



WATER SERVICES  
ASSOCIATION OF AUSTRALIA

# Purified recycled water public outreach and education: Successes and lessons learnt from the US and globally

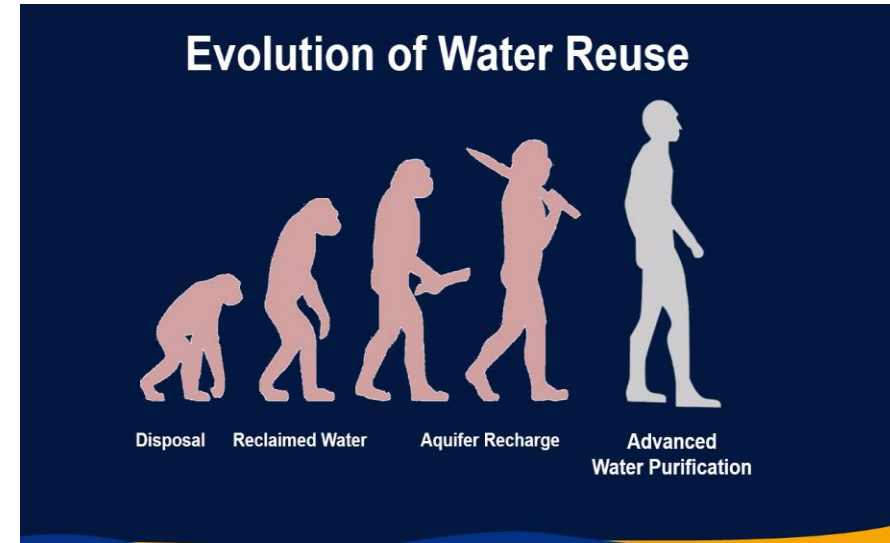
Next Water Conference  
22 October 2025



# The 'why' of PRW

## Drivers/benefits:

- Resilience to climate change – rainfall independent
- Drought readiness
- Strategic objectives eg reducing reliance on imported water
- Can be lower cost than some options (don't need a separate distribution system needed, as you do for recycled water for irrigation)
- It can work for inland communities
- Environmental benefits – less nutrients to waterways
- Takes care of PFAS
- Better energy use, yield than some options (less salt than seawater)
- Population growth - manages nutrient disposal
- Manage saltwater ingress to aquifers
- We want it to be 'on the table' for Australia



**Supports govt objectives for affordable essential services**

# Let's talk about success

**Are there many successes for PRW?**

**Yes, it's more widespread than many people realise**

**It can be a long journey**

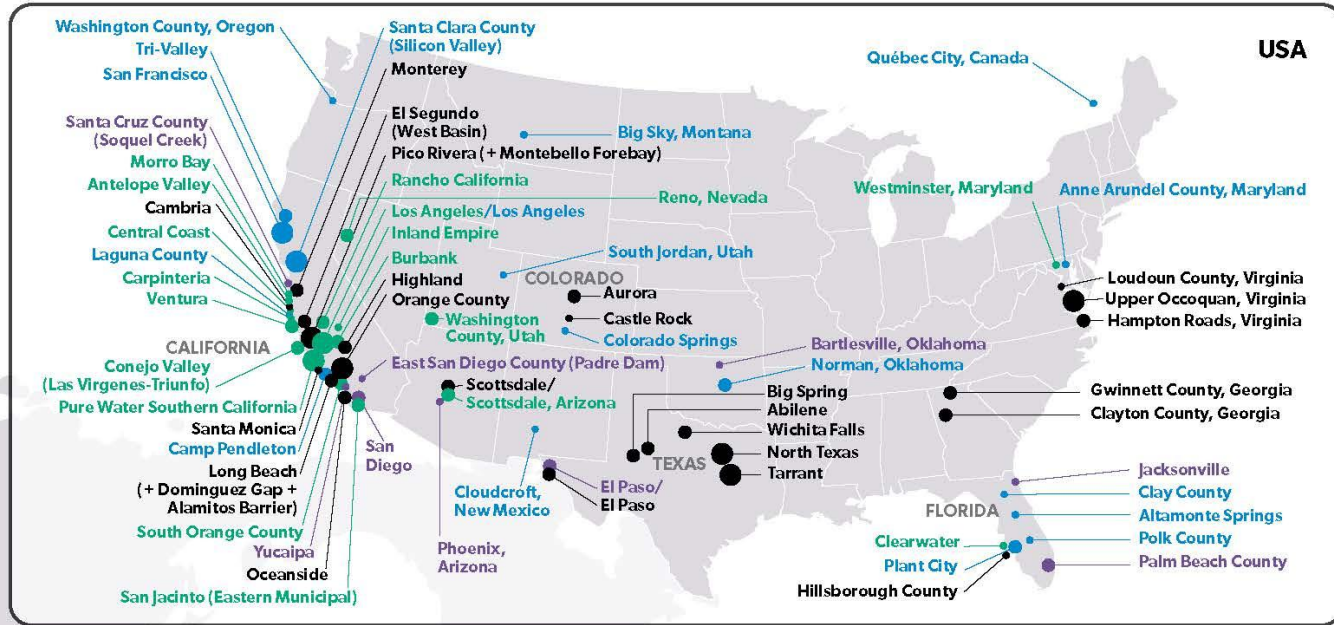
**WSAA spent a couple of years mapping places on the journey:**



# Global purified recycled water locations

2040s/Unknown

250315



● Exploring/Education ● Planned ● In Construction ● Operating/Available

● Supplies <100,000 people or Demonstration/education only

● Supplies 100,000 – 1,000,000 people

● Supplies >1,000,000 people





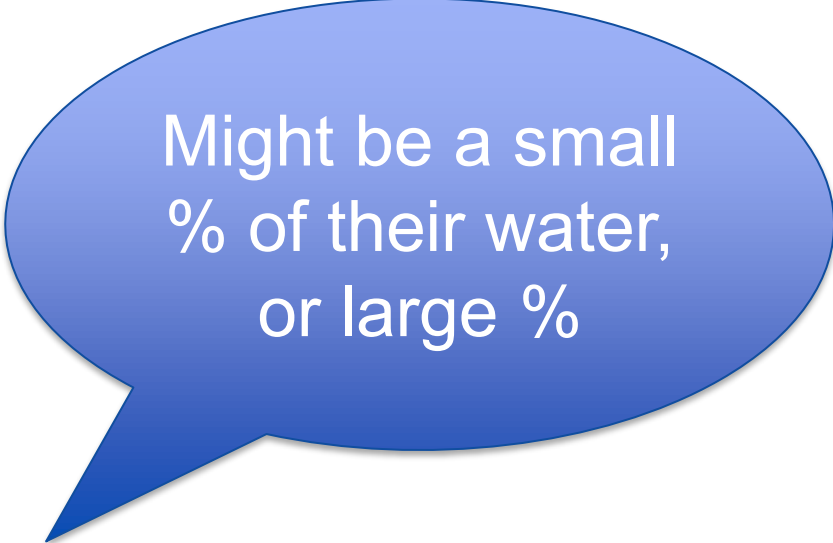
# In people terms

Today, purified recycled water is part of the local supply for

**30 million people**

By 2050, if most of the places on this map are ready, it will supply at least

**55 million people**



Might be a small % of their water, or large %

- Castle Rock – 33%
- San Diego – almost 50%
- Ventura – 20%
- Beaufort West – 20-30%
- Monterey – over 50%

**What can we learn from their  
journeys**

# Lessons from the journeys of others

1

## It can be done

Communities around the world have implemented purified recycled water schemes for decades. It could be successfully implemented in Australia, if circumstances warrant.

The three 'T's:  
Trust · Transparency · Time

2

## Trust is critical for securing support for purified recycled water

Transparency and open information sharing will help to develop and maintain this trust.

3

## Establishing purified recycled water is complex and takes time

It takes time – up to a decade. People need to be taken on a journey to be comfortable with it. Rushing or imposing deadlines increases the risk of rejection or backlash.

4

## Seeing is believing

Investing in a demonstration plant, visitor centre and tour program for 'place based learning' will greatly improve community understanding and support. It can showcase and prove the reliability of the technology, and pre-empt stigma reactions through calm, engaging learning environments. The experience should be carefully crafted with sequenced messaging to build overall awareness and understanding, and may include sampling the water.

5

## Wording and imagery are critical

This will be somewhat specific for each community, so local research is important. Choose words and branding that resonate and do not alienate. Technical jargon confuses people and doesn't build trust.

6

## News media coverage has a profound impact on public acceptance

It can make or break a scheme. Proactively engaging key influencers and the media, leveraging social media, and using expert testimony and third party advocacy can help build trust and transparency.

7

## Political support is essential

Political cycles can polarise an issue, and force people to take a side. Good engagement across the full political spectrum, to gain and keep support, is critical.

8

## Grass roots education and engagement

Can be more effective than high profile marketing activity or 'above the line' presence.

'Water should be judged by its quality and not its history'

LUCAS VAN VUUREN, SOUTH AFRICA

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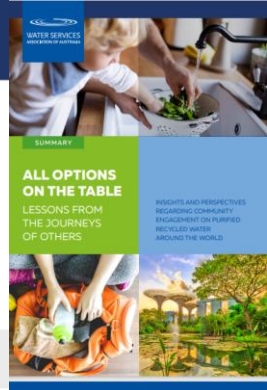
## General education around the urban water cycle and context

Will help prevent stigma and encourage acceptance. Provide information on the range of long-term supply options, climate trends and cost.

10

## Regulators play a powerful role

They will lead government and community perception, and have the authority to determine whether purified recycled water can proceed. It is their role to take a conservative approach to risk management, so it may take a long time for them to become comfortable and produce a regulatory framework. Good regulatory engagement, and high transparency, are essential.



# Map – detailed case studies

**Global Connections Map**

Download map slide package here!

Click on the markers to show purified recycled water for drinking (potable reuse) around the world.

This resource has been developed by the Water Services Association of Australia in partnership with the WaterReuse Association.

**Auckland: Māngere purified recycled water pilot**

Watercare Services Limited, North Island, New Zealand – Exploring purified recycled water after Citizens...

[View details](#)

## Let's take a look at Auckland

**Auckland: Māngere purified recycled water pilot**

The primary drivers for pursuing purified recycled water as a future water source option are population growth, resilience to drought/climate change and the cost-effectiveness of this option. There are also limited opportunities to take additional surface and groundwater from within the Auckland region. We anticipate that we will need at least an additional supply capacity of 150 million litres (39 million gallons) a day by mid-2040s. Diversifying our water supply portfolio using rainfall-independent sources will help us achieve a more resilient and reliable water supply.

Watercare has built a small-scale purified recycled water pilot plant at its Māngere Wastewater Treatment Plant facility. Tertiary treated wastewater provides source water to the pilot plant. Treatment processes utilised are UF, RO, UV-AOP, GAC, and chlorination. The pilot plant was commissioned in early 2024. Data gathered during piloting will be used to evaluate the feasibility of purified recycled water as a future water source option, guide full-scale facility planning and design, support permitting, and support drinking water regulatory development. Additionally, the facility will provide a venue for conducting tours and educating stakeholders on water purification processes, helping to build operational capability and social license for purified recycled water.

**Engaging with our community**

Between August and September 2022, Watercare collaborated with the University of Auckland to host a Citizens' Assembly based on the question: "What should be the next source of water for Auckland beyond 2040?". Independent experts provided information to the 37 assembly members – representative of Auckland based on age, gender, ethnicity, education, so they could understand the different water source options.

Purified recycled water is being investigated as an option for the next major drinking water source beyond 2040. If Watercare were to pursue purified recycled water, a scheme is expected to become operational mid-2040s.

At the end of the two-month process, the citizens prepared a report outlining their final recommendations. The group recommended that direct purified recycled water be pursued as the next major water source for Auckland and that Watercare continue to educate the public on the safety and quality of this option.

Watercare will collaborate and consult with Māori (indigenous population of New Zealand), communities, and other stakeholders before making decisions on long-term water and wastewater solutions. We will also partner with Māori to co-design solutions that address any cultural sensitivities.

**Related resources**

- [Citizens' Assembly recommends direct recycled water for Auckland's future water source](#)
- [Citizens' assembly project](#)
- [Purified recycled water](#)
- [New Zealand's first wastewater recycling plant launched in Māngere](#)

## To explore more:

WATER SERVICES ASSOCIATION OF AUSTRALIA

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**ALL OPTIONS ON THE TABLE: TOOLKIT ON PURIFIED RECYCLED WATER FOR DRINKING**

## Your one stop shop for water industry knowledge and resources

Water360 is the best place to start searching for the latest and most reliable information to support your work in the Australian water industry.

Search for topics, resources etc



# WSAA is here to help – utilities, govts, all

## Resources & expertise

- [All Options on the Table – Lessons from the Journeys of Others](#) report
- WSAA PRW [Toolkit](#)
- WSAA Visitor centres [reports](#)
  - + US Water Research Foundation Global Advisory Committee ([Report](#))
- [Water360.com.au](#) – maps, animations, case studies, fact sheets, AWRCOE materials
- WSAA Consumer Research (2-yearly)

## Knowledge-building

- WSAA PRW & RW Community of Practice
  - Webinars
- LA March 2026: WateReuse Symposium Study Tour
- Monthly meetings

## Presentations

- Media interviews
- Customer Reference groups
- Ministers, staffers, departments, community groups, regulators
- Staff sessions
- Expert Committees
- Rotary, Lyons

## Contacts

- Global contacts (utilities, experts, consultants)
- WateReuse Ass'n International Committee
- California Communications Collaborative
- Source bottled water



(Contact Danielle for a walk-through of our resources & how we can assist)

# So clearly It has been a success....

- And lots of resources to help you plan your journey around that.
- Water36- 0 – maps & resources
- Toolkit
- Join WSAA PRW CoP
  
- But let's also talk about the learnings.
- - Have there been many?
- What are they like, have there been more failings for PRW than for other water supply options?

# Qld – Toowoomba, what went wrong?

## Insufficient time, information not ready

- Classic case of how not to engage with the community
- Announced by accident – Council didn't have information ready
- Active local critics before communications materials were developed.
- In 2006, only 15 cities around the world had adopted it. Now 35+ (including Perth)
- 3-year community engagement shortened to 10 weeks
- Solution adopted instead cost \$100 million more
- PRW still on the Toowoomba options list
- **Views aren't static – change with time & information**

## CADS gathers to voice defiance



## July 2006 Referendum:

Yes	No
38%	62%

**"Poowoomba"**

# San Diego also rejected PRW initially

- In the late 1990s a contender for Mayor called the proposal 'Toilet to tap'. The City did not have information ready to counter this. The proposal was dropped.
- But San Diego went on to complete a Water Reuse study – partnered with Surfrider Foundation, using public participation
- Then a 2<sup>nd</sup> study – Built demonstration project, engaged with regulators, offered tours and tastings
- Formed Water Reliability Coalition of local groups



Water reuse does **NOT** involve drinking water directly from the toilet.



Community support gradually rose: **26% in 2004, up to 73% in 2012, 79% in 2019**  
Now building Pure Water San Diego: By 2035 it will provide 33 – 50% of city's supply

# Many water supply projects are hard

## PRW:

- Western Corridor
- Durban
- UK – WW
- Cloudcroft

## Other projects:

- Sydney Desal
- Huntingdon Beach desal in California
- 3<sup>rd</sup> pipe schemes – eg Pimpana QLD
- Tillegra Dam
- Dungowan Dam
- Tamworth food recycling

# What do we take from this?

**Plan well – for smooth sailing & rough weather**

**Lean in on what we have learnt globally**

**Prepare extensively**

**Work hard to enable all options... but also know how they differ for your context, at some stage you'll need to choose one to go ahead (or first)**

**Costs are critical**

**Build awareness of source and treatment.... Emphasis on source water eg 'pristine'**

**Don't wait for the framework... help build the framework**

**Drought is a double edged sword**

**All water supply options can have failures – plan well & don't lose heart**

**Thank you**

**[danielle.francis@wsaa.asn.au](mailto:danielle.francis@wsaa.asn.au)**

**+61 (0)427 021 115**

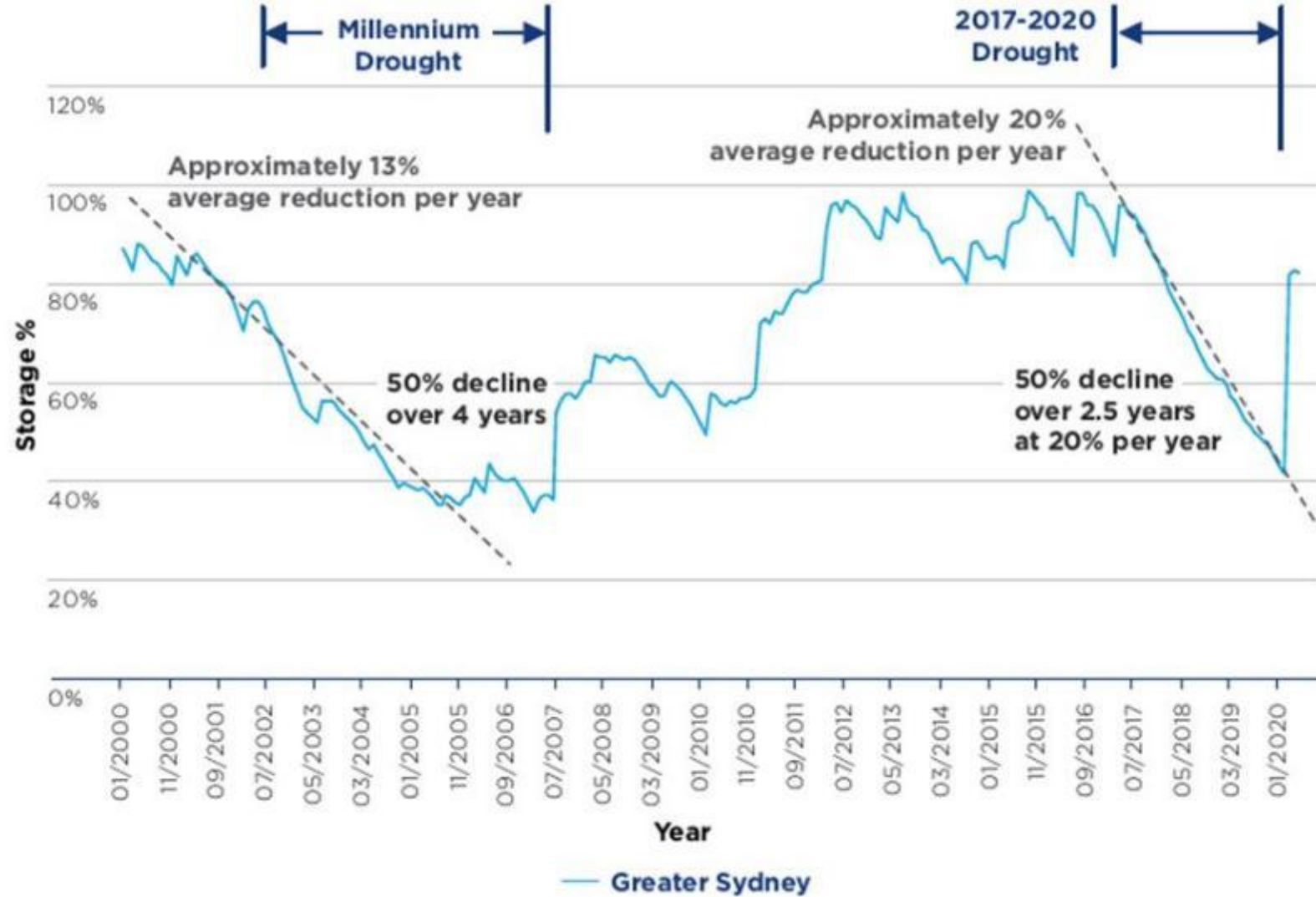
# Sydney Water's PRW engagement: Lesson's learned and next steps

Next Water Conference - October 2025

Clare Porter, Head of Strategic Communications and Corporate Social Responsibility



# Greater Sydney is vulnerable to running out of water during drought



Source: WaterNSW, May 2020

# The Greater Sydney Water Strategy underpins our long-term planning



Support our rapidly growing city and the **NSW Government's housing supply strategy**



**Support economic growth and community wellbeing** by providing confidence in the security and sustainability of Greater Sydney's water supply to meet growth and adapt to a changing climate by 2040 and beyond



Identify the **strategic pathways to ensure the right investment decisions are made at the right time** in consultation with customers and the community



Set the pathway to **identify highest economic value and most affordable** investment portfolios for water infrastructure

Released August 2022

**49 GL/y  
water saving  
by 2040**

**Continue investment in comprehensive water conservation and efficiency program**

**Additional  
20 GL/y**

**Increase use of Sydney Desalination Plant**

**Continue planning for new rainfall-independent supply options**



**Purified recycled water**



**Desalination**



**Make much greater use of stormwater and recycled water**



**Invest in upgrades, new connections and leak management**



**Integrate our water and land use planning more effectively**



**Invest in wastewater and improve waterway health**

# Action 2.5: PRW Discovery Centre

Quakers Hill

Blacktown LGA

Adjacent to Water Resource Recovery Facility

Action 2.5 under Priority 2 of the GSWS Implementation Plan: Construct and commence the operation of a PRW Demonstration Plant - COMPLETE



**Opened:** October 2023 as part of National Water Week

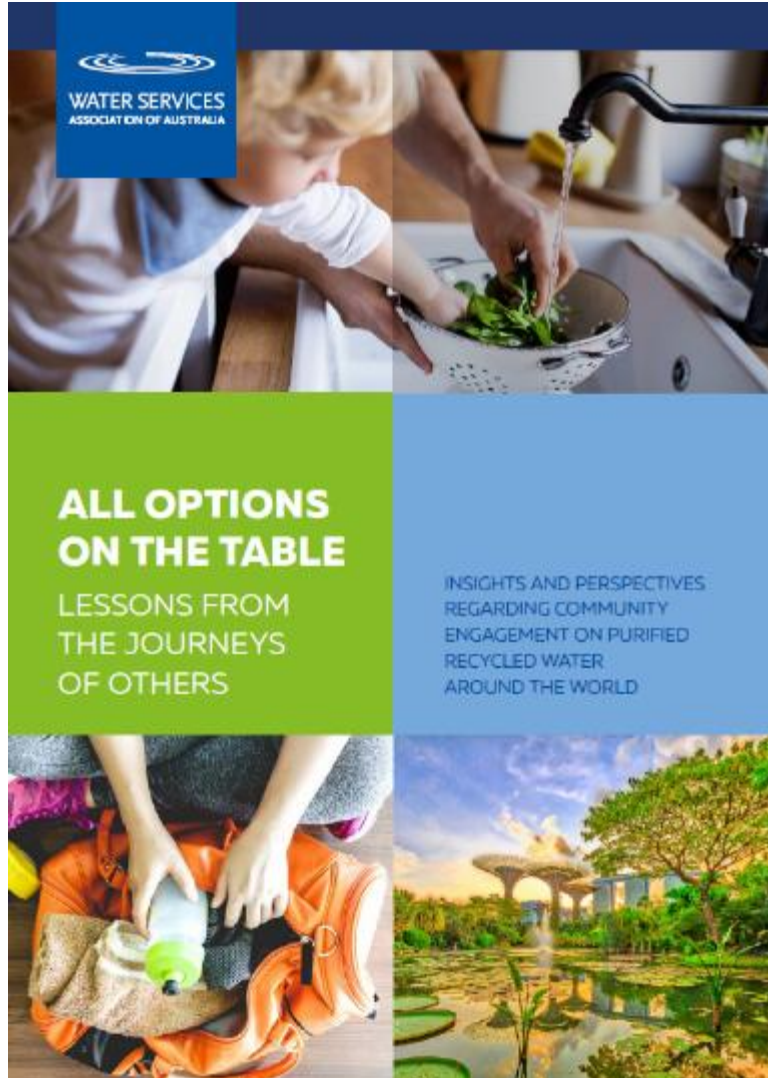
**Capacity:** 0.5ML per day

**Challenge testing / verification:** April 2024 – April 2025

**Final Recycled Water Quality Management Plan for Demonstration Plant ~ Late 2025**



# WSAA's 'Lessons from the journeys of others' (2019) has guided our approach



## Lessons from the journeys of others

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#### The three T's:

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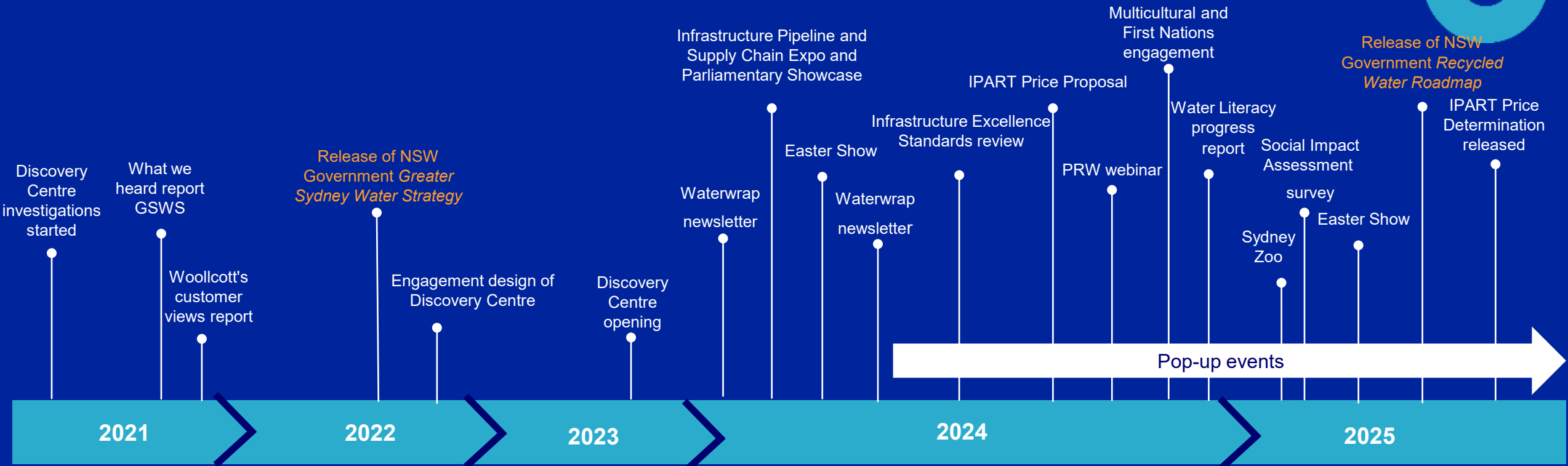
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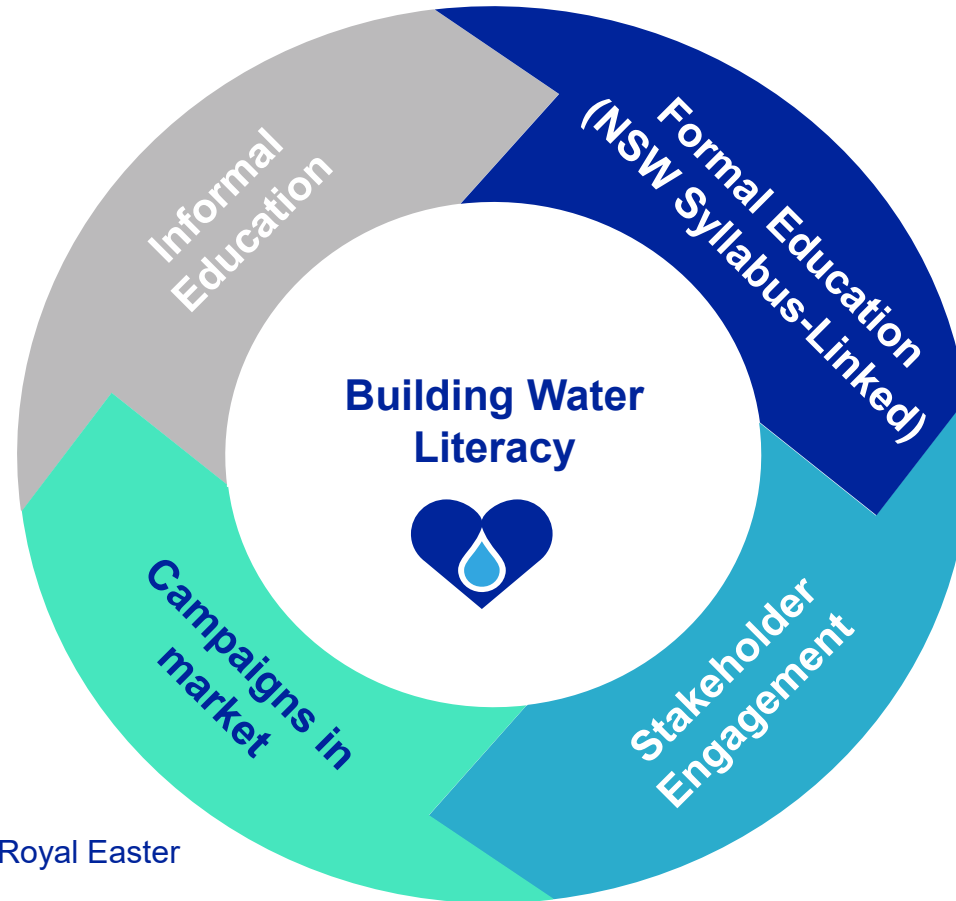
# Our journey so far



# Our approach to education and engagement

- Wonders of Water Discovery Van
- Ambassadors and advocates e.g., guest speakers
- PRW Discovery Centre
- Website
- Online resources

- Traditional media
- Social media
- Digital / Videos
- Marketing
- Activations e.g. Sydney Royal Easter Show
- Flyers, FAQs and other collateral

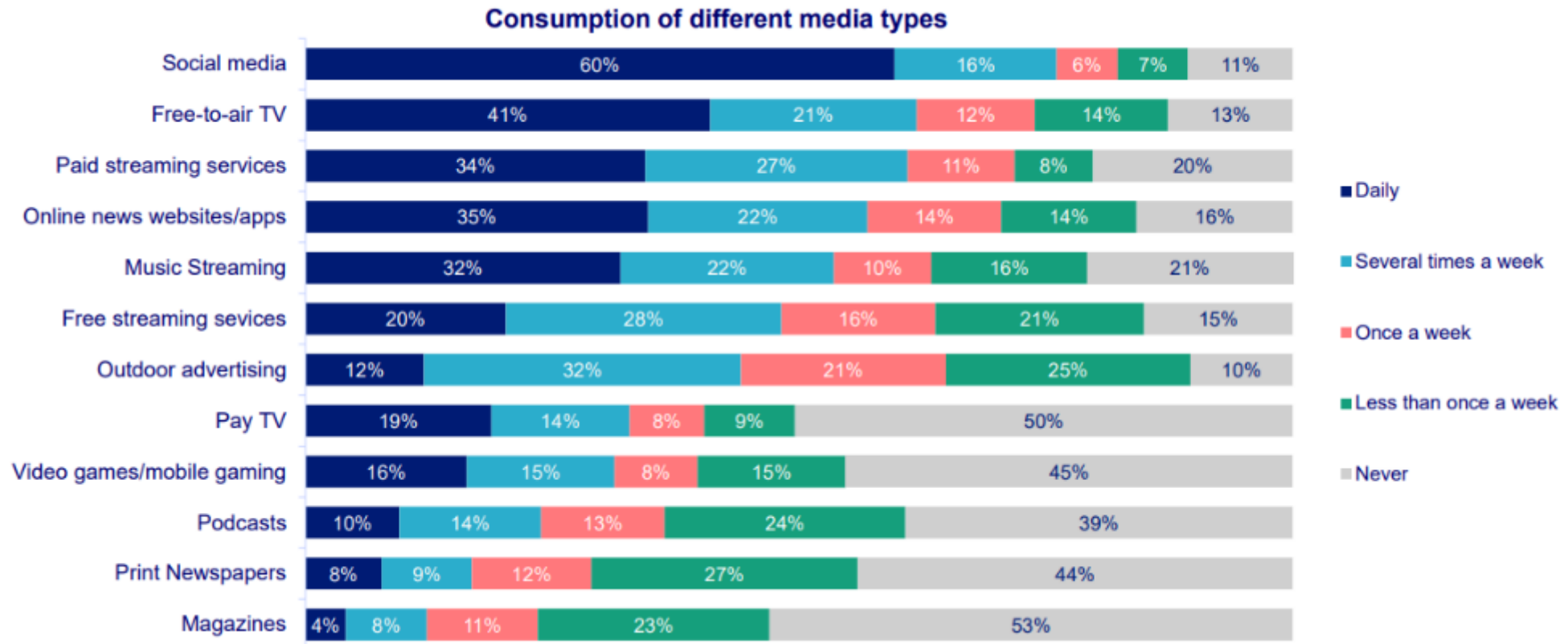


- Incursions
- Toilet Training (Early Learning Framework)
- Aqua Allies (NSW Geography and Science Syllabus)
- Secondary School Program (in-school and onsite at PRW Discovery Centre)
- Online resources

- Water Literacy Tracker
- Customer engagement program
- Site tours, virtual tours and briefings
- Employee initiatives
- Face to face e.g., community forums, events, webinars, Parliamentary showcase
- External initiatives e.g. National Water Week

# Understanding consumption of different media types

There's a reason we focus on 'always on' socials...



# PRW and water literacy campaigns

## Stats and insights

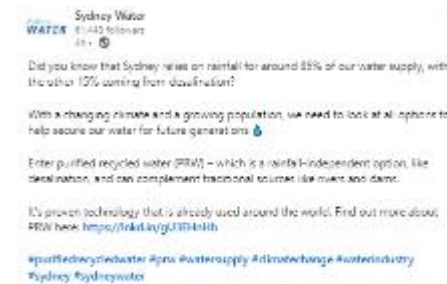
### Jess Fox – Future of water

- 24 million times our ads were seen by our customers
- Started vital conversations around the future of Sydney's water



### PRW launch

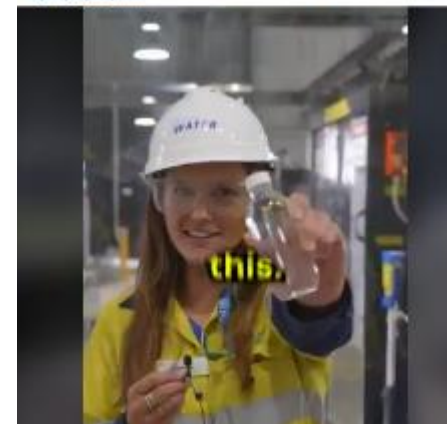
- Audience: more than 3.6M
- ASR: \$402,131 in free PR exposure
- Posts: 171 posts across our social media platforms dedicated to PRW
- Impressions: 773k
- Reach: 405K



### Water literacy

Across social media

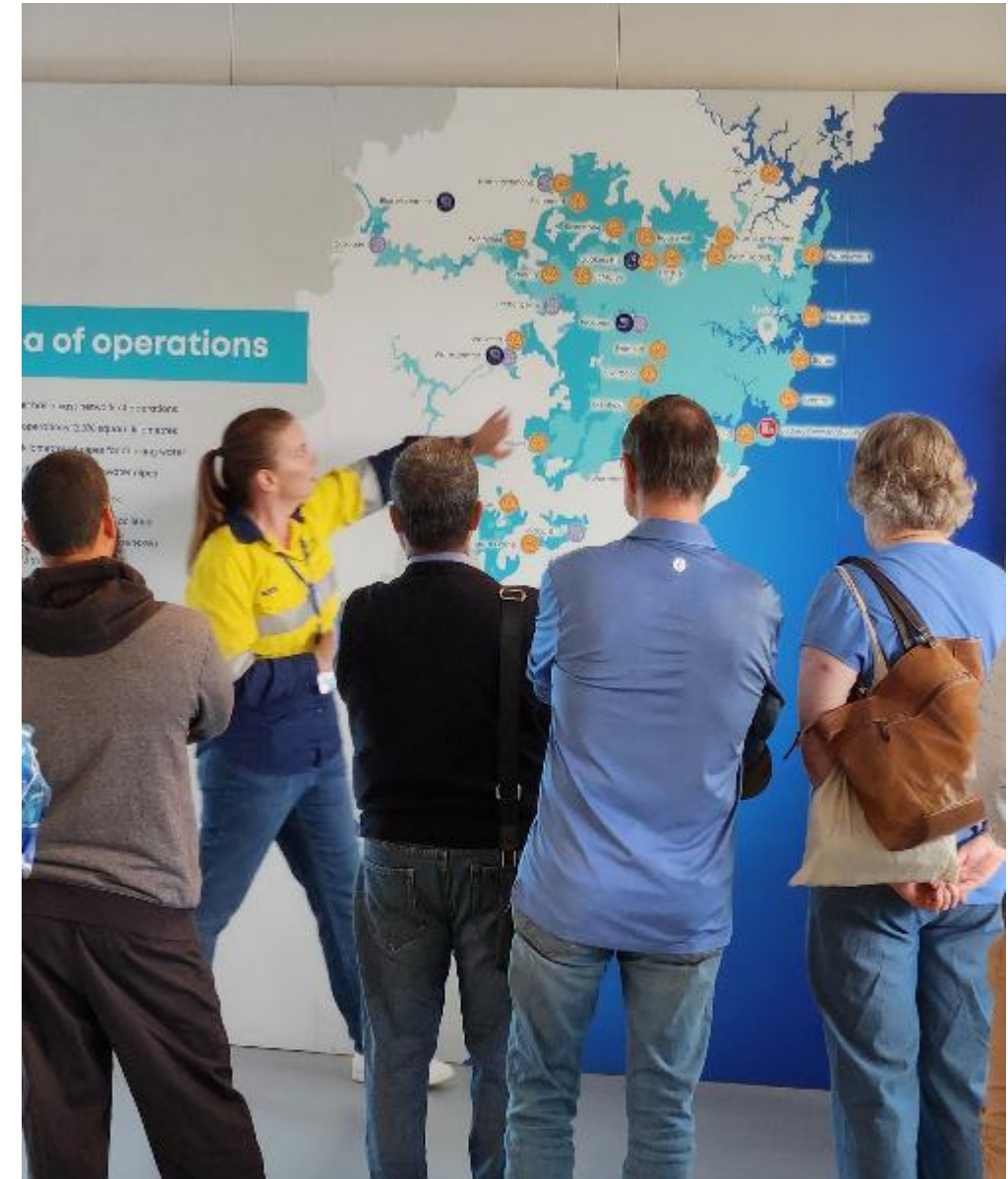
- 29 million times our water literacy ads have been seen by our Sydney Water customers online
- Reached more than 3.4 million customers online
- 145k website visits over the course of the campaign



# PRW Discovery Centre

## From October 2023

- Over **5,000 visitors** have toured the centre, including Members of Parliament, local councils, business leaders, academics, international delegations, and community members
- **1,343 stakeholders** have toured, including NSW Health and members of their independent Expert Panel, WaterNSW, Committee for Sydney, Western Sydney Leadership Dialogue, Business Western Sydney, CSIRO, DCCEE, DPHI and the NSW EPA
- **24 MPs** have also toured with overall neutral to positive sentiment maintained, including supportive social posts from some MPs. The Hon. Rose Jackson MLC Minister for Water toured on 14 February 2025.



How comfortable would you be if purified recycled water was used as part of Greater Sydney's water supply?

7.5 8.9

Pre tour Post tour

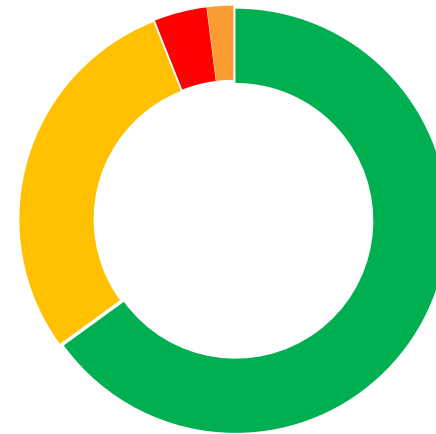
# Community engagement – *Securing our water supply – Quakers Hill to Prospect project*

From July 2024

The project engagement team has had over **1,650 face to face conversations at 43 events** as part of a series of community pop-ups at food markets, sporting events, cultural festivals, malls and universities.

They've also hosted focused listening sessions with targeted stakeholder groups.

Sentiment has been overwhelmingly positive for the project. Overall, feedback has been **64% positive, 31% neutral, 3% negative, and 2% uncategoryed/unrelated.**

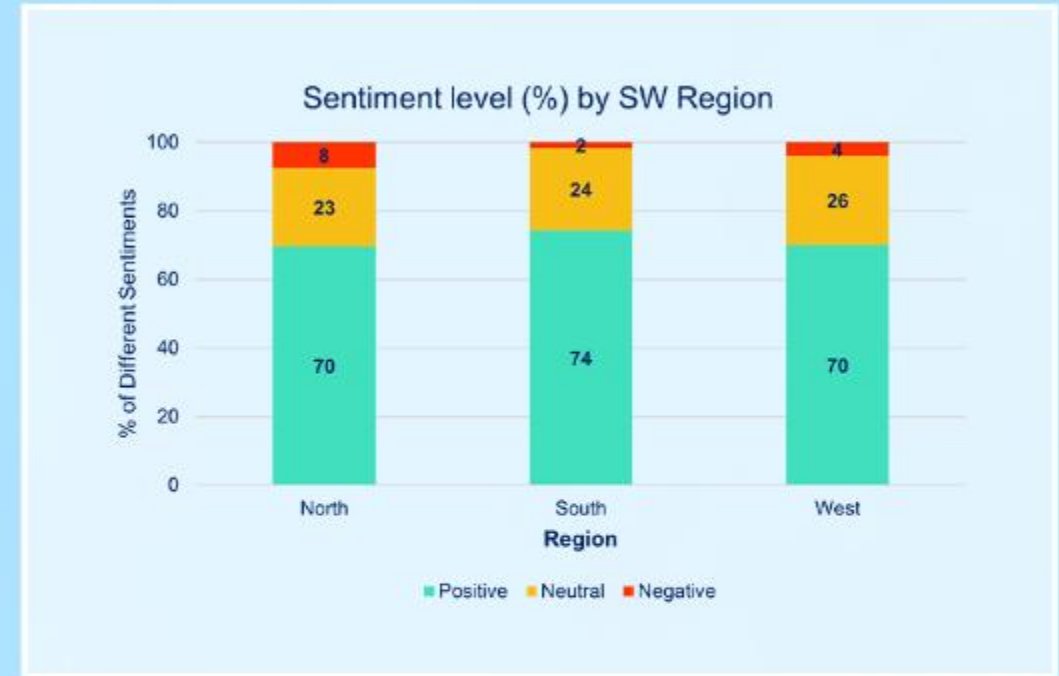
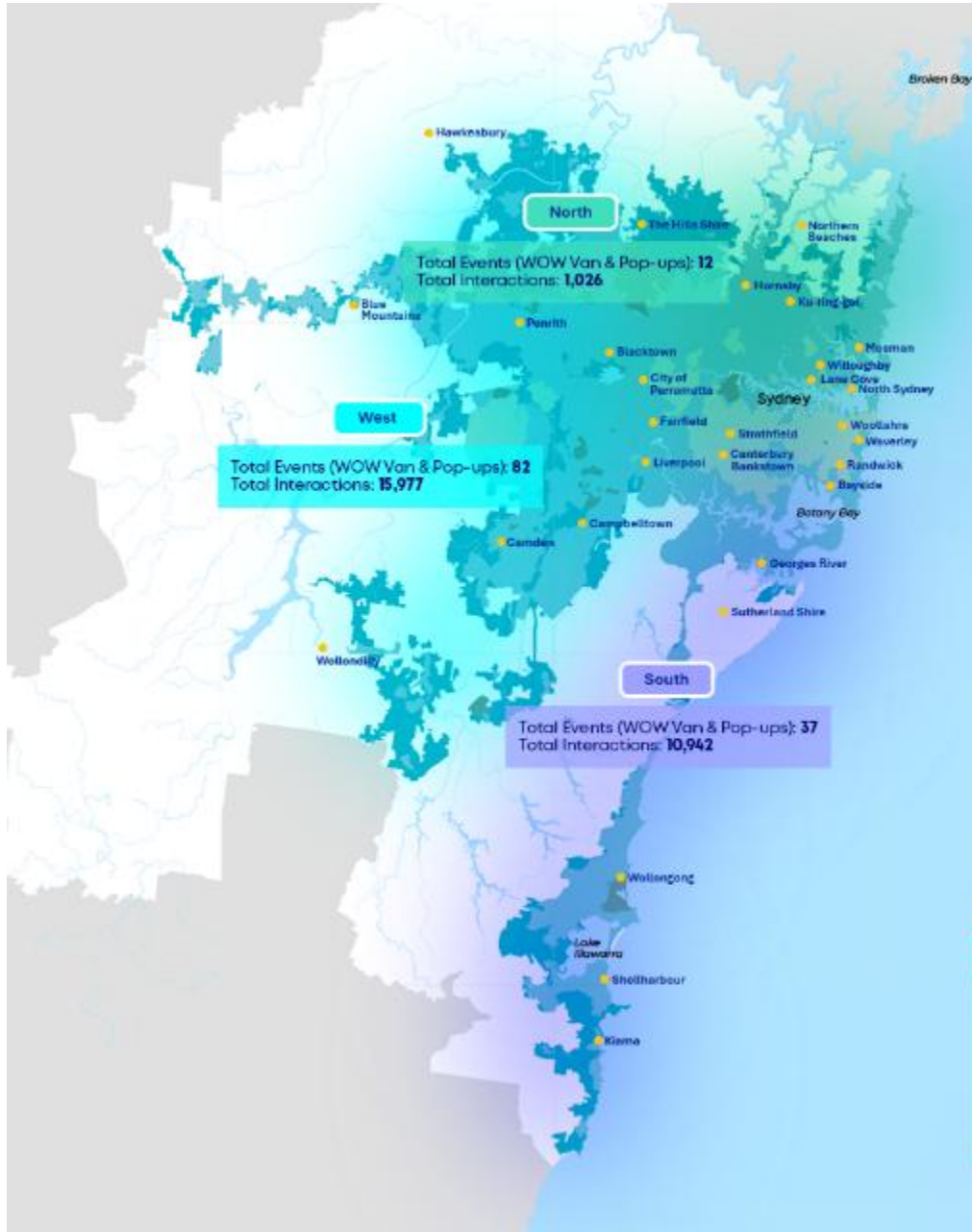


**Positive**  
**Neutral**  
**Negative**  
**Uncategorised**



# Where we've been

\*As at 30 June 2025



## Key

North region		10 LGAs
- Northern Beaches	- Ku-ring-gal	
- Willoughby	- Hunters Hill	
- North Sydney	- Lane Cove	
- Mosman	- The Hills Shire	
- Hornsby		
- Ryde		

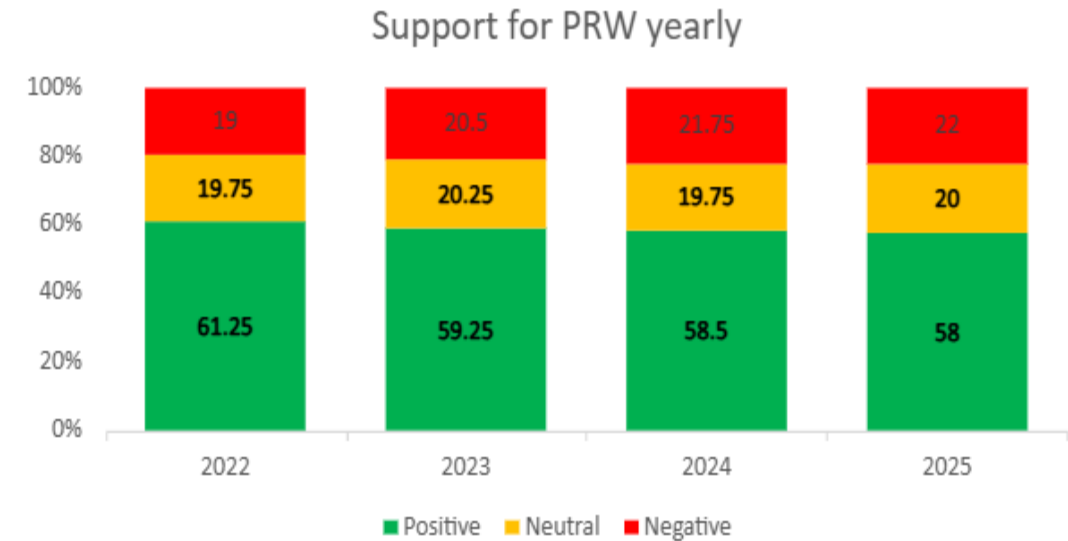
West region		11 LGAs
- Penrith	- Blacktown	
- Blue Mountains	- City of Parramatta	
- Camden	- Cumberland	
- Campbelltown	- Fairfield	
- Wollondilly	- Hawkesbury	
- Liverpool		

South region			15 LGAs
- Kiama	- Randwick	- Strathfield	
- Shellharbour	- Waverley	- Canada Bay	
- Wollongong	- Wollahra	- Canterbury Bankstown	
- Sutherland Shire	- City of Sydney		
- Georges River	- Inner West		
- Bayside	- Burwood		

# What we've learned

While engagement has increased since 2021, support levels have remained stable. This indicates no underlying concerns, but also no uplift in sentiment.

- Water literacy and trust remain the cornerstones of public support for PRW, and continued engagement is critical to sustaining progress.
- Those with higher trust in Sydney Water and greater confidence in the safety of drinking water are significantly more likely to be comfortable with, and supportive of, PRW.
- PRW schemes typically take 10 years, continuous in depth education and engagement increases support, particularly among those who are initially cautious
- Effective PRW implementation in Greater Sydney relies on close collaboration with regulators, including NSW Health, NSW EPA, DCCEEW, DPHI, local councils, and MPs.
- Final approval rests with government, but our focus over the next four years must be on sustained engagement to build understanding, trust, and support for PRW – this isn't about a single go/no-go moment, but a series of steps that strengthen acceptance.



# 50%

*A good reference point in any democracy is a referendum for which 50% support is considered enough to make a proposed change – WSSA*

# Next steps

## Our engagement journey continues



Lean into and support the government's **Recycled Water Roadmap**, including working with DCCEEW on the **Framework for community engagement on PRW projects**



Ongoing efforts to build water literacy across a variety of channels, including PRW Discovery Centre tours



Monthly pop-up displays showcasing the Securing our Water Supply - Quakers Hill to Prospect project



Working with NSW Health to have PRW tasting approved, likely early 2026

We're confident that tasting PRW will play a major role in increasing community support. Once approved, we're proposing a phased rollout.



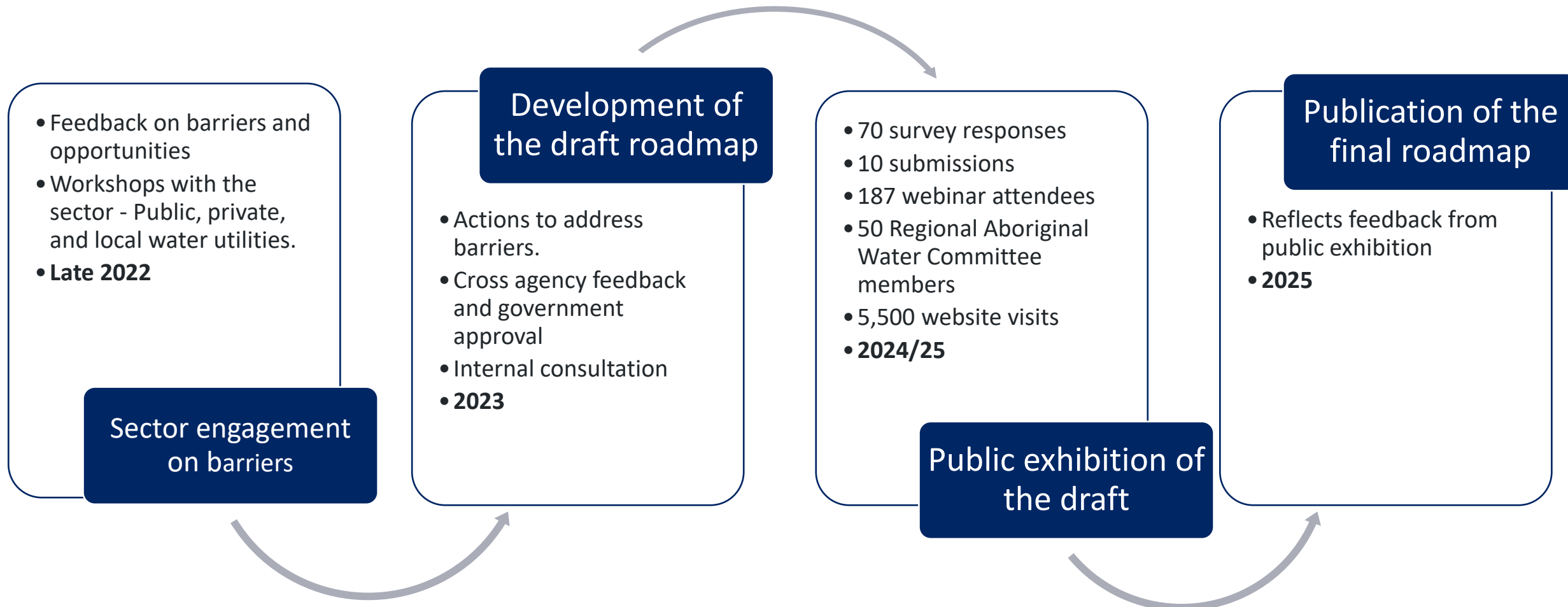
# NSW Recycled Water Roadmap

Erin Toner  
Principal Water Strategy Officer

Urban Water Strategy, Policy and Programs Branch

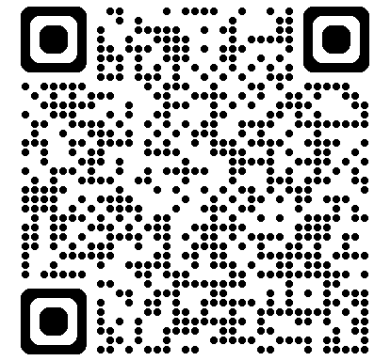
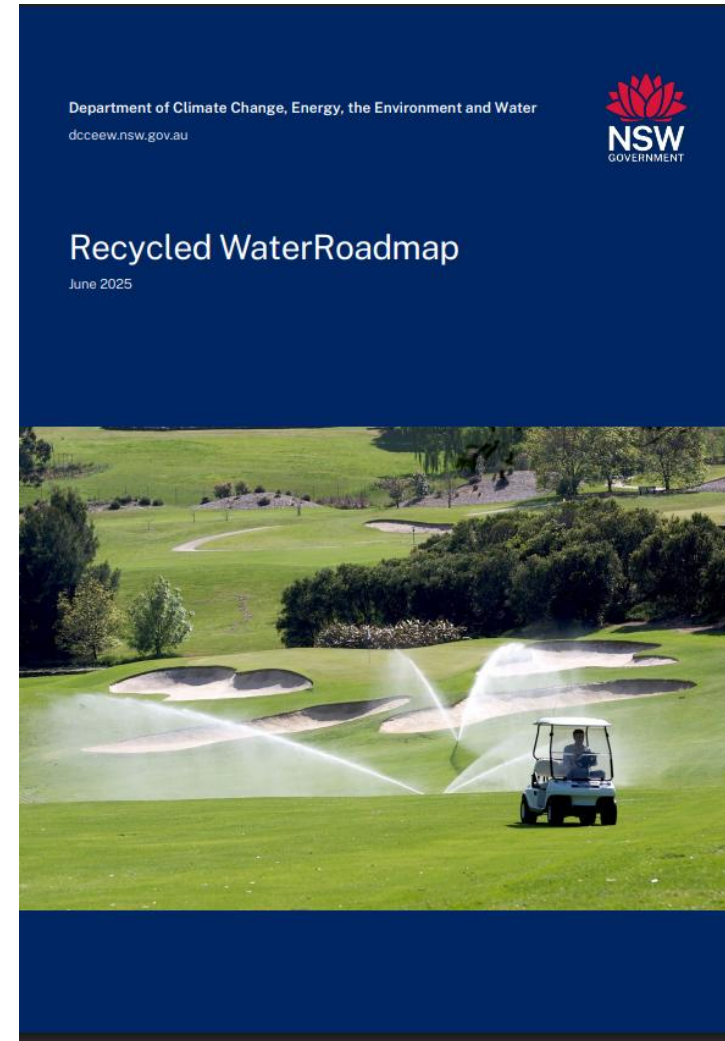


# Roadmap development



# Vision for the future of water recycling in NSW

- **Utilities consider recycled water** equally with other supply and demand options
- **Increased delivery of recycled water** solutions, improving diversity, resilience and environmental water quality
- **Communities understand water recycling** options and engage with utilities on purified recycled water for drinking



[water.nsw.gov.au/recycled-water-roadmap](https://water.nsw.gov.au/recycled-water-roadmap)

# Priorities in the Recycled Water Roadmap

## Priority 1.

State-wide planning and policy frameworks that support integrated and coordinated planning for recycled water

## Priority 2.

Provide tools and resources to support planning and delivery of recycled water solutions

## Priority 3.

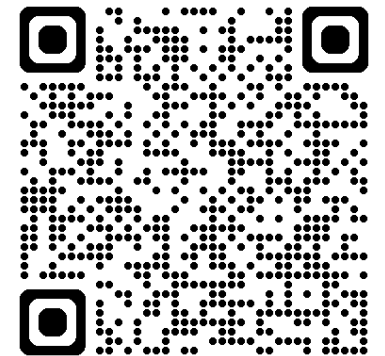
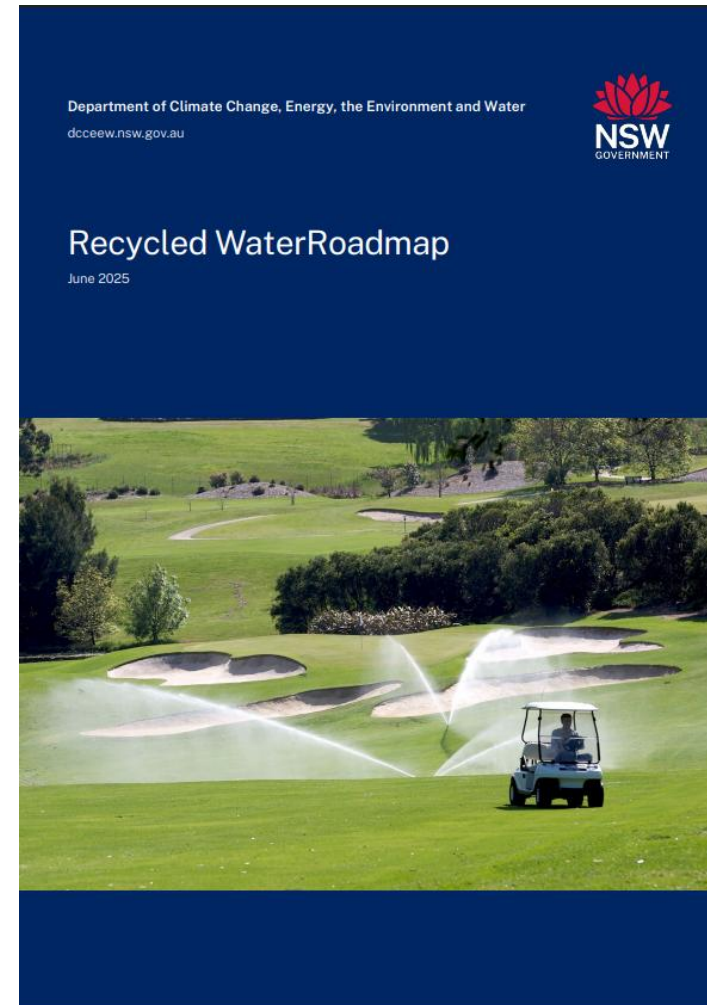
Clear regulatory and approvals processes in place for recycled water

## Priority 4.

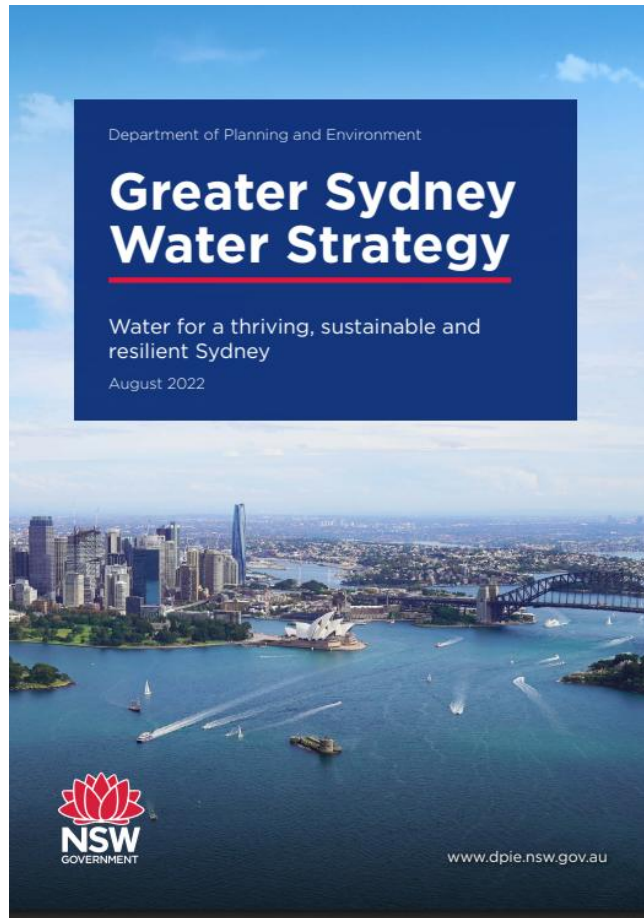
Build capacity and capability across the water sector to plan and deliver innovative recycled water solutions

## Priority 5.

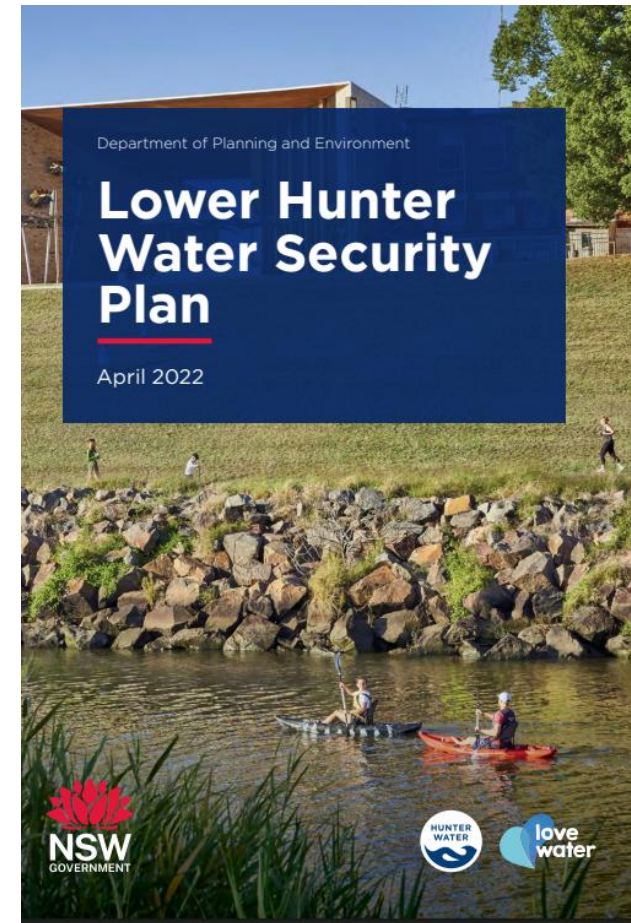
Take steps now so that purified recycled water is an option for our future drinking water supply



[water.nsw.gov.au/recycled-water-roadmap](https://water.nsw.gov.au/recycled-water-roadmap)

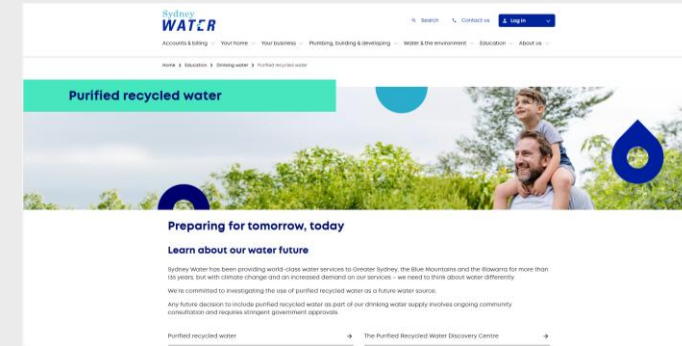
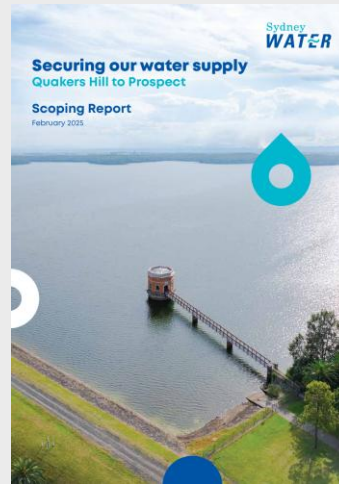
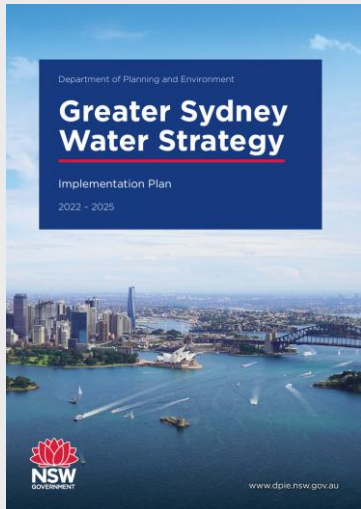


- Construct and commence operation of a purified recycled water demonstration plant.
- Engage with the community to understand preferences for additional water supplies—including purified recycled water.



- Engage with the community on purified recycled water and build a purified recycled water demonstration plant in the region.

# Purified Recycled Water delivery in Greater Sydney



2022

2023

2025

Government approvals  
(Planning (EIS), Health,  
Funding)

Estimated delivery 2032-  
2034  
(subject to approval)

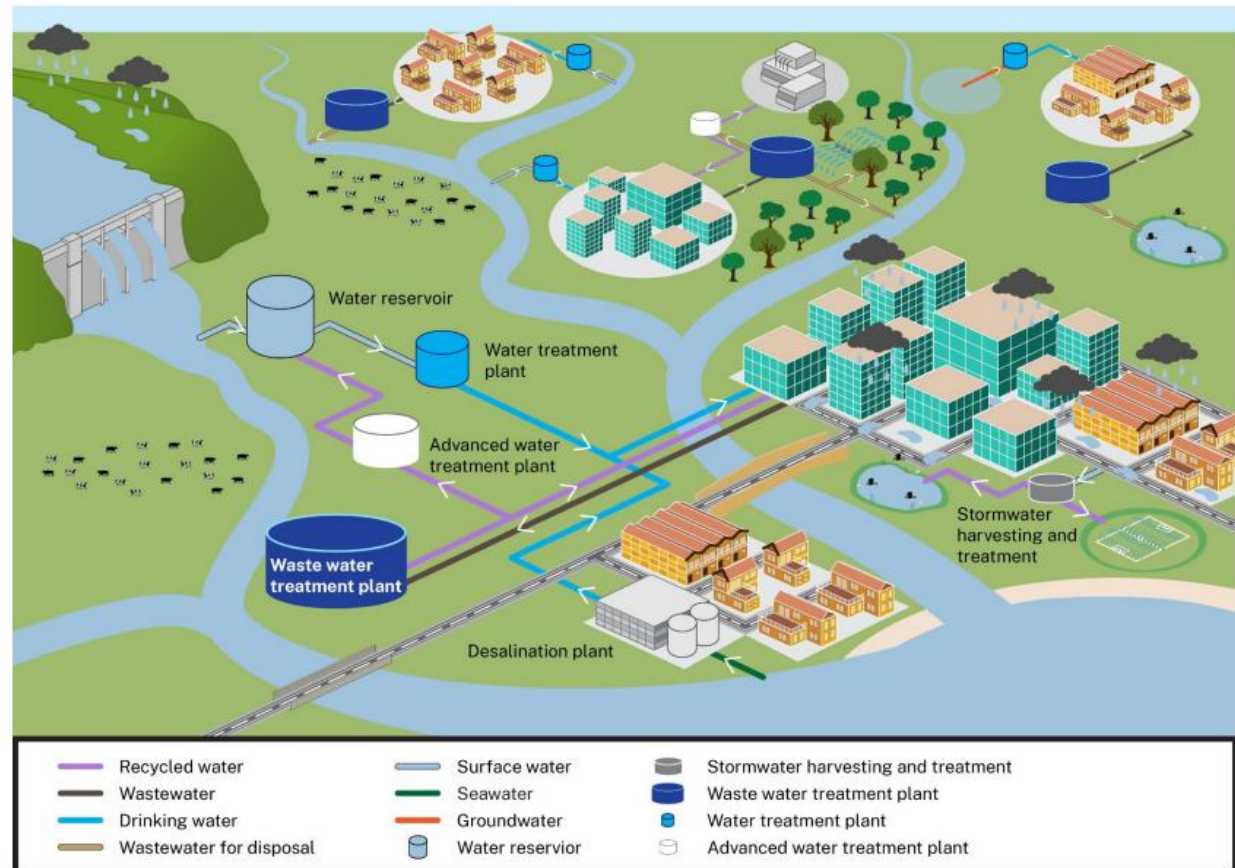
Ongoing community engagement and customer insights program

## Priority 5.

Take steps now so that purified recycled water is an option for our future drinking water supply

*“A collaborative, community-focused approach featuring workshops, local events, and tailored communication will help build trust, dispel myths, and empower communities to embrace [purified recycled water] as a key component of water resilience.” – Ballina Environment Society*

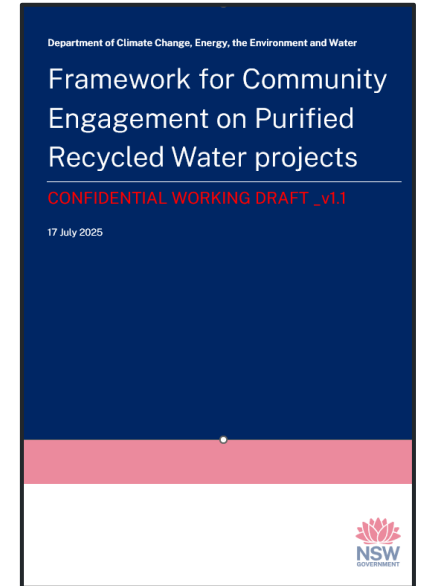
- Develop a framework to support utilities to deliver community engagement programs for PRW.
- Recommend a review of water recycling guidelines with drinking water guidelines to integrate purified recycled water for drinking.



# Draft framework for community engagement on purified recycled water projects

## Framework purpose

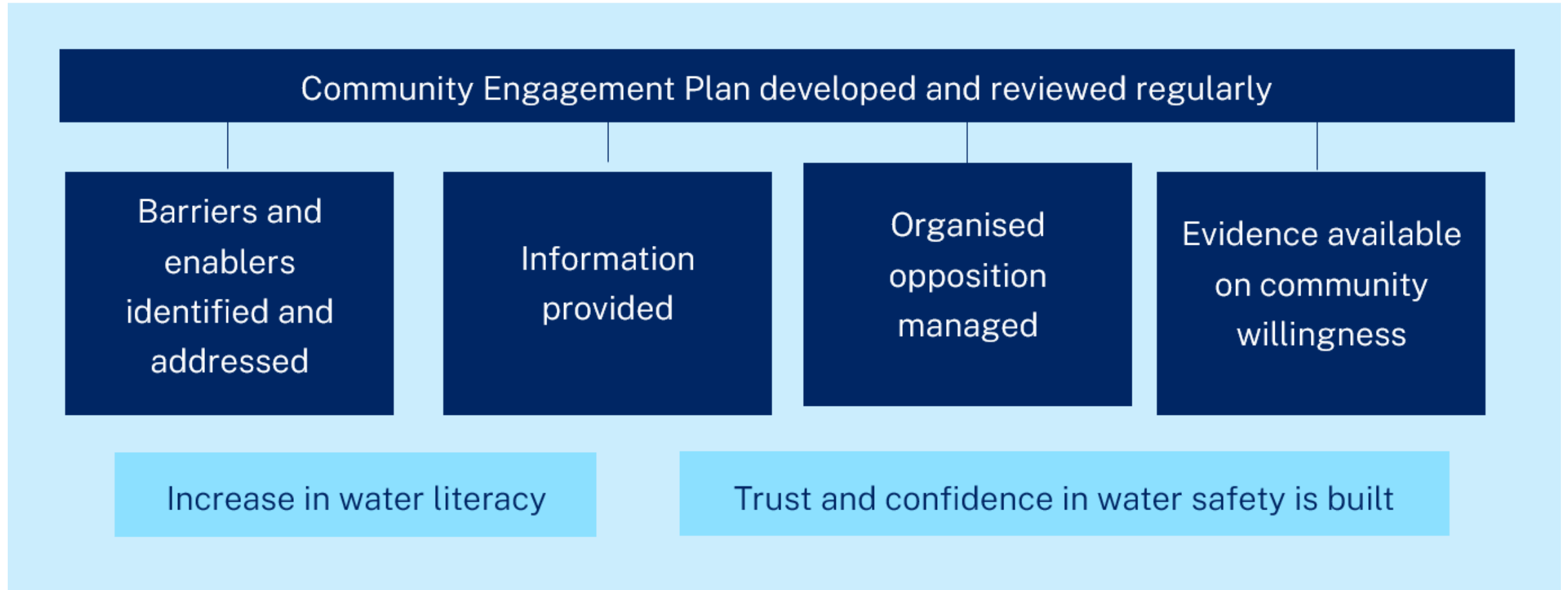
- **To support** Government in understanding the robustness and appropriateness of a community engagement program for a specific Purified Recycled Water project.
- **To evaluate** whether a fit for purpose methodology has been applied.
- **To establish expectations** about what data and evidence demonstrates the robustness and efficacy of community engagement activities.



## Framework development



# Components of the draft framework



**Why the attribute is important – Our expectations – Potential evidence of methodology**

# Recycled water concierge



Provide information	Provide tailored information to enquiries, considering the context of their project to navigate the regulatory framework
Direct enquiries	Direct enquirers to applicable guidelines, codes and other relevant regulatory instruments
Highlight research	Highlight emerging evidence-based research, initiatives and case studies of recycled water solutions
Encourage uptake	Encourage the uptake of safe, reliable and cost-effective recycled water schemes
Maintain resources	Maintain a repository of resources about recycled water, policies, guidance, case studies
Raise awareness	Raise awareness on the critical role recycled water plays for a sustainable NSW

**Recycled Water Concierge Contact**  
**[recycledwater@dcceew.nsw.gov.au](mailto:recycledwater@dcceew.nsw.gov.au)**



## Contact

Erin Toner

[Erin.Toner@dcceew.nsw.gov.au](mailto:Erin.Toner@dcceew.nsw.gov.au)

**Recycled Water Concierge Contact**  
[recycledwater@dcceew.nsw.gov.au](mailto:recycledwater@dcceew.nsw.gov.au)

# Potable Reuse: San Diego From 1994 to the 2025

Bernados Water Engineering  
Brian Bernados  
President

# City of San Diego “Repurification” Project

- In 1994, the City of San Diego submitted a report to introduce advanced treated water in San Vicente Lake.
- Highlights of the proposal included:
  - Microfiltration
  - Reverse Osmosis
  - Advanced Oxidation (ozone/peroxide)
  - 12-month retention in a reservoir used as a source of potable supply
  - Existing Surface Water Treatment Plant (media filtration & chlorination)



# 1995 Advanced Treatment Pilot Study

- In a letter dated April 22, 1996, from the Division of Drinking Water and Environmental Management
- “RO provided a less than expected removal of viruses and the advanced oxidation [ozone] process was demonstrated to be very effective at inactivation of viruses, . . . .”

We accepted the results of this study

We were going to approve the project; however, some in the public were opposed

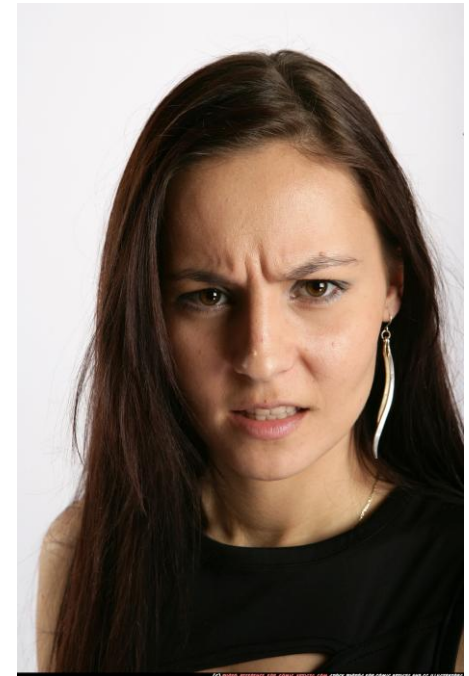
THEN

# SAN DIEGO UNION-TRIBUNE WEDNESDAY, MAY 19, 1999

## “Toilet-to-tap idea gets the big flush, for good”

“That's what San Diego City Council members said yesterday of a **reviled and publicly distasteful** proposal to turn sewage water into drinking water.”

- Interestingly, this proposal would have been issued a permit
- Soon after, N-Nitrosodimethylamine (NDMA) was found in CA and identified as a carcinogen



# June 20, 2001 – San Diego Still Needs a New Water Source

- At the time I was the District Engineer for the San Diego Field office (responsible for all of San Diego County)
- A meeting was held with Peter MacLaggan,
  - who had spear-headed the Repurification proposal,
  - By 2001 was working for Poseidon Resources
- Discussed in broad terms the Carlsbad project
- Expectation was to construct by 2005



CARLSBAD DESALINATION PLANT LAYOUT AND FACILITIES

FIGURE 14

# October 19, 2006, Poseidon Resources, Carlsbad Seawater Desalination Project Conceptual Approval

- “Based on the WSS [Watershed Sanity Survey] and meetings, the Department grants conceptual approval of Carlsbad Seawater Desalination Plant at Agua Hedionda Lagoon (Carlsbad Desalination Plant) to produce potable water.”
- “The information Poseidon submitted indicates that the proposed treatment process will remove the algae particles and the biotoxins from the water.”

# A New Reliable Source

- The California Coastal Commission issued the Project's Coastal Development Permit and authorized Project construction on November 3, 2009.
- On Dec. 15, 2015, the desalination plant, was dedicated.



# Potable Reuse Demonstration Plant

- In 2009, the City of San Diego revisited surface water augmentation by initiating a demonstration project at its North City Water Reclamation Plant (WRP).
- The City made a renewed proposal to California Department of Public Health (now DDW).
- The intent was to use advanced treated water from the North City WRP to augment the City's San Vicente Reservoir.

# 2010 California Senate Bill 918

- SB 918 required that recycled water regulations be developed for IPR, including
  - the planned replenishment of a groundwater basin with recycled water, and
  - the planned augmentation of a surface water reservoir used as a source of drinking water with recycled water.
- (the old “Repurification” idea is back)
- Now call it Surface Water Augmentation regulations
- San Diego calls it “Pure Water San Diego”

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EDITORIAL

**THE YUCK FACTOR: GET OVER IT**

# Conceptual Approval and Permit

- California Department of Public Health (now DDW) conceptually approved the project in 2012.
- In 2016, the City of San Diego revised its project proposal to instead augment the City's Miramar Reservoir, a much smaller reservoir than the San Vicente Reservoir.
- Lots of Independent Advisory Panel meetings & studies.
- May 29, 2020, permit is issued.
- Construction is nearly complete.

# New Regulations

- In 2014, revised regulations for groundwater replenishment were adopted, which replaced an earlier version adopted in 1978.
- In 2018, the regulations for surface water augmentation (SWA) with recycled water were adopted.
- In 2024, the regulations for Direct Potable Reuse became official.
- Minimal push back from the public. Prefer reuse > desal!
- Multiple periods of drought seemed to change public opinion on whole.



# Overcoming the Yuck Factor

**Next Water 2025  
Melbourne, Australia**

**Andrew Salveson, Carollo Engineers**

# A Structured Engagement Program in Colorado

# Start With A Plan



WaterReuse Colorado  
Advancing Direct Potable Reuse to Optimize  
Water Supplies and Meet Future Demands

Technical Memorandum 2  
COMMUNICATIONS AND OUTREACH  
PLAN FOR DIRECT POTABLE REUSE  
IN COLORADO

FINAL | July 2018



# Identify Your Audiences

Everyone is important, but resources need to be focused

Table 2 Key Audiences in Colorado for DPR Outreach

Group or Organization	Priority <sup>(1)</sup>	Category
Local elected officials	High	Influencer
Press/media	High	Influencer
Town Councils and Boards	High	Implementer
Community organizations	High	Influencer
Local health department	High	Influencer
Managers/executives	High	Influencer and Implementer
Community leaders (public as water utility customers)	High	User
Colorado Department of Public Health and Environment	High	Regulator/Agency
Industry (food and beverage, manufacturing, etc.)	High	User
Environmental groups	High	Influencer
State legislators	Medium	Influencer
Water associations and organizations (CFWE, AWWA, CWC, etc.)	Medium	Influencer
Basin Roundtables and Inter-Basin Compact Commission	Medium	Influencer
Schools (K-12)	Medium	Influencer
Secondary education academic staff	Medium	Influencer
Water providers' leadership (Front Range Water Council, etc.)	Medium	Influencer
Water providers operations staff	Medium	Implementer
Water resources staff	Medium	Implementer
Agriculture and downstream constituents	Medium	Users
Colorado Water Conservation Board	Medium	Regulator/Agency
Medical professionals	Low	Influencer
Other state elected officials	Low	Influencer
Development community	Low	Influencer

Notes:

(1) Audiences prioritized by workgroup based on initial impact on DPR project implementation.

# Identify Desired Outcomes

AUDIENCES		Local Elected Officials (mayor, city councilors, HOAs)	Press and Media	Town Council/Utility Board	Community Organizations (e.g., Chamber of Commerce, business councils, Rotary Club)	Local Health Departments	Community Leaders (Public/Water Utility Customers)	CDPHE	Industrial, Food/beverage, Manufacturing	Managers/Executives (as Implementers)	Managers/Executives (as Influencers)	Environmental Groups
OUTCOMES AND ACTIONS	Category	Influencers	Influencers	Implementers	Influencers	Influencers	Users	Regulators and Agencies	Users	Implementers	Influencers	Influencers
Desired Outcomes	What are the desired outcomes or actions we want target audience to perform?	Support utility adoption of reuse Positively influence other influencers Support funding/financing Promote with constituents Be responsive with inquiries	Produce stories based on our messaging Reach a lot of people Multiplier effect Gain public confidence/support Be factual	Consensus at a minimum Be informed about financing of project To be unanimous champions Trust collaborate with staff Be spokespeople to arm press and public with factual information Be the face of reuse to the community	Vocal support Be neutral if not supportive Champion the project to reporters, utility boards and their own base	Publically issue statements supporting implementation Respond and validate the safety of reclaimed water when called by members of the public	Trust DPR is safe Trust water providers Support the implementation of DPR Understand the value DPR provides to their community	Approve projects Not oppose Help educate public/others using directed messaging Partner with advocates, be a partner	Not oppose Support from a water resource perspective	Advance the project	Promote projects internally and externally to persuade staff and the public Educate staff on proper messaging to the public	Not oppose Support implementation from a water resource perspective Advocate DPR safety using directed messaging Help educate members of environmental groups using directed messaging

# Understand Concerns

AUDIENCES		Local Elected Officials (mayor, city councilors, HOAs)	Press and Media	Town Council/Utility Board	Community Organizations (e.g., Chamber of Commerce, business councils, Rotary Club)	Local Health Departments	Community Leaders (Public/Water Utility Customers)	CDPHE	Industrial, Food/beverage, Manufacturing	Managers/Executives (as Implementers)	Managers/Executives (as Influencers)	Environmental Groups
OUTCOMES AND ACTIONS	Category	Influencers	Influencers	Implementers	Influencers	Influencers	Users	Regulators and Agencies	Users	Implementers	Influencers	Influencers
Motivations	What motivation does the target audience have for meeting the desired outcomes or performing the desired actions?	<p>Economic growth/development needs new water supply sources - DPR is an affordable and politically viable source</p> <p>Quality of life</p> <p>Security/certainty of water supply</p> <p>Getting reelected</p> <p>Protecting the environment and agriculture by ensuring a sustainable source and high water quality</p> <p>Financial accountability for water supply</p>	<p>Sell exciting and cutting-edge stories</p> <p>Increase community engagement</p> <p>Beneficial social impact through stories about drinking water and relatable topics</p> <p>Stories that provide a positive outlook for customers and consumers</p>	<p>Getting reelected</p> <p>Financial feasibility</p> <p>Grants</p> <p>Pleasing/serving constituents</p> <p>Water sustainability</p> <p>Environmental leadership and responsibility</p> <p>Community development and growth</p> <p>Community image</p>	<p>Alignment with mission</p> <p>Community growth</p> <p>Economic sustainability</p> <p>Standard of living</p> <p>Colorado-state leadership</p> <p>Environmental leadership</p>	<p>Job description to be a resource for public health to the community</p>	<p>Sustainable water supply</p> <p>Being part of a "progressive" community</p> <p>Desire to be a champion of a sustainable program</p> <p>Existing water quality or quantity issues</p>	<p>Long-term viability of water supply</p> <p>Promote factual information to water systems</p> <p>Demonstrating progress towards reaching goals outlined in the Colorado Water Plan</p>	<p>Security/certainty of water supply</p> <p>Promoting sustainability</p>	<p>Long term viability</p> <p>Growth</p> <p>Economics</p> <p>Environmental stewardship</p> <p>Crisis prevention</p> <p>Drought resilience</p> <p>Cost effective</p>	<p>Economics</p> <p>Growth</p> <p>Internal and external pressure to move project forward</p>	<p>Security/certainty of water supply</p> <p>Protecting the environment and agriculture</p> <p>Being "green"</p> <p>Promoting sustainability</p>

# Understand Motivations

AUDIENCES		Local Elected Officials (mayor, city councilors, HOAs)	Press and Media	Town Council/Utility Board	Community Organizations (e.g., Chamber of Commerce, business councils, Rotary Club)	Local Health Departments	Community Leaders (Public/Water Utility Customers)	CDPHE	Industrial, Food/beverage, Manufacturing	Managers/Executives (as Implementers)	Managers/Executives (as Influencers)	Environmental Groups
OUTCOMES AND ACTIONS	Category	Influencers	Influencers	Implementers	Influencers	Influencers	Users	Regulators and Agencies	Users	Implementers	Influencers	Influencers
Hurdles to Overcome	What concerns or hurdles inhibit the target audience from achieving the desired outcome?	<p>Cost</p> <p>Concern over public perception</p> <p>Turnover/new staff or officials</p> <p>Following if something goes wrong in another location (missteps)</p> <p>Misinformation that is not in line with direct messaging</p>	<p>"Toilet to tap" is controversial and therefore can be good click bait</p> <p>Incorrect information that can go viral</p> <p>Inappropriate sources / not all sources</p> <p>Organization needs to sell</p> <p>Poor word choices / spinning of information leads to negative public perception</p>	<p>Risk aversion and risk perception</p> <p>Lack of information</p> <p>Safety</p> <p>Understanding technical aspects</p> <p>Public perception about water sources (pristine vs. New)</p> <p>Vocal minority (5-10%) opposition</p> <p>Lack of local or regional examples</p> <p>Perceived lack of support</p> <p>Organizational momentum</p> <p>Existing supply is "good enough"</p> <p>Lack of current regulation and implementation</p>	<p>Lack of control or understanding of importance of the issue</p> <p>Not listing this as a priority</p> <p>Yuck factor/ misinformation</p> <p>Diverse/limited perspective of the council</p> <p>Lack of connection of water to quality of life</p>	<p>Educate appropriately (don't have information to make case)</p> <p>Lack of employee engagement and interest</p> <p>Additional workload</p> <p>Not my jurisdiction mentality</p>	<p>Lack of education about public health standards and technologies</p> <p>Exposure to misinformation about the safety of DPR</p> <p>Scrutiny within unsupportive community</p> <p>Fear of water being "unsafe" for consumption</p> <p>Fear of lack of control over household water supply</p> <p>Assuming the community has an adequate water supply</p>	<p>State legislature approval</p> <p>Internal buy in or consensus</p> <p>Resources needed to regulate</p> <p>Contaminant risk</p>	<p>Internal perception</p> <p>Customer perception</p>	<p>Previous projects gone wrong</p> <p>Fear of public perception</p> <p>Contaminant risk</p> <p>Associated costs</p> <p>Internal buy in or consensus</p>	<p>Previous projects gone wrong</p> <p>Internal buy in or consensus</p> <p>Associated costs</p>	<p>Internal perception</p> <p>Member perception</p>

# Define Messaging

AUDIENCES		Local Elected Officials (mayor, city councilors, HOAs)	Press and Media	Town Council/Utility Board	Community Organizations (e.g., Chamber of Commerce, business councils, Rotary Club)	Local Health Departments	Community Leaders (Public/Water Utility Customers)	CDPHE	Industrial, Food/beverage, Manufacturing	Managers/Executives (as Implementers)	Managers/Executives (as Influencers)	Environmental Groups
OUTCOMES AND ACTIONS	Category	Influencers	Influencers	Implementers	Influencers	Influencers	Users	Regulators and Agencies	Users	Implementers	Influencers	Influencers
Messaging	What specific messaging can be used to convince the target audience to perform desired actions?	<p>Consistent messaging points</p> <p>Right amount of detail</p> <p>Range of formats for different audiences</p> <p>Peers are doing it</p>	<p>Consistent talking points across all staff</p> <p>Utilize organizations existing tools</p>	<p>Clear terms and concepts (internal, external)</p> <p>Water supply need (long and short)</p> <p>Diversity of supply</p> <p>Success stories - local is better</p> <p>Lack of safe and reasonable alternatives, water quality considerations</p> <p>Cost/benefit</p> <p>Solid science (treatment, monitoring, advanced/ additional treatment)</p> <p>Recognition/ legacy</p>	<p>Economics</p> <p>Messaging should be kept to a high level</p> <p>Graphical</p> <p>Support specific goals to each organizer</p>	<p>Acute chronic/ pathogens and chemicals</p> <p>Comparable water quality</p> <p>Regulations and safe guards</p> <p>Transparency</p> <p>Teamwork: "we've been working together since the beginning"</p>	<p>DPR is safe</p> <p>Specific health and safety standards DPR meets</p> <p>DPR will provide a sustainable water supply for your community</p>	<p>Solid science (treatment, monitoring, advanced/ additional treatment)</p> <p>Information on what other states are doing</p>	<p>Clear terms and concepts (internal and external)</p> <p>Water quality of purified water compared with current water supply</p> <p>Specific health and safety standards DPR meets</p> <p>DPR is "green"</p>	<p>Data to validate</p> <p>Preferred option - feasibility study results</p> <p>Safe</p> <p>Cost</p> <p>Supply</p> <p>Environment</p>	<p>Other project success stories</p> <p>Preferred option - feasibility study results</p> <p>Safe</p> <p>Cost</p> <p>Supply</p> <p>Environment</p>	<p>Solid science (treatment, monitoring, advanced/ additional treatment)</p> <p>Information on what other states are doing</p> <p>Specific health and safety standards DPR meets</p> <p>Water supply need (long and short-term)</p> <p>Success stories across industry</p> <p>Detailed information about emerging contaminant removal.</p> <p>DPR is "green"</p>

# Determine Messenger

AUDIENCES		Local Elected Officials (mayor, city councilors, HOAs)	Press and Media	Town Council/Utility Board	Community Organizations (e.g., Chamber of Commerce, business councils, Rotary Club)	Local Health Departments	Community Leaders (Public/Water Utility Customers)	CDPHE	Industrial, Food/beverage, Manufacturing	Managers/Executives (as Implementers)	Managers/Executives (as Influencers)	Environmental Groups
OUTCOMES AND ACTIONS	Category	Influencers	Influencers	Implementers	Influencers	Influencers	Users	Regulators and Agencies	Users	Implementers	Influencers	Influencers
Messengers	Who will the target audience listen to?	Staff Constituents Regulators General public	Academics Environmental groups Regulatory bodies Elected officials Water providers/utility staff Other state agencies Reclaimed water providers/treaters and users Health professionals Community groups/ leaders Early adopter water providers	Regional experts Trusted sources, health advisors, expert panels National, state and local experts National, state and local regulators Utility leaders/directors Academics Other utilities/early adopters Media/press CWCB Colorado municipal league Community leaders/organizers	Utilities - engineering Mayor Members State regulators Tech experts (specific) National organizations or affiliates	CDPHE Water providers Outside consultants Academics Early adopters Encourage messengers to travel as a pack	Health experts (doctors, academics) DPR experts (consultants, academics) State regulators (CDPHE, EPA) Water provider (where a good relationship is already in place) Neighbors City council Media outlets	Health experts (doctors, academics) DPR experts (consultants, academics) National regulators (EPA) Internal experts Other state regulators	Utilities - engineering Customers State regulators DPR experts Media/press	Consulting engineers Internal subject matter experts Other utilities Elected officials	Consulting engineers Internal subject matter experts Other utilities Elected officials	Utilities - engineering Mayor Members State regulators Tech experts (specific) National organizations or affiliates Media/press

Seeing (& Tasting) is  
Believing



# Museum Quality



# Mobile



# Simple



# Community and Celebration



Questions?