Water Management in Western Australia

Discussion Paper

November 2025

Acknowledgement of Country

WALGA acknowledges the continuing connection of Aboriginal people to Country, culture and community. We embrace the vast Aboriginal cultural diversity throughout Western Australia, including Boorloo (Perth), on the land of the Whadjuk Noongar People, where WALGA is located and we acknowledge and pay respect to Elders past and present.

About WALGA

The Western Australian Local Government Association (WALGA) is an independent, member-based, not for profit organisation representing and supporting the WA Local Government sector. Our membership includes all 139 Local Governments in the State.

WALGA uses its influence, support and expertise to deliver better outcomes for WA Local Governments and their communities. We advocate to all levels of Government on behalf of our members and provide expert advice, services and support to Local Governments.

WALGA's vision is for agile and inclusive Local Governments enhancing community wellbeing and enabling economic prosperity.

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1. Executive Summary

Water is an essential resource, including for Local Government operations, community health and wellbeing, environmental sustainability and economic activity. Local Governments contribute to the management of water through strategic planning, land management, development approvals, amenity, community behaviour change and, in some cases, direct water service provision. Local Governments' role in water service provision includes drainage, water use and re-use and aspects of wastewater and sewerage services. The challenges for future water management are escalating across Western Australia due to population growth, climate change and increased competition for limited water resources.

Water management in Western Australian is governed by a legislative framework at the State and Australian Government level which govern how water is accessed, used and regulated. Nationally, the *Water Act* 2007 and the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* establish controls over water use, especially in sensitive ecosystems and within the Murray-Darling Basin, while also ensuring national water data collection and reporting under the National Water Initiative (NWI). A 2024 review of the NWI in the National Water Reform Inquiry Report identified significant limitations in Western Australia's legislation, including the absence of statutory water entitlements and reliance on outdated legislation.

At the State level, governance is shared between the Department of Water and Environmental Regulation (DWER) and the Water Corporation, with DWER operating under six primary Acts the *Water Agencies (Powers) Act 1984*, *the Rights in Water and Irrigation Act 1914*, *the Country Areas Water Supply Act 1947*, *the Metropolitan Water Supply, Sewage and Drainage Act 1909*, *the Water Conservation Act 1976* *and Metropolitan Arterial Drainage Act 1982*. Although a Water Reform Bill was announced in 2006 to consolidate these laws, progress toward a consolidated Act was discontinued in December 2023, with the State Government opting for other measures such as streamlining licence approvals and infrastructure delivery. Water Corporation is the main supplier of water, wastewater, drainage and bulk irrigation services in WA.

WALGA's consultation to date has highlighted **water security** and **water efficiency** as the key priorities for the Local Government sector. Water security relates to the reliable availability of water at a rate and quality to meet the needs of communities now and into the future. Key factors impacting water security include aging infrastructure, climate change, limited access to alternative or non-traditional water sources, regulatory and licensing barriers and inequitable water distribution, particularly in regional and remote communities. Addressing water security requires more strategic and integrated water use planning. Water efficiency focuses on improving community water literacy, promoting waterwise infrastructure and water sensitive urban design principles through encouraging the adoption of efficient technologies and design standards.

Local Governments across Western Australia are addressing water security and efficiency through various actions across strategic infrastructure planning, innovative water management practices and community awareness. Faced with increasing challenges such as aging infrastructure, declining water availability and the impacts of climate change, Local Governments are investing in adaptive upgrades, exploring alternative water sources and adopting water sensitive urban design principles.

This Paper outlines key water challenges for Local Government, the legislative and policy settings governing water and includes options to provide solutions in an increasingly water constrained environment. Questions for Local Government have been included to inform the development of an updated WALGA Water Management Advocacy Position. This Paper has been informed by consultation through Zone submissions, workshops and interviews with Local Governments across the state, in addition to key State Government stakeholders.

2. Purpose of this Paper

WALGA is seeking sector feedback on this Discussion Paper to assist WALGA's understanding of current water management issues facing the sector and inform the development of a new, consolidated Water Management Advocacy Position.

Local Governments are requested to provide comments on this Discussion Paper by COB Thursday, 12 March 2026 to environment@walga.asn.au. WALGA welcomes all forms of feedback; Council endorsed, CEO or officer level feedback.

Feedback received will inform a draft Water Advocacy Position provided to WALGA Zones and State Council for consideration.

3. Introduction

Water is an essential resource, including for Local Government operations, community health and wellbeing, environmental sustainability and economic activity. Local Governments contribute to the management of water through strategic planning, land management, development approvals, amenity, community behaviour change and, in some cases, direct water service provision. While the direct management of wastewater and sewerage infrastructure is generally the responsibility of state or regional utilities, Local Governments have an indirect but significant interest in these systems, as effective wastewater treatment and disposal are essential for environmental health and community wellbeing.

Climate change is significantly reshaping Western Australia's water resources, with impacts varying across different regions. According to the 2024 State of the Climate Report by CSIRO and Bureau of Meteorology (BOM), there is increasing seasonal variability, changing rainfall patterns, intensifying of extreme heat events which is leading to disruption of water supply and quality.

Australia's climate is highly variable, both geographically and year to year[1]. In Western Australia, the north is becoming hotter and wetter, though rainfall remains inconsistent [2]. The rangelands are seeing more intense, short duration rainfall events alongside rising temperatures. Meanwhile, the southwest is becoming significantly drier, with reductions in rainfall, streamflow and groundwater, making it the most climate impacted region in the country[3].

Since the mid-1970s, Perth's average rainfall has declined by 15%, resulting in an 80% reduction in streamflow[4]. More frequent short, intense rainfall events are placing pressure of ageing drainage infrastructure and increasing the risk of urban stormwater flooding. The Integrated Water Supply Scheme (IWSS), the potable water distribution network which covers Perth, the Goldfields and Agricultural Region and parts of the South West, supports residential, commercial and industrial water needs and sources water primarily from groundwater and desalination, supplemented by surface water (dams) and groundwater replenishment. In 2023-24 potable water sources consisted of 34% groundwater, 32% desalination, 28% surface water (dams) and 6% groundwater replenishment. Most parks, ovals and public gardens are the responsibility of Local Government and are irrigated using self-supplied groundwater[5]. Overall, 70% of all scheme and non-potable water for irrigation and farming in the south-west comes from groundwater reserves[6]. Increased groundwater extraction in some areas is placing severe stress on aquifer systems,

[1] State of the Climate Report 2024
[2] CSIRO -Australia's changing climate
[3] WA Government - Future climate projections for water management in Western Australia
[4] WA Government - rebalancing our groundwater
[5] WA Government - Water for Growth - WA's water supply and demand outlook to 2050
[6] CSIRO - Groundwater yields in south-west Western Australia

contributing to the drying of wetlands, banksia woodlands and the inland movement of saline water[7]. These challenges are compounded by population growth and rising demand for water resources, making water management increasingly complex. These changes are placing growing pressure on Local Governments to adapt their water management practises and infrastructure.

From consultation and research WALGA has undertaken with Local Government, two key themes consistently emerged - **water security** and **water efficiency**. In discussions with Local Government, climate change was identified as a significant driver and amplifying factor across all aspects of water management, including across planning, policy and infrastructure.

Water security is a critical challenge across the State but particularly in regional WA, where Local Governments contend with the water use needs of heavy industry, inconsistent water availability and quality, higher costs compared to metropolitan areas and significant expenses associated with headworks and infrastructure upgrades. Local Governments also manage standpipes for agricultural and emergency management uses and saline groundwater for use on public open space. In response to these challenges, Local Governments are adopting water saving measures, collaborating with State agencies and exploring alternative technologies and water sources.

Water efficiency is an increasing priority for Local Governments across Western Australia, as they work to maximise limited water resources and reduce wastage. Local Governments are implementing waterwise technologies and water sensitive design principles such as smart irrigation, hydro and eco zoning, stormwater harvesting and participating in programs such as the Waterwise Council Program. However, feedback from Local Governments highlights a gap in water literacy within their organisations and amongst the broader community, with limited understanding of water sources, management practices and climate impacts, creating a disconnect between technical realities and public expectations.

To inform this Paper WALGA reviewed its existing Water Advocacy Positions and motions and feedback from WALGA Zones and undertook extensive direct consultation with the sector. Consultation included workshops with both metropolitan and non-metropolitan Local Governments, an online session with 40 officers focused on water security and efficiency and a regionally focused session with 30 Local Government representatives exploring the barriers to being waterwise in a regional setting. In addition, WALGA conducted 14 one-on-one interviews with officers from 22 metropolitan, regional and remote Local Governments to better understand key issues. Further insights were gained through meetings with officers from the Department of Water and Environmental Regulation and the Water Corporation, as well as internal discussions with WALGA policy teams.

This Paper provides the current WALGA Advocacy Positions (Section 4) an overview of relevant legislation, policy and programs (Section 5) and outlines the key water issues identified by Local Governments (Section 6) as well as potential options for resolution.

4. Current Advocacy Positions

The current WALGA Advocacy Positions related to water include:

3.1.1 Service Delivery to Aboriginal Communities

This Advocacy Position highlights the commitment of Local Governments in Western Australia with Aboriginal communities to improving living standards and governance. It focuses on ensuring that essential services, such as power and water, are delivered at a standard consistent with other towns and cities across Australia. WALGA and the Local Government sector have advocated to

[7] WA Rebalancing our groundwater | Western Australian Government

the State Government for improvements in water quality to ensure consistency across all communities.

4.3 Clearing Permits and Water Licenses and Permits

This Advocacy Position addresses the sectors opposition to increased cost recovery for clearing permits and water licenses by the Department of Water and Environmental Regulation. Local Governments use water primarily for public open space (POS), benefiting the broader community without private gain. WALGA asserts that these costs should be borne by the public through taxation, not by Local Governments. This position notes the need for regulatory reforms to support contemporary water legislation.

6.10 Public Open Space (POS)

This Advocacy Position addresses the importance of POS recognising that as population densities increase, communities increasingly rely on functional POS for diverse purposes, including the integration of drainage, services and utilities. This position addresses the current requirement for 10% of developable residential land to be allocated for POS and highlights the need to review this requirement to ensure its modern relevance.

This position also emphasises the need for POS to be adaptable to varying water availability and climate conditions.

6.14 Planning for Water

This Advocacy Position underscores the need for formal support from relevant Local Governments for Water Management Reports related to water infrastructure projects. This support is crucial when a Local Government is expected to manage the infrastructure asset or when the proposed location of water infrastructure assets will affect Local Government assets or facilities.

5. Legislative and Policy settings

Water provision and licensing in Australia is governed by State and Australian Government legislation. The Australian Government, through the Department of Climate Change, Energy, the Environment and Water (DCCEEW), leads National policy and legislative reform. State and Territory Governments are responsible for legislating and managing water assets within their jurisdictions.

5.1 Australian Government

Water Act 2007

The *Water Act 2007*, administered by DCCEEW, governs water management across the Murray Darling Basin and provides for other matters of national interest in relation to water policy and water information. This includes the establishment of a National framework to ensure future provision of water through comprehensive data collection across all jurisdictions. It provides a mechanism for regular assessment of each state against the National Water Initiative. The Act authorises the Bureau of Meteorology to collect and publish water information, including a National Water Account and periodic reports on water resource use and availability. The Act is scheduled for review in 2027.

Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) regulates impacts on matters of National environmental significance, including significant impacts on water

resources. This includes the "water trigger", which initially applied to coal seam gas and large coal mining developments.

On 15 December 2023, the EPBC Act Water Trigger was amended to include likely significant impacts on water resources from all types of unconventional gas developments, such as shale and tight gas. As a result, any proposed actions that are likely to significantly affect water resources from these developments must now be referred for assessment under the EPBC Act.

National Water Initiative

Established in 2004, the National Water Initiative (NWI) promotes sustainable water management through market, regulatory and planning based approaches. The NWI requires each State and Territory to develop water plans, manage over-allocated systems, maintaining water rights registers, improve water pricing and enhancing urban water management and demand. The NWI builds on from the 1994 Council of Australian Governments (COAG) Water Reform Framework.

The 2020 National Water Reform Inquiry by the Productivity Commission highlighted the need to update the NWI to address climate change and water demand. A 2024 review, resulting in the National Water Reform 2024 recommended focusing on developing a shared understanding of water security and considering all extreme climate events in water planning. It also recommended integrating water demand changes into net zero strategies to ensure sufficient water for Australia's net zero transition. The Australian, State and Territory Governments are currently collaborating to renew the NWI by developing a more adaptable National Water Agreement (NWA). WALGA, through the Australian Local Government Association (ALGA) and directly, has provided input into this review.

National Drought Agreement

The National Drought Agreement (NDA) is intended to support the agricultural sector and regional communities by fostering collaboration, providing support and resources, guiding policy development, building capacity and promoting community engagement to enhance drought resilience. The Agreement establishes a National framework for addressing drought related challenges, ensuring collaboration across all levels of government to support the agricultural sector and rural communities. From 2024 until 2029, the NDA builds on the First National Drought Agreement focusing on long term preparedness to help businesses and communities manage and recover from the impacts of drought. This intergovernmental agreement outlines the roles and responsibilities of the National, State and Territory Governments in preparing for, managing through and recovering from drought. The NDA emphasises a consistent, collaborative approach to drought management across Australia.

Future Drought Fund

The Future Drought Fund (FDF), established by the Australian Government in 2019, under the *Future Drought Fund Act 2019* aims to enhance drought and climate resilience across the country. The FDF provides $100 million annually for grants and programs to support initiatives, including local solutions for drought resilience, building knowledge and skills and innovative projects for transformational change.

Drought Resilience Adoption and Innovation Hubs

Drought Resilience Adoption and Innovation Hubs, part of the Australian Government's Future Drought Fund, are designed to enhance drought resilience by fostering collaboration between researchers, farmers and communities.

The hubs serve as regional centres for innovation, focusing on developing Regional Drought Resilience Plans. The Hubs also implement practical solutions, focusing on adaptive farming

practices, community support networks and financial mechanisms to improve drought preparedness and response.

Example Plans include the Mid-West Regional Drought Resilience Plan, which was developed through significant collaboration between the Mid-West Development Commission, Northern Agricultural Catchments Council (NACC NRM) and the Department of Primary Industries and Regional Development.

National Water Quality Management Strategy

The National Water Quality Management Strategy is the nationally agreed framework for water quality management, this strategy provides non-mandatory guidelines to support consistent water quality planning and management across jurisdictions.

5.2 State Government

In Western Australia, the Department of Water and Environmental Regulation (DWER) regulates and manages water resources under six acts:

- *Water Agencies (Powers) Act 1984*
- *Rights in Water and Irrigation Act 1914*
- *Country Areas Water Supply Act 1947*
- *Metropolitan Water Supply, Sewage and Drainage Act 1909*
- *Waterways Conservation Act 1976*
- *Metropolitan Arterial Drainage Act 1982*

The Water Corporation supplies water, wastewater and drainage services statewide. It also provides bulk irrigation supply for farming and agriculture, while also planning future resources to meet population growth.

Water Services Act 2012

The *Water Services Act 2012* regulates the provision of water services in Western Australia. It establishes a framework for licensing, regulating and overseeing water service providers to ensure the delivery of water services is efficient, safe and sustainable. The Act covers potable drinking water, sewerage, drainage, irrigation and wastewater services. It applies to both State-owned providers, such as the Water Corporation, Aqwest and Busselton Water, and private suppliers operating independently. Private suppliers typically service regional areas where connecting to State infrastructure is either not feasible or prohibitively expensive due to headworks and upgrade costs.

Under a Class Exemption from section 5(1) of *the Water Services Act 2012*, 21 small Local Governments can provide water services (sewage/non-potable water) in their communities. These include the Shires of Northam, West Arthur, Gnowangerup, Kent, Wickepin, Victoria Plains, Dumbleyung, Jerramungup, Brookton, Goomalling, Dowerin, Koorda, Denmark, Ravensthorpe, Dalwallinu, Morawa, Lake Grace, Yilgarn, Coolgardie, Moora, East Pilbara and City of Kalgoorlie Boulder. Without these exemptions, licensing would impose a substantial financial and resource burden on the sector. WALGA has consistently supported the Class Exemption.

Rights in Water and Irrigation Act 1914

The *Rights in Water and Irrigation Act 1914* (RiWI Act) provides the regulation, management, use and protection of water assets across the State. Local Governments operate under licences and

permits in accordance with the RiWI Act. Under the RiWI Act, Local Governments can extract water using licences and permits:

- 5C Groundwater or Surface Water Licence: Required for extracting water from groundwater or surface water sources.
- 26D Licence: Required for the construction or alteration of wells, bores and soaks.
- Section 11, 17, or 21A Surface Water Permit: Required for works involving surface water, depending on whether the area is proclaimed and if access is via road or Crown land.

These licences are administered by DWER and are reported against in line with the licence agreement.

The other three Acts which Local Government have interactions with are the *Country Areas Water Supply Act 1974*, which protects public drinking water sources in non-metro areas and controls land use and vegetation clearing in catchment areas. The *Metropolitan Water Supply, Sewerage, and Drainage Act 1909*, which regulates water supply and drainage infrastructure in metro areas. And the *Waterways Conservation Act 1976* which provides for the conservation and management of significant waterways so relevant for Local Governments managing foreshore reserves and waterway rehabilitation.

Water Reform Bill

The *Water Reform Bill*, first announced in 2006, aimed to consolidate and update the six acts governing Western Australia's water resources. However, in December 2023, the State Government announced that following feedback from water users and stakeholders, the Reform Bill would not proceed. Instead, the State Government would focus on prioritising license applications and delivering new water infrastructure across WA.

Feedback from the National Water Reform 2024 Inquiry Report highlighted various issues in Western Australia's current legislation. The report found that Western Australia lacks statutory water entitlements and plans, relying on outdated, 110-year-old legislation. The Inquiry Report noted the need for legislative reform, recommending that Western Australia adopt laws aligned with the NWI to enhance transparency around irrigation pricing, costs and subsidies and strengthen independent economic regulation to ensure water service pricing reflects cost recovery.

Gnangara Groundwater Allocation Plan

The Gnangara Groundwater Allocation Plan was developed to manage Perth's largest water resource, the Gnangara groundwater system in response to climate change. Since 1980, groundwater levels in the system have dropped by up to 10 metres, due to increased groundwater use and declining rainfall across WA. This significant reduction has adversely affected Local Government assets, including lakes and wetlands, bushland and other ecological areas.

Under the Plan, Local Governments in the affected area must reduce groundwater extraction by 10% from July 2028. To support this transition, in 2023 the State Government allocated $4 million through the Gnangara Waterwise Councils Grants Program. The funding was for Local Governments within the Gnangara plan area to implement waterwise actions, to meet the 10% reduction. Funded projects included irrigation system upgrades, park retrofits to increase non-irrigated areas of waterwise vegetation, installation of weather stations and smart irrigation control systems and exploring alternative water sources such as stormwater harvesting and wastewater reuse.

Kep Katitjin – Gabi Kaadadjan Waterwise Action Plan 3

The Kep Katitjin – Gabi Kaadadjan Waterwise Action Plan 3 (2024-2027) is the third Plan for Boorloo (Perth) and Bindjareb (Peel). Kep Katitjin is delivered in collaboration with 11 State

Government agencies and includes 43 actions aimed at strengthening collaboration and conservation efforts, with the goal of creating climate resilient and waterwise communities by 2030.

Action four of the Plan is to research, scope and engage on expansion of the Waterwise program into regional urban centres. It prioritises research, scoping and stakeholder engagement to guide the expansion, with the findings intended to shape the fourth and final Waterwise Action Plan (2027-2030).

Waterwise Council Program

The Waterwise Council Program, delivered in partnership by the Water Corporation and DWER, supports Local Governments in delivering water efficiency and sustainability measures in their communities. Initially focused on improving water use in community assets, such as facilities and public open spaces, the program now also promotes good governance, ecological health and promotes quality urban space. Currently, 47 Local Governments have Waterwise Council status. The Program largely focuses on the metropolitan areas and WALGA has consistently advocated for this Program to be adapted and expanded statewide.

Drainage for Liveability Program

The Drainage for Liveability Program is a collaborative initiative led by DWER and Water Corporation aimed at transforming traditional stormwater infrastructure into multifunctional assets that enhance community amenity and environmental outcomes. For Local Governments, Councils are encouraged to partner with State Government and Community groups to develop innovative projects, such as converting drains into living streams or integrating stormwater systems into parks, that deliver co-benefits like improved water quality, habitat creation, and enhanced amenity.

6. Water management themes

This section of the Paper provides detail on the two key themes of water security and water efficiency that were identified through the consultation process. The role and activities of Local Government are outlined and recommended solutions identified.

Water Security

Water security relates to the reliable availability, adequate quantity and acceptable quality of water needed to support human health, economic development and environmental amenity. Issues identified include:

- Infrastructure: The need for funding to repair and upgrade aging Local Government water infrastructure including irrigation, drainage and stormwater systems and to improve reliability of State-managed assets.
- Alternative Sources: The need to diversify water supply through non-traditional sources such as recycled water, stormwater harvesting, or desalination to support community assets.
- Licensing: Addresses challenges with the current water licensing system, including equity, access and regulatory enforcement.
- Access: Examines barriers to equitable water access, particularly for regional and remote communities.
- Use: Focuses on water planning for allocation and consumption across sectors.

Water Efficiency

Water efficiency is focused on reducing unnecessary loss through better practices, technologies and infrastructure. Issues identified include:

- Technology: This include adopting waterwise technologies to enhance water efficiency and adapt to the changing climate.
- Water Literacy and behaviour change: Addressing the need to for increased water literacy internally and at a community scale to support internal capacity and to support the adaptive capacity of communities.
- Water Sensitive Urban Design (WSUD): Encourages the adoption of efficient technologies and design standards to reduce water consumption across public and private infrastructure, while incorporating blue and green infrastructure.

7. Water security

An adequate and reliable supply of water is essential for healthy, resilient communities and for the sustained growth of WA's economy and population. This section explores infrastructure (headworks, infill sewer and expansion of the sewer system, dams and groundwater), alternative water sources, licensing, water access and use.

7.1 Infrastructure

Aging water infrastructure is an escalating concern for many Local Governments, who directly manage a significant portion of existing irrigation and drainage systems. These assets are increasingly prone to failures such as burst pipes, leaks and irrigation breakdowns, placing substantial financial and operational strain on Local Governments. In addition to managing their own extensive drainage and irrigation networks, Local Governments and their communities also rely heavily on State-managed infrastructure, some of which dates back to the 1800s. This includes regional bulk water supply systems, major irrigation schemes and arterial drainage networks overseen primarily by the Water Corporation and DWER. The combined aging of both Local and State infrastructure presents a growing challenge to water security, service reliability and long-term planning across Western Australia.

Local Governments rely on state managed infrastructure particularly in areas experiencing residential and commercial growth. Insufficient potable water infrastructure can limit new development and contribute to current housing supply challenges. Perth's water supply is currently sourced from a mix of desalination, groundwater, surface water (dams) and groundwater replenishment. Recognising the need for long-term water security, the State Government has invested heavily in desalination infrastructure, including two existing plants and a $2.8 billion commitment to the Alkimos Seawater Desalination Plant, scheduled for completion in 2028. Whilst these investments reflect the shift away from traditional surface water systems, which are increasingly unreliable due to reduced rainfall and higher evaporation rates, desalination plants are energy intensive and should be considered within net zero plans for state owned assets.

Local Governments across Western Australia are increasingly prioritising infrastructure upgrades to ensure long-term water security in the face of the growing unreliability of traditional water sources. In response, Local Governments are undertaking upgrades to stormwater and water infrastructure to improve reliability, while also enhancing community resilience and emergency preparedness through improved water access and storage. Energy efficiency improvements are also being incorporated into water related infrastructure to reduce operational costs and energy consumption. In regional areas, Local Governments are exploring conservation technologies and practices, particularly for dams and natural water bodies, to extend water availability. However, the high costs associated with these initiatives often exceed the financial capacity of individual

Local Governments, highlighting the need for coordinated funding and support to ensure critical infrastructure upgrades can be delivered.

Headworks

Headworks refer to the planning and construction of essential water infrastructure, such as potable water supply and sewage connections, required for new subdivisions and developments. These projects are typically funded through Water Corporation's five year capital works program or by developers with the cost and assets later recouped at the conclusion of the development by Water Corporation.

Local Governments have raised that the current approach to headworks has negative impacts on the availability of residential development. Infrastructure expansion often favours high yield developments over smaller and regional projects, impacting economic and residential growth in those areas.

In Western Australia, number of dwellings delivered per million dollars spent is a key driver of development feasibility, with higher costs and lower yields inhibiting greyfield and brownfield developments. Importantly, service providers are not engaged until a developer initiates local structure planning (LSP), which can limit opportunities to coordinate infrastructure across broader catchments, especially where multiple servicing options exist. This fragmented approach can hinder strategic water planning and infrastructure delivery.

Infill Sewer

In infill areas, fragmented land ownership complicates the coordination of sewer upgrades, which further constrains housing supply. The State Government infill sewerage program was intended to provide both environmental and social benefits, to enable upgrades of existing areas with on site disposal. However, funding cuts and delays have left many areas unconnected. Local Governments have advocated for renewed funding to complete infill sewerage upgrades and improve connections in existing urban areas.

Dams

Dams and water bodies are essential for irrigation, emergency management and community amenity, with many regional Local Governments responsible for managing their own infrastructure. However, drought and changing rainfall patterns are significantly reducing dam levels, prompting Local Governments to implement water restrictions and prioritisation of water use for essential services. Consultation with Local Governments show that many are forced to turn off irrigation for sporting ovals or reduce watering times when dam levels become critical. Maintaining and upgrading dams places a substantial financial burden on Local Governments, with limited support available from the State Government. In addition to high management costs, many dams experience significant water loss due to evaporation. While innovative solutions such as covers and dam balls are being explored by Local Governments to reduce evaporation rates, these options come with considerable cost barriers. Although inheriting State-owned dam infrastructure has provided benefits in terms of water storage and drought resilience, it also brings the financial responsibility of maintaining ageing systems that do not meet modern efficiency standards.

Waterways

Health of waterways is a key part of the States integrated water system. Local Government are responsible for maintaining drainage infrastructure that prevents nutrient-rich runoff from entering natural systems, a key contributor to algal blooms, as well as from severe weather events that trigger significant stormwater run-off. The economic impacts associated with sediment control alone can be significant for Local Governments, with substantial portions of drainage budgets allocated to remediation when development pollution occurs. Through land use planning and

development approvals and active enforcement, Local Government have mechanisms to enforce erosion and sediment control measures that safeguard waterways and wetlands. WALGA has developed guidance for the sector on this issue.

Options

To assist Local Government with managing water infrastructure, key initiatives could include:

- State Government funding programs for:
    - Local Government water infrastructure upgrades, including irrigation, drainage and sewerage systems.
    - Local Government management and maintenance of water assets (e.g. dams and water catchments).
    - Regional Local Government to support small-scale sewerage infrastructure headworks costs.
    - Infill sewerage program to be sufficiently funded
    - Technical support and training, particularly in regional areas, to enable infrastructure upgrades.
- For the State Government to identify areas of critical non-potable water supply and assess any disused water assets that could be transferred to Local Governments to enhance water security.

Questions for Local Government

1. Are there any additional water infrastructure challenges impacting your Local Government?
2. What solutions or support would assist your Local Government in addressing water security and infrastructure needs? (*These could be as outlined or additional suggestions*).

7.2 Alternative water sources

In response to increased demand and declining water supply, both State and Local Governments are turning to alternative water sources to supplement and, in some cases, replace traditional water sources for irrigation and potable water supply. These alternatives include groundwater replenishment, managed aquifer recharge (MAR), stormwater harvesting, desalination and the treatment and reuse of wastewater.

Local Governments are investing in a range of initiatives including desalination, stormwater harvesting, wastewater reuse and feasibility studies for alternative water supply options. For example, the City of Mandurah responded to rapid population growth by developing a new irrigated public open space using treated wastewater from the Caddadup Wastewater Treatment Plant and managed aquifer recharger (MAR). The City of Kalgoorlie-Boulder has invested heavily in alternative water supply by recycling treated wastewater and harvesting stormwater to irrigate its public open spaces and provide non-potable water to local schools and industries. To bolster drought resilience, the City has invested in upgraded pipelines and storage dams and is planning a pilot brackish water desalination plant to further improve its water supply reliability. The City of Kalamunda utilises drainage water through managed aquifer for parks during summer months, the Shire of Katanning's brackish desalination plant supplies 30kL per day, supporting three local parks. The City of Swan is working with the Department of Communities to use stormwater and recycled water at a new greenfield development. Regional Local Governments have been

supported through the Community Water Supplies Partnership with funding for increased capture and storage of rainwater, groundwater, stormwater and recycled water.

In regional areas, salinity in groundwater is a concern, particularly across the Wheatbelt, where elevated salt concentrations make groundwater unsuitable for irrigation, road construction and bushfire control. As a result, many Local Governments rely on costly potable water supplies or are seeking alternative sources, such as water from State Government trials of brackish water desalination to sustain water needs.

Regional Local Governments have expressed interest in the expansion of brackish desalination (with infrastructure currently being trialled in the Shires of Dumbleyung, Merredin and Katanning) and exploring alternative water sources such as recycled wastewater and stormwater harvesting. Local Governments have emphasised the need for tailored solutions that reflect both metropolitan and regional contexts, noting that under resourced Local Governments often lack the technical expertise and internal capacity to initiate or manage these systems.

Concerns have also been raised about land released by the State Government for development when sites lack access to traditional groundwater sources for irrigating public open spaces. This forces reliance on costly and energy-intensive alternatives and raises equity concerns, especially for peri urban and regional Local Governments that are paying more for their water than their metropolitan counterparts. The absence of strategic, long-term planning prior to land release exacerbates these challenges and highlights the need for improved and integrated water management strategies.

While alternative water can contribute to water security, use should be assessed on a case-by-case basis. A multi-criteria analysis considering cost, greenhouse gas emissions, safety and long-term sustainability may, in some instances, identify scheme water as the most suitable option after groundwater. To ensure responsible and efficient water use, alternative water sources should only be considered after water efficiency and trading have been ruled out. Scheme water or potable water is used for irrigation in areas where groundwater and other alternative water sources are unsustainable or cost prohibitive.

Alternative water sources in WA include:

- Groundwater replenishment: Treats wastewater before recharging into deep aquifers for drinking water. Example: Beenyup facility in Cragie, recharges 28GL annually.
- Managed aquifer recharge (MAR): Recharges water from aquifers or alternative sources (stormwater, treated wastewater) into underground aquifers. Example: bores, ponds, basins and trenches.
- Stormwater harvesting: Captures rainfall runoff for non-potable use like irrigation.
- Wastewater treatment and reuse: Treats sewage or industrial water for reuse, such as irrigation.

Options

To assist Local Government with alternative water sources, key initiatives could include:

State Government funding Programs for:

- Alternative water infrastructure, including dedicated funding for pilot projects, ongoing maintenance, monitoring and system upgrades.
- Provision of technical expertise and support to assist Local Governments in planning, accessing feasibility and implementing alternative water infrastructure.
- The development of integrated regional water management plans
- Community and developer incentives for the use of alternative water sources, such as rainwater and recycled wastewater, greywater and stormwater.

- Further support from Department of Health (State) to assist Local Governments in understanding the process of utilising wastewater.

Questions for Local Government

1. Is your Local Government exploring any additional alternative water sources? If so, what challenges have limited the expansion of these efforts?
2. What further solutions or support mechanisms would be necessary to enhance your Local Government's water security through alternative water sources?

7.3 Licensing

Water Licensing is governed primarily by the *Rights in Water and Irrigation Act 1914* (RIWI Act) with DWER regulating over 12,000 active licenses across a range of sectors, authorising the extraction of over four trillion litres annually. Under this legislation, Local Governments are required to obtain a Section 5C license to lawfully extract water from either groundwater or surface water sources. In addition, a Section 26D license is necessary for the construction, modification, or replacement of well, bores or soaks. A Surface Water Permit is also required when activities interfere with or obstruct a watercourse. These apply in proclaimed areas and are designed to ensure water use is sustainable, equitable and aligned with environmental protection objectives.

These licenses are designed to ensure water is protected now and into the future. This is particularly important in WA, where 70% of all water used across the State comes from Groundwater[8].

A recent Office of the Auditor General audit of DWER's regulation of water licences found significant deficiencies in DWER's compliance and enforcement practices. The audit found that DWER relied heavily on self-reporting by licence holders with minimal verification for compliance. Alarmingly, 87% of potential incidents over the last three years were not assigned to staff for investigation. In response to these findings, the State Government announced a $16.9 million dollar boost to strengthen DWER's capacity to assess and monitor compliance.

A key concern for high growth, peri-urban and regional Local Governments is DWER's First-In-First-Served approach for groundwater licenses[9]. Applications are generally assessed in the order they are received which can disadvantage Local Governments with limited resources or slower administrative capacity. Based on this, and the need for sustainable water allocation, a shift from the traditional First-In-First-Served licensing system to an approach that prioritises highest value use could provide greater long-term benefits for communities and their aspirations as identified in Local Government Strategic Community Plans.

Under the *Rights in Water and Irrigation (RIWI) Act*, the decision to grant or refuse a license is at the department's discretion. Clause 7(2) states that when assessing an application, DWER must consider all relevant factors, including the ecological sustainability and environmental acceptability of the proposed water use. The withdrawal of the Water Reform Bill, which aimed to modernise water management legislation, has further complicated these challenges. The reform may have offered solutions to protect environmental water reserves and regulated wastewater and stormwater management, providing additional water supply to supplement traditional water.

[8] Office of the Auditor General - Regulation of Water Licences
[9] DWER - Policy - Timely submission of required further information and Water Licensing — First In, First Served Policy Review,

Options

To assist Local Government in navigating licencing, key initiatives could include:

- For the State Government to undertake a review of the framework that governs water services and supply, including dealing with issues relating to the First-In-First-Served approach for groundwater licences.
- For the State Government to ensure that approved water licences do not compromise the availability of water for high priority uses, particularly in ecologically sensitive areas, by applying rigorous assessment criteria during the licence approval process

Questions for Local Government

1. Are there any additional challenges your Local Government faces regarding your water licenses, and if so, what solutions would assist in solving them?
2. What solutions or support would assist your Local Government in addressing water licensing issues?

7.4 Access

Ensuring access to water and consistent water quality is still a key issue across Western Australia.

Aboriginal Communities

In July 2023, responsibility for water and wastewater services in 141 Aboriginal communities across Western Australia was transferred from the Department of Communities to Water Corporation and Horizon Power. This transition marked the beginning of the Aboriginal Communities Water Services (ACWS) program, which aimed to deliver safe and more reliable water services.

While service levels vary depending on community size and remoteness, more than 95% of the Aboriginal population in these communities receives water quality testing in accordance with regulatory standards. In extremely remote communities with fewer than 10 residents, water quality testing may be less frequent due to logistical challenges. In these cases, risk assessments are undertaken in collaboration with health regulators to determine the most appropriate testing regime.

The Remote Essential and Municipal Services (REMS) Program supports remote communities by improving infrastructure and management practices to ensure access to safe drinking water, complementing the efforts of the ACWS program.

Inconsistent Quality

Local Governments across Western Australia have reported challenges related to water service delivery in certain areas, particularly where infrastructure is ageing or where services are classified as Non-Standard Water Services. These challenges can include fluctuations in water volume, pressure and quality, which may affect the reliability of supply. In response, alternative on-site treatment solutions, such as water tanks and filtration systems are often deployed by the State Government to maintain access to potable water. Once key townsite locations are declared a Non-Standard Water Service site, the ability to retain and grow populations is diminished with supply of potable water being a basic essential service.

Provision of water by the Water Corporation is highly regulated and operates under a Water Services Licence and complies with a Memorandum of Understanding with the Department of Health, adhering to the Australian Drinking Water Guidelines.

Drought

Drought relates to the prolonged period of insufficient rainfall or groundwater recharge, leading to water shortages that can severely impact agriculture, ecosystems and communities. In Western Australia, under the Future Drought Fund, seven regional drought resilience plans have been developed to map the vulnerabilities of communities to future drought impacts in the face of low and variable rainfall, high temperatures and reliance on agricultural production.

Water Deficiency Declaration

A Water Deficiency Declaration supports areas that experience prolonged dry conditions that impact the availability of stock water for commercial farmers. A water deficiency declaration involves an eligible Local Government making a formal request to the Department of Water and Environmental Regulation (DWER) which, after consulting with the Department of Primary Industries and Regional Development (DPIRD), makes a recommendation to the Minister for Water. A water deficiency declaration is authorised when farmers are unable to access on-farm water and are required to travel long distances to access off-farm water due to prolonged dry conditions. In response, the State Government coordinates central watering points where water is carted to for farmers to access for their stock.

Fixed Standpipes

Fixed standpipes in regional areas provide bulk water supply directly from a water supply main and are typically owned and managed by Local Governments, DWER and the Water Corporation. These standpipes are critical in supplying water to communities with limited or no access to water, particularly when areas are declared as water deficient. They also support Local Government operations by providing potable and non-potable water to maintain street trees, undertake minor construction works and service businesses that rely on carted water. Community standpipes, usually with a low flow rate, are owned by Local Governments and available to the community. Commercial standpipes, which have a high flow rate, are often privately owned or provided by Local Governments and cater to commercial operators.

Case Study – Shire of Esperance

Deficiency Declarations are currently in place for Salmon Gums, Grass Patch and Cascades in the Shire of Esperance. As such, since 2024, the Water Corporation has been carting stock water on behalf of DWER to support emergency stock watering. The declaration in Salmon Gums was issued after an application from the Shire of Esperance on behalf of 13 farmers in Salmon Gums. A declaration of this kind is a last resort in a period of ongoing dry conditions which have impacted and depleted water availability on both the farm and within the community.

Local Governments are also participating in pilot programs and using drought vulnerability data to identify at-risk areas and prioritise interventions. By addressing these challenges, Local Governments aim to protect public and environmental assets, support sustainable water use and enhance community resilience to drought and other water-related challenges.

Options

To assist Local Government in improving water access and resilience, key initiatives could include:

- Ensure consistent and reliable water services to both metropolitan and regional areas. This includes providing water at a quantity and quality that supports the health and economic growth of regional communities.
- Incorporate learnings from regional drought hubs into future regional water planning.

Questions for Local Government

1. Are there any additional challenges your Local Government is facing in receiving consistent and reliable water services?
2. Are there any solutions not included which would support your Local Government?

7.5 Use

Local Governments face challenges maintaining public green spaces under strict water restrictions, especially where groundwater is scarce or in high-density areas where public open space (POS) is critical for community wellbeing and liveability.

Local Governments reported challenges in consistently providing sufficient water to all POS, often having to prioritise sporting ovals within their communities. An additional concern relates to new developments, where developers initially secure establishment licences to access groundwater for irrigating POS. During this phase, plantings receive generous water allocations to support growth and aesthetics. However, upon handover to the Local Government, water access reverts back to standard licence restrictions, resulting in reduced irrigation capacity. This often leads to a visible decline in the quality and appearance of parks and reserves, causing resident dissatisfaction and highlighting the limitations of Local Government-managed water allocations.

Options

To assist Local Governments in managing public open space equitably and sustainably, key initiatives could include:

- Support for the consistent application of water sensitive urban design (WSUD) principles to capture water where it falls, helping sustain vegetation and enhance urban resilience.
- Development of consistent communication assets to better educate the community on water efficiency measures, such as browning off, to ensure increased community awareness of water allocations.

Questions for Local Government

1. Are there any additional challenges your Local Government is facing in maintaining consistent and high quality POS?
2. Are there any additional solutions which would support your Local Government?

8. Water efficiency

Water efficiency prioritises water resources in a way that maximises their utility while minimising water loss. In essence, it is doing more with less. For many Local Governments, this includes implementing measures with a combination of technologies that reduce water consumption, enhance water reuse and improves the overall management of water resources. It also includes ensuring efficient use of water, through ensuring effective community behaviour change programs

and interventions, water sensitive urban design principles, as well as efficiency in Local Governments' own operations.

8.1 Technology

Local Governments across Western Australia are increasingly adopting waterwise technologies to enhance water efficiency and adapt to the changing climate and associated impacts. These efforts include the use of smart irrigation systems that optimise watering schedules based on weather conditions and soil moisture, as well as hydro-zoning (grouping plants with similar water needs together to reduce water consumption) and eco-zoning (converting existing under-utilised irrigated turfed areas into waterwise, native gardens) in public parks.

Stormwater harvesting projects, such as those implemented by the City of Perth, are being used to capture and reuse water from sources like the Claisebrook main drain, a system that intercepts a mix of stormwater and groundwater. In addition, many Local Governments are interested in exploring wastewater reuse for irrigation and investigating opportunities to recharge shallow aquifers with recycled water to support urban tree stock and waterwise landscaping. Complementary initiatives such as leak detection technologies, water loggers, drought-tolerant plantings and community education programs further promote water efficiency practices.

Despite growing interest, the implementation of these practices is often hindered by high upfront costs (compared to costs of water saved), limited funding and a lack of technical expertise and capacity, particularly in regional areas. Where these efforts are successful, they are often backed by initiatives like the Waterwise Council Program and the Gnangara Waterwise Councils Grants Program, which provide funding and resources to help Local Governments. Noting both programs of these are based in the Perth and Peel and do not provide direct support to regional areas.

Local Governments have also noted issues in accessing bulk billing water consumption data from the Water Corporation for inputting into reporting platforms. This data supports Local Government action improving water efficiency. Water Corporation is working with Local Governments and companies that provide data analysis services for the sector to streamline the provision of water data.

8.2 Water literacy and behaviour change

Feedback from Local Governments highlighted that community water literacy needs to be improved, including understanding of the water cycle, water sources, management practises and impacts of climate change on ecological areas dependant on groundwater resources. This gap has created a disconnect between the technical knowledge and operational realities faced by Local Governments and the public's expectations around water use. For example, despite declining rainfall and reduced water allocations, community expectations for green spaces, especially grassed areas remain unchanged. This lack of awareness makes it challenging for Local Government to gain community support for necessary measures such as water restrictions or reduced watering during drought conditions.

Improving water literacy within Local Governments is also essential to ensure that water efficiency measures are appropriately planned and budgeted for. Many Local Governments, particularly in regional areas, have reported having limited staff capacity and identified the need for further training for staff and elected members to support informed decision making.

Local Governments play an active role in promoting water literacy through a variety of initiatives. These include delivering community programs, hosting educational events and leveraging both social and print media channels to inform and engage residents. Under the Waterwise Council Program, endorsed Local Governments can participate in a Water Sensitive Cities Index Benchmarking Workshop, funded by the Water Corporation, to asses current water management performances and identify actions to accelerate the transition to waterwise communities.

The 47 participating Waterwise Councils in Western Australia can access up to $10,000 of in-kind funding to support greening initiatives such as native plant sales, educational workshops, the establishment of waterwise and native verges and the purchase of verge trees managed by Local Governments. While these initiatives are welcomed, Local Governments are also investing heavily in infrastructure upgrades to improve water asset management. This includes retrofitting outdated fixtures and appliances, upgrading irrigation systems, implementing hydro zoning and maximising the use of recycled water.

The Water Corporation offers a range of targeted education programs, such as the Waterwise Schools, Councils, Business and Aquatic Centres. However, Local Governments have expressed a need for expansion of the Council Program to include additional funding and educational support, enabling Local Governments to continually build on outcomes of the reporting process.

8.3 Water Sensitive Urban Design

Water sensitive urban design is a contemporary approach to managing the urban water cycle through integration into the natural and built landscape[10]. It uses planning and design principles that incorporates stormwater, groundwater, wastewater and water supply into our built form to achieve best practice water efficiency.

Local Governments are applying water-sensitive urban design principles to demonstrate best practices and educate residents on efficient water use. Collectively these efforts aim to improve water efficiency, reduce long-term costs and foster a culture of water literacy within the community. While the State government has embedded sustainable water resource management and water sensitive design in land and water planning policies, support is required by all decision-makers to ensure these policy objectives are implemented on-ground.

By recognising and incentivising Local Government that implement innovative water-saving initiatives—such as smart irrigation systems, stormwater reuse, and community education programs—the State can amplify grassroots efforts and align them with broader strategic goals. A coordinated approach that values both top-down policy and bottom-up innovation would not only improve water efficiency but also strengthen partnerships across jurisdictions, ensuring that water use is managed sustainably in the face of climate variability and population growth.

Drainage infrastructure not only underpins urban water management but also has significant environmental implications, including the potential for contamination if not managed effectively. WA Local Governments operate an extensive drainage network, including over 13,000 kilometres of longitudinal drains associated with roads in built-up areas. In addition, they manage more than 2,600 kilometres of stormwater drains and 2,400 kilometres of open drains not associated with roads. These figures do not include table drains and other drainage structures associated with rural roads, indicating the true scale of drainage infrastructure may be even greater.

Given these vast networks, the need for sophisticated drainage management is clear, not only to maintain infrastructure but to mitigate risks to the environment. Initiatives such as Drainage for Liveability and water sensitive urban design (WSUD) are being incorporated to support ecological health, improve water quality and manage flash flood events, while also contributing to urban amenity and reduced energy costs. The integration of WSUD with drainage infrastructure is particularly significant, as it links water management with broader sustainability and liveability objectives throughout communities.

[10] NewWAterWays website

Options

To assist Local Governments in mainstreaming water efficiency practices, key initiatives could include:

For the Department of Water and Environmental Regulation and Water Corporation to:

- Expand, and sufficiently resource, the Waterwise Council program applicable across the whole State and develop tiers within the program to enable whole-of-sector participation.
- Improve networks for Local Governments to share knowledge, resources and best practice relating to water efficiency.
- Provide water efficiency training opportunities for Local Government staff, executives and elected members.
- Develop a range of consistent communication assets for community education for use by Local Government.
- Partner with Local Government to invest in water efficiency pilots, such as stormwater harvesting, browning off of ovals and waterwise verges to increase community awareness and mainstream these applications
- Adopt a holistic framework that incorporates comprehensive water use data and actively incentivising Local Governments striving for water efficiency. This would involve enhancing data-sharing mechanisms between State and Local Governments, enabling evidence-based decision-making and targeted interventions.

Questions for Local Governments

1. Are there any additional challenges your Local Government is experiencing relating to water efficiency?
2. Are there any solutions not included which would support your Local Government?

9. Conclusion

Water is an essential resource to the health, wellbeing and sustainability of communities, the environment and the economy. However, climate change, combined with a growing population and increased groundwater extraction, is placing Western Australia's water systems under significant pressure.

Local Governments across Western Australia are working to reduce water consumption, upgrade infrastructure and explore alternative water sources. However, the scale and urgency of projected changes in water availability requires a more coordinated response. Strengthening partnerships between Local and State Governments is essential to secure long-term water resilience for communities, including through shared investment, strategic planning and expanding research into alternative water sources, alongside efforts to ensure existing infrastructure is fit for purpose. A more collaborative approach will better position the State to meet future water challenges.

Local Governments through land use planning, asset management and community education, play a central role in conserving water, implementing efficiency measures and supporting public health and environmental outcomes. Ensuring water security at the local level is critical for maintaining liveable, climate-adaptive communities now and in the future.