

23 May 2022

Professor Hugh Durrant-Whyte  
Natural Resources Commission  
Water Review Team  
GPO Box 5341  
SYDNEY NSW 2001

Email: [nrc@nrc.nsw.gov.au](mailto:nrc@nrc.nsw.gov.au)

Dear Professor Durrant-Whyte

**Review of Water Sharing Plan – Bathurst Regional Council Area**

Council wishes to thank you for the opportunity to provide a response to the call for submissions on the need for a review of the Water Sharing Plan for the Macquarie Bogan Unregulated and Alluvial Water Sources ("the WSP").

The recent drought and experience of Bathurst Regional Council (BRC) in seeking to sustain a viable Town Water Supply (TWS) places Council in a very well informed position to provide input into a review of the WSP. BRC is of the view that a review of the WSP is essential.

Bathurst is a growing regional city with a long forward horizon of predicted growth. BRC operates a town water supply and sewerage service that supports the city of Bathurst and Environs. BRC has a population circa 40,000 people.

During the most recent drought, which for the Bathurst water supply was the worst drought on record, the Bathurst supply was identified as at risk, with day zero horizons of well less than 12 months during a continuing drought.

Council responded with a suite of actions inter alia including:

1. Strong restrictions, which were implemented well in advance of Council's adopted Drought Management Plan. Restrictions reached Level 4, almost Level 5, while the Sydney system was approaching Level 2. This was necessary due to the winter filling nature of Chifley Dam and irrigation between Chifley Dam and the Council Water Filtration Plant/weir combined with a prediction of ongoing lower than average rainfall.

If the dam is around 22% (the current trigger) in the lead up to summer in the above circumstances then the system will fail and Bathurst will run out of water.

2. Unpicking of an inappropriate, concurrent and potentially catastrophic irrigation allocation (put in place by a NSW Agency), through Council driving support for a section 324 instrument to restrict irrigation back to 20% from 100%. Happily, in the large majority local irrigators could see the dire situation and worked with Council on this matter.
3. Consolidation of Council's water efficiency actions for example recycling of process water, leak reduction, irrigation efficiency for Parks and Gardens, promoting efficient household devices and use and so on.
4. Exhaustive analysis of factors, issues, options and emergency supply projects.
5. The Winburndale Dam Pipeline Project and defence of the Dam's secure yield after dispute with the regulator over interpretation of operating conditions which would reduce secure yield from circa 1200ML/a to 28 M/a (which remains unresolved and in process). The 1200ML secure yield is part of the TWS secure yield and Council still plans to construct the pipeline.
6. The Bathurst Water Harvesting Project which can lift the secure yield of the Bathurst supply by around 1500ML/a.

An economic analysis was carried out on behalf of Council by the Western Research Institute on the costs of placing the Bathurst Town Water Supply on restrictions, as follows:-

Water restriction level	Contribution to economy - Output	Household Income	Employment Full time equivalents (FTE)
Unrestricted	\$1,709,940,000	\$723,810,000	9769
Level 5 (25% business reduction)	\$1,526,330,000	\$660,870,000	8957
Level 6 (50% business reduction)	\$1,057,120,000	\$454,570,000	5882
100% reduction	\$130,630,000	\$66,780,000	901

It is understood that the economic aspects of water usage are part of the background of the water sharing plan. Unrestricted the Bathurst supply is around 6500 to 7000ML over a year. The turnover per megalitre is around \$200k to 300k which can be related to the turnover of other uses.

Through the ensuing project development processes under both the Water Supply, Critical Needs Legislation, the relevant parts of the WSP which inform the regulatory/application processes, Part 5 of the EPA Act, relevant Water Legislation such as the Section 60

provisions and numerous other legislation and regulations that combine to regulate such projects, Council is in a sound position to provide feedback.

Council is of the view that the scheduled review of the plan is essential for the following reasons:

1. Elements of the plan served the TWS of Bathurst very poorly during the most recent drought experience as follows:
  - a. The triggers for Chifley Dam and the Bathurst Drought Management Plan (DMP) need significant amendment. A timely adaptive process is needed. See above in relation to the timing of the 22% trigger. Council is planning to evaluate both an adaptive/timely control and a range of specific irrigation controls in the update to its DMP.  
One example to be evaluated is;
    - 0% allocation when Chifley is at or below 50% in mid October. (This would match Extreme Town Water Restrictions, when Chifley was 45% on 14/10/19 during the most recent drought),
    - 40% allocation when Chifley is at or below 65% on a to be set date,
    - 80% allocation when Chifley is at or below 80% in mid October (or a date to be determined).
    - 100% allocation when Chifley is above 80% on a date to be set.
  - b. Problems with interpretation of priority of uses throughout the application and assessment process. The WSP is where the priority for share allocation is made, not every other step in the assessment of applications and environmental impacts processes as well. This lived misinterpretation has the potential to duplicate and triplicate the share allocation priority through numerous applications denying the opportunity for critical projects. This erroneous interpretation should be countered in a revised WSP, given the evidence of subsequent misinterpretation. Council's applications in recent years were not to change the water share component.
  - c. A lack of clarity over what can be done during extreme drought – if the plan is to be stood aside by the Minister during extreme drought and emergency provisions put in place, it ought be made clear or if the plan is to be used then it ought make clear that a Business as Usual Approach is not the way (for emergency projects) and an adaptive management approach will be required with some guidance provided. Given Council's experience of poor timeliness with policy makers, agencies and regulators better guidance is needed as critical timeframes were not met during the last drought and it was evident that critical parts of the NSW framework were still being operated in a business as usual way – fortunately it rained at the last minute. Absent the rain a catastrophe would have ensued.

4.

Professor Hugh Durrant-Whyte  
Natural Resources Commission  
23 May 2022

---

It is noted that the Auditor General's findings into the State Government support of the 2.2M people in NSW that rely upon Regional Water Supply Infrastructure was scathing. The management of the drought subsequently was very nearly catastrophic. Given the circumstances the plan needs review to help prevent a repeat of the business as usual near failure recent experience.

2. The plan needs to deal much better with critical human need as it failed this element during the last drought. BRC is of the view that TWS ought to be elevated to the same priority as environmental and land owner priority.

The essential need for this is easily established in the query of - **what does the plan say/regulators/agencies do, when in an extreme drought towns and cities are faced with system failure and choices need to be made between supply and/or emergency projects and other uses?**

There was not an answer to this during the last drought as cities such as Bathurst Orange, Dubbo and Tamworth were at extreme risk with precious little time. This may require an amendment to the Act however it may also be possible that this new proposed element of the plan could be woven into the "Adaptive Management" approach section of the existing plan. Either way it ought to be evaluated in a review of the plan.

3. Greater capacity for TWS applications ought to be provided for in the plan to guide regulators, as in BRCs experience applications can be blocked in dire TWS circumstances by various State sections/agencies/regulators requiring excessive data and analysis rather than providing for adaptive management plans. In fact BRC is of the view that it ought be made clear through the above listing of priority of TWSs, that, TWSs are to be considered in the plan and in all applications arising from the plan to ensure protection of existing TWS infrastructure and Secure Yield and to enhance secure yield for augmentation for critical human need. This would help overcome the omission of critical human need/TWS as essential criteria to be considered in the determination of applications.
4. The data for the plan is quite aged and there is now much more data available to inform a review of the plan. For example the analyses from the Regional Water Plan and updates to Council analyses. This further data ought to be utilised for best policy. Council is happy to assist with its data. It is unsatisfactory to wait further years for such a review.
5. The implementation of irrigation metering, particularly in the management area upstream of the Bathurst Weir and the use of the information could provide much better management of water for the Bathurst TWS and ought to be brought into the plan/controls, given the risk and experience of inappropriate irrigation management by the relevant state agency.

5.

Professor Hugh Durrant-Whyte  
Natural Resources Commission  
23 May 2022

---

6. Irrigator restrictions for the Bathurst TWS raw water supply areas require better controls and dynamic/timely controls rather than just the same as all unregulated areas given the findings of the last drought. It is not satisfactory to chase at the last minute a section 324 instrument to resolve such matters. Currently during drought the irrigation industry between the Bathurst Weir and Chifley Dam can use more than the city of Bathurst. The output of the City of Bathurst and the aforementioned irrigation section could be compared for scale.
7. The need for consultation with Bathurst Regional Council prior to NSW State Government Agencies setting the general security allocations each year. In the last drought, the unregulated section of the Macquarie River, including upstream of Bathurst Water Filtration Plant was provided with 100% general allocation, when Bathurst Town Water Supply was restricted at Level 3, with restrictions further increased to Level 4 during that same water year.
8. The fit/relevance of the Long Term WSP needs to be clarified as in Council's experience the strategy has been stood aside by other State Government Regulators,
9. Given the impacts of climate change on secure yield and reliability of TWSs a mechanism to acquire irrigation licences and convert these licences to TWS security ought to be established (given the security of the irrigation supply upstream of Bathurst is equivalent to TWS this could be done on a 1 to 1 basis, but for other areas perhaps on a ratio basis). This is considered necessary as many TWS augmentations will be needed across the State to overcome the impacts of climate change as well as of course a suite of other efficiency measures. This will need to be partnered with no replacement licences into the system for the acquired licences.
10. No further licences for irrigation in the raw water supply areas for Bathurst due to the impact on the TWS. BRC was faced with recently the ludicrous circumstance of a State Agency advertising for a further licence into the Bathurst Water Filtration Plant Weir Pool to irrigate land downstream of the weir and in so doing gain TWS reliability. This should not have happened. The Bathurst TWS cannot withstand further licencing. The purpose of Chifley Dam is for Town Water Supply not further irrigation.
11. Bathurst Regional Council returns in the order of 3GL/a of water back into the Macquarie River Under a NSW EPA Environment Protection Licence, and receives no credit for returned water, as the approach has been that when water is put back into the system, it becomes the state's water again and can be extracted again under a different licence or the same licence. A return flows policy has been investigated by NSW Department of Planning and Environment–Water for some time and needs to be progressed. The water sharing plan should cater for water credits when water is returned to the river.

6.

Professor Hugh Durrant-Whyte  
Natural Resources Commission  
23 May 2022

---

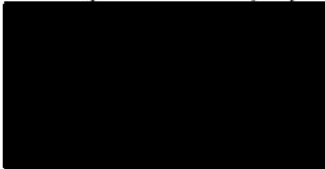
12. Change to enable storm water harvesting and other innovation. Given the 10 year duration of the plan and once in 10 year opportunity to make submissions on changes, the plan needs to allow for innovations such as storm water harvesting and other water security improvements/innovation to be specifically recognised and enabled.

13. Lessons from the drought can improve the efficacy of the plan.

BRC has also had input into and reviewed the Central JO submission and supports the submission.

Should you require further information, please contact the undersigned.

Yours faithfully ,



**ENGINEERING SERVICES**