INLAND RIVERS NETWORK

[redacted] PYRMONT NSW 2009
[redacted]
[redacted]
web inlandriversnetwork.org
ABN 34 373 750 383

The Natural Resources Commission
GPO Box 5341
Sydney NSW 2001

By email nrc@nrc.nsw.gov.au

Friday 16th July 2021

Submission to Review of the *Water Sharing Plan for the Castlereagh Unregulated River Water Sources 2011*

The Inland Rivers Network (IRN) is a coalition of environment groups and individuals concerned about the degradation of the rivers, wetlands and ground waters of the Murray-Darling Basin. It has been advocating for the conservation of rivers, wetlands and groundwater in the Murray-Darling Basin since 1991. Member groups include the Australian Conservation Foundation; the Nature Conservation Council of NSW; the National Parks Association of NSW; Friends of the Earth; Central West Environment Council; and Healthy Rivers Dubbo.

Introduction

IRN welcomes the opportunity to participate in the Natural Resources Commission (NRC) review of the *Water Sharing Plan for the Castlereagh Unregulated River Water Sources 2011* (the WSP).

A key issue for water management in the Castlereagh River is the protection of low flows upstream of Binnaway for:

- the protection of threatened native fish
- to increase connectivity with the Macquarie and Barwon Rivers
- to reduce high salinity levels at the lower section of the Castlereagh

Response to Review Questions

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

The WSP has failed to meet its environmental objectives to:

'protect, preserve, maintain and enhance the important river flow dependent and high priority groundwater dependent ecosystems of these water sources,'

a) Lack of Monitoring

The 2019 audit of the WSP by Alluvium found:

"limited evidence of targeted monitoring and no evidence reporting of performance indicators in the WSP for the Castlereagh Unregulated and Alluvial Water Sources 2011 during the audit period".

No specific target ecological populations are referred to in the WSP, instead these very general descriptions are listed:

> *a) native fish including eel-tailed catfish, Murray cod, and olive perchlet,*
>
> *(b) native vegetation including red gum woodland and black box-coolibah woodland,*
>
> *(c) high diversity hotspots and significant habitat for native fish, frogs, waterbirds, native vegetation and low flow macroinvertebrate communities in water sources that are susceptible to increased frequency and duration of low flows and drying.*

Part 2 of the WSP specifies performance indicators to be used to measure the success of the WSP's strategies to reach its objectives, yet there are no plans and processes in place to monitor the performance indicators.

If the main objective of a WSP is to protect, preserve, maintain and enhance the environment, then the condition of the environment must be monitored.

b) Extraction limits

The first element to the strategies listed in Part 2 of the WSP to reach targeted environmental objectives is to *'establish and maintain compliance with a long-term average annual extraction limit and a long-term average sustainable diversion limit'*.

There is no calculation of extraction as required under Part 6 cl.29, and therefore no assessment of extraction against LTAAEL as is required under cl. 30 and no subsequent management of compliance with the LTAAEL as required under cl. 31.

Without broad scale metering in this water source, the assessment of compliance is not possible.

IRN considers that the original intention of the Ken Matthews Report from 2017 be enforced: “No Meter, No Pump.” IRN would support a rule in the WSP that banned all pumping until a meter was fitted to a pump, regardless of the diameter of the pump intake.

WSP Part 6 clauses 29, 30 and 32 state the LTAAEL compliance be assessed against the preceding five water years. For compliance to be assessed, it will not be enough for agencies to assume that take from unregulated rivers is low risk at exceeding Cap and SDL for the purposes of MDBP compliance.

Compliance with the LTAAEL and long term average SDL is a factor in ensuring the establishment and maintenance of Planned Environmental Water (PEW). If the LTAEEL is not complied with, PEW cannot be protected.

c) Lack of gauges

Part 8 Division 2 Rules for Access Licences establishes cease to pump rules based on river heights. Table B shows flow heights below which flows were to be protected from extraction by specified licence types.

The management of these environmental rules relies on the installation of gauges at the end of 5 zones within the water source. The gauges required to determine those river heights have not been installed by DPIE Water.

Gauges and meters to measure water use must be installed as a high priority of the WSP.

Inland Rivers Network believes that these gauges and meters must be installed, and the rules in the current WSP about cease-to-pump and start-to-pump be retained moving forward, and not wound back to a time before the current WSP. To do otherwise would clearly constitute a reduction in planned environmental water, and a greater risk that both ecosystems downstream and basic rights of people downstream will be seriously compromised.

Part of the Castlereagh flows through sandy alluvium where flows immediately under the river surface are important. Low flows may “disappear” into the alluvium but when there are no inflows it will take longer after flows resume for outflows into the lower Castlereagh to appear. Ultimately, flows to the Barwon-Darling may be compromised in and following long periods of low flow.

d) Lack of protection for off-river pools

Clause 46 protects the presence of water (part of PEW) by prohibiting extraction at times when there is no visible flow at the licenced access point, except upstream of Binnaway (see below) and where other exclusions apply.

46 (2) (b) excludes off-river pools including lagoons on the floodplain, enabling any licenced works in such pools to empty them at an artificially rapid rate. By comparison, the Border

Rivers Unregulated WSP has an equivalent cease-to-pump rule that does apply to off-river pools as well as in-river pools.

IRN requests that this exclusion be removed and that no pumping from off-river pools be permitted when they are below full capacity. NRC should investigate how many access licences of what size currently take advantage of this exemption and whether it would be necessary for cease to pump rules to protect off-river pools to be phased in or apply as soon as a new WSP commences. Monitoring is needed of the ecological effects of pumping from off-river pools as well as of compliance.

Protection of pools is essential to protect environmental values at times of no flow including plants and animals that need to either survive in water or need time to complete phases of their life cycle that enable them to survive in shrinking pools, mud or dry soil. Many species may be unable to respond effectively to artificially rapid drawdown of pools. Pumping after flow ceases reduces the amount of aquatic habitat and time available for these processes, and increases the risks to aquatic species, the amount of water required to refill a pool and, in the case of in-river pools, enable recommencement of flow to people and ecosystems downstream. For fish and larvae that have swum or floated into or been spawned in off-river pools such as billabongs during over-bank flow, pumping the pool down may reduce the chance of the fish surviving until another overbank flow enables them to move into the river.

While water that is not pumped out may evaporate, evaporation is an essential use of water, not a loss: evaporation is essential to cool the water and minimise the risk that it will be too hot for plants and animals to survive. As global warming increases temperatures and evaporation, notably during heat waves, and the severity and/or frequency of droughts, the chances of naturally diverse ecosystems in the rivers and floodplains surviving climate change depend on the volume of water in pools being maintained as high as possible for as long as possible.

e) Upstream of Binnaway

The rules that manage water extraction in the Castlereagh upstream of Binnaway are covered by clause 46B of the WSP, and were directly imported from the *WSP for the Castlereagh River Above Binnaway Water Source 2003.*

The risk assessment in the draft Macquarie-Castlereagh water resource plan identifies an unacceptably high risk to base flows and low flows upstream of Binnaway. The risk assessment also reports very high consequence score due to threatened fish being present.

The protection of low and base flows upstream of Binnaway must be clearly defined as an ecological objective of the WSP, and the rules in 46B rigorously assessed for their effectiveness at protecting low and base flows in this section of the river.

f) Salinity

IRN submitted substantial comments to the Status and Issues Paper on the Macquarie-Castlereagh Surface Water Source released in late 2016. We raised the issue of significant

risks to key environmental assets and ecological function, including from salinity in the lower sections of the Castlereagh River.

The risk assessment in the draft Macquarie-Castlereagh water resource plan identifies an unacceptably high risk of elevated levels of in-stream salinity impacting the health of water-dependent ecosystems in the Castlereagh River at Gungalman Bridge.

Addressing salinity in the lower Castlereagh requires the protection of low and base flows upstream. Reduced salinity must be listed as an ecological objective of the WSP.

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

The WSP has failed to contribute to any positive social outcomes, as water extraction is not being restricted under the operation of this WSP.

With no limit on water extraction, there can be no improvement on social outcomes as expressed in the WSP, improved:

- access to water for basic rights
- water dependent cultural, heritage and recreational uses including recreational fishing
- water quality

There has been no Cultural Water access licences granted in this water source, therefore no compliance with Part 7 cl. 40.

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

Extraction is not measured, therefore cannot be limited. The environmental impacts of water extraction are not monitored.

The operation of this WSP in no way restricts the volumes of water that are extracted, or when that water is extracted. By not applying any rules in this water source the NSW Government is in practice favouring extraction over the environment and basic rights, in line with the findings of the ICAC report into water management in NSW:

> *'the rights of productive water users were given priority over the rights of other stakeholders and that there was a clear alignment between the department's strategies and goals and those of the irrigation industry.'* [1]

The long term outcome of poor water management will have serious economic implications to the region.

[1] ICAC, Nov 2020. Investigation into complaints of corruption in the management of water in NSW and systematic non-compliance with the Water Management Act 2000 p 9

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

An audit of the WSP conducted in 2019 found that following provisions were not being given effect to:

- Part 2 Vision, objectives, strategies and performance indicators, cl. 12 used to measure the success of the WSP strategies to reach the objective of the WSP
- Part 6 Limits to the availability of water, cl. 30 Assessment of average annual extraction against the long-term average annual extraction limit for the Castlereagh Valley Extraction Management Unit (EMU)
- Part 6 Limits to the availability of water, cl. 32 Compliance with the long-term average annual extraction limit for the Castlereagh Valley Extraction Management Unit.

Also, a number of provisions were only partially given effect to.[2]

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

As detailed under question 1:

- Identification of ecological values to be protected needs to be extended to include addressing salinity and protecting low and base flows for threatened fish.
- Targeted monitoring and reporting of key performance indicators needs to be a legal requirement of the plan that is enforced.
- The WSP creates a legal imperative for extraction to be within the LTAAEL and the long-term average SDL, however in the Castlereagh River, this compliance is not assessed. There needs to be even stronger rules in the WSP to create the imperative for Government agencies to undertake activities that result in water extraction compliance measurement
- Gauges at the end of the five zones to be installed so cease to pump rules can be enforced.

From the 2019 review of the WSP, IRN understands that DPIE Water intends to develop WSP implementation plan, and that they have not progressed due to resourcing constraints. Without such plans, Government and agency staff from DPIE Water, the Natural Resource Access Regulator (NRAR), WaterNSW and DPIE – Biodiversity and Conservation only have understanding of their own roles and responsibilities in regard to WSP operations. For the WSP operations to be optimised, the interaction of departments in applying the WSP must be clear to the people involved.

Yours Sincerely
Brian Stevens
Secretary

[2] Castlereagh-River-Unregulated-and-Alluvial-Water-Sources-2011.pdf