Nature Conservation Council
The voice for nature in NSW

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Natural Resources Commission
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Submission to Review of *Water Sharing Plan for the Peel Valley Regulated, Unregulated, Alluvium and Fractured Rock Water Sources 2010*

The Nature Conservation Council of NSW (NCC) is the state's peak environment organisation, representing more than 150 member organisations. Together we are committed to protecting and conserving the wildlife, landscapes and natural resources of NSW.

Introduction

NCC welcomes the opportunity to participate in the Natural Resources Commission review of the *Water Sharing Plan for the Peel Valley Regulated, Unregulated, Alluvium and Fractured Rock Water Sources 2010* (the WSP).

It is noted that various changes have occurred to water planning in the Namoi catchment since this WSP was gazetted in 2010. These include:

1. The making of the *Water Sharing Plan for the Namoi and Peel Unregulated Water Sources 2012*
2. Separation of the WSP into four different plans under the Basin Plan Water Resource Planning process with proposed amendments 2019

A key issue for the Peel Valley is the town water supply for Tamworth Regional Council. The continued growth in demand requiring additional water storage is a key environmental impact on the Peel River system.

The approach to setting and managing the Long Term Annual Average Extraction Limit (LTAAEL) as described in the WSP Background Document 2010 has an emphasis on maintaining history of use rather than limiting use to a sustainable level of extraction '*to promote healthy and enhanced water dependant ecosystems'* as outlined in Cl 9 WSP Vision Statement.

There are a number of significant issues that cause the WSP to fail to meet the objects of the *Water Management Act 2000* (WMA) and the environmental objectives of the WSP. These include:

1. A loss in environmental benefits compared to management rules under the *Water Act 1912.*
2. Access to the Environmental Water Allowance for extractive purposes

The high connectivity with the Peel Alluvium and management of aquifer (general security) access licences has a potential impact on planned environmental water (PEW) and delivery of held environmental water (HEW) in regard to calculation of transmission losses.

NCC has major concerns about the management of floodplain harvesting (FPH) in the Namoi catchment. It is noted that FPH is included in the WSP in Cl 40 (2) (c) (iii) in regard to the calculation of the LTAAEL. The volume of extraction through FPH in this water source is yet to be determined.

NCC does not support this volume of water, once assessed, being added to the LTAAEL. It should be shared across the existing volume as modelled at the commencement of the WSP.

The calculation of and reporting on compliance with the LTAAEL during the life of this WSP has been highly deficient.

There appears to be a lack of reporting on the implementation of the WSP. It is unclear whether a number of significant amendments for the unregulated river have been implemented or carried over to the new amended plans.

The WSP has a number of complex management rules. There is concern that NSW Government resourcing and capacity to regulate the WSP is limited in the Namoi Region.

The proposed amendments to the WSP fail to meet the objects of the Basin Plan.

Tamworth Regional Council water supply

Tamworth Regional Council holds the largest licence in the Peel Valley of 16, 400 ML/yr.

It is noted that the WSP Background Document gives consideration to establishing two LTAAELs for this water source to take into account the scale of the utility demand and likelihood of growth in use.[1]

The growth in use of Tamworth City water supply has demonstrated not only a high likelihood, but the high consequences have already occurred.

An expectation that ongoing growth in use of Tamworth water supply can continue from the Peel River water source is not sustainable.

A separate LTAAEL may be a more realistic approach to managing this impact.

Chaffey Dam was raised to secure Tamworth water supply. The infrastructure was completed in 2016 in time to capture significant inflows and fill to the new water level. This increased volume has been used over a three year period and the dam is now very low. An announcement of an increase in the Dungowan Dam capacity will further decrease natural flow regimes in the Peel River system

It is concerning that 95 per cent of growth in use of Tamworth water supply is attributed to the Lower Namoi. This is an accounting method that bears no relationship to the source of the water supply. The environmental resilience of the Peel River system is under threat through this poor approach to water management.

The inclusion of only 5 per cent of growth in extraction by Tamworth City in the calculation of compliance with the Peel regulated river LTAAEL (cl 42) is a significant issue.

[1] NSW Office of Water, 2010. *Water Sharing Plan Peel Valley regulated, unregulated, alluvium and fractured rock water sources.* Background Document p 38

Compliance with LTAAEL

The WSP deals with the volume of LTAAEL at cl 39. The notes attached to (2) (a) of this clause demonstrate two different approaches to modelling the LTAAEL volume for the regulated water source.

One model run indicates a volume of 15,000 ML at the commencement of the plan. This also concurs with the model run for the Cap.

However, the model run for the period 1991 to 1998 indicates a volume of 16, 200 ML. This note in the WSP demonstrates an approach to locking in a history of use rather than defining a sustainable level of take that considers the needs of the river to maintain health and resilience.

The Background Document discusses a different 'reactive' approach to managing the Peel system for compliance with the LTAAEL compared to other WSP, including the Upper and Lower Namoi.

This is attributed to the impact of the enlargement of Chaffey Dam resulting in an immediate LTAAEL response '*even if the new enlarged dam has not filled and actual growth in extractions has not occurred*.'[2] The standard approach assumes automatic growth of use with an increase in storage. The Background Document surmises that this is not necessarily going to occur in the Peel.

However, as stated above. The increased storage capacity was used in three years. This appears to demonstrate an immediate growth in use.

The 'reactive' approach involves a comparison of the modelled 10 year rolling average of annual extractions with observed data from meters.

The assessment of average annual extraction against LTAAEL under Cl 41 allows for the comparison of the average of annual total extractions for the preceding ten water years with the modelled average over the same period.

There appears to be no reporting on this approach.

Compliance with the LTAAEL for the regulated Peel is based on further assessments if current modelled long term average annual extractions, minus 95% of the growth in extraction by the City of Tamworth has exceeded the LTAAEL by 3% or more.

NCC considers this approach to be highly inadequate and an unsustainable approach to managing water use in the Peel Valley.

It is also notes that under Cl 40 the calculation of LTAAEL and current levels of annual extraction includes FPH extractions. The volume of FPH extraction in the Peel is currently unknown and possibly further adds to the unsustainable use of water in this water source. As stated above the final assessed volume should not be additional to existing extraction limits.

Calculation of and compliance with LTAAEL is a key issue for the review of this WSP.

It is noted that the amended regulated Peel WSP bases the LTAAEL on the Cap baseline conditions.

The NRC would need to review the modelling approaches taken for this water source.

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[2] Ibid

Rules in the WSP

1. Regulated

1.1 Access to uncontrolled flows

It is noted that there has been no supplementary licences allocated to the regulated Peel River. Access to uncontrolled flows occurs under general security entitlements as a substitute for allocation. The Background Document describes this as a 'no-debit substitution access.'[3] This appears to be free access to tributary inflows with no accounting of take. This extraction is managed purely through flow heights at specific gauges.

The 50:50 share rule changes once available water determinations fall.

It is difficult to accept that there would be no discernible improvement to environmental outcomes if the flow threshold at the Carroll Gap was raised from 40/50 ML/day to 500 ML/day.[4]

This would need to be tested by real time flow levels, rather than modelled outcomes.

Uncontrolled tributary inflows are important natural flow events into regulated rivers that provide nutrients, natural water temperature and seasonality. These flows need to be better protected to improve the health of the river system. This is an important objective of water sharing rules.

The 50:50 share rule must be maintained at all times.

1.2 Access to Environmental Contingency Allowance (ECA) and stimulus flows

NCC strongly objects to rules in the WSP that grant access to water set aside for environmental benefit. The description of these flow releases from Chaffey Dam as 'uncontrolled flows' is misleading. The justification for this access to environmental water is that it improves access for users above Piallamore gauge who have no tributary inflows.[5]

The complex set of rules around storage level inflows, timing of releases and priority of release capacity to licence water orders give precedence over water users above environmental requirements of the water source.

To then allow extraction of these environmental flows is unacceptable. The Background Document reports that the access to flows above the Piallamore gauge was lowered from a proposed 100 ML/day flow to 50 ML/day. Again an argument has been made that there is little difference to environmental benefit from this increased access to flows. This decision is not based on any evidence.

An amendment was provided to return the threshold to 100 ML/day, should the installed pump capacity in this reach increase by 20 per cent or more from that installed at commencement of the plan. What does pump capacity have to do with environmental benefits of flow height??

There is no apparent reporting on whether there has been an increase in pump capacity. This amendment has remained in the amended Peel WSP 2019.

[3] Ibid p 44
[4] Ibid p 35
[5] Ibid p 45

NCC understands that there has been only one attempt to release an ECA since Chaffey Dam was raised and filled. This water should be protected from extraction.

The planned environmental provisions of the regulated Peel WSP are highly inadequate and not protected.

2. Unregulated

2.1 Cockburn River Access Rules

The *Water Act 1912* cease-to-pump condition for unregulated licences in the Cockburn River Management Zone was 0.5 m at Kootingal gauge on the Cockburn River. The WSP unregulated Peel River rules lowered this water access to 0.25 m at Kootingal gauge or no visible flow at the pump site. This is a loss of protection to the environment and a backward step in water management. This rule change is a failure to meet the objects of the WMA.

2.2 Flow Classes

For the WSP to be effective in protecting low flows, the 80 %ile flow in each unregulated water source should be the cease to pump limit.

2.3 Cease to pump on pools

The WSP fails to protect habitat in pools by not implementing cease to pump rules.

2.4 Amendments

The WSP has a significant number of amendments listed for Part 9 Division 3. There appears to be no reporting on whether any of the actions were taken. It is difficult to follow if these amendments were made in the Namoi and Peel Unregulated WSP 2019 or carried over.

3. Alluvial

The extraction from the highly connected Peel alluvium is managed by accounting for 51% of take from the available determination for the aquifer and 49% of take from the available determination for regulated general security licences.

Compliance with LTAAEL is a trigger of 15% above annual average usage over a 5 year period.

This trigger is too high and should align with the 5% rule for the unregulated river and fractured rock water source.

There appears to be no reporting on the regulation of these rules.

The take of surface water allocation through ground water access accounting is a significant issue in regard to the protection of environmental water. It is unclear how the rules accessing ECA and stimulus flows are managed in conjunction with surface water access in the alluvium.

The protection of PEW and HEW and accounting for transmission losses while surface water take is included in aquifer access is a significant issue.

The access rules in the highly connected unregulated water sources do not protect low flows and can be the cause of prolonging no flow in the system.

The WSP reserves a portion of recharge as planned environmental water ensures that the aquifer storage cannot be drawn down over the long-term.

NCC is concerned that the protection of recharge is proposed to be removed from the amended Namoi Alluvium WSP 2019 that includes the Peel alluvium.

Response to Review Questions

1. To what extent do you feel the plan has contributed to social outcomes?

The emphasis in the making of the plan was to have negligible impacts on history of use. The over allocation of the Peel River system has not been effectively managed, particularly in regard to the growth in use of Tamworth water supply. There will be ongoing social issues in this water source until a sustainable level of take is implemented.

2. To what extent do you feel the plan has contributed to environmental outcomes?

The WSP fails to achieve environmental outcomes in any measurable way. The provision of access to environmental water releases from Chaffey Dam is a significant issue.

Cease-to-pump rules at no visible flow does not provide protection for base flows in water sources.

The management of highly connected aquifers does not protect surface flows and has the possibility of reducing the effectiveness of PEW and HEW deliveries.

3. To what extent do you feel the plan has contributed to economic outcomes?

The emphasis in the making of the plan was to have negligible impacts on history of use. Economic impacts have been caused by the increased competition for water access through the growth in town water supply.

The failure to limit growth in use in this water source is the key issue.

4. To what extent do you feel the plan has contributed to meeting its objectives?

NCC considers that the WSP has failed to meet its vision statement:

The vision of this Plan is to provide for sustainable and integrated management of these water sources for the benefit of both present and future generations, to promote healthy and enhanced water dependant ecosystems and to provide for equitable water sharing among users in these water sources.

5. What changes do you feel are needed to the water sharing plan to improve outcomes?

All environmental water allocations must be protected from extraction.

All water use by Tamworth must be included in the LTAAEL for the Peel water source.

Access to uncontrolled flows must be maintained at 50:50 regardless of available water determinations.

Protected low flows in unregulated streams should be the 80% ile flow.

Pools should be protected with cease to pump rules when no visible flow is entering the pool.

The LTAAEL compliance trigger should be consistent across unregulated and alluvial water sources at 5% above annual average use over 3 years.

FPH should be included in the existing calculations of LTAAEL not added to it.

The highly connected alluvial aquifer systems need improved management to protect surface flows with transparent reporting on the impact of take.

Conclusion

The complexity of the management of the Peel River water sources needs to be closely examined.

The making of new WSP under the requirements of the Basin Plan has further complicated this task.

The over allocation and growth in use of the water supply is a significant issue that has not been adequately addressed by NSW Government policy.

The recent announcement to further entrap inflows in an enlarged Dungowan Dam will have a cumulative impact on the health of the Peel River water source.

Yours sincerely,

Chris Gambian
Chief Executive
Nature Conservation Council of NSW