



# Hunter Water Customer and Community Advisory Group

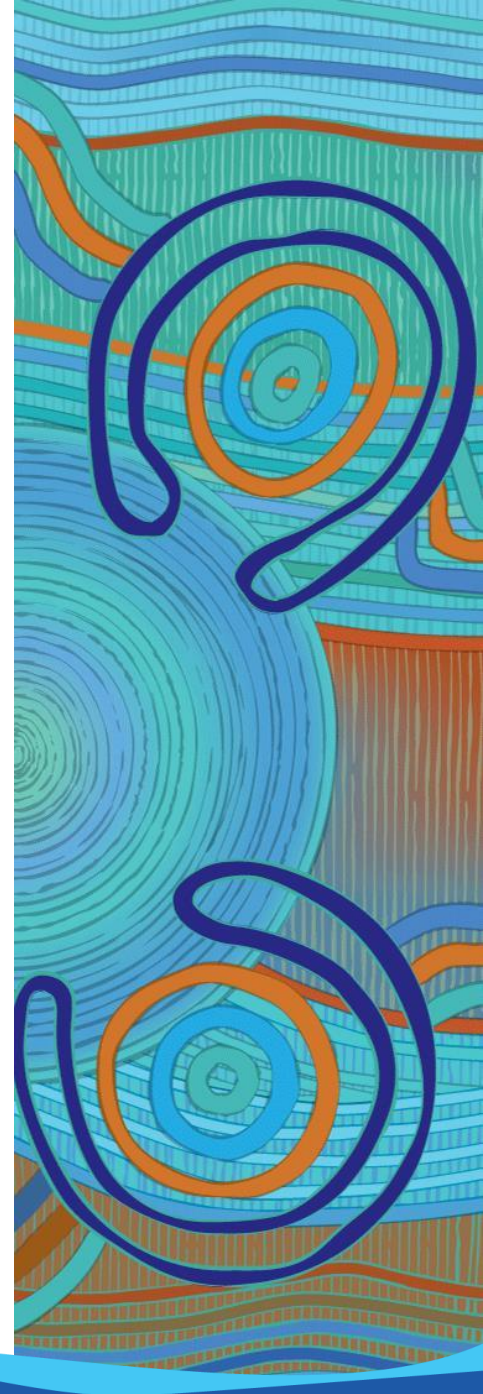
Tuesday 18 June 2024



## ACKNOWLEDGEMENT OF COUNTRY

Hunter Water acknowledges the Traditional Countries of the Awabakal, Geawegal, Darkinjung, Wonnarua and Worimi peoples on which we operate and the Countries beyond where our water flows.

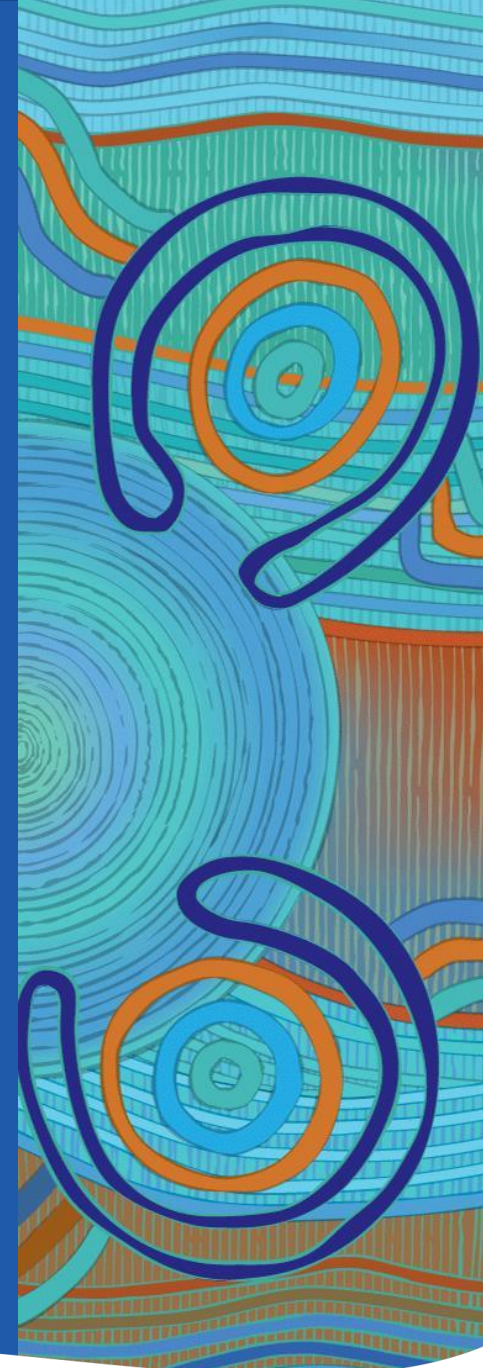
We recognise and respect the cultural heritage, beliefs and continuing connection to the lands and waters of our Traditional Custodians and pay respect to their Elders past, present and emerging.





# Operational update

**Emma Berry**  
Executive Manager Strategy &  
Engagement






# Current storages

**97.6%**  
AS AT 13 JUN 24

### Grahamstown Dam




**STORAGE LEVEL**  
**97.7%**  
178,037 ML

↓ 0.4% 1 WEEK AGO  
↑ 1.5% 1 MONTH AGO  
↑ 1.8% 1 YEAR AGO

**MAXIMUM CAPACITY**  
182,305 ML

### Tomago Sandbeds




**STORAGE LEVEL**  
**100.0%**  
54,000 ML

0.0% 1 WEEK AGO  
0.0% 1 MONTH AGO  
↑ 7.8% 1 YEAR AGO

**MAXIMUM CAPACITY**  
54,000 ML

### Chichester Dam




**STORAGE LEVEL**  
**100.0%**  
18,443 ML

0.0% 1 WEEK AGO  
0.0% 1 MONTH AGO  
↑ 4.7% 1 YEAR AGO

**MAXIMUM CAPACITY**  
18,356 ML

### Anna Bay Sandbeds



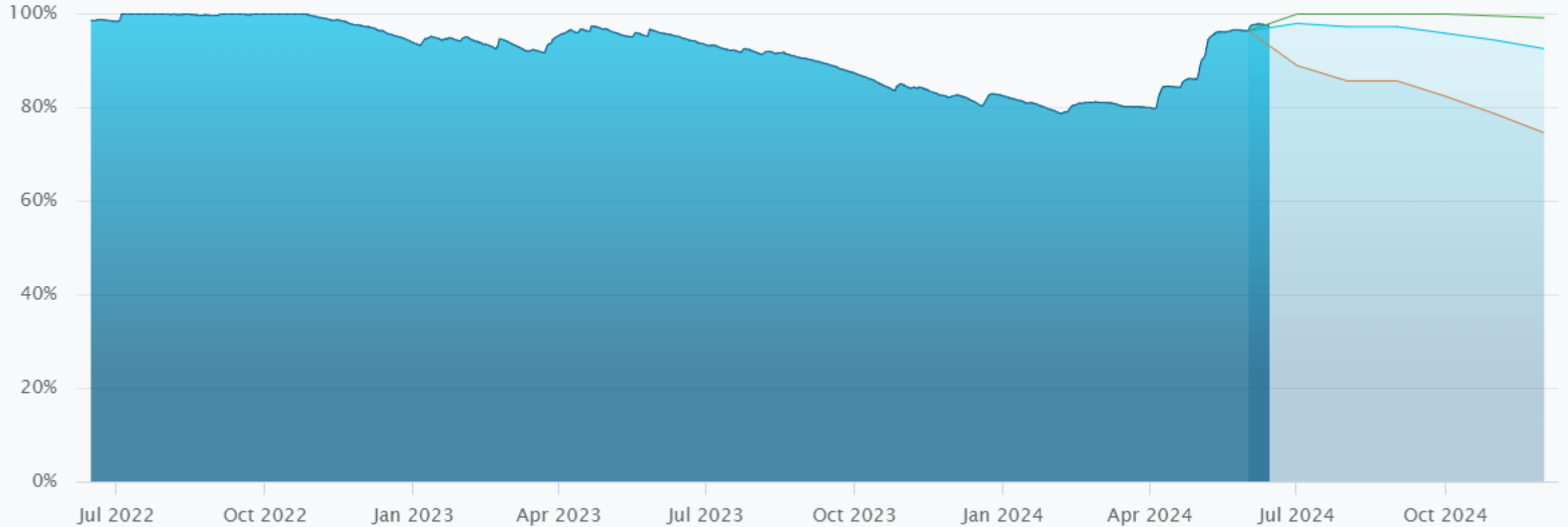
**STORAGE LEVEL**  
**85.5%**  
12,423 ML

↑ 1.8% 1 WEEK AGO  
↑ 7.4% 1 MONTH AGO  
↓ 14.0% 1 YEAR AGO

**MAXIMUM CAPACITY**  
14,537 ML

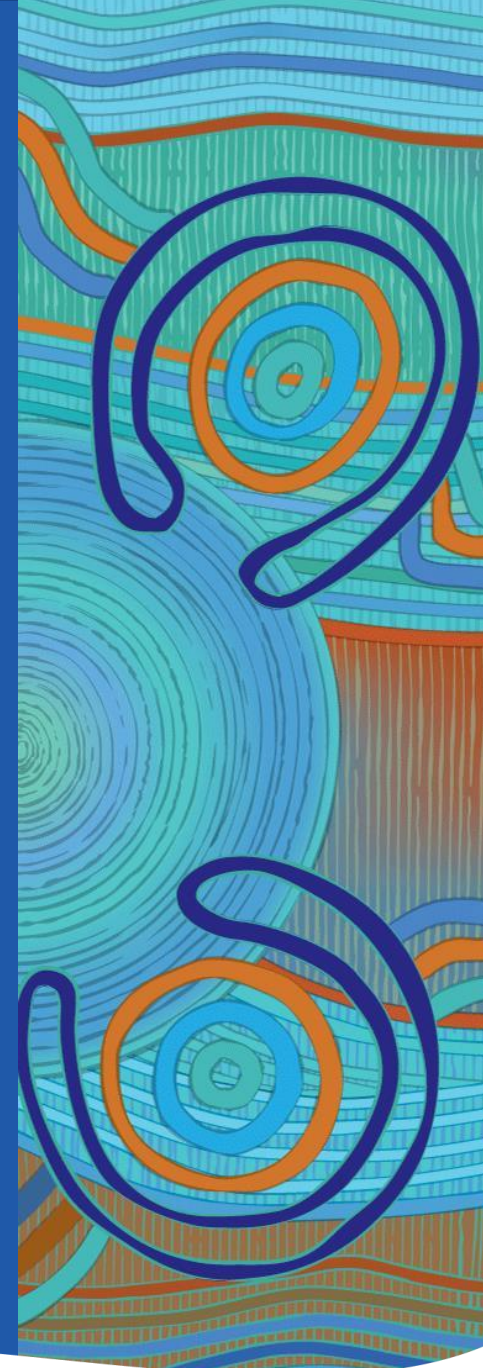


# Historical storage levels and outlook





# Pricing proposal community engagement update





# Community engagement

2025-30 pricing proposal  
customer engagement





# Revised customer outcomes

I expect Hunter Water to provide **GREAT CUSTOMER EXPERIENCE**

I expect to be able to use Hunter Water's services and interact with Hunter Water easily, in the channel I choose. I want to be **treated with respect**, kept informed with clear and timely communication, and I trust Hunter Water will always try to resolve my issue first time, **every time and in a timely manner**.

I expect Hunter Water to be **COMMUNITY-FOCUSED**

I expect Hunter Water to listen and use community feedback in its decision making, support the community through grants and partnerships, deliver educational activities and participate in community events.

I expect Hunter Water to provide **VALUE FOR MONEY**, and be **AFFORDABLE**

I expect Hunter Water to keep bills as low as possible by being efficient and looking for ways to save money. I want Hunter Water to deliver valued services. I expect Hunter Water to treat consumers experiencing vulnerability with dignity and make it easy for them to get assistance.

I expect Hunter Water to provide **HIGH QUALITY WATER SERVICES**

I expect my water to be safe and clean. My water and wastewater services should be reliable so that I can depend on them year-round.

I expect Hunter Water to provide **WATER SECURITY**

I expect Hunter Water to plan ahead and ensure water resources are used wisely so that we have enough water to support the health and prosperity of our region, now and in the future, no matter the weather.

I expect Hunter Water to be **ENVIRONMENTALLY SUSTAINABLE**

I expect Hunter Water to care for the environment: protecting it during our operations, 'treading lightly on the planet' and being fair to future generations by acting on big challenges like climate change.





# Forming a community committee

## Purpose:

To help keep Hunter Water accountable to the community for delivery of the Customer Outcomes.

## Functions:

- **Report card:** Receive information from Hunter Water on progress against the delivery of the Customer Outcomes, including against adopted measures, to review wholistic performance and 'mark' the annual customer report card. The Community Committee may consider broader factors and provide a qualitative view, which will be published alongside Hunter Water's report card.
- **Adjustments:** Be consulted in the event that mid-period changes are necessary. Be consulted on any mid-period adjustments to the Customer Outcomes, report card measures, or targets that may be required during the pricing period to sense-check and validate any proposed changes (for example, where a measure can no longer be reliably measured due to a change in a service provider). The Committee's feedback will be used to inform discussions with IPART.

Additionally, the Committee will be able to engage ahead of the next pricing period 2030-2035.



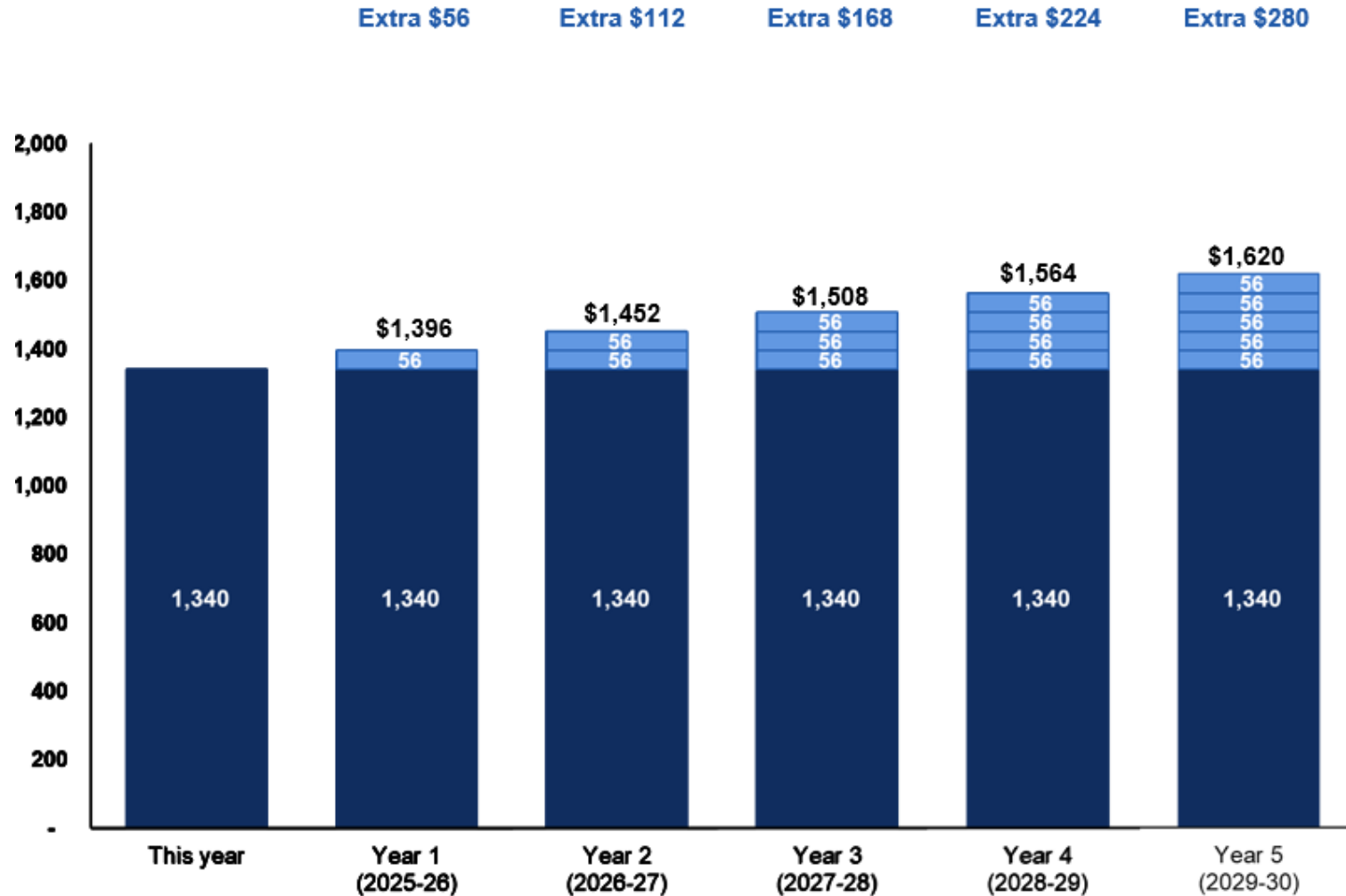
# Indicative bill impact 2025-2030

Annual household water and wastewater bills are projected to increase by between 5 and 6% per year, every year from 2025-2030.

- Customer prices will need to increase, even to deliver the same level of service that we currently provide.

**\$1,340 now (in 2023-24) → \$1,620 (before inflation)**

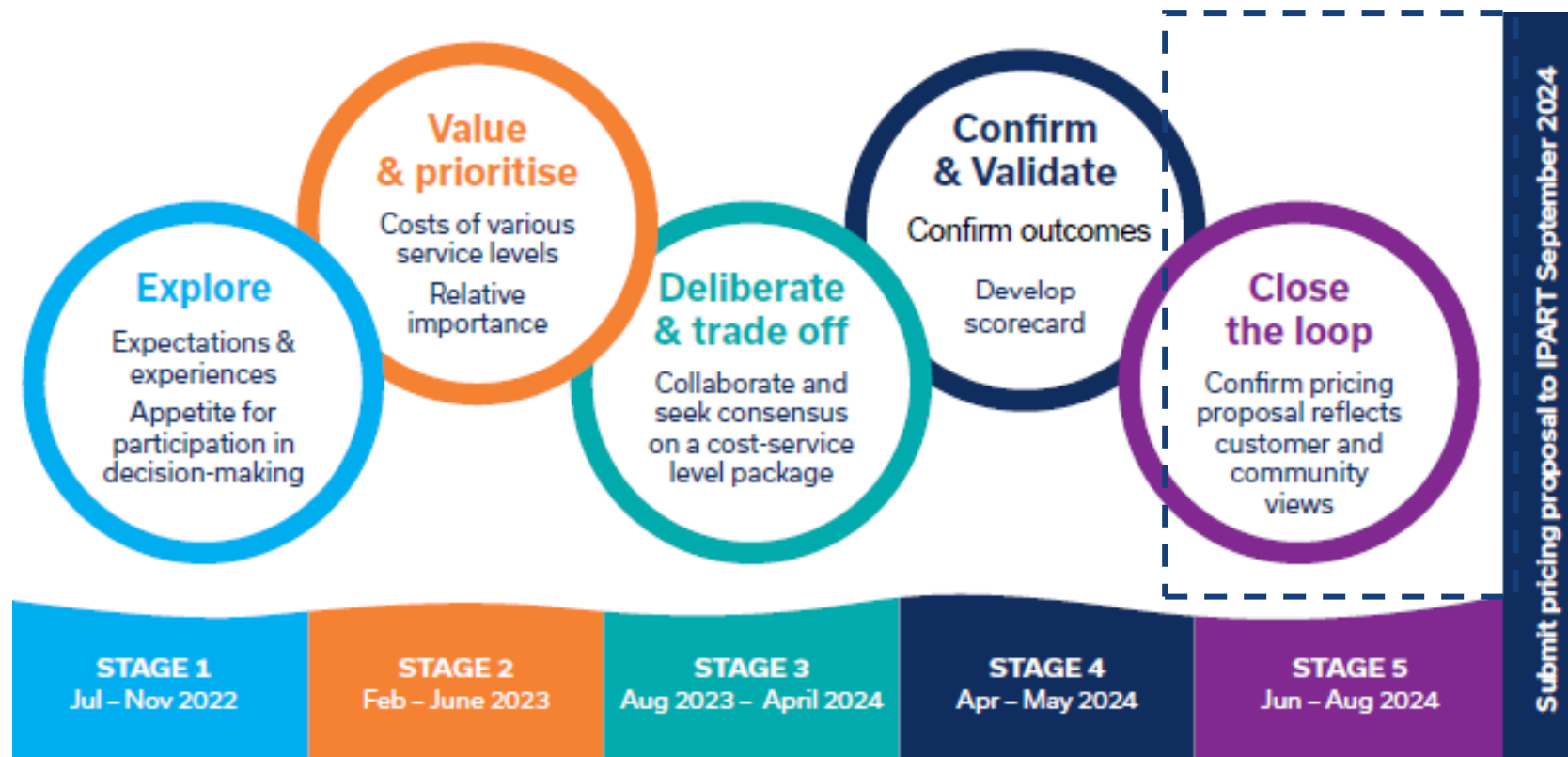
- Prices will also increase by inflation each year.
- These are estimates, based on factors that may change (like interest rates).
- Any increase is subject to review and approval from IPART.





## Next Steps: Stage 5 and beyond

- We will present an update on Stage 5 engagement to the CCAG in **August 2024**
- Prices will remain **unchanged in 2024-25 FY**
- **Our pricing proposal will be lodged to IPART in September 2024**
- IPART's public consultation and review to follow





# Drinking water quality: PFAS

11 June 2024

## Hunter Water statement on Lower Hunter drinking water supply



Hunter Water manages a 'catchment-to-tap' water supply that meets the Australian Drinking Water Guidelines (ADWG) as developed by the National Health and Medical Research Council (NHMRC).

The drinking water that we provide to more than half a million customers in the region is safe and reliable as demonstrated by compliance with the ADWG.

Hunter Water has an extensive water quality monitoring program that includes analysis for PFAS. **Hunter Water routinely tests for PFAS in all our drinking water supply zones, and reports all detections over 0.002 micrograms per litre (2 parts per trillion), which is our independent laboratory's limit of reporting.**

The testing program confirms that drinking water supplied by Hunter Water is safe and meets the Australian Drinking Water Guidelines.

**Water quality monitoring results are reported monthly, and are publicly available on the Hunter Water website.**



# Hunter Water's PFAS monitoring

- Hunter Water has been a leader in monitoring for PFAS within its drinking water network.
- Routine PFAS monitoring is undertaken at each of Hunter Water's drinking water treatment plants and at locations throughout the reticulated water network, and is reported monthly.
- This program has analysed over **3,500 samples** for PFAS since 2016.
- In the last 12 months, all results have been **below the laboratory's limit of reporting**, apart from two low-level detections in the Grahamstown Dam water supply zone in December 2023 and in February 2024.
- **To date, all detections have been below the Australian Drinking Water Guideline values.**

## Reviewing the Australian Drinking Water Guidelines:

- The Commonwealth Government has advised that the **National Health and Medical Research Council is reviewing the Australian PFAS guideline values**. This independent review will consider recent guidance and reviews from both international and Australian sources.
- Premier Chris Minns recently confirmed that the NSW Government is also conducting a review of drinking water quality standards that apply in NSW.



# Love Water Grants 2024

5 June 2024

## Community at the heart of Hunter Water's 2024 Love Water Grants



Hunter Water has announced the 18 recipients of its 2024 Love Water Grants program, awarding over \$125,000 for the program's fifth year. The announcement follows a significant number of applications in various areas, from schools and pre-schools to community groups and organisations.

The one-off grants, valued at up to \$10,000, primarily support water conservation and efficiency initiatives and projects with an education, environmental, or sustainability focus.



# Love Water Grant recipients 2024

Organisation	Project	LGA	Funding
Kurri Kurri Men's Shed	Planter boxes and irrigation	Cessnock	\$6,000
Dungog District Community of Schools	Water surveying education program	Dungog	\$10,000
Vacy Country Carnival	Water tank and solar pump	Dungog	\$8,000
Hunter New England Health	Water tank for existing gardens (Yallarwah Place)	Newcastle	\$7,600
Rutherford Technology High School	Wicking beds for STEM education program	Maitland	\$4,850
Survivors R Us	Bathroom upgrades, including showers and toilets	Lake Macquarie	\$3,500
Glen William Public School	Water tank and vegetable garden	Dungog	\$9,785
Canvas Events PR Marketing Co.	MeetPats for local events	Lake Macquarie	\$9,360
Cessnock West Public School	Water tanks (part of larger school upgrades)	Cessnock	\$10,000

Organisation	Project	LGA	Funding
Gresford District Community Group	Water tank and gutter repairs	Dungog	\$7,000
Cooks Hill Surf Life Saving Club	Replacing old taps at the clubhouse	Newcastle	\$2,700
Merewether Surf Life Saving Club	Water tank for equipment wash down	Newcastle	\$5,415
Fingal Beach Surf Life Saving Club	Replace showerheads, taps and dishwasher	Port Stephens	\$4,637
Maitland Community Preschool	Wicking garden beds and Aboriginal mural	Maitland	\$8,700
RDA Raymond Terrace & Lower Hunter (Riding for the Disabled)	Repair stormwater system, such as downpipes	Port Stephens	\$10,000
Arcadia Vale Public School	Water tank pump and garden irrigation	Lake Macquarie	\$2,850
Charlestown East Public School P&C Association	Water tank and native garden	Lake Macquarie	\$7,560
Newcastle Rowing Club	Water tank for equipment wash down	Newcastle	\$10,000
		<b>Total:</b>	<b>\$127,957</b>



## General discussion





# THE CURRENT & FUTURE OF RECYCLED WATER

Clara Laydon, PRW Program Lead

Tony McClymont, RW & IWM Program Lead

CCAG; JUNE 2024

# WASTEWATER AND RECYCLED WATER

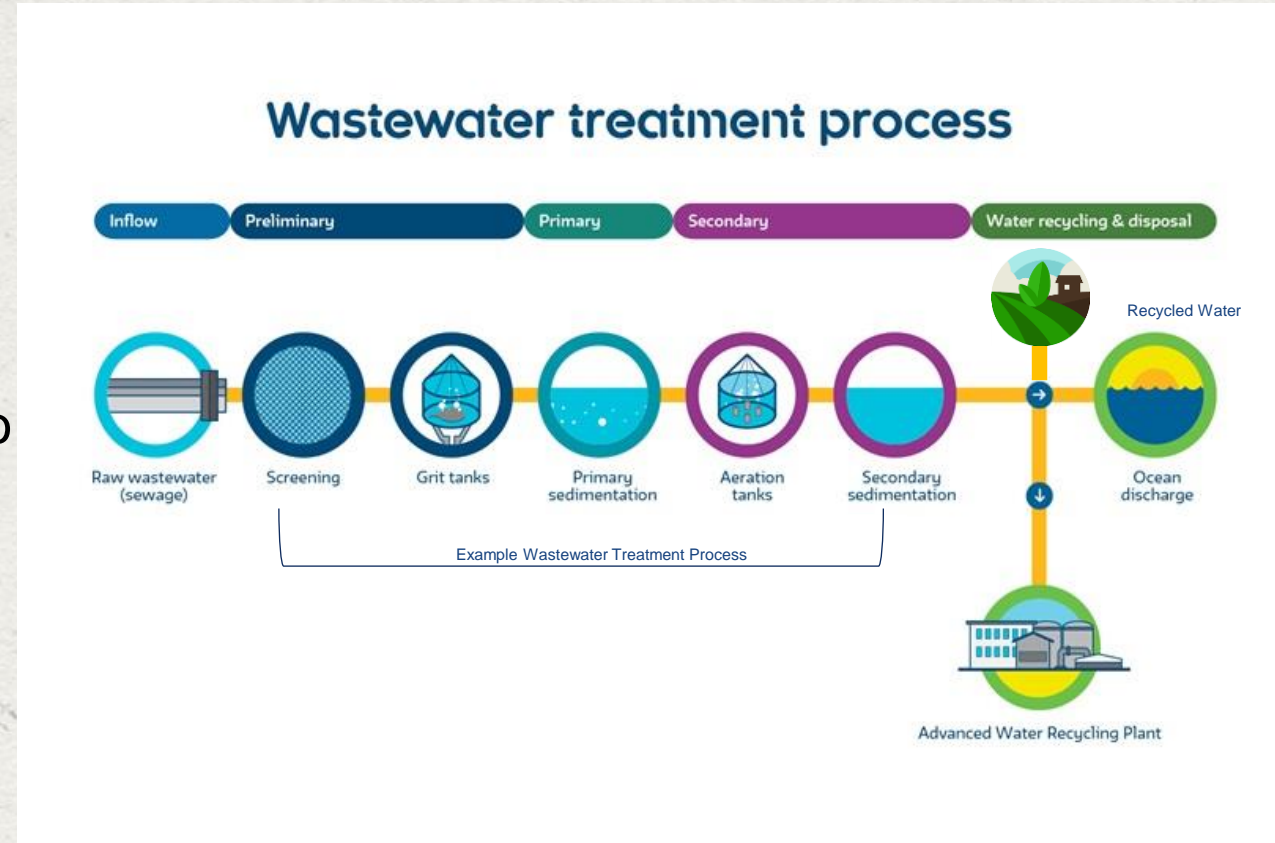


**Wastewater, sewage** – the waste stream that goes to treatment plants, not stormwater.

**Effluent** – the treated liquid stream we discharge from the treatment plants to the environment.

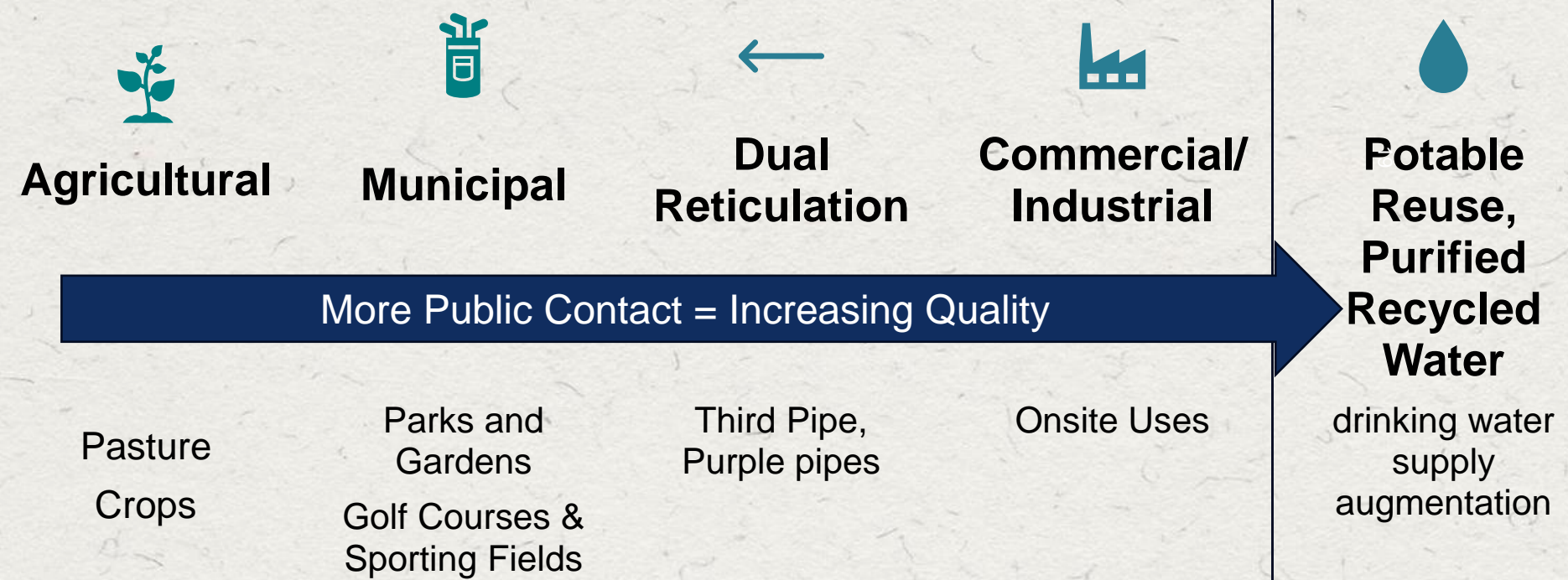
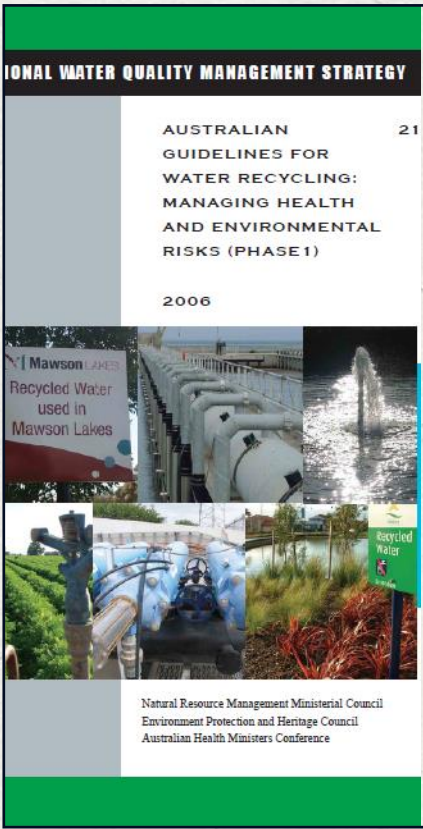
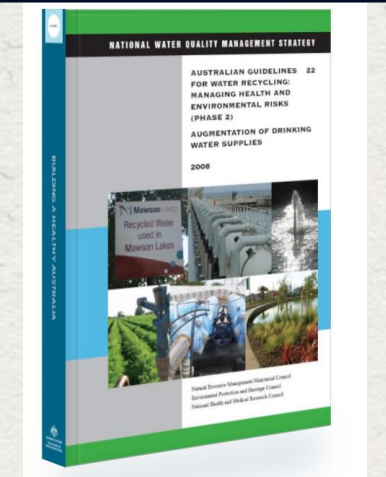
**Recycled Water** – treated effluent which is sent to a recycled water end use (customer). It may get extra treatment, further disinfection. Not for drinking.

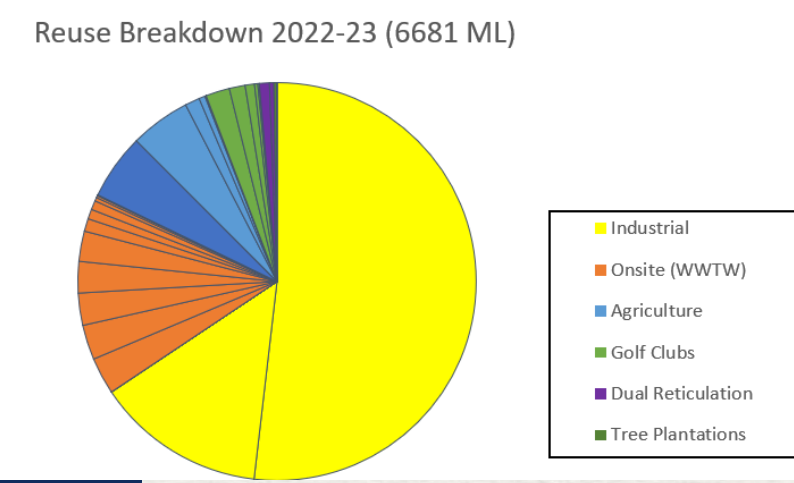
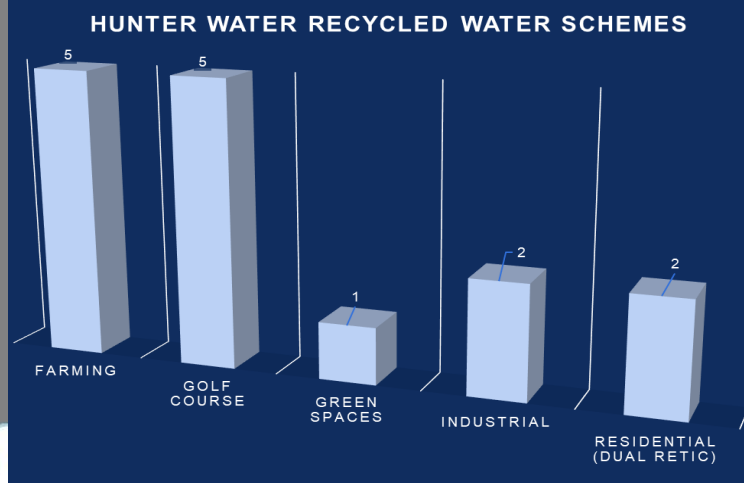
**Purified Recycled Water** – effluent goes through additional and **very** high-treatment process. Recycled water is used to supplement drinking water.



# RECYCLED WATER QUALITY & END USES

## AUSTRALIAN GUIDELINES FOR WATER RECYCLING (AGWR)





Our older schemes have been opportunistic.

- lower quality requirement agricultural schemes.
- Proximity to end users. Including industrial end-user Eraring.
- Golf courses which limit public access and as a result can have lower quality requirements.

Newer schemes have been higher quality.

- Industrial scheme KIWS (coNEXA).
- Vintage Golf Course (high quality, unrestricted public access)
- Dual Reticulation schemes at Chisolm and Gillieston Heights are the highest public access scheme.

# RECYCLED WATER – WHAT’S NEXT



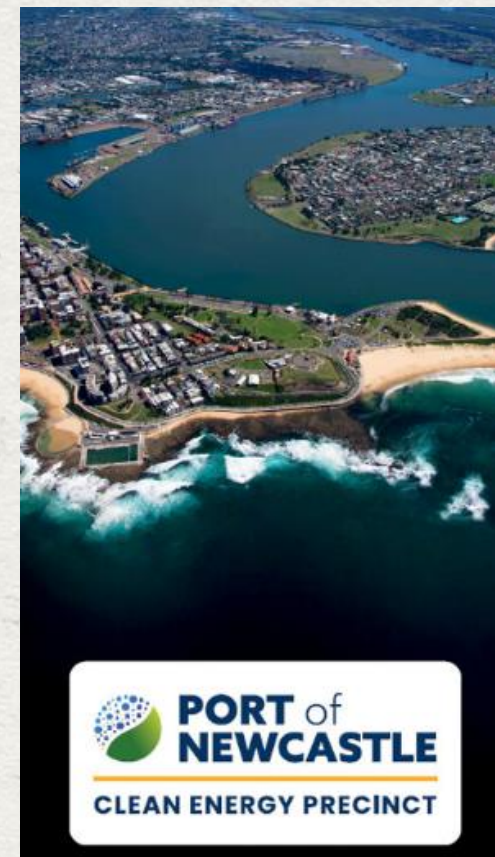
**Hunter Water is committed to recycled water and alternative water opportunities:**

*“The program is estimated to increase the volume of recycled water and alternative water supply by 1.3 billion litres per year. This is an increase of 15% on current levels.”*

- LHWSP

Implementation of new recycled water supply for onsite use at wastewater treatment plants, expansion of recycled water for industrial use and delivery of one community greening scheme.

Current investigations into community greening for parks and sporting fields including using recycled, recycled water supply to support the energy transition (Clean Energy Precinct and Hydrogen Hub).



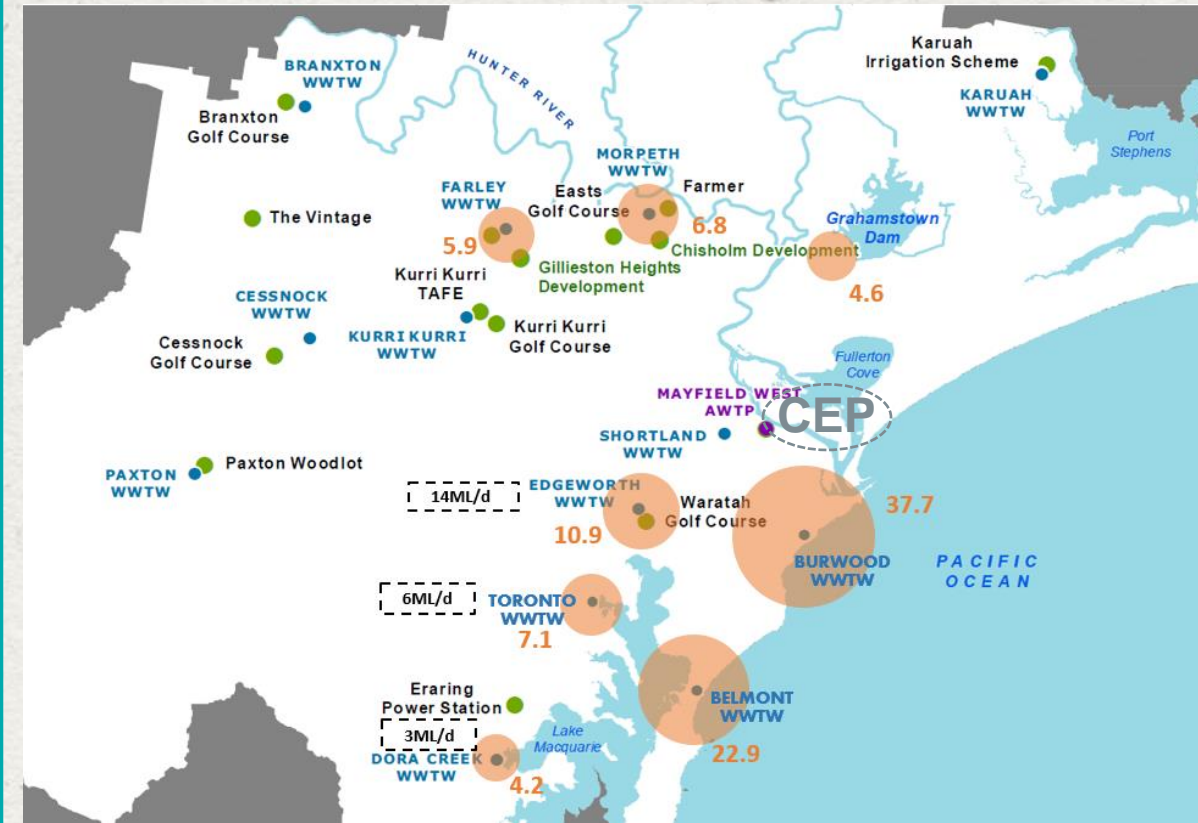


# WATER SUPPLY OPTIONS FOR HYDROGEN

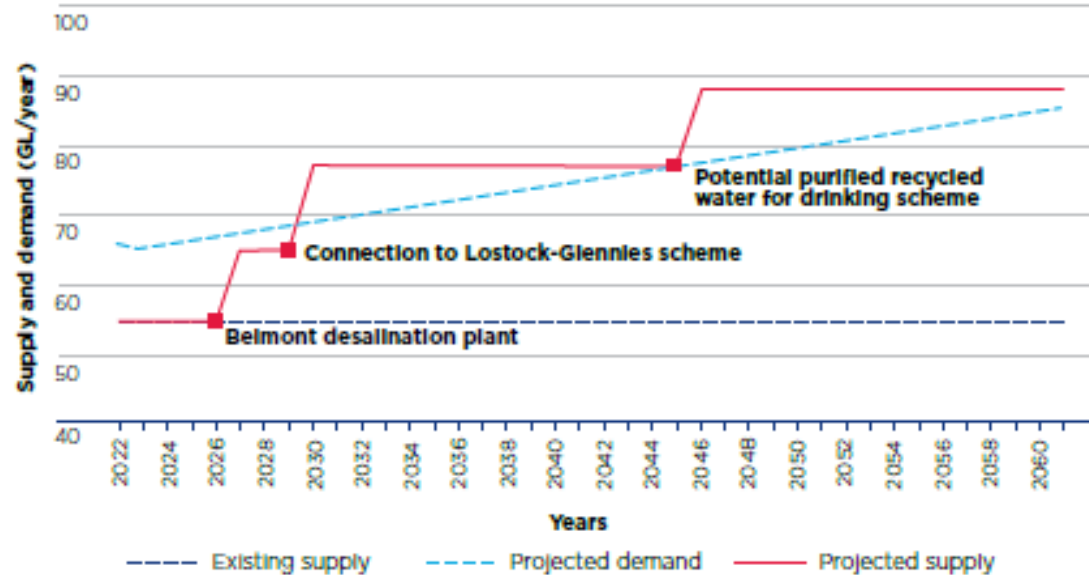


Hydrogen Production Electrolyser Capacity (MW)	Projected Year of Production	Water Demand		New Infrastructure Lead Times to support
		Peak (ML/day)	Average (ML/day)	
55	2026	1.6	1.1	2-4 years
150	2026	4.2	2.9	2-4 years
750	2028	21.0	14.7	6-8 years
1600	2030+	45.0	31.5	6-8 years

**Recycled water:** Several sources of treated effluent are available for recycled water supply



**Drinking water:** New demands for hydrogen would bring forward water supply augmentations included in LHWS



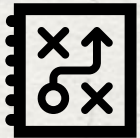
# RECYCLED WATER – WHAT’S NEXT



## Our Challenges



Our established schemes are the ‘easiest’ schemes – technically, cost, distance, opportunity.



Future opportunities are likely to be more complex, further distance, higher quality, etc and this also adds cost.



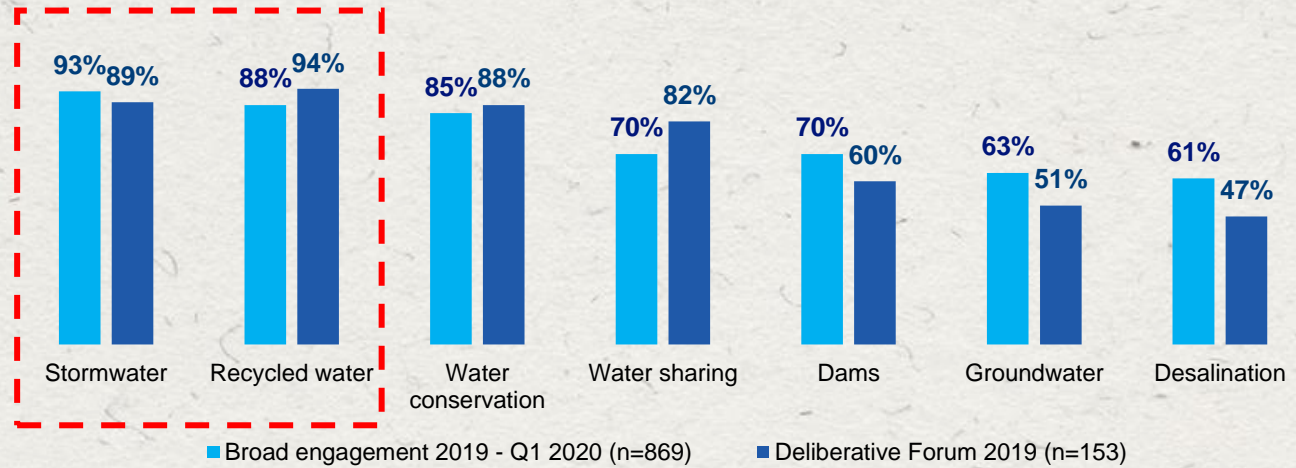
While the community supports Recycled Water projects, previously (2018) there was a higher community willingness to pay, but under more recent cost of living there has been a decline to increase bills to fund projects.

# Recycled Water and stormwater harvesting have strong community support



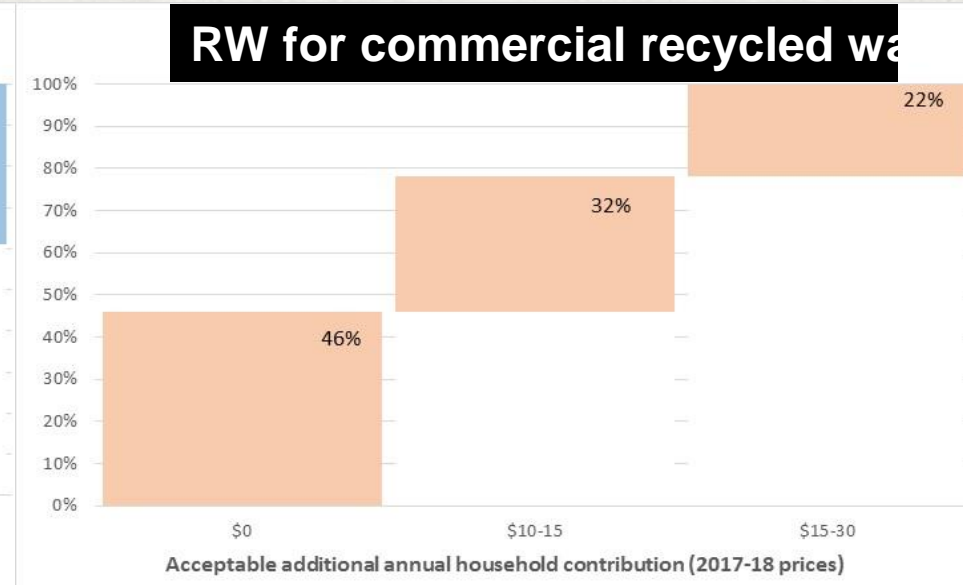
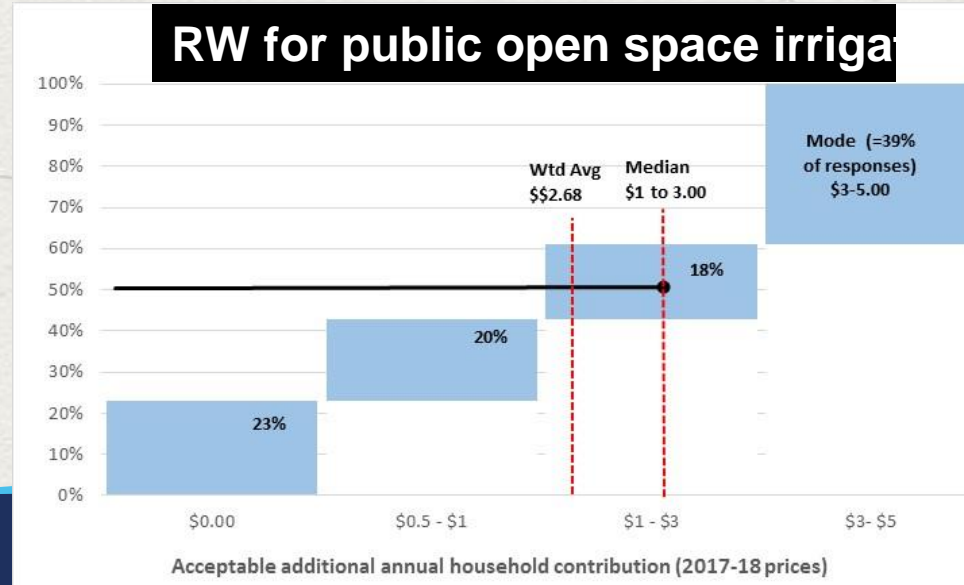
## LHWSP engagement

Recycled water for non-drinking purposes and stormwater harvesting are the **highest rated options** that participants indicated “open to consideration of that option”



## Customer Willingness to Pay survey (2018)

- **77% willing to pay** for recycling for public open space irrigation
- **54% willing to pay** for recycling for business and industry





# WATER CONSERVATION FINAL RECOMMENDATIONS

Q1

WHEN IS IT APPROPRIATE TO PAY MORE TO SAVE WATER THAN WATER IS WORTH?



TO SECURE WATER FOR FUTURE GENERATIONS



WHEN SUPPLY IS COMPROMISED

## WATER CONSERVATION \$5m

\$4m 65% **REDDING LEAKS IN OUR SYSTEM**

\$1m ≥20% **ENCOURAGING CUSTOMERS TO USE LESS WATER**

\$0 **NOT KEEN TO FUND INDUSTRIAL RESEARCH FROM CONSUMER POCKETS!**

96% **IS IT ENOUGH?**

7.5-10% **RECYCLED WATER**

Q4

SHOULD HOUSEHOLDS SUBSIDISE RECYCLED WATER TO MAKE IT ATTRACTIVE FOR INDUSTRIAL USES?



HOUSEHOLDS SHOULD NOT BE EXPECTED TO PAY ADDITIONAL \$\$\$ FOR INDUSTRIAL USERS

\* MAY INVEST IN RECYCLED WATER IF CHEAPEST WAY TO MEET REQUIREMENTS FOR OUR COMMUNITY

# RECYCLED WATER PROGRAM – KEY ACTIONS



## Working with our partners

Working with DCCEEW

Working with Local Councils

Working with Industry Partners

## Developing investment portfolios

Industrial

Community Greening

Agriculture

Dual reticulation

Stormwater Harvesting

Purified recycled water for drinking

## Evaluation approach

Valuing benefits

Understanding barriers

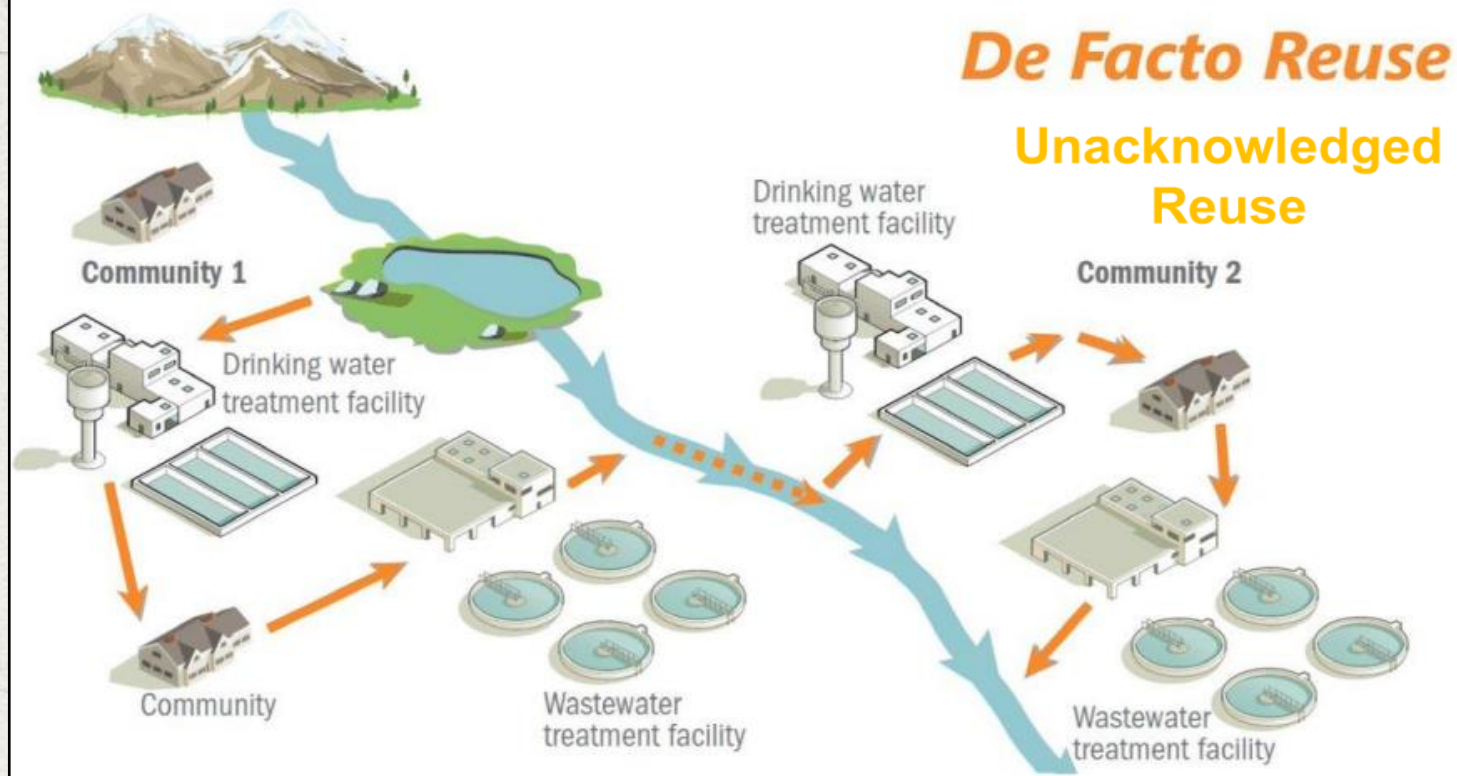
# PRW SCHEME TYPES

## Unacknowledged or Defacto Reuse -

Any township that has a wastewater and a drinking water plant downstream of another.

**Indirect Potable Reuse (IPR-PRW)** is the most common and usually the first types of PRW water utilities undertake. Requires a level of 'naturalisation'.

**Direct Potable Reuse (DPR – PRW)** is the most 'direct' PRW & is usually cheaper and more efficient than IPR. Does require higher control and surveillance.



### De facto Water Reuse



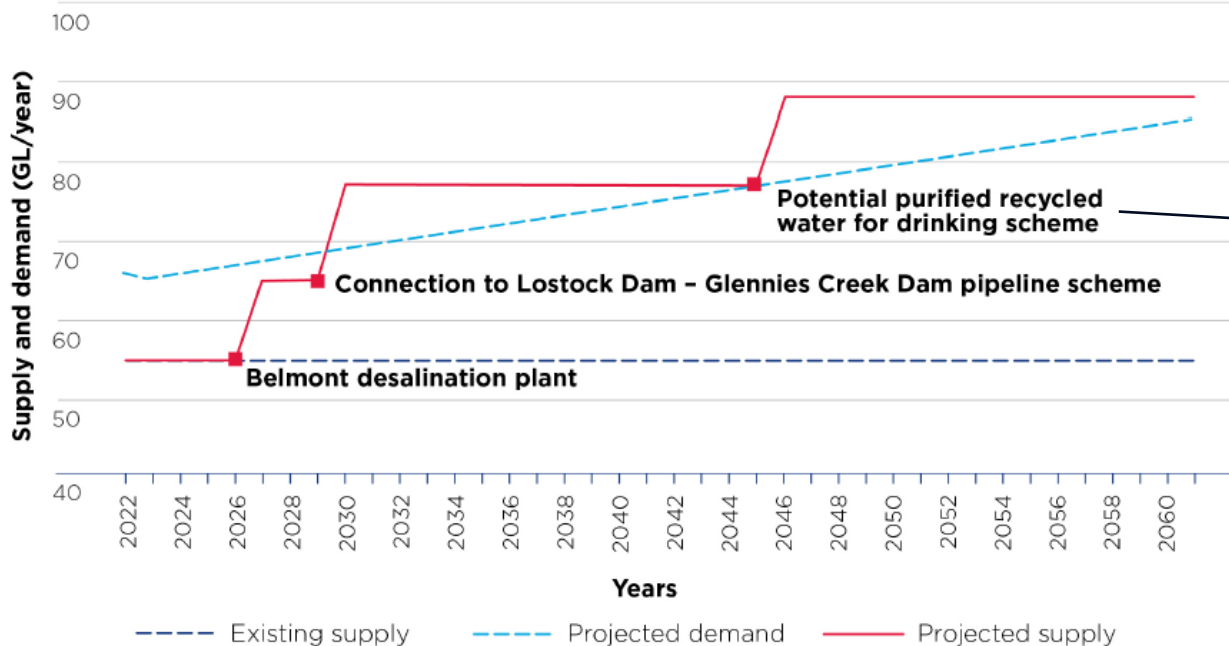
### Indirect Potable Reuse



### Direct Potable Reuse



# RECYCLED WATER – WHAT’S THE FUTURE



## Purified Recycled Water (PRW)

*“a new purified recycled water for drinking scheme involving sending highly treated recycled water to Grahamstown Dam for storage and further treatment at the existing Grahamstown Water Treatment Plant” - LHWSP*

### How open is the community to Hunter Water considering adding purified recycled water to existing water sources?

More than three quarters (77%) of 50 respondents to an online survey between April to October 2020 were either quite open to Hunter Water considering this option or think Hunter Water should definitely consider this option.



# PRW PROCESS

It is very similar to Desalination.

One additional step Advanced Oxidation to remove any trace organics and chemicals that may have been present in wastewater.

It can be considerably cheaper than Desal,

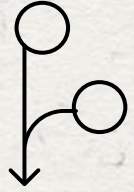
Capital costs for the PRW treatment plant can be cheaper, coastal conditions not required.

Most importantly, less salt in effluent = less energy for RO membranes process.

Overall Treatment Objective	Unit Process	Nutrients	TOC	TSS	TDS	Trace Chemicals	Pathogens
Pre-treatment for RO membranes	Membrane Microfiltration			✓			✓
Reducing dissolved compounds	Reverse Osmosis	✓	✓	✓	✓	✓	✓
Disinfection and removal of trace organic compounds	Advanced Oxidation (UV/H <sub>2</sub> O <sub>2</sub> )					✓	✓
Naturalisation	Remineralise			Increase TSS	Increase TDS		



# PRW CHALLENGES - TECHNICAL



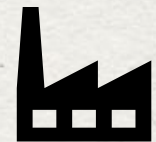
Feedwater (effluent) may need to be centralised → compared to desal which has a seawater to draw on.



If Indirect PRW than product water has to be transported to a storage for naturalization.



Within a natural storage some of the water can be lost to evaporation.



Then the PRW & natural water mix is drawn and treated by conventional treatment.



Brine is still a factor that needs to managed.

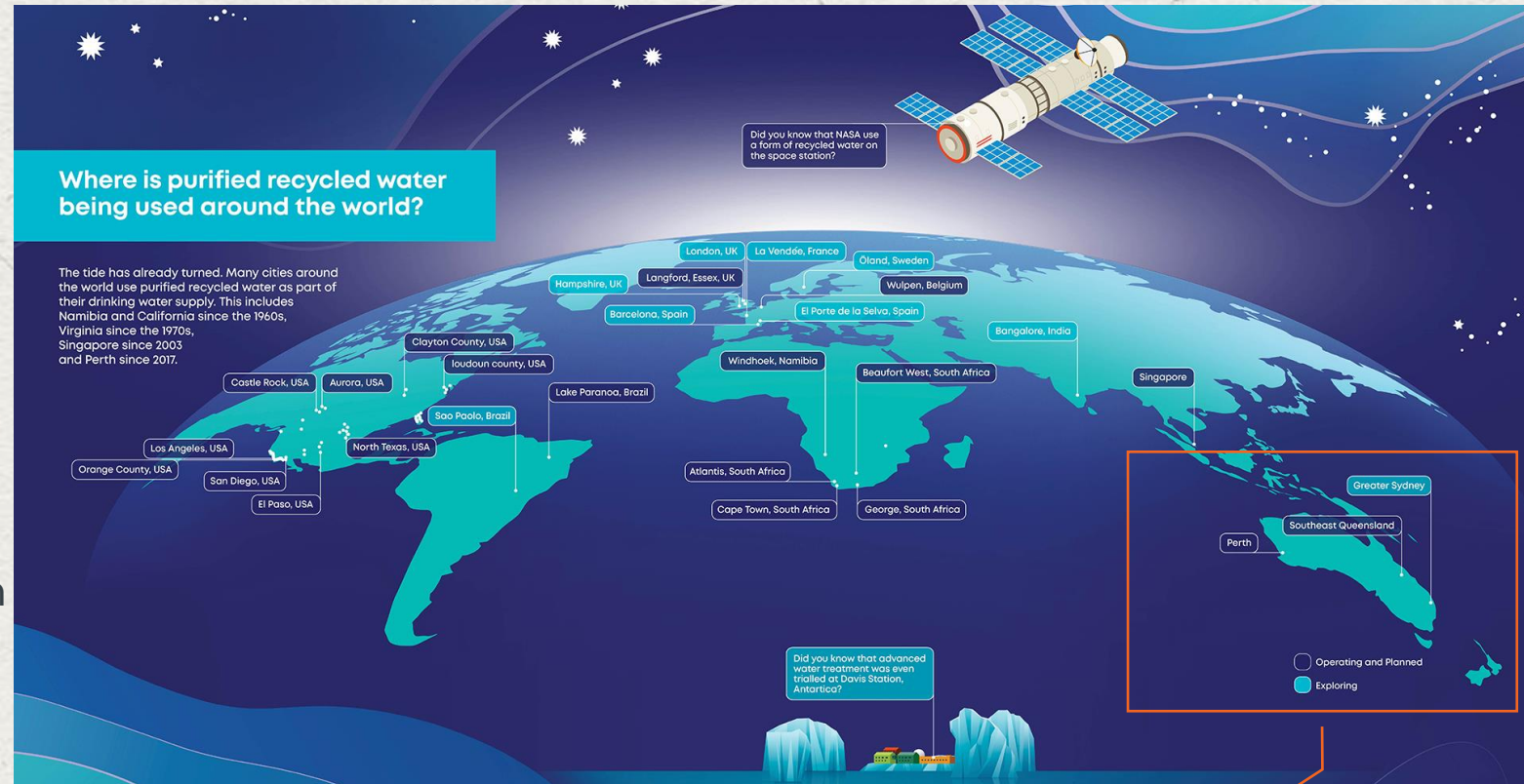
# WHAT'S HAPPENING IN AUSTRALIA

Orange has had the first urban stormwater harvesting scheme for potable water augmentation since 2009.

Western Corridor scheme completed in 2008, intended to be PRW if required in drought – currently providing industry grade RW.

Western Australia has the first PRW scheme in place in 2017.

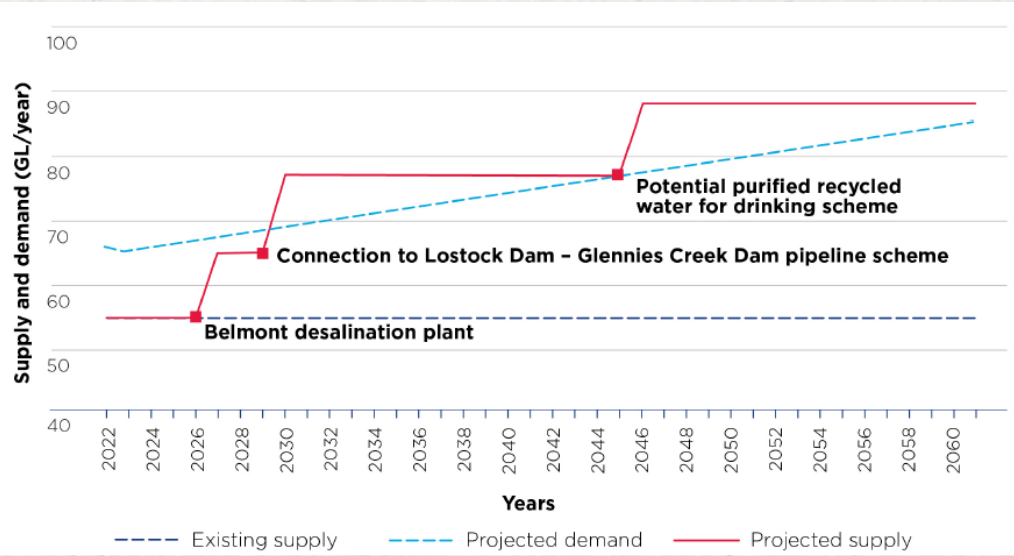
RIGHT NOW – PRW Validation Plant & Education Centre opened in Sydney.



**Purified Recycled Water**  
DISCOVERY CENTRE

PRW is emerging as a potential future water source for a multiple of Australian utilities.

# OUR PRW APPROACH



## Education First - Outreach & Uplift

- Baseline education of the urban water cycle & how does PRW fit in.
- Progressively increase in the education program, targeting high school students.
- Education that PRW is a safe and reliable option

**Prepare our community for an educated discussion, to allow for the option to be on the table and seriously considered when needed.**



**Initially looking to establish an educational trailer for greater outreach.**

This example is from Soquel Creek Water District (US). <https://www.soquelcreekwater.org/265/Water-Education-Trailer>



# THANK YOU

Any questions?



## Call

1300 657 657, weekdays 8am-5pm  
1300 657 000, 24 hours, seven days  
Translation service: 13 14 50

## Head Office

36 Honeysuckle Drive  
Newcastle NSW 2300

## Email

[enquiries@hunterwater.com.au](mailto:enquiries@hunterwater.com.au)

## Mail

Hunter Water  
PO Box 5171  
HRMC NSW 2310

## Connect

[hunterwater.com.au](http://hunterwater.com.au)

