

Position paper

Addressing town water security for regional NSW cities and towns

Summary

The 2017-2020 drought was the worst in 130 years and severely impacted regional cities and towns across NSW, yet investment in resilient town water supplies remains insufficient. Failure to act will repeat serious social and economic consequences in a future drought. All communities in NSW deserve secure, affordable water supplies.

Recommendations

On behalf of councils and communities across country NSW we ask that the NSW government:

1. Analyses and publishes measures of town water security to identify and prioritise towns with the most significant water security challenges.
2. Considers a more adaptive regulatory approach in Water Sharing Plans to properly recognise water supply for critical human needs.
3. Actively encourages diversification into alternative water supplies to improve town water security in regional NSW, including streamlining approvals and removing regulatory hurdles. All options must be on the table.
4. Urgently considers increasing funding for the Safe and Secure Water Program with a focus on improving water security, investing before a drought triggers emergency funding.
5. Revisits the funding criteria and program management approach of the Safe and Secure Water Program.
6. Prioritises activities and investment in operational, non-infrastructure solutions to water security and drinking water quality to complement the Safe and Secure Water Program. This includes training for operators and engineers delivered in regional NSW facilities, expanding the use of digital technology and a renewed focus on catchment management.
7. Ensure that our local water utilities remain in local government ownership.

Background and context

There are 92 councils, county councils and corporations that have Local Water Utility responsibilities serving a population of 1.9 million in regional NSW. The extreme drought of 2017-2020 was the worst in NSW and Australia in 130 years of records. By late 2019, more than 50 town water supplies in regional NSW were at high risk of failure.

The social and economic costs of complete failure of any town water supply are extremely high and are not commonly considered in traditional benefit-cost analyses for water security projects. For an inland city the size of Tamworth, there is nowhere for 50,000 people to move in a complete water supply failure scenario. There would be no water for business, schools, hospitals, no jobs, leading to economic failure. Food processing industries would grind to a halt which could lead to shortages in some staple foods made in NSW.

The mining industry is also a significant customer of some Local Water Utilities. Although the population of some mining towns can be quite small, mining royalties from regional NSW government represent billions of dollars, with only a fraction of that invested in water security that sustains the population of mining towns. The economic costs of failure in foregone royalties would consequently be very high in a water supply failure scenario.

Although town water allocations in the Murray Darling Basin are a small fraction of total allocation, this paper suggests that insufficient attention has been paid to water supply for critical human needs.

Urgent action is required if we are to avoid a repeat of the impacts of the 2017-2020 drought. Diversification of water supplies will also provide resilience against other extreme events such as bushfire and flooding. The introduction of Health Based Targets for drinking water management has also increased the need for urgent infrastructure investment.

Discussion

Planning for water security

- Every town water supply scheme needs a Plan B and a Plan C to diversify water sources and improve water security. All options must be on the table, including dams, regional pipelines, groundwater (including groundwater recharge), water recycling and stormwater harvesting. However, it must also be recognised that with the scale of needed investment in water security being in the billions of dollars, we are unlikely to 'build our way out of trouble'.
- The NSW government's Regional Water Strategies so far have not sufficiently addressed town water security with priorities, commitments and timeframes.
- Water Sharing Plans need a major re-think. A review of water reserves for critical human needs is required for existing major dams to secure water for inland cities and towns to optimise our existing major water security infrastructure. Water Sharing Plans are based on historical inflows up to 2010, when the drought of record has become the 2017-2020 drought. When councils require water for towns in an extreme drought the transmission losses are very high. Different, more flexible methods of water allocation are required in extreme drought to conserve water for critical human needs.
- Councils are rarely responsible for an entire water catchment or groundwater aquifer. Water sources are shared amongst many users. Local knowledge is frequently overlooked in water planning and infrastructure investment. The responsibility for town water security planning needs to be shared between state and local government, with surface water and groundwater modelling led, funded and managed by the state with an appropriate level of local community input.
- Groundwater is often pursued as a last resort in the face of looming surface water supply failure, however many groundwater studies have been insufficient, failing to quantify sustainable yield or characterise groundwater quality. Groundwater quality can be difficult and expensive to manage for safe and palatable drinking water. Treatment processes such as Reverse Osmosis are complex to operate and expensive and invariably not sustainable for small communities to own and operate without significant ongoing external funding and operational support.

Regulatory environment

- Urban stormwater runoff is increased by the existence of hard surfaces in cities and towns, yet it remains very difficult for local water utilities to augment town water security with stormwater harvesting schemes. Regulatory hurdles for urban stormwater harvesting are significant and need to be addressed. It is easier to let urban stormwater drain into a river and pump water from a river than to harvest stormwater in a town with all of the water quality and access licensing requirements that are imposed.
- Purifying recycled water for public open spaces, for industrial use or for supplementing drinking water supplies introduces a source of water that doesn't rely on rainfall. There is little encouragement by state regulators for regional communities to fund or approve advanced water recycling, and notably no regulatory approval pathway. The handling of byproducts from the treatment process, the brine, needs further research to identify sustainable climate independent solutions for inland NSW.

Funding, delivering, owning and operating town water infrastructure

- Local government is best placed to plan for, deliver and manage essential local water and sewerage infrastructure. Local water utilities must remain in local government ownership, not state government and must not be privatised.
- The local government sector does not have control over catchments and large dams and most small councils can't fund water security projects on their own.
- The Safe and Secure Water Program continues decades of co-operation between state and local government to fund safe and affordable water supply and sewerage services across NSW. However, the program has not achieved its objective of eliminating the water supply and sewerage backlog in urban areas of country NSW.
- Focussing on capital funding rather than whole of life costs for water infrastructure has led to perverse consequences, threatening the financial sustainability of some councils. Operational costs for advanced treatment such as energy, treatment chemicals, consumables such as membrane replacement are a high proportion of the whole-of-life costs. Funding needs to be urgently extended to operational support for existing infrastructure to complement capital funding for new infrastructure as a Community Service Obligation to maintain minimum water supply standards. Digital technologies have a huge part to play, and yet are not prioritised for funding.
- Emergency funding during extreme drought was necessary in 2017-2020, amounting to \$284 million. When projects need to be progressed very quickly, the solutions are more expensive and sub-optimal. In the worst cases investment can be stranded when emergency consents expire, or the cost of sustaining additional infrastructure is too high. A better result will be obtained with better planning and stronger commitment to investment before drought occurs.
- Where state agencies have been involved with managing projects for small towns, the cost overheads have been high and project delivery has not been optimal. More attention is required to project management capability and performance for delivery of regional water infrastructure. The state's project assurance framework is unnecessarily complex for small water projects and needs to be overhauled.
- Technical support for council water operators needs to recognise that many treatment plants have not been properly designed with operability in mind. Many designs continue a one size fits all approach. Treatment plant design and technical support needs to be fit-for-purpose and adaptable to changing water quality and water sources across regional NSW.

The relationship between water quality and water security

- The importance of meeting 'aesthetic' criteria for drinking water has been understated for many years. If drinking water is unpalatable then clearly people won't drink it and will pursue alternatives including soft drinks, which creates health problems.
- Managing catchment water quality is a tragedy of the commons that cannot be solely managed by local government. The absence of attention to catchment water quality has led to notable failures in drinking water quality due to circumstances beyond council's control. Retaining water in the landscape will improve catchment water quality as well as water security.
- Having capable operators is essential to delivering safe and reliable town water supply. Training needs to be fit-for-purpose and delivered in region, 'on country', which means creating water training centres in regional NSW.

Contact for further discussion

- Country Mayors Association of NSW: <https://nswcountrymayors.com.au/>
- NSW Water Directorate: <https://www.waterdirectorate.asn.au/>