the demand (volume and seasonality/timing) for water. For example, in the Lower Lachlan there is a move away from seasonal cropping towards permanent plantings, such as almonds. This means that demand for water will not fluctuate as significantly as in the past, and irrigators will require greater continuity in water extraction. Thus, it is expected that water demand will become increasingly decoupled from rainfall. The relationship between rainfall and water demand must be a key consideration in choosing to adopt this model.

Distribution of rainfall

The areas covered under WRPs are large, and rainfall may vary considerably within one WRP. In the Lower Lachlan, modelling is based on annual rainfall at Hillston which is not representative of the variable rainfall across the area. Within the Lachlan and if this model is to be replicated in other valleys, consideration must be given to: rainfall variability and distribution within the WRP area; where rainfall is measured; how many measuring points are required; the timing and seasonality of rainfall; the ability (physical and regulatory) to capture rainfall; and long-term rainfall trends.

Caution is needed in the use of historical data for future projections

Under Schedule I, Table 4 (“*Application of the variable permitted take method for take from groundwater in the Lower Lachlan Alluvium SDL resource unit over a historical climate conditions*”) the Permitted Take is calculated as the average Permitted Take based on a 114 year period of rainfall at Hillston (mm) from the water years 1895-96 to 2008-09. The data shows that the average cumulative permitted take over that nominated historic period equals that portion of the SDL attributable to take from groundwater in Lower Lachlan Alluvium SDL resource unit (108 GL). This approach may



not be appropriate in valleys experiencing change in the underlying crop type, or future rainfall patterns until further data has been collected and analysed.

A process to explain compliance triggers is needed under the rainfall relation model

NSWIC has concerns that the processes and triggers for compliance issues under this model are inadequately developed. Water license holders need the certainty of knowing from the beginning what happens if there is a compliance breach (e.g. a review is requested). The use of groundwater when rainfall conditions are low may push a user over a compliance trigger unknowingly. NSWIC requests that compliance triggers and processes be outlined.

A provision for a review period is needed

A provision is required for a review of the rainfall relation method at a predetermined point in time. DoI-Water should reserve the right to amend this method if it is found to be ineffective when implemented. Flexibility must be retained to discontinue this model beyond 2029 if circumstances require.

NSWIC is concerned that the data for the rainfall relation method for all valleys was not provided during the Groundwater SAP meetings, and that DoI did not meet commitments to provide state-wide analysis. This does not allow stakeholders to have a clear understanding of the impact of this aspect of the proposal. NSWIC and Members strongly requests that stakeholders are provided with all available information at the earliest possible opportunity to best be involved in decision making, and to be able to share the local and operational knowledge of how polices will function on ground.

Since usage pattern is unique to each valley, the method to determine SDL compliance must be based on the specific needs of each valley. Whilst the rainfall relation model may be appropriate in this instance, **NSWIC does not endorse replicating this model across NSW**. Whilst NSWIC acknowledges that there is neatness in having a consistent methodology, this would not be beneficial. NSWIC advise that flexibility is needed.

Recommendation: DoI-Water should consult with local stakeholders in each groundwater source on the appropriateness of the rainfall relation model in that area to ensure the model captures local circumstances (e.g. underlying crop type and rainfall variability). This model should be subject to review at the conclusion of the WSP. NSWIC suggests that when a new untested methodology of this kind is implemented, that a complimentary tested methodology is simultaneously implemented to provide a control measure to evaluate the accuracy of a new methodology.

5. Water users must be consulted if there are any impacts from ongoing consultation with Indigenous nations on the ability of entitlement holders to utilise their entitlements.

NSWIC welcomes and respects the consultation with Indigenous people and organisations as part of the development of WRPs. NSWIC understands that consultation with Indigenous



stakeholders is ongoing. If this consultation results in the development of any new proposals which may impact the rights or ability of water access entitlement holders to utilise their entitlements, then there must be further consultation with license holders before any new provisions are developed.

Recommendation: License holders should be consulted with if there is to be any further changes to the rights or ability of water access entitlement holders to utilise their entitlements.

6. Basic Landholder Rights require clarification

NSWIC members seek clarification on whether the definition of basic landholder rights has been changed. Clarification is needed as to whether stock and domestic rights are recognised under basic landholder rights. Clarification is also needed for the definition of “reasonable use”. DoI-Water has advised that as long as a property overlays the groundwater source, the property owner is entitled to utilise groundwater as a basic landholder rights even if the bore isn’t located on the property. NSWIC requests clarification of this.

Recommendation: Clarification is needed on basic landholder rights.

7. Managing compliance with WSP and Basin Plan use limits

There are two main options for addressing non-compliance with either the WSP long term average annual extraction limit, or the Basin Plan SDL, which in the Lachlan WSP are outlined in Part 6, section 30:

1. Allocate water to all licenses and then reduce the allowable water account debit to limit usage
 - This would benefit the more active users, but also allows all licence holders the capacity to use or trade a known volume of their entitlement.
2. Reduce the available water determination (allocation) to all licences
 - This would disadvantage more active users, particularly in groundwater areas where there is significant over-allocation, such as the Upper Lachlan where entitlement is approximately 2x the use limit, because it would need to allow for carryover, and would assume that all allocation would be tradeable. In these circumstances the AWD would need to be very significantly reduced to ensure compliance with the use limit.

The position of NSWIC is that there should be no more than minimal impact, and the method should be guided by the recommendation of each groundwater source authority. The method to address overallocation must be valley specific and formed on the basis of local expertise. NSWIC offers to assist in seeking local expertise.

8. Greater community participation is required, particularly in relation to Extreme Events Policy



NSWIC firmly believes that the continual reduction in stakeholder involvement is becoming a critical issue, which risks the loss of valuable practical and operational knowledge that is integral to sustainable management of water resources.

Recommendation: Greater stakeholder participation in decision making, such as by requirements for representation on advisory panels to ensure practical and local knowledge resources are utilised. The WRP should include a clear process for how Critical Water Panels should be established, how they should operate, what transparency requirements are needed, and what communications and reporting are required.

Conclusion

NSWIC welcomes the Draft Lachlan Alluvium Water Resource Plan. NSWIC requests that DoI-Water respond to the aforementioned issues. It is crucial that flexibility is maintained between valleys, and that local expertise is best utilised in decision-making. NSWIC is happy to work with DoI-Water on any of the above issues.