BATHURST REGIONAL COUNCIL

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Draft Regional Water Strategy – Macquarie-Castlereagh

Please find following Bathurst Regional Council's feedback on the Draft Regional Water Strategy – Macquarie-Castlereagh.

Council provided a detailed submission on 26 September 2022 to the then stage of consultation. That submission is **attached** and to avoid duplication is only referenced in this submission with a few key points referenced/drawn out further.

Council extends its thanks for the opportunity to provide feedback and has had the benefit of a further consultation session since its September submission.

By way of perspective and the importance of the Regional Water Strategy (RWS) to Council, Bathurst struggled during the last drought with strong Level 4 restrictions in place, and with meteorology predictions of continuing dry conditions faced down day zero water supply predictions of less than 12 months.

The most recent drought was the worst on record and as such has directed the most recent secure yield level of service analysis which shows a drop in what was estimated to be a secure yield for the Bathurst potable supply from a range of 5800ML to 8000ML to a secure yield of 4700ML. The unrestricted demand is estimated at 6500ML so clearly Bathurst needs to lift the yield of the Town Water Supply as well as continue its demand refinement and improvement process.

Bathurst also provides a raw water supply which supplies parks and gardens as well as some significant businesses. The secure yield from this supply has reduced from circa 1000ML to 700ML on the historic use of Winburndale Dam, (the water source), while the unrestricted demand is circa 1000ML, again showing a gap to be overcome going forward.

In line with the findings of the Regional Water Strategy (RWS) the above highlights the need to lift the Bathurst supply.

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Council has identified the following "kit of parts" strategic approach for its water supply yield and demand model going forward incorporating elements of the RWS;

a. Ongoing low hanging fruit on the demand side (basix and tanks, leak prevention, technology and efficient watering, recycling water where appropriate) and emergency and smaller yield options such as groundwater where feasible,
b. Bathurst Water Harvesting Stage 1
    i. 1100 - 1500 ML/annum based on the average of the 3 years of the worst drought on record (2017-2019)
c. Bathurst Water Harvesting Stage 2
    i. An additional 1800 - 2350 ML based on the average of the 3 years of the worst drought on record (2017-2019)
    ii. Concept design offtake is flexibly 2.6kms downstream of the Bathurst Waste Water Treatment Plant.
d. Winburndale Dam
e. Groundwater should the framework reform to better permit permanent use (noting current preference for emergency use and RWS identification of stress/groundwater depletion) and/or
f. Irrigation rules and/or
g. Fish River Supply option and/or
h. Regional Pipelines noting the potential for a Fish River, Burrendong Dam (utilizing some of the airspace as identified in the draft RWS) and Central Tablelands connection

It is noted that the RWS uses a stochastic analysis approach which inter alia provides for scenarios beyond the approximately 1 in 1000 year secure yield level of service approach which has been used across the Local Water Utility (LWU) sector for many years and as such offers greater insight into potential water shortages.

Council has provided feedback on greater legibility as to the risks suggested in the Draft RWS arising from using both the Secure Yield and Stochastic modelling approach as follows:

1. Greater clarity around risk, levels of service and relativity of secure yield and stochastic analysis
    a. As discussed at recent sessions use the level of service and risk of various standards/levels incorporating the following elements
        i. Supply Level
            1. Unrestricted
            2. Enduring
            3. Level 5 (L5)
            4. Level 6 (L6)
            5. System Failure

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ii. Risk
    1. Secure Yield 1 in 1000 (0.1% chance of failure)
    2. Secure Yield enduring
    3. Stochastic Bathurst Historical
    4. Bathurst stochastic worst case climate

iii. An explanation that tries to relate the differing measures and then a matrix hopefully down the track after explanation. Please include that the stochastic approach allows for many more checks, up to and beyond the secure yield and that the results for Bathurst show results of many more scenarios so we can see what the more difficult risks are beyond secure yield, which is necessary to ensure enduring supply and to better understand risks. The key risk to RWS is that the sector, both operators and elected and community stakeholders do not understand or cannot relate to the risks and the message then becoming just more noise.

Additionally picking up on descriptions used at recent consultation sessions the following was found useful in relation to risk:

1. Worst case scenario beyond the life of the strategy
2. Paleo Climate Data
    a. Historical Record of circa 100 years of data is not a long time in terms of climate records
    b. Add the Paleo Climate Data for a 10, 000 year set of data that shows risks over a longer horizon

Further clarity is also needed over what exactly the "Repeat of Historic Climate Risk" means as it is different again to traditional secure yield which uses historical data at an approximately 1 in 1000 horizon where the aim is to exceed unrestricted demand with growth. For the risks cited by the RWS it is pitched at enduring supply.

Additionally for Tamworth, a 1 in 1400 risk of running out of water is cited when emphasising the risk of the Bathurst and Orange water supplies. Can it be made clear that the Tamworth risk is with or without actions taken since the last drought to lift the Tamworth supply. It was apparent during the last drought that Tamworth was in a similar situation to Bathurst.

Council has a strong interest in the option of the Fish River scheme with the transition away from coal and the availability of the Energy Australia entitlement which is understood to be up to 34 ML/d.

Council requests that the proofing of this option be a high priority of the RWS.

Council is supportive of the option of using some of the airspace/flood retention at Burrendong Dam for additional water supply and given the significant volume of this supply requests that an option of piping water from Burrendong for integration into a

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Oberon Dam, Lake Rowlands and Burrendong Dam network is listed as a priority for analysis. It may well prove more feasible than a dam at Long Point on the Macquarie.

Council is supportive in principle in the integration of Aboriginal knowledge and cultural interests aspects of the RWS and the Water Security/Critical Human Need aspects of the RWS.

In relation to groundwater, Council awaits the Groundwater Plan part of the strategy. Historically feedback from State Agencies has been a strong preference for the use of groundwater as an emergency supply only where other options exist. Council is hopeful that clarity over the use of groundwater from a permission aspect will be resolved in the Groundwater Plan as it is a very expansive process currently to take on an application with a full borefield assessment over a number of years.

Council is of the view that the approvals/heads of consideration framework is in need of reform given the absence of appropriate consideration and framework of the following in some approvals:

a. Existing in-service infrastructure and the critical human need the secure yield of this infrastructure provides. This creates a risk of the effective loss of existing infrastructure
b. Given the above the public interest
c. Critical human need
d. The future of new critical infrastructure.

Reliance upon the Minister to set aside Water Sharing Plans and other rules is not timely enough for some towns and cities. Additionally, the Water Supply Critical Infrastructure Framework as an alternative was not timely or effective in the last drought.

In both of these cases a Business as Usual approach was brought to the assessment. It is suggested that critical human need be also a priority under the Water Act and integrated into the Water Sharing Plans or that the emergency point of intervention be identified in water sharing plans and the emergency actions be identified and planned well prior to dryer than average conditions with an ongoing prediction of dryer than average rainfall.

Council thanks you for your invitation to provide comment to the above and looks toward working with you to progress the above outcomes.

Yours faithfully

Darren Sturgiss
DIRECTOR
ENGINEERING SERVICES