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Mr Wayne Chaffey

Chair

Upper Namoi Water in the Landscape Initiative (WITLI) Steering Group

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Dear Wayne

Headline implications for the Upper Namoi: Namoi Regional Water Strategy's plans for long-term water supply for Tamworth

Thank you for your invitation to prepare a high-level overview of the options for securing Tamworth's water supply, coming out of the 2023 Namoi Regional Water Strategy ('Namoi Strategy'). Please find attached the overview, which I have prepared from an analysis of the Namoi Strategy and feedback from members of the WITLI Steering Group.

Yours sincerely,

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Headline implications for the Upper Namoi: Namoi Regional Water Strategy's plans for long-term water supply for Tamworth

Prepared by Dr Andrew Lawson, Co-Director of AgLaw Research, School of Law, University of New England, Armidale, with input from members of the Water in the Landscape Initiative (WITLI). Version 2, 2025-08-15

This document provides a high-level overview of the five options for 'Addressing Tamworth's long term water security risks' contained in the Namoi Regional Water Strategy ('Namoi Strategy') and the headline implications for landholders in the Upper Namoi catchment in relation to landscape scale land management and re-hydration.

How the Namoi Strategy fits within the overall State and national water planning frameworks, and how Tamworth's water security fits within the Namoi Strategy are summarised later in this document, for the sake of completeness.

Namoi Strategy Key Challenge # 1: Addressing Tamworth's long term water security risks

The rationale for improving Tamworth's water security starts with the analysis of 'The challenges facing the Namoi' in Part 4 of the Namoi Strategy. This part identifies '5 key challenges that are immediate priorities for the region' (p 33). The first key challenge on this list is 'Addressing Tamworth's long term water security risks'.

The Namoi Strategy outlines three arguments to justify this ranking (pp 34-36):

- *Tamworth is an important regional centre* – Tamworth is the largest regional centre in north-west NSW. Around 63,000 people or 65% of the population of the Namoi Region live in Tamworth and the greater Peel region.
- *Tamworth is growing* – Population growth projections range from 10% to 50% over the next 20 years. Ensuring access to reliable and secure water supplies is a key challenge for supporting this level of growth.
- *Tamworth could run out of water* – Most of Tamworth's water supply relies on rainfall, via Chaffey and Dungowan Dams, with a small proportion from groundwater. The Strategy highlights that there is a risk of Tamworth running out of water in severe and prolonged drought, regardless of growth.

Namoi Strategy Action 1.6: Plan for long term water supply augmentation as Tamworth grows

Having made the case for Tamworth's water security as a priority matter, the Strategy proposes the five options for addressing the Tamworth challenge, outlined in Action 1.6 and visualised in the graphic in Figure 1 (pp 65- 67):

Option 1: Working towards purified recycled water facilities

Option 2: Pipeline from Namoi Valley dams to Tamworth with an increased storage reserve

Option 3: Pipeline from Manning Valley to Peel Valley

Option 4: Increase the water reserved for Tamworth in Chaffey Dam

Option 5: Off river storage for town water supply

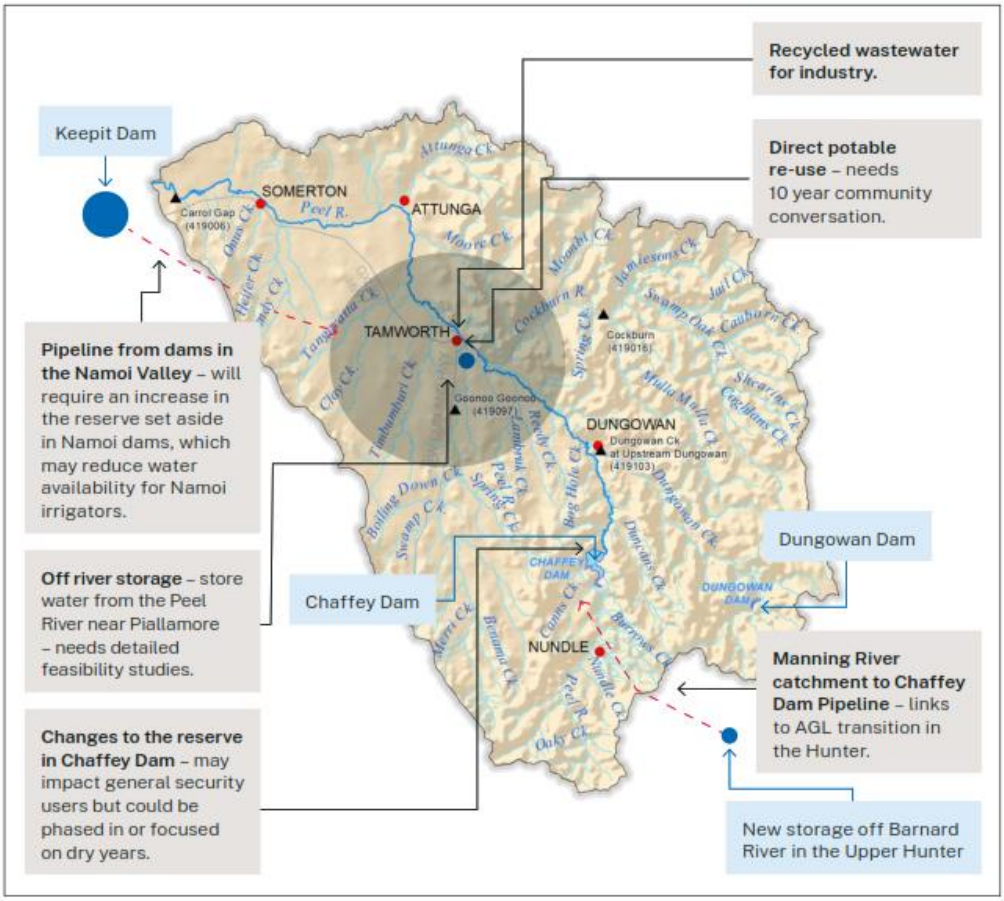

Figure 1: Namoi Strategy options to support Tamworth's water security

(Source, Namoi Strategy, p 65)

What are the high-level implications of these options for landholders in the Upper Namoi catchment in relation to landscape scale land management and re-hydration?

Option 1: Working towards purified recycled water facilities

This option advocates investment in advanced water treatment, which 'could allow Tamworth to expand its water demand without increasing take from dams' (p 66).

The Namoi Strategy outlines the difficulties of implementing this option, including 'stringent regulatory processes and standards, costs and the need to achieve community confidence and acceptance'. Public acceptance of recycled potable water has been mixed in Australia, most famously exemplified in Toowoomba, Qld, where a 2006 referendum on the introduction of a potable wastewater reuse scheme was rejected by citizens. Since then, no *direct* potable reuse schemes have been successfully implemented in Australia, though there are a small number of *indirect* potable reuse schemes that aim to supplement existing water sources, such as groundwater replenishment in Western Australia.[1]

[1] Stuart Khan and Rhys Anderson, 'Potable Reuse: Experiences in Australia' (2018) 2 *Current Opinion in Environmental Science & Health*, 55-60, https://doi.org/10.1016/j.coesh.2018.02.002.

Implications: This option has few implications for landholders in the upper catchment, in terms of land management and landscape re-hydration. There would be costs to ratepayers generally in terms of construction of infrastructure, education and communication, though it should be noted that all five options in Action 1.6 may involve costs to ratepayers. This option could enhance Tamworth's urban self-sufficiency in water at no cost to water resources elsewhere in the upper or lower catchment.

However, there is no indication in the Strategy as to whether this constitutes a complete solution, or merely a partial response, to Tamworth's future water security. If the latter, then there will still be a need to augment surface water supplies to provide water security for Tamworth. Furthermore, there is no indication of a timeframe for this option. The Strategy notes the considerable barriers to this option, including the need to gain regulatory approval, conduct extensive community consultation, and secure community acceptance. These impediments may make this option a long-term aspiration, rather than a short- or medium-term solution.

Option 2: Pipeline from Namoi Valley dams to Tamworth with an increased storage reserve

This option involves moving water from the Namoi catchment to the Peel catchment by piping water from Keep it Dam or Split Rock Dam in the Namoi Valley. The Strategy suggests this option could be achieved 'by purchasing licences and converting or retiring the licences so the water can remain in the dam to support Tamworth's water needs' (p 66).

Implications: According to the Strategy, the main implication of this option for landholders is the possibility it 'could reduce supplies to general security agricultural water users in the Namoi Valley, as well as have ecological implications'. The Strategy also notes that the option would continue to rely on surface water, which may become less reliable due to climate change. The Strategy reports that stakeholders have raised concerns 'that transferring water from the Namoi to the Peel Valley may result in declining populations and economic activity in smaller regional towns in the Namoi'. Community sentiment may resist a change to the historical purpose of Keepit Dam from irrigation and flood mitigation to Tamworth urban supply. Although not referenced in the Namoi Strategy, it is important to mention that since its inception the relevant Water Sharing Plan includes an allowance for 95% of the increase in water demand via growth in Tamworth would be sourced from the Namoi system.[2]

Option 3: Pipeline from Manning Valley to Peel Valley

The Strategy describes this option as 'an inland diversion scheme' (p 66), which would tunnel water through the Great Dividing Range from the Manning Valley (NSW mid-north coast) into the Peel Valley.

Implications: This option obviously has important implications for landholders, ecosystems, and surface and groundwater systems in the Manning catchment, but the impacts on the Upper Namoi would be minimal, other than the cost implications to ratepayers of evaluating environmental impacts, persuading decision-makers, and constructing and operating the necessary infrastructure.

[2] *Water Sharing Plan for the Upper Namoi and Lower Namoi Regulated River Water Sources 2016* (NSW), cls 28, 33. See Figure 3 below for how water sharing plans fit into the overall NSW water policy and planning context.

Option 4: Increase the water reserved for Tamworth in Chaffey Dam

This option involves changing the way Tamworth's annual allocation of water from Chaffey Dam is calculated. According to the Namoi Strategy, Tamworth is currently allocated water from Chaffey Dam on a 2-year rolling period, before water is allocated to irrigators. The historical effect of the allocation rules is that Tamworth Regional Council has been automatically allocated 100% of its entitlement in the first year, and 70% in the second year. If there is sufficient water in the system, then the remaining 30% is set aside for Tamworth, before water is allocated to general security licence holders. In other words, in years of sufficient volume in Chaffey Dam, 100% of Tamworth's allocation is available to it over the two-year rolling period. In drier years, only 70% is guaranteed in the second year. The irony here is that the city does not usually need 100% of its allocation in the years when 100% is available: 'in most years it uses well under half of that entitlement' (p 67). Option 4 proposes changes to this arrangement, by a altering the rules of allocation. Two possible mechanisms include: (1) Allowing for 100% of Tamworth's water entitlement to be set aside automatically every year (instead of 70% in the second year of the two-year rolling period); and (2) Increasing the town water reserve in Chaffey Dam by 14 GL/year or more.

Implications: Both these mechanisms have implications for landholders. The Strategy notes that allowing 100% of entitlement automatically 'may also reduce reliability of water for irrigators in dry years', and increasing the town water reserve 'is likely to reduce average end of year allocation to Peel Valley general security licences from 64 to 50%', which will affect the local irrigation industry. The Strategy also noted concerns about the impacts on environmental water allocations.

Option 5: Off river storage for town water supply

This option was the least developed conceptually in the Strategy and involves construction of a new 10 GL off-river storage and bulk transfer system near Tamworth. It is pitched, not as a stand-alone measure, but a complement to water efficiency and recycling measures.

Implications: The implications for landholders depends on the timing of water harvesting for this storage – i.e. more significant implications if the water is harvested in dry times compared with flood harvesting.

Where does the Namoi Strategy fit in State and national water resources management and planning?

In June 2023, The NSW Department of Planning & Environment released the Regional Water Strategy for the Namoi region ('Namoi Strategy').[3] The Namoi Strategy is one of 13 regional strategies being developed and implemented across NSW – see Figure 2 below

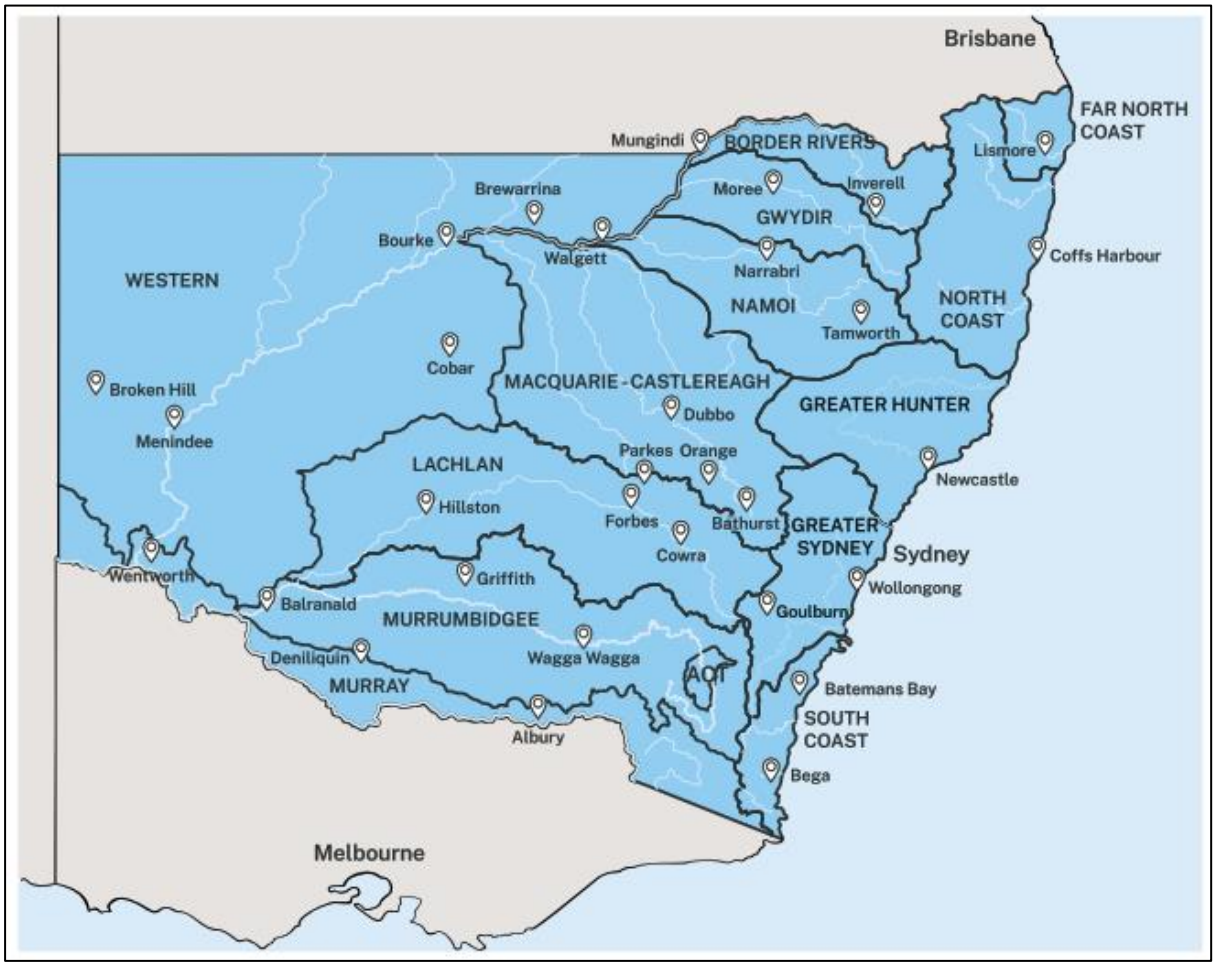

Figure 2: Map of NSW regional water strategy regions

(Source: Namoi Strategy, p 8)

As the Namoi drains westward into the Murray Darling Basin (MDB), it is also a part of the Federal and State processes for managing MDB water resources, as per Figure 3.

[3] Available at this link: https://water.dpie.nsw.gov.au/our-work/plans-and-strategies/regional-water-strategies/final/namoi-regional-water-strategy

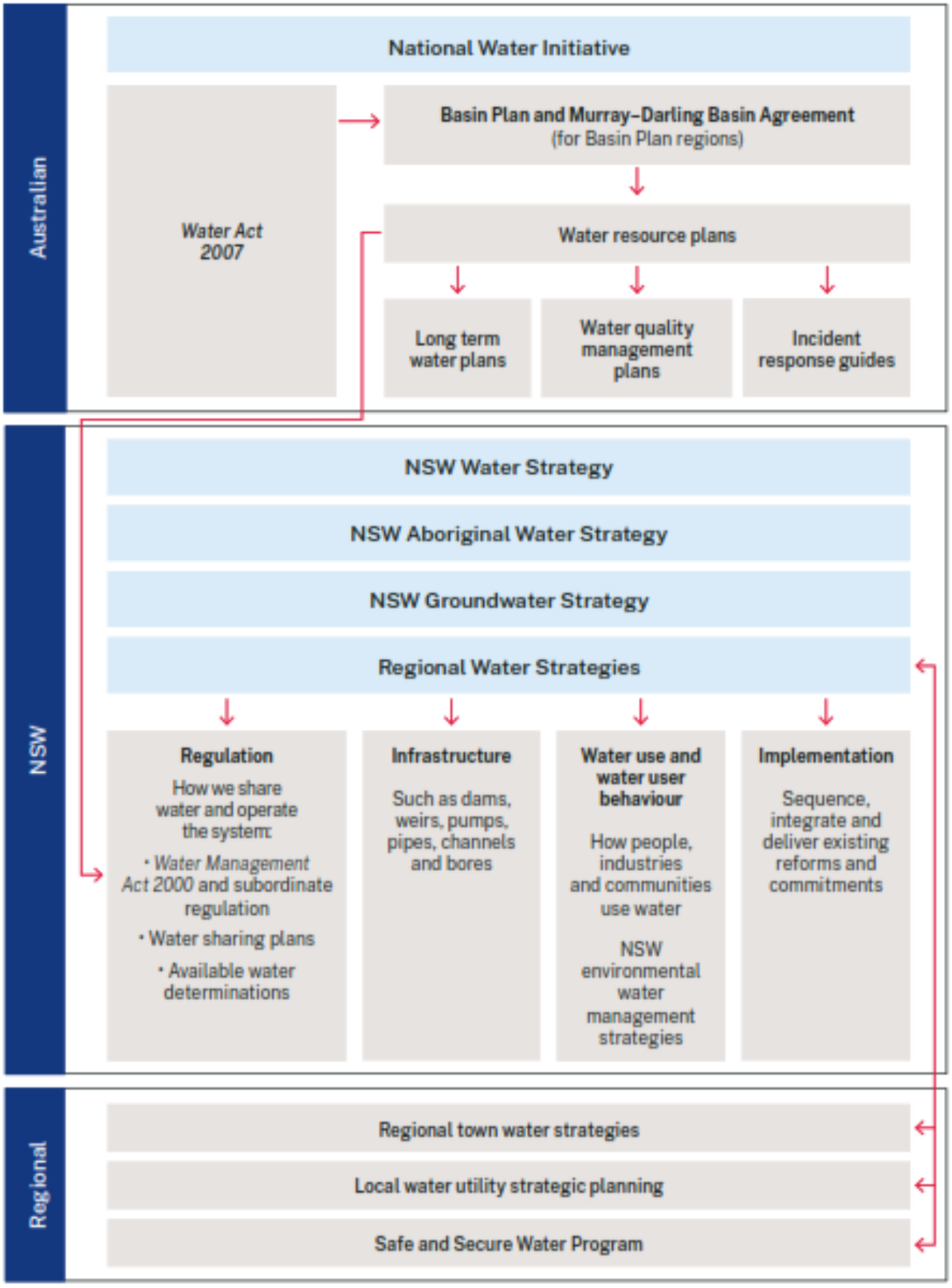

Figure 3: NSW water policy and planning context

(Source: Namoi Strategy, p 11)

Strategising aims to achieve the five key objectives in Figure 4.

Figure 4: Regional water strategy objectives

(Source: Namoi Strategy, p 9)

What are the highlights of the Namoi Strategy?

The Strategy identifies five 'key challenges' for the Namoi region (p 33):

1. Addressing Tamworth's long term water security risks
2. Addressing water security risks of regional towns across the Namoi Valley
3. Improving the health and resilience of the region's aquatic and floodplain ecosystems
4. Addressing barriers to Aboriginal water rights
5. Supporting a growing regional economy in a future of potentially reduced water availability

The Strategy identifies three priorities to address these challenges, as set out at the bottom of Figure 5.

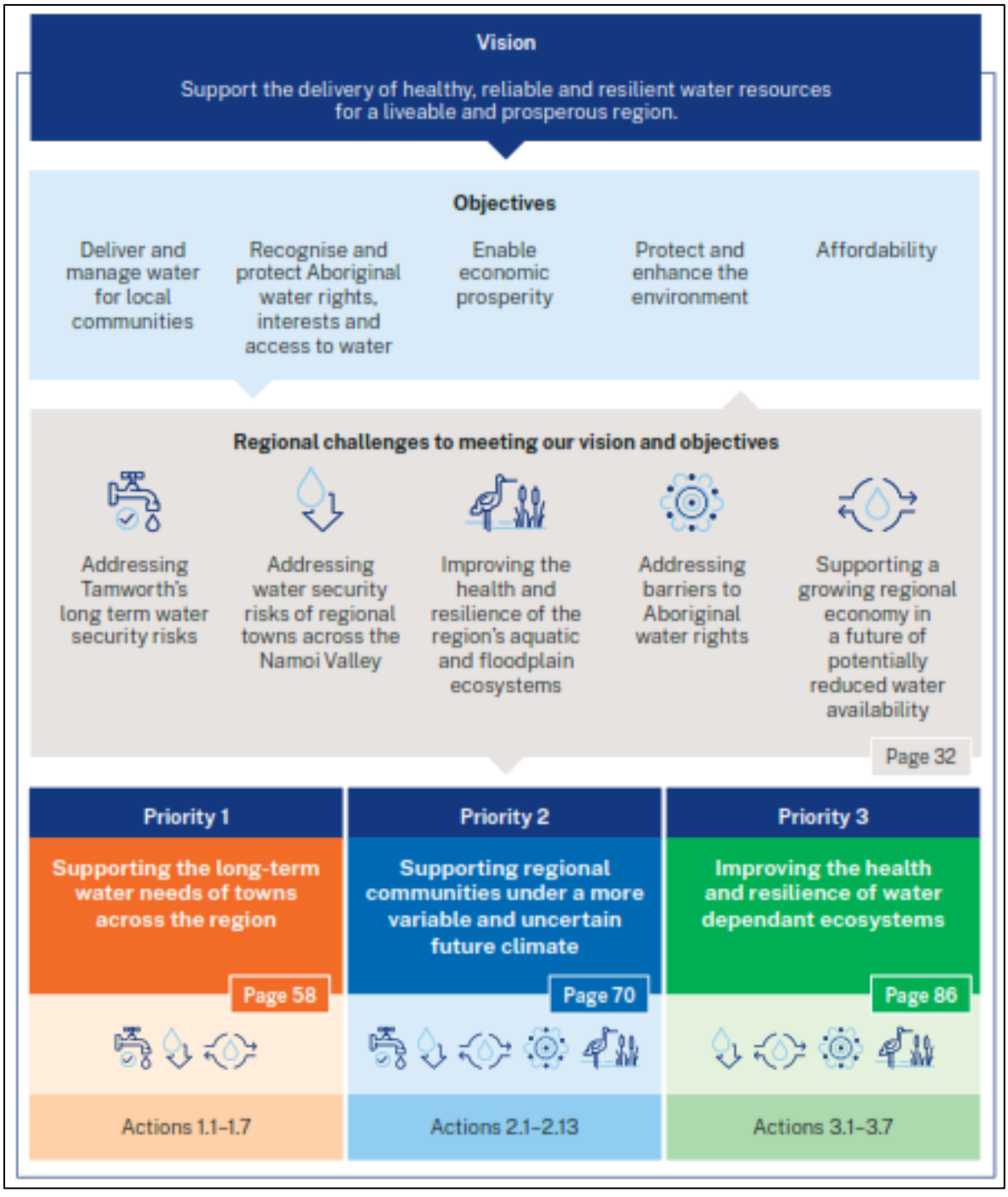

Figure 5: Overview of Namoi Strategy vision, objectives, challenges and priorities

(Source: Namoi Strategy, p 56)

The Strategy then outlines 27 actions to address these priorities, which are summarised in the graphic in Figure 6.

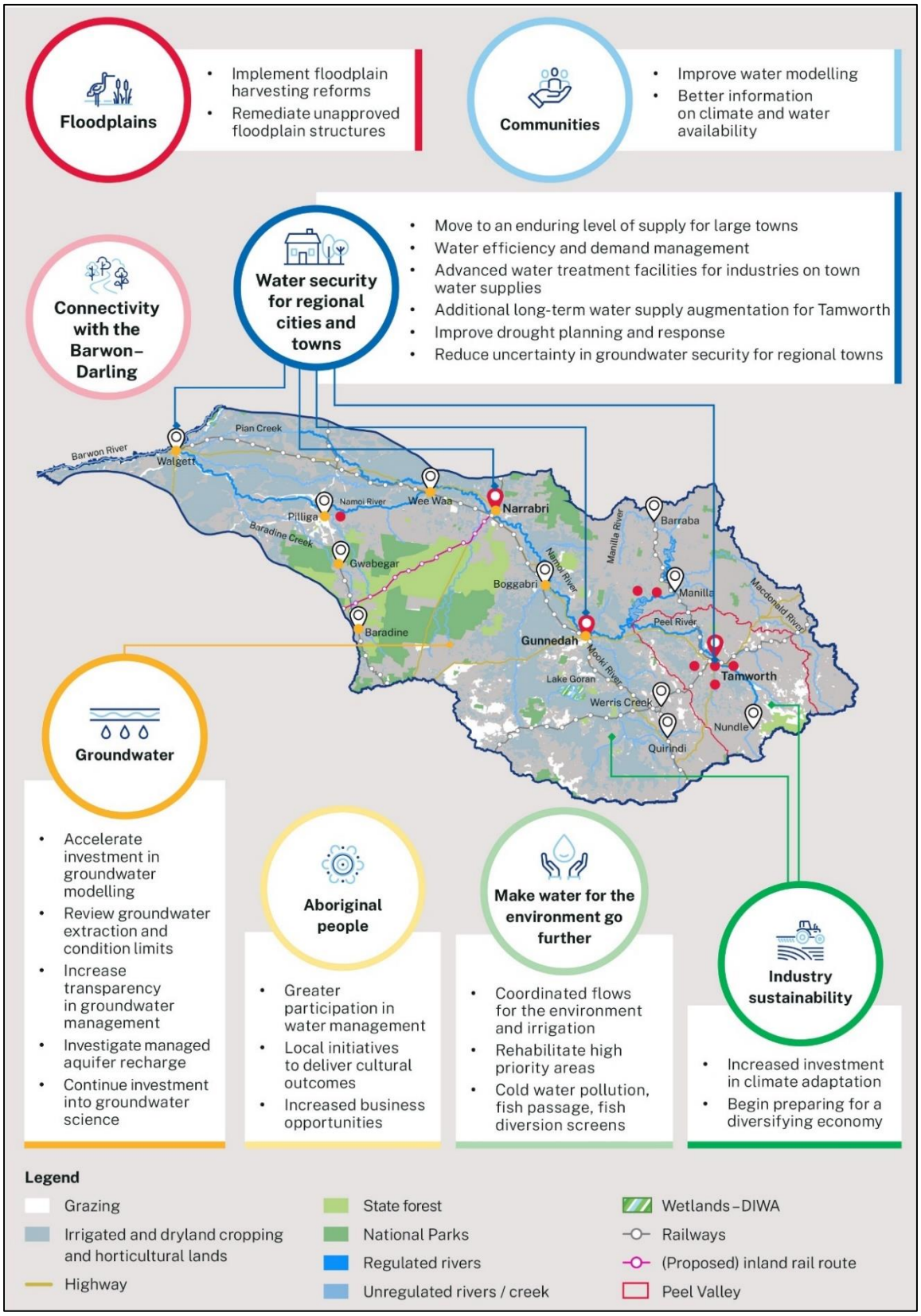

Figure 6: Summary of Namoi Strategy actions

(Source: https://water.dpie.nsw.gov.au/our-work/plans-and-strategies/regional-water-strategies/final/namoi-regional-water-strategy)

The scope of this document is limited to the first key challenge – 'Addressing Tamworth's long term water security risks', which is addressed in Priority 1 – 'Supporting the long term water needs of towns across the region' – and Action 1.6 – 'Plan for long term water supply augmentation as Tamworth grows' (pp 65- 67).