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Groundwater Strategy Team
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Sydney Water's submission on the draft NSW Groundwater Strategy

Thank you for providing Sydney Water with the opportunity to comment on the first long-term draft *NSW Groundwater Strategy* developed by NSW Department of Planning and Environment (DPE).

Sydney Water strongly supports the vision and strategic priorities of DPE's draft *NSW Groundwater Strategy*. It's positive to see the specific focus on this important water resource, and the prompt response to actions identified in the *NSW Water Strategy*. The draft document is informative and clearly identifies some of the key challenges and threats to our state's groundwater.

While we acknowledge the 20-year horizon of the strategy is long enough to inform future reviews and updates of Water Sharing Plans, we suggest it could take a broad 40-year view of challenges and opportunities, consistent with the NSW Government's *Draft Greater Sydney Water Strategy* (GSWS). This will enable the groundwater strategy to look at long term opportunities and threats, and support management of groundwater in NSW's most populous area.

The draft groundwater strategy identifies the range of uses that drive groundwater extraction in NSW and the kinds of economic benefits that result. Sydney Water suggests the strategy also acknowledge groundwater extractions that are incidental to other uses with high economic benefit - for example construction and maintenance of essential public water infrastructure. These activities are regulated under water management legislation and sharing plans. Identifying them in the groundwater strategy will ensure these kinds of extractions are properly accounted for, and appropriate long-term approaches for managing them are developed.

The strategy rightly identifies threats to supply, recharge and quality arising from drought, climate change and population growth, as well as impacts on quality from pollution.

We strongly agree with the strategy's intent that "Our groundwater management framework needs to be better integrated with surface water and land management" and support Action 1.2. "Better integrate groundwater management with other land and water management processes".

We suggest the strategy more strongly emphasise the potential impacts on groundwater recharge in urban areas, where widespread impervious cover reduces infiltration of stormwater into soils and increases rapid, erosive runoff into streams. This is also likely impacting the ability of groundwater systems to maintain baseflows in urban streams during dry times.

The strategy could include specific actions to address urban impacts on groundwater resources including increased retention of water in urban landscapes, stormwater harvesting, and land use planning approaches that maximise pervious surfaces. These approaches have the benefit of retaining more water in the catchment, supporting efforts to cool and green our urban landscapes, while also reducing demand on other forms of water extraction.

New approaches to land use planning in Western Sydney, including [Sydney Water's best practice water sensitive urban typologies](#), demonstrate how these approaches can be holistically implemented.

While Sydney's urban water supplies rely predominantly on surface water, groundwater has been identified as an emergency drought water supply in Sydney's metropolitan water planning processes. The *Draft Greater Sydney Water Strategy* notes that "bore fields will still continue to play a limited but meaningful role in drought management, providing up to 30 GL/year". The GSWS will drive more detailed drought planning, including having options at-the-ready to respond quickly when drought conditions return.

We note that as Sydney's water supply becomes increasingly diversified, with greater levels of rainfall independence over time, we will be less likely to need these emergency groundwater sources.

However, we do strongly support the identification of aquifer recharge in the groundwater strategy. This offers the opportunity to better manage aquifers by offsetting extractions, while enabling diversification in water and recycled water management.

Well-treated recycled water or stormwater can be pumped into suitable aquifers to be stored, where it can then be accessed when needed. The most well-known aquifer in the Sydney region is the Botany sand aquifer located between Centennial Park and Botany Bay. The hydrogeological characteristics of the north-eastern Botany aquifer (Botany Sands) have been assessed as suitable for managed aquifer recharge systems to extend available water resources.

While these concepts need more detailed hydrogeological studies and groundwater modelling, it is a strategic approach that could assist in achieving all three priorities of the strategy and may be relevant in other groundwater sources in the future. Managed aquifer recharge also has the potential to address threats to groundwater systems from saltwater intrusion because of rising sea levels or reduced recharge because of drought.

We support the draft groundwater strategy's commentary on the potential impact and ongoing management of not- yet-recognised contaminants, chemicals of concern and microplastics on groundwater quality.

We also note the draft groundwater strategy has identified the need to manage legacy groundwater issues associated with retiring and rehabilitating coal mines as NSW transitions to a

low carbon future. We note the draft GSWS has listed actions from the review of mining in the Sydney drinking water catchment, including requiring more offsetting from mining companies to ensure there is a net gain for water supply.

We suggest the groundwater strategy identify opportunities for offsetting mining impacts on groundwater and surface water by using quality recycled water.

We acknowledge the broad implementation plan for the *NSW Groundwater Strategy*. We would appreciate more information on how it will help inform and support the draft GSWS priorities and actions around rainfall independent supply, emergency drought supply planning, enhanced management and governance of stormwater and improved waterway health monitoring.

We look forward to continuing the conversation with the DPE Groundwater Strategy Team. Please contact Lyndall Pickering – Strategic Planning Manager at lyndall.pickering@sydneywater.com.au if you require more information.

Yours sincerely



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