

Lachlan - Draft Regional Water Supply Strategy

Submission by

Parkes Shire Council

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Thank you for the opportunity to comment on the Lachlan Draft Regional Water Strategy: Shortlisted Actions - Consultation Paper September 2023.

General Comments

Water is the absolute lifeblood of regional Australia and most certainly the lifeblood of the Lachlan Valley, it must be treated as a most valuable resource, however socio-economic factors are also critical. Government water buy-back, seemingly prioritising environment over socio-economic factors, no apparent wholistic approach between departments all drive down confidence in what could be a growing and thriving economy.

The Australian Bureau of statistics provides that the Australia population in 2017 (24.6 million) is projected to reach between 37.4 and 49.2 million people by 2066, that is, the Australian population is set to potentially double in the next 40 years.

If this is so, then what is the whole of government approach? we will certainly need more food, surely the Lachlan Valley can play a key role in that, we will need more homes, our towns need to be protected from flooding, our agricultural products need to be value-added. Water is the quintessential element in every aspect of a growing nation and should not be considered in isolation of these factors. A vision for what the Lachlan Valley can achieve should be the starting point for strategies not a strategy that is intrinsically about water, but how water can be used to achieve the aspirations of the valley.

The Regional Water Supply (RWS) strategy has no aspiration to be better! And no connectivity to other strategies.

For example the NSW Farmers strategy "Think big, think fresh - A fresh food precinct at the heart of Western Sydney - A new initiative to create 12,000 jobs and a world-leading food hub", which proposes a seamless and world-leading Fresh Food Precinct in close proximity to Western Sydney Airport has the potential to create 12,000 jobs and provide local residents access to fresh fruit, vegetables and meat products sourced from within the Sydney Basin and the airport precinct. It includes a proposed 5-square-kilometre area of protected cropping on adjacent land could add an additional 8,000 jobs to the region, not including job creation in the local supply industries. If this could be dreamt for the heart of Sydney, then surely it could be dreamt for the Lachlan Valley? The water usage for 500 hectares of world-best-practice protected agriculture would be around 5000ML/an (or about 0.6% of licenced water in the regulated Lachlan). Yet the Lachlan is the most unreliable water in the State, with no proposed remedy to address the unreliability.

Unfortunately, with each change of government and each change of Minister, departments are changed, personnel are changed and as a consequence there are no enduring strategies which can address the needs of the Lachlan Valley.

For example, after decades of campaigning real progress was made with the raising of Wyangala Dam, which tangibly addressed most of the issues identified in the study. Disappointingly, the recent Wyangala investigation (similar to this strategy), managed to identify all the obstacles, but none of the ameliorants. If any private sector development took this approach, no large development would every proceed. It seems profoundly obvious that a larger volume dam can be used to best effect, be that irrigation, increased water security to drive high-value agriculture, flood mitigation, town water, water for mines or indeed released at the optimal time to enhance environmental outcomes.

Instead, the valley, including the people, the economy, the communities, and the environment will all need to suffer the drying climate with no tangible solutions proposed.

Wyangala Dam needs to be properly designed and ameliorants investigated. A P90 design will allow a much more accurate estimate to construct the dam and reduce the potential of cost over-runs seen in other major infrastructure projects that were not appropriately planned, such as Snowy Hydro 2.0. This may mean investing in environmental offsets, fish hatcheries, targeted release regimes to support environmental outcomes and optimising flood mitigation modelling.

A 50-year water supply infrastructure development plan is needed to design, cost, develop biodiversity offsets, acquire corridors etc etc, as in time it is likely that "all" the major suggestions for improving water security in the Lachlan Valley will be needed, and many are long-lead projects.

Parkes Shire Council established a network of groundwater bores in the upper Lachlan aquifers in the late 1960's in the face of extreme drought, prior to which, the town water supply was reliant on Dams in the Bumbery ranges, being Lake Endeavour and Lake Medcalfe. In the droughts of 2000's, a property was purchased on the Lachlan River and a town water connection was made to the Lachlan River. In recent times a fifth source has been added with the construction of an Advanced Water Recycling Facility (ie treated sewage recycling).

The Parkes Water Supply (PWS) consumption peaked in the late 1990's at approximately 3600ML/an, however with user-pays pricing, leak detection, smart metering and various other initiatives, the average annual demand is now approximately 2300ML/an (~0.3% of licenced water on the Lachlan, albeit much was groundwater), a 35%+ reduction over the past 30 years. Other municipal water supply authorities have similarly reduced their water demand to reflect contemporary ESG expectations, however the pareto principle holds and there is little efficiency left to be squeezed from local water utility customers.

The town of Parkes is within the Lachlan River catchment, with significant flows contributed predominately via the Goobang Creek.

Despite having a network of groundwater bores, access to the Lachlan River, two (2) surface water impoundments and an Advanced Water Recycling Facility (ie treated sewage recycling), we continually and proactively prepare for the next drought. Accordingly, we have responded to multiple Lachlan water initiatives, experienced droughts, drawn down aquifers, floods, environmental initiatives, and regional strategies for over half a century.

It is therefore with over 50 years of on-ground experience we see the Draft Lachlan Regional Water Strategy, as yet another strategy for strategies with no bias for action. It identifies the escalating water security problems but provides little in the way of solutions. If this was a strategy for some new initiative that would be expected, however on this age-old issue it is very concerning procrastination.

By way of contrast, the Central NSW Councils in 2009 completed a water security study for the towns of the region, which subsequently won an Engineering Excellence award. That document proposed tangible project, based on engineering principles, to address town water deficiencies, but has been largely ignored for nearly 15 years, yet many of the deficiencies identified then have been again identified in the Strategy.

It is also apparent that the financial impact of drought on towns is several orders of magnitude underestimated. Businesses will not establish in the regions if continuous water supply is not

available and businesses that close as a consequence of a lack of water, potentially will not reopen. Without water pumped in, the town of Parkes would not exist, which has a GDP in excess of \$1B. Further the notion of "carting" water to communities when supplies are depleted would in reality be very difficult to achieve.

Towns of the valley will now, once again, seek to contemporise the 2009 Central NSW Councils water security study to ensure the protection of the valley communities.

Specific Reference to Short listed actions

Priority 1 - Build resilience to Climate extremes.

1.1 Establish a coordinated approach involving all levels of government to implement local council and town water related actions under Priority 1.

It just seems incredulous that a whole of government committee now needs to be formed and an integrated hydrogeological model developed after decades of asking, albeit we support both initiatives.

It would be critical that any committee is structure to endure changes of Government, be "independently chaired", be responsible to government and with a clear decision pathway to government. Local government should be represented.

1.2 Support Councils to improve flood risk management in the Lachlan region.

Catastrophic flooding has occurred in Parkes Shire where it has never occurred before, historic storm intensities are increasing and a whole new flood routing methodology is needed. Homes have been inundated, massive stream-bank erosion has occurred, stock losses are high and infrastructure damage has resulted in massive costs to the local people, councils, the State and Australian governments.

This initiative is strongly supported.

1.3 Upgrade the existing hydrological models for the Lachlan Catchment to better represent river operations and drought contingency measures.

Accurate river modelling is critical; however, the model needs to be significantly expanded to include groundwater connectivity and water quality, for example oxygen depletion is obviously an issue.

There may also be value in the inclusion of critical ecosystems. This may help ensure environmental flows are better targeted.

1.5 Support groundwater use for towns and communities.

Action 1.5 is absolutely critical for the future of the region. When combined with a regional water grid and enhanced hydrogeological modelling, significant synergies could be achieved.

For example, a suitably sized regional water grid would, if designed sympathetically, traverse may of the Valleys paleochannels, creating the opportunity for Managed Aquifer Recharge. In the future, a raised Wyangala may have an impact on out-of-back flooding hence aquifer recharge. A regional water grid could then potentially assist with managing the aquifer recharge when surface storages are full. This would however require a detailed hydrogeological/hydrological model, which modelled the connected water system, water quality and consequential effects.

As indicated above the current groundwater arrangements require Councils (or any other user) to spend very large sums on hydrogeological models to justify any groundwater expansion, only to have that compared with existing departmental models. This seems an extraordinary and unnecessary duplication of effort and waste of money.

As indicated the security of groundwater sources for town water supply is a concern, as is the management of extraction. During the last drought groundwater extraction was entirely unfettered in the upper Lachlan. Both Wyangala Dam and groundwater were being drawn down with no reference between these water sources. In fact, as incredulous as it may seem, they are even management by different agencies. Councils are required to spend hundreds of thousands of dollars developing Integrated Water Cycle Management plans, with 30-50 year planning regimes, yet state agencies separate most aspects of water management into multiple agencies and multiple responsibilities, which can only blur lines of responsibility and stifle integrated planning.

1.6 Investigate water security for small and remote communities.

Safe and Secure Water Program is discussed in this initiative. The program is imperative to smaller water utilities such as Parkes. Unfortunately, there appears to be no forward planning with the program, as funding decision can take a decade to be made. A well-managed program should list all the projects that have applied for funding, they should be annually re-prioritised if necessary, and the list made public, so Council have "some" idea if funding is probable and the likely timelines.

As indicated above, Councils are required to compile Integrated Water Cycle Management plans, with 30–50-year planning regimes, yet the State cannot advise from year-to-year if their co-contribution is going to be available.

Parkes Council has applied for additional funding to allow the Parkes-Peak Hill Water Supply Project to progress. The project will deliver 39 km of new pipeline to link new and existing infrastructure, 2 new pump stations, an upgraded Lachlan River pump station, 2 new pre-treatment plants in Eugowra Road and Akuna Road and a new raw water dam at the Parkes Water Treatment Plant. With surface water and ground water declining, this project needs to be funded to allow completion as a matter of urgency.

1.7 Investigate the need to further expand the regional water supply grid.

It is now imperative that a regional water grid be implemented, however a new lens needs to be used to ensure the design not only meets critical human needs, but the aspirations of the valley, given the cancelling of the Wyangala Upgrade.

Further, as indicated above, a suitably sized regional water grid would, if designed sympathetically, will traverse many of the Valleys paleochannels, creating the opportunity for Managed Aquifer Recharge. In the future, a raised Wyangala may have an impact on out-of-bank flooding hence aquifer recharge. A regional water grid could then potentially assist with managing the aquifer recharge when surface storages are full. This would however require a detailed hydrogeological/hydrological model, which modelled the connected water system, water quality and consequential effects.

There is currently a concept design for a pipeline from Forbes' water treatment plant to Parkes' pump station to Gooloogong bores. This would expand the existing Central Tablelands Water network linking Parkes and Forbes to the Central Tablelands Water Supply network. This initiative should be expedited as a matter of urgency.

The B-Section pipeline (Forbes to Tottenham) is approximately 130km in length and supplies water to the communities of Gunningbland, Bogan Gate, Trundle, Tullamore, Albert and Tottenham. There are also some rural consumers along the pipeline, however due to the limitations of supply, new rural connections have not been allowed for decades. The B-Section communities are often subjected to water restriction.

Parkes Council has renewed a number of sections of the pipeline, installed a large reservoir at Trundle, a re-chlorinator at Trundle, a re-chlorinator at Forbes, a booster pump at Bogan-gate, all in an effort to improve supply, however the pipeline remains entirely deficient.

The pipeline is also reaching the end of its life, and failures are becoming more frequent.

On the grounds of social equity, the pipeline should be strategically renewed. The small incremental cost to upsize the pipe would also be logical.

The opportunity exists for the CNSWJO and its member councils to partner with the NSW Government through DPE Water to participate in the next National Water Grid Fund (NWGF) funding round in January 2024 to potentially update the Centroc Water Security Study to enable the delivery of action 1.7.

1.8 Improve the understanding and management of groundwater resources in the Lachlan region.

As indicated elsewhere this is critical. If all the sleeper licences are activated, the allocation across the upper Lachlan will be potentially halved, so needs to be understood.

Aquifer response is difficult to predict given the largely unknown subterranean conditions, thus long run calibration of hydrogeological models is critical. Monitoring bore network need to be expanded and the modelling resourced to allow real time prediction of aquifer response.

1.9 Better integrate strategic planning and water planning.

Integration of strategic landuse planning and water planning is logical, however as indicated above a whole of government 50-year plan is needed to meet the aspirations of the valley, and water is part of that.

Strategic landuse planning should not be used prior to that to stop further development in the valley due to all the issues identified in the RWS.

Priority 2 - Improve catchment health

Improved catchment health is an obvious objective that all would agree with, however, simple emulation of nature may not provide the optimal environmental outcomes.

An enlarged Wyangala dam may well allow water releases at critical times, where water may have not otherwise been available.

Eco systems need to be better understood. Many of the ecosystem now considered important would be reliant on the security (albeit poor security) of water supplied by Wyangala dam.

Priority 3 - Support a strong and sustainable economy in a capped system.

Immediate affirmative action is required to ensure businesses are supported with permanent, quality, highly secure water supplies. Without secure water, businesses will not establish in the region.

The region is not currently prepared for another substantial drought!

As suggested in the 2009 Centroc study a water grid is needed to provide water security, however a new lens needs to be used to ensure the design not only meets critical human needs, but the aspirations of the valley.

We would strongly support the ability to convert general security licences to high security.

Parkes Councils suggested - High Priority Actions

A whole of government approach to the development of the Lachlan Valley, then rescope the Water Strategy to align to the aspirations of the Valley.

Develop a 50-year water supply infrastructure development plan, such that projects can be fully scoped well in advance, to meet the future water needs of the Valley. This might include;

- P90 Design
- P90 Cost estimate
- Biodiversity stewardship areas to offset biodiversity impacts
- Acquisition of land corridors

High priority projects include.

- Immediate funding of the Parkes-Peak Hill Water Supply Project to allow construction commencement ahead of the drought.
- Staged upgrade of the Forbes to Tottenham water supply pipeline (B-Section)
- Design/feasibility/funding of the regional water grid, but with a review of capacity to meet aspiration & drought resilience of the Valley long term. With early investigation of the Forbes Gooloogong Pipeline. The opportunity exists for the CNSWJO and its member councils to partner with the NSW Government through DPE Water to participate in the next National Water Grid Fund (NWGF) funding round in January 2024 to potentially update the Centroc Water Security Study to enable the delivery of action 1.7.
- Progress the Lake Rowlands dam upgrade.
- We would strongly support the ability to convert general security licences to high security.
- Reassessment of Wyangala Dam, looking at possible ameliorants for the issue identified, including a P90 design.

A hydrology/Hydrogeological/Quality/Environmental model needs to be developed as a matter of high priority to ensure decisions are based on science.