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Our Water, Our Voice

Strategic Customer Engagement Program Phase 5 Final Report

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Prepared for Sydney Water by Kantar Public
Kantar Public research team: Kirsty Macmillan, Damian Hampton, Rowan Gibson, Sharne Thomas, and Jake Gollan
Contributors: Synergies Economic Consulting

Sydney WATER

Sydney Water's Customer Engagement Program: *Our Water, Our Voice*

Sydney Water is serious about listening to customers and planning for the future, with customers at the heart of the process. Starting in July 2022 and spanning 24 months, Sydney Water has been undertaking a thorough listening exercise through collaboration with customers, to deeply understand customer expectations and priorities, and customer willingness to pay for investments that align with these expectations. The program was named by customers: *Our Water, Our Voice* and runs alongside a wide range of other customer research programs currently being undertaken by Sydney Water.

This report summarises the findings from the fifth phase of the customer engagement program, including conversations with a panel of more than 60 residential customers (both homeowners and renters) between November and December 2023. These customers came away with a comprehensive understanding about Sydney Water and the challenges Greater Sydney faces and were able to make informed recommendations about how Sydney Water should invest in the future.

This is a detailed document, designed for an internal Sydney Water audience, and an interested external audience. It is not intended to be distributed at a community level.

This report follows the customer engagement structure of Phase 5. A customer panel was held, drawing on population from across Greater Sydney, including the Blue Mountains and Illawarra. Each day of the panel lasted eight hours in duration and included a mix of age groups (aged 16+), gender, location, homeowners, renters, financially vulnerable people, people living with a disability, culturally and linguistically diverse people and First Nations people. The panel was conducted face-to-face in Parramatta.

To supplement this document, a shorter summary-style version will be prepared – designed to be published and promoted to keep customers informed of the knowledge gathered to date, how it is being used, and where it fits in the broader regulatory process.

Our Water, Our Voice aims to involve customers actively and genuinely in Sydney Water's decision-making process. Customers have selected the name for the program and, in Phase 1, they actively shaped the focus for Sydney Water's Regulatory Proposals.

Sydney Water has the target of achieving its regulator's expectations of an 'Advanced' level for this customer engagement program, resulting in a customer-led and customer-supported price proposal.

I hope you find this an informative read and that it sets the scene for Phase 6, the last phase of the *Our Water, Our Voice* customer engagement program.

Kirsty Macmillan
Managing Director Australia

Acknowledgement of Country

Sydney Water and Kantar Public respectfully acknowledge the Traditional Custodians of the land and waters on which we work, live, and learn.

Their lore, traditions and customs nurtured and continue to nurture the waters (bulingang or saltwater and muulii ngadyuung or sweet water) in Sydney Water's operating area, creating well-being for all. We pay our deepest respect to Elders, past and present. We acknowledge their deep connections to land and waters. In the spirit of reconciliation, we remain committed to working in partnership with local Traditional Owners to ensure their ongoing contribution to the future of the water management landscape, learning from traditional and contemporary approaches, while maintaining and respecting their cultural and spiritual connections.

Executive Summary

Introduction

Sydney Water is Australia's largest water utility, providing safe, high-quality drinking water to nearly 5.3 million people in and around Greater Sydney every day, along with providing wastewater, stormwater, and recycled water services to many homes and businesses.

Recently, the Independent Pricing and Regulatory Tribunal (IPART) introduced a new regulatory framework for water businesses in NSW which requires demonstration that pricing submissions are in the long-term interests of customers, evidenced by customer preferences and willingness to pay for water services.

The *Our Water, Our Voice* program is a six-phase program conducted between 2022–24 that provides critical input to understanding customer preferences for this and other regulatory and government submissions.

Phase 1 aimed to capture customer priorities and expectations of outcomes, understand the relative importance of each outcome, as well as customers' willingness-to-pay for these outcomes.

Phase 2 focused on the design of performance metrics to guide the evaluation of Sydney Water's service delivery. It also evaluated the current measures and settings of Sydney Water's existing service performance standards and how these align with customer expectations and priorities.

Phase 3 explored different ways Sydney Water might deliver outcomes to align with the customer priorities from Phase 1, including potential levels of service. This phase asked customers whether they were willing to pay to see improvements in service levels for high level outcomes or whether there were any areas where they might be willing to see a reduction in service levels.

Phase 4 introduced the possibility of Sydney Water needing to significantly increase water bills to fund responses to key challenges facing Sydney Water. It informed customers of the likely increase in the base bill and then assessed customers' willingness to pay more than what they're currently paying, to see improvements in service levels. It also explored, in greater detail, what is important to customers when investing in areas such as waterway health, cool green spaces and water resilience and what Sydney Water needs to consider when prioritising investment in these areas.

Phase 5 [the focus of this report] sought customer recommendations or advice on a range of potential investment options for Sydney Water. This included guidance around the preferred performance, risk and cost profiles that Sydney Water should consider adopting to reflect customers short and long-term interests in the best possible way. These investment options were explored within the context of Sydney Water needing to increase water bills over the next 5-10 years

to meet its service delivery obligations.

Phase 6 will explore key areas of the pricing structure for Sydney Water customers and customer commitment performance targets (also known as Outcome Delivery Incentives - ODIs). This includes a particular focus on the future tariff structure and pricing control Sydney Water proposes to IPART and whether ODIs are implemented in Sydney Water's strategic business plan.

Methods

The collective objectives of Phase 5 were to:

- Shape and guide how Sydney Water provides the services that customers want and need while managing costs now and in the future.
- Obtain a degree of consensus around the overall bill impact that would be tolerable for customers, when delivering these services.

An in-depth exploration took place over four full days (eight hours each day) of customer panel sessions. Sessions were tailored to ensure ease of participation of different groups. These took place in Parramatta and included customers from across the Greater Sydney region, including the Blue Mountains and Illawarra.

Table 1 Number of customers engaged

Engagement	Location	Number of days (8 hours each)	Number of Participants Day 1	Number of Participants Day 2	Number of Participants Day 3	Number of Participants Day 4
Customer Panel	Parramatta	4	n=63	n=61	n=60	n=60

The broad focus of each customer panel day was:

Day 1: A learning day	Provide customers with the knowledge frameworks and context to help them reach consensus and deliver recommendations to Sydney Water.
Day 2: An understanding day	The focus of this day was to talk to customers about key focus areas for Sydney Water and to help customers develop their understanding of these, so that they were on the same page as Sydney Water when making recommendations.
Day 3 and Day 4: Two days of Sharing and Recommendations	The focus of Day 3 was to understand what customers think are the most important expenditure principles (identified in Day 1) and trade-offs (from Day 2) when making decisions. Customers were asked for their advice and recommendations on how they view the risks of spending or not spending in key customer priorities, preventing pollution and securing the region's water supply.

Day 4 brought everything together from each of the previous three days of the consultation into one session, where customers were asked to reach a consensus (using the L-Scale[1]) and provide advice to Sydney Water on their spending recommendations.

Overview of customer decision frameworks and trade-off windows

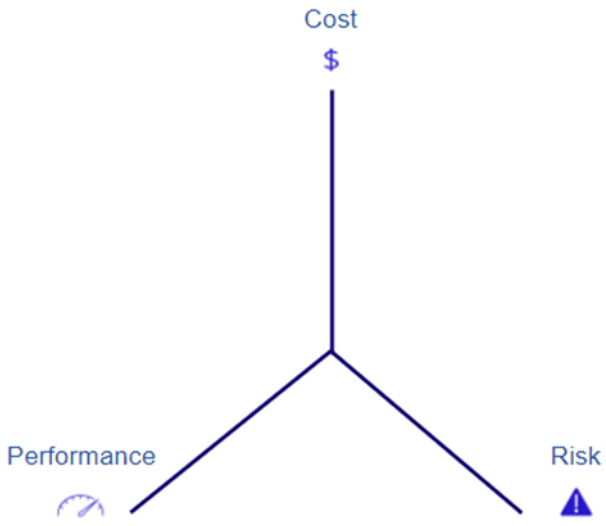
Customer decision framework

One of the core challenges across the four sessions was to ensure that customers were making decisions and providing advice which was based on a deep understanding of the trade-offs associated with specific options, as opposed to more immediate and surface level decisions based on initial perception, status quo bias and likability. It was also critical that Sydney Water understand the rationale and reasons for recommendations (or the 'why' behind the recommendations) and not just the recommendations themselves.

A framework was developed, in consultation with Sydney Water, to guide customers' thinking and to assist customers in articulating why they were making specific recommendations and how they expect these recommendations to be enacted by Sydney Water. The framework used was designed to ensure that customers considered three decision-making elements when making recommendations, or deciding on their preferences, as part of any consensus-reaching exercises. These core elements were:

1. **Performance:** This was defined as the desired performance of any specific intervention/ investment/service/action area (for example 'preventing pollution').
2. **Risk:** This was defined as the risk that customers were willing to take in relation to a specific intervention/investment/service/actio n area.
3. **Cost:** This was defined as a total cost, on the average bill, to provide services which matched the desired performance or risk levels.

Figure 1 Triangle template



[1] *The L-Scale is used widely in community engagement and recognises that true collaborative decision making doesn't require everyone to love the decision, nor even like it. For the sake of reaching a consensus no more than 20% of people could loathe the option.*

An important step in walking customers through the framework was for them to understand that each of the three elements can be set differently for different investment areas. The relationship between performance, risk and cost was referred as the 'Triangle' throughout the panel sessions.

Trade-off windows

A set of customer-informed considerations, or trade-off windows, that would form the centre of decision-making was developed in consultation with participants. Understanding the key considerations was only the first step. There was also a need to understand the tensions within each trade-off window and how customers balance these.

To achieve this, the reason/s and rationale/s customers applied when designing their Triangles (for Sydney Water as an organisation), along with the questions they asked, were recorded and analysed as part of the design phase for Day 2. These were then thematically grouped and distilled down to create a list of common guiding principles that customers typically apply when considering the levels of cost, performance, and risk they are comfortable with. All windows were discussed in-depth and applied during exercises throughout Days 2, 3 and 4.

Customers were asked to treat these windows like a continuum and identify which end of the continuum closely reflected their preferences.

Figure 2. Customer developed trade-off windows

Customer developed trade-off windows included:

Focus on the now		*Focus on the future*
Maintaining (status quo)		*Improving*
Quality		*Quantity*
Individual (I get something)		*Collective (Our community)*
Pay to prevent		*Pay to respond*
Sydney Water's job		*We all have a part to play*
Protecting		*Progressing*
Focus on the biggest need/impact		*Focus on the network/focus on the whole*

Summary of Findings and Preferred Customer Options

A summary of findings and preferences from the customer panel is presented below.

Customers were briefed on the three key outcomes identified through previous phases of the engagement that are driving how Sydney Water plans to operate in the next five years, and where Sydney Water will invest to ensure that its activities align with the needs of its customers, now and into the future. Two of these outcomes that were explored as part of this phase were:

- **Environmental Protection:** Sydney Water will support healthy waterways that are safe and clean for nature and recreation, recover stormwater, support cool, green public places, and reach net zero.
- **Water Quality and Reliability:** Sydney Water will deliver safe, secure water now and in the future.

Prior to determining which options were preferred, customers were advised that there would be a necessary increase in the quarterly bill of between $32 and $53 to cover infrastructure investment for Sydney Water to meet its legal and regulatory requirements and minimum service levels. Therefore, any further investment towards customer priorities preferred by panel customers would be in addition to the required quarterly bill increase.

It is also important to note that to reach a consensus no more than 20% of customers could 'Loathe' and therefore 80% 'Accept' the decision using the L-Scale. The recommended option was the one with the least amount of 'Loathers' and therefore the greatest level of 'Accept'.

Preventing Pollution

As part of the discussion around preventing pollution, customers were presented with further background information about how Sydney Water prevents pollution of waterways, largely by managing wastewater, and controls pollution at the source.

Customers were also presented with information on what an increased performance by Sydney Water could look like when it comes to preventing pollution. It was explained that even though the network is large, and Sydney Water invests a lot to maintain pipes and operate treatment plants, pollution can still occur.

Customers were informed that Sydney Water currently spends at least $90 to $100 a quarter from the average customer bill to maintain and improve wastewater and stormwater infrastructure to prevent pollution, improve reliability and protect against failure.

However, Sydney Water could spend more money to protect and enhance the environment by improving the way it manages the wastewater and stormwater systems to prevent pollution and protect against failure. Customers at their tables determined the tables preferred cost, performance, and risk profiles. These were presented to the room. Customers were then asked to consider each option and their willingness to pay for additional efforts to prevent pollution in Greater Sydney's waterways. They then voted using the L-Scale.

When it comes to preventing pollution, Option A (medium cost, medium risk, medium performance) recorded the greatest level of 'Accept' at 80% and the lowest level of 'Loathe' at 20%. All other options had less than 80% 'Accept' and greater than 20% proportion of 'Loathers' based on the L-Scale definition of consensus.

Figure 3. Preferred Cost / Performance / Risk for the Preventing Pollution Option

	Option A	Option B	Option C	Option D
Cost	Medium	Medium	Low-Medium	Low
Performance	Medium	Medium	Medium	Low
Risk	Medium	Low	Medium	High
	20% Loathe 80% Accept (i.e. Live with / Like / Love)	28% Loathe 72% Accept (i.e. Live with / Like / Love)	22% Loathe 78%% Accept (i.e. Live with / Like / Love)	33% Loathe 67% Accept (i.e. Live with / Like / Love)

Note: Options were determined by customers.

Below outlines what the medium cost, performance and risk profile entails.

Medium Performance:

- Sydney Water treatment plants are upgraded, but NSW Environment Protection Authority (EPA) standards are sometimes breached before the upgrade is completed.
- The volume of wet weather overflows is reduced compared to current performance.
- Some overflows occur in some parts of the wastewater system during moderate to heavy rainfall.
- There are more than 300 pollution or other incidents that cause environmental harm, with one or two high impact events.
- There over 100 stormwater devices, frequently maintained, removing up to 1,500 m^3 of litter and debris from stormwater.

Medium Risk:

- About 90% of Sydney Water's wastewater treatment plans comply with key environmental performance standards.
- Some swim sites are not safe for swimming after periods of heavy rainfall.
- More than 85% of Beachwatch and Harbourwatch sites are rated good or very good. Sound maintenance of Sydney Water's wastewater system means performance is more resilient after wet weather.
- There are one or two high impact environmental incidents every year.
- There is no major change in the rating of urban waterways across Greater Sydney in the short term, but some specific sites may gradually recover.

Medium Cost:

- Between $15 and $20 per year *(on top of $90 that an average customer now pays on their bill to prevent pollution)*

Key trade-off windows playing a part in this decision were:

- **Focus on improving or maintaining** – Customers who prioritised improving over maintaining were concerned that the current state is not acceptable. Some pointed out that current EPA standards were being breached, which they felt was unacceptable.
- **Focus on the individual experience or the collective** – Customers prioritised their individual experience over the collective. This even included customers who were strong advocates of taking a collective approach.
- **Focus on prevention or focus on responding** – Most customers also valued preventing over responding. This was primarily because responding was typically seen as more expensive, particularly in the long run. Customers talked about it being easier and cheaper to take measures to avoid a problem, than it is to have to clean it up.

In general, customers who were more financially secure found it easier to think about the long term, whereas those customers who were more cost sensitive were less able to do so. This was reflected in the discussions and influenced how people approached the window trade-offs.

Water Supply Security

Within each customer outcome there are several focus areas. For water quality and reliability, these are – water quality, water continuity, water conservation and water supply security. Customers were provided with a background on what water supply security means and what the current water supply situation is within Greater Sydney, including:

- Greater Sydney's total drinking water demand now exceeds the amount of water Sydney Water can draw long term from dams and the Sydney Desalination Plant.
- This means Greater Sydney is vulnerable to drought and we are likely to need water restrictions for longer when it happens.
- With climate change, the amount of water Sydney Water can get from dams will continue to reduce over time.

Customers were then provided with further information on how Sydney Water plans for new water supplies. Customers were provided an explanation of Sydney Water's responsibilities when it comes to new water supplies and how that is different from WaterNSW. New water supplies are helpful as a drought response, so long as they're built before the drought starts. New supplies can add between 10 – 100 billion litres per year of drinking water, depending on which of the options is selected. However, they take time to build – up to seven years. New water supply sources are also expensive, with costs recovered through customer bills over the life of the assets.

With this context, customers were presented with four water supply security options to consider. For water security, performance was locked as medium, so that customers were only trading off risk versus cost. As a result, this table is different from the table shown for preventing pollution.

Figure 4. Slide content from the customer panel debrief report - Preferred Water Security Option

	Option A	Option B	Option C	Option D
Water Supply Actions	Action 1 - No new water supply	Action 1 - No new water supply	Action 2 – Build new water supply	Action 2 – Build new water supply
Water Conservation Actions	Action 3 – Current water conservation	Action 4 – Extra water conservation	Action 3 – Current water conservation	Action 4 – Extra water conservation
Risk Outcome	High	Medium High	Medium Low	Low
Additional $ per average quarterly bill	Between $5 and $10	Between $5 and $10	Between $15 and $20	Between $15 and $20
L Scale Result	64% Loathe 36% Accept (i.e. Live with / Like / Love)	53% Loathe 47% Accept (i.e. Live with / Like / Love)	14% Loathe 86% Accept (i.e. Live with / Like / Love)	17% Loathe 83% Accept (i.e. Live with / Like / Love)

Below outlines what the preferred option entails.

Low-Medium Risk / High bill ($15-20) increase

What low-medium risk looks like?

- Approximately 5.5 years of drinking water supply in a harsh prolonged drought, from building a new water supply.
- The supply-demand gap is addressed through new rainfall independent sources, but deteriorates over time with population growth, meaning as the city grows in the long term, we will need to plan and build new water supplies.
- We spend less time in water restrictions than we currently do.
- Reduced risk of higher-level water restrictions than currently.
- Good ability to cope with extreme weather events like heavy rainfall.

What does Sydney Water do?

- Sydney Water builds additional water supply in the next ten years, equivalent to 90 billion litres per year.
- Sydney Water continues to provide water conservation programs to those who ask.
- Sydney Water fixes leaks based on repair difficulty and customer disruption.

What do customers need to do?

- Overall, customers reduce average drinking water consumption by around 5% all the time over ten years (regardless of whether there is a drought).
- Each household, on average, does one less clothes wash per fortnight, fixes 10% of household leaks and does 25% less outdoor watering.

Key trade-off windows playing a part in this decision were:

- **Sydney Water's responsibility not the community's:** Underpinning this was the view that, if customers are going to pay for new water supply sources, then they should not have to reduce their water usage as well. They feel that they should experience some benefits from the higher bills.
- **Focus on the future rather than the now:** Many customers felt uncomfortable with taking no action at all, particularly those with a stronger future focus. They appreciated the risks being posed by climate change and population growth and were concerned about the potential for a rapid decline in dam levels in the future.
- **Focus on the collective rather than the individual:** Some doubted the ability of the community to focus on the collective by reducing their water usage and would feel more comfortable if Sydney Water took greater responsibility. Many acknowledged that the challenges facing Sydney Water are highly complex and, for the community to be able to contribute meaningfully, it is Sydney Water's job to educate the community.
- **Focus on improving rather than maintaining:** Sydney Water should invest in new water supply options rather than leaving it to chance and hoping for the best if a harsh drought were to occur. Customers were concerned that a focus on the status quo meant Greater Sydney would eventually fall behind in supply.
- **Focus on preventing rather than responding:** Sydney Water should invest in new water supply options to prevent future water security issues, rather than waiting for problems to occur. It was considered that, in the long run, it would be cheaper to take steps to avoid a water supply issue occurring, than it is to implement solutions after the water supply issue has occurred.

Again, those more financially secure found it easier to think about the long term, whereas the more cost sensitive were less able to do so. This was reflected in the discussions and influenced how people approached the window trade-offs.

Concerns of Preferred Option

For the decisions made regarding preventing pollution and water supply security, obtaining a perfect consensus is only possible when one of the options presented is remarkably compelling, where there is little or no downside and no negative trade-offs that the customers have to make. The choices and options presented to customers in this engagement are complex, and one is not easily more compelling than the others. This is why comprehensive customer engagement has been necessary.

Each option had a clear, real and notable cost to customers, both financial and non-financial. As a result, a 100% consensus was not practical, nor realistic to expect. For each option, a proportion of 'Loathers' was expected. For the sake of reaching a consensus, it was agreed with customers that we needed no more than 20% of customers to say they' Loathe' and therefore 80% 'Accept' an option.

Concerns amongst ‘Loathers’

For both preferred options, the core issue amongst ‘Loathers’ was a focus on the financial impact of increased costs. These ‘Loathers’ rationalised the need to avoid increased costs, with arguments about keeping things the way they are, (e.g. “the status quo is fine”, “the risk is off in the distance”, “we don’t have to worry about that now”, etc).

For ‘Loathers’, the strong focus on ‘bill-shock’ may always have been present. However, in the current economic climate (high inflation, increasing interest rates), it appears amplified above what it would normally be. Customers likened it to the trade-offs that individuals and households make every day.

Customers argued that the question “is this really, really necessary right now?” should be central to everything Sydney Water proposes. These ‘Loathers’ did not believe that this question sat at the heart of Sydney Water’s decision-making and felt that a trade-off had not been adequately considered. Because of this, these customers felt that the additional proposed expenditure could end up being frivolous rather than important.

Concerns amongst ‘Live with it’

Amongst those who could live with either increased investment in preventing pollution or water security, the reasons for this position were similar to those identified as ‘Loathers’. However, there were different levels of emphasis. Amongst those who would ‘Live with it’, there was as much concern about cost as there was that the option was not doing enough to prevent pollution or ensure water security.

Those who would live with the Prevent Pollution consensus option often wanted greater levels of action from Sydney Water. While concerned about the impact of more expensive bills, they felt improvement was better than the current situation and were willing to trade off their preferred position to reach consensus.

The proportion of those willing to live with the Water Security option was comparably lower than for prevent pollution. For some of these customers, there was both an unwillingness to undertake any further water conservation measures, while also paying an additional $15-20 on their quarterly water bill. While they might prefer a future with a lower level of risk, they preferred this be the responsibility of Sydney Water rather than themselves.

There were concerns about the financial impact of increased costs, particularly on the financially vulnerable. There was also an expectation that programs would be put in place to support those who were financially stretched and likely to need assistance.

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1.1 About Sydney Water

Sydney Water is Australia's largest water utility, a world-class organisation delivering essential services to Greater Sydney. Sydney Water provides safe, high-quality drinking water to nearly 5.3 million people in and around Greater Sydney every day, along with providing wastewater, stormwater and recycled water services to many homes and businesses.

Sydney Water has a long-term strategy and vision: 'Creating a better life with world-class water services'. The strategy has been built from customer insights and provides the foundation of Sydney Water's work every day.

1.2 Customer voices, supporting Sydney Water's Regulatory Submission

Sydney Water is a statutory corporation, wholly owned by the NSW Government. Sydney Water's Operating Licence is regulated by the Independent Pricing and Regulatory Tribunal (IPART), which sets minimum standards for customers and government expectations in key performance areas. IPART also regulates what Sydney Water can charge customers for water, wastewater and stormwater services, sets Sydney Water's system performance standards, and monitors compliance against those standards.

IPART has recently introduced a new regulatory framework for regulating water businesses in NSW. This framework puts the onus on water businesses to demonstrate that the services and outcomes proposed in their pricing submissions are in the long-term interests of customers, as evidenced by customer preferences, along with willingness to pay for the services they receive. It is important that Sydney Water engages meaningfully with customers to explore their values and preferences for outcomes and uses these insights to inform its pricing submission and long-term business strategy.

IPART's requirements, in relation to customer engagement, highlight the need for tailored and supportive engagement to assess the outcomes that customers expect, preferences for how the outcomes will be delivered, and overall willingness to pay for those outcomes and service levels. Research and engagement are to include, at a minimum, topics such as: changes to

service standards, changes to price structures, and any proposal for expenditure on customer agreed outcomes (i.e., to achieve outcomes not covered by regulation).

IPART's expectation is that Sydney Water runs an industry-leading customer engagement. The *Our Water, Our Voice* customer engagement program provides the insights needed to develop Sydney Water's Enterprise Plan, which is a precursor to the regulatory submissions to IPART. These regulatory submissions specifically incorporate the revised Operating Licence and Customer Contract, to be issued by IPART by 1st July 2024, and the price proposal, due in September 2024. These submissions will help shape customers' water bill prices for the 2025-2030 period.

Sydney Water's submissions to IPART for changes to prices and the Operating Licence will be aligned with the Sydney Water strategy and plans at all levels. The *Our Water, Our Voice* program is a critical input to these regulatory submissions.

This two-year (2022-24) program of customer engagement covers a wide range of topic areas and gives customers an opportunity to tell Sydney Water what is important to them.

Customers are already at the heart of everything Sydney Water does. Sydney Water continually engages with customers to understand their experiences, through research studies tracking customer sentiment and satisfaction with products and services. Sydney Water also engages with customers through additional activities as well. e.g. engages on local and major projects, customer and community education and community engagement.

The *Our Water, Our Voice* customer engagement program takes a long-term view. The insights gathered from this program will help shape Greater Sydney, including the Illawarra and Blue Mountains, for generations to come.




Customers, moderators, Sydney Water staff and stakeholders attending the customer panel sessions in Parramatta on Saturday 11th November, Saturday 18th November, Saturday 25th November & Sunday 3rd December 2023.

2 Engaging our customers in the regulatory process: program overview

***Our Water, Our Voice* is a multi-phase program divided into six distinct phases of customer consultation. This report summarises the findings from Phase 5 of the program.**

PHASE 1: Capturing customer priorities

Phase 1 aimed to capture priorities and the outcomes that customers expect Sydney Water to focus on over the next five to ten years. It also aimed to understand the relative importance of each outcome and customers' willingness to pay for these outcomes. The research measured customer appetite for engagement with the decision-making process, including what their expectations were regarding their role in assisting Sydney Water to reach decisions.

PHASE 2: Capturing customer service expectations

Insights from Phase 2 will help design performance metrics that can guide the evaluation of Sydney Water's service delivery. This includes measuring customer satisfaction and understanding customer expectations of Sydney Water's future targets (over the next 10 years and beyond). During this phase, we tested the current measures and settings of Sydney Water's existing service performance standards and how these align with customer expectations and priorities. When different service expectations were raised by customers, we discussed how the desired outcomes impacted them, how they should be measured, and how they impact existing performance standards.

PHASE 3: Customer insights for better strategic planning

This phase explored customer sentiment towards Sydney Water's key strategic direction and business plans. The research captured customer insights to inform the development of Sydney Water's Operating Licence and Price Proposal submissions, as well as core elements of the Customer Contract.

PHASE 4: Service levels and investments for the future

This phase explored key areas of potential investment in 'customer priority' areas. A package of potential options for investment was presented to customers to discuss their preferred performance settings, key investment considerations and their willingness to pay for new investments.

PHASE 5: Customer recommended investment preferences

This phase sought customer recommendations or advice towards a range of potential investment options for Sydney Water. This included guidance around the preferred performance, risk and cost profiles that Sydney Water should consider adopting to reflect customers short and long-term interests in the best possible way. These investment options were explored within the context of Sydney Water needing to increase water bills over the next 5-10 years to meet its service delivery obligations.

PHASE 6: Customer recommended Pricing Structure and ODIs

Phase 6 will explore key areas of the pricing structure for Sydney Water customers and customer commitment performance targets. This includes a particular focus on the future tariff structure and pricing control Sydney Water creates and whether Outcome Delivery incentives (ODIs) are implemented in Sydney Water's strategic business plan.

Our Water, Our Voice timeline

3 How we listened: Phase 5 approach and methods

3.1 Objectives

Sydney Water's Customer Engagement program was extended to seek customer recommendations or advice towards a range of potential investment options for Sydney Water. The overall remit of the phase was:

To shape and guide how Sydney Water provides the services that customers want, and need – while managing costs now, and into the future

The specific research objectives for Phase 5 of Sydney Water's Customer Engagement program were to:

- Work directly with customers to ensure that their concerns and aspirations are consistently understood and considered.
- Partner with customers across different aspects of decision-making, including developing alternative plans and identifying customers' preferred options or solutions.
- Engage with customers to help shape and guide how Sydney Water provides the services that customers want and to understand, in greater depth, what Sydney Water should consider and prioritise during decision-making over the next 5-10 years.
- Obtain a degree of consensus around the overall bill impact that would be tolerable for customers, when delivering specific services.

3.2 Qualitative Approach

As part of Sydney Water's journey to becoming a highly customer-centric organisation, it seeks to engage customers on what is most important to them by using a range of approaches. These approaches include:

- Seeking a deeper engagement by involving customers in setting the priorities that matter to them the most.
- Choosing effective methods to provide all customers (including more difficult-to-reach customers) with an opportunity to have a say around how services are delivered. This included triangulating and testing responses against other information Sydney Water routinely collects as part of a wider customer research program.

- Providing clear explanations of different approaches Sydney Water could take (including price differences and any potential trade-offs), so that participants are able to offer meaningful and relevant feedback on the development of future plans.

Where possible, Sydney Water also aims to:

- Collaborate with customers (and/or customer representatives) to develop solutions that are in their long-term interests.
- Continually seek to improve engagement methods and explore innovative new methods of obtaining customer input.

Phase 5 qualitative research comprised four full days' worth of customer panel sessions with ~60 customers over four weekends in November and December 2023 (11th November 2023 – 3rd December 2023).

Target recruitment screeners were designed in consultation with recruitment partners, Q&A Market Research Services and approved by Sydney Water prior to their use. These are provided in Appendix A. The recruitment screeners were designed to ensure inclusivity of the customer base, incorporating both hard-to-reach and under-represented audiences, and ensuring that the methods of communicating recognised the ways in which customers prefer to engage in research. Customers were recruited from across the Greater Sydney region.

All research was conducted in accordance with ISO20252:2019 standards.[2]

Customer Panel

A total of four full day customer panel sessions were facilitated in person and were attended by residential customers. These took place in Parramatta and included customers from across the Greater Sydney region, including the Blue Mountains and Illawarra.

Each customer panel session included a mix of age groups (all customers aged over 16 years old), genders, locations, homeowners, renters, financially vulnerable people, people living with a disability, people from culturally and linguistically diverse backgrounds, and First Nations people.[3] Appendix C includes a demographic breakdown of panel participants.

In line with standard practice in this type of research, customers received an incentive for attending all four days as a 'thank you' for their participation. The incentive aligned with industry

[2] Please note, the ISO20252:2019 standards are the international best practice standards established by SAI Global for service providers conducting market, opinion and social research, including insights and data analytics and used internationally to certify research suppliers who engage in legally compliant and independently audited market and social research methods.

[3] In this report, First Nations refers to people of Australia who associate as being a person of Aboriginal and/or Torres Strait Islander origin

recommendations and is considered fair given customers were asked to commit almost 40 hours of their time over four weekends in November and December 2023.

Table 2 Residential Customer Panel Sessions

Date and Time	Location and time	Number of participants
Day 1: Saturday 11 Nov 2023	Parramatta: 9:00AM – 5:00PM	n=63
Day 2: Saturday 18 Nov 2023	Parramatta: 9:00AM – 5:00PM	n=61
Day 3: Saturday 25 Nov 2023	Parramatta: 9:00AM – 5:00PM	n=60
Day 4: Sunday 3 Dec 2023	Parramatta: 9:00AM – 5:00PM	n=60

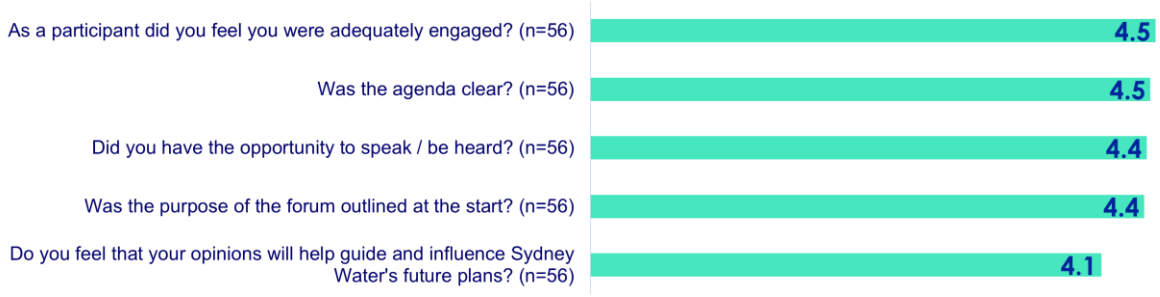
Sydney Water staff, the regulatory body, IPART, Sydney Water's Customer and Community Reference Group (CCRG), NSW Health, the NSW Department of Planning and Environment, WaterNSW, Energy and Water Ombudsman NSW (EWON), and the NSW Environmental Protection Authority (EPA) were invited to observe each day in person.

Customer panel sessions were conducted by a team of experienced moderators from Kantar Public. Data collection, for the purposes of analysis, included notetaking by moderators and workbooks completed by customers. The self-complete workbooks enabled customers to make their own recommendations, note down their observations and record the reasons behind their recommendations or why they could or could not reach a consensus. Customers were also encouraged to write down additional questions and provide feedback or comments, which were collected, in addition to their contributions in discussions at each table.

Following the customer panel days, Kantar Public moderators participated in a series of analysis sessions to identify and analyse the key themes that emerged. This process included individual reflection, followed by extensive group discussions and thematic brainstorming.

Customer feedback was provided via feedback forms at the end of each panel day, as part of their completed workbook. This feedback is being used to improve engagement practices for the remaining research phase. The feedback form is provided in Appendix D., A selection of aggregated feedback is provided below along with direct quotes from customers:

Figure 5. Customer feedback, on a five-point scale (combined results from four panel sessions)



Mean score out of five – using an agreement scale. Base: Customer panel participants who completed a feedback sheet. Note that some respondents didn't fill in the sheet or didn't respond to all questions (n=56).

"Really good 4 days. Would like to be involved with Phase 6 if that happens. Good venue as well."

Residential customer | Day 4

"I think the table lead did an amazing job moderating the group."

Residential customer | Day 4

"Day 4 was the best of all sessions. It felt like we achieved a lot. Looking forward to seeing what eventuates."

Residential customer | Day 4

"All of the discussions have been insightful and very useful. It will be interesting to see this put in real use. Thank you for the opportunity."

Residential customer | Day 4

Customer Panel Structure

Sessions were conducted over four days with the following broad structure:

Day 1: A learning day

The focus of this day was to provide customers with the knowledge frameworks and context to help them provide recommendations to Sydney Water and reach consensus on how the organisation can provide the services that customers want and need – while managing costs now and into the future.

Day 2: An understanding day

The focus of this day was to talk to customers about some key focus areas for Sydney Water and to help develop customers' understanding of these, so that they were on the same page as Sydney Water when making recommendations (on Day 4). This day recognised that there is often a lot of technical language used when Sydney Water talks about these areas, so care was taken to ensure everything was explained carefully. Customers were also able to ask questions and focus on the things that are important to them, to address any information gaps or extra things that they might need to know and whether they think Sydney Water should be prioritising these areas.

Day 3 and Day 4: Two days of sharing and recommendations

The focus of Day 3 was to understand what customers think are the most important expenditure principles (identified in Day 1) and trade-offs (from Day 2) when making decisions. Customers were asked for their advice and some recommendations on how they view the risks of spending or not spending in specific proposed areas, such as preventing pollution and securing the region's water supply. These days built on what customers learnt about Sydney Water and the customer journey on previous days. Day 4 brought everything together from each day of the consultation into one session, where customers were asked to reach a consensus (using the L-Scale) and provide advice to Sydney Water on their spending recommendations.

Session plans – an iterative approach:

A planning day was held prior to the sessions, that was led by Kantar Public and included key members of Sydney Water's customer engagement working group and key heads of business along with members of the CCRG. The purpose of this planning day was to develop the session plans, objectives, session content, the structure of each day, along with specific lines of enquiry and the tasks for customers to undertake. Rehearsals took place around five days prior to each session. The purpose of the rehearsals was to refine what had been planned for each day and to adjust this based on the learnings from each session. During these rehearsals , substantial alterations and adjustments were often made to reflect the previous panel session's learnings. Questions asked during each panel session were collected and recorded by Kantar Public and answered on the next day by a Sydney Water executive.

3.3 Framing and remit

To ensure that all stakeholders and participants were working toward a common goal, an overarching panel remit for the sessions was developed in partnership with Sydney Water.

The core aim was to provide guidance to all attendees on why the customer panel sessions were being run and what the core outcome was to be. The Collective Objective is provided below for reference:

To shape and guide how Sydney Water provides the services that customers want, and need – while managing costs now, and into the future.

The Collective Objective encompassed two core concepts, which were felt to be essential for the day:

1. A commitment to customer consultation and active listening: to shape and guide how Sydney Water provides the services that customers want and need.
2. A commitment to customer engagement and participation in cost and spending opportunities for Sydney Water, including decisions that extend beyond the engagement sessions, while managing costs now, and into the future.

The Collective Objective was used in a number of ways:

1. During Day 1, the Collective Objective was provided to, and reviewed by, customers. The remit itself was explained to customers through its alignment with the four-day agenda (with the agenda items being designed to align with specific remit elements).
2. During Day 2, the Collective Objective was again provided to participants and reviewed against Day 1 activities and the scheduled Day 2 activities.
3. During Day 3 and Day 4, the Collective Objective was broken down into its two core elements (customer consultation and participation in cost and spending opportunities). The purpose of this separation was to demonstrate how the sessions were building on one another to answer both constituent parts of the Collective Objective and to set the scene for Day 3 and Day 4 (which focused on spending decisions and collective agreement for recommendations).

3.4 Stakeholder engagement

To be truly consultative, it was essential to ensure that all relevant stakeholders were included in consultations as part of the design and development of the sessions. Throughout the design and development of the four-day program, a range of stakeholders and engagement activities were undertaken as follows:

- **Sydney Water Customer Engagement Working Group (CEWG) and the Sydney Water Customer and Community Reference Group (CCRG):** Both the CEWG and CCRG were heavily involved in all design and development elements of the customer consultation, as were key Sydney Water Executives and Heads of Business. This included, but was not limited to, the implementation of:
    - **Weekly CEWG meetings:** attended by all key internal Sydney Water stakeholders and the Kantar Public team (members of the CCRG did not attend these sessions, Sydney Water held separate briefing sessions with the CCRG as part of internal consultation requirements). Where topics of discussion required the inclusion of

additional consultation partners, team members from these partner agencies were invited to these sessions such as:

    - **Synergies Economic Consulting:** Synergies partnered with Kantar Public to provide additional economic consulting expertise and advice – with a specific focus on ensuring sessions were run in line with IPART requirements and to assist in translating sometimes complex economic information into simple, customer-friendly language.

- **Planning sessions:** Half-day planning sessions were conducted prior to the development of any draft consultation structure. The purpose of these sessions was to begin the process of aligning key needs across the business and to ensure that the Kantar Public team (and their partners) had a comprehensive understanding of the core business, CCRG and customer needs prior to developing any session plans or draft materials for review.
- **Rehearsal sessions:** Four rehearsal sessions were conducted for Phase 5 – with each being conducted early in the week prior to allocated customer sessions (undertaken either on the Monday or Tuesday of the week prior to the session). Members of the Sydney Water CEWG and CCRG were present at all four rehearsal sessions.
- **Critical feedback:** Kantar Public provided all materials (including draft session plans, draft slide decks, draft stimulus, draft activity sheets and draft activity plans) to Sydney Water for critical review and feedback. These were then provided, by Sydney Water, to members of the CCRG for review. All materials provided to customers had been reviewed and approved by Sydney Water prior to any sessions being conducted.
    - **Customer session attendance:** Members of the Sydney Water CEWG and CCRG were present at all four customer sessions, in addition to senior Sydney Water sponsors of the project (General Managers from across Sydney Water) and the Sydney Water Managing Director (who attended the morning session on three days).

- **Utilities Regulation Advisory (URA):** URA was commissioned by Sydney Water to provide oversight and review of the structure for the customer sessions and the materials used in the sessions. Materials developed by Kantar Public were provided to URA by the Sydney Water CEWG for review and comment. Comments provided by URA were passed to the Kantar Public team for review and execution prior to structure being finalised.

3.5 Session structure rationale, development and review

As noted above, in consultation with the Sydney Water CEWG, the members of the CCRG and other agency partners, Kantar Public developed a four-day session plan, which would guide the customer engagement process. The core aim of the session plan was to be:

- **Flexible and customer driven:** It was deemed essential that the design for the sessions be flexible and be able to adapt to customer needs, desires, questions and areas of interest (noting that 'flexibility' in this context needs to be placed within the confines of the core purpose of the work and the time constraints within which the project was conducted).
- **Iterative and progressive:** The session plan was designed to build toward a conclusion in a logical and progressive manner. To ensure customers were able to make informed and educated decisions during the sessions (particularly on Day 4). The session plan was designed to start with broad concepts and gradually (through a series of exercises and techniques) increase customers' understanding, not only of what could be done, but the limitations and trade-offs associated with specific decisions and investment approaches. Over the four days, the engagement methods and session design transitioned from being information overlay to discussion and deliberation.
- **Interactive:** Sessions were designed to be as interactive as possible to ensure continued engagement and participation of customers throughout the four days. While every effort was made to include interactive elements in all sessions, Day 1 content, particularly, was 'heavier' in nature – as Day 1 was heavily focused on briefing participants about the process, educating customers about the findings from previous rounds of consultation and laying the groundwork for decision-making across Day 3 and Day 4.
- **Deductive:** The sessions were outcome focused – there was a clear objective in relation to obtaining consensus regarding spending across core areas. All materials used, across all days, were focused on ensuring that customers could make recommendations from an educated perspective – including a clear understanding of the pros and cons associated with the decisions and the trade-offs required to implement specific decisions, and clear articulation of the rationale for a recommendation.

3.6 Comparisons with the original plans against the final session structure

As the approach taken to consultation was iterative and customer-driven, there were differences between the planned and agreed sessions at the commencement of the consultation period (Day 1) and the structure which was subsequently included/undertaken across the other days.

Essentially, learnings from each day influenced the specific exercises and focus areas for upcoming days – where changes were required (either to provide further clarification to customers, to allow more time for review, or to focus on areas identified by customers as priorities), materials and schedules were adjusted, approved and rehearsed.

3.7 Data collection and analysis approaches

Below we provide a short summary of key analysis and investigation approaches utilised across the four days. The core purpose of these techniques was to provide insight into why decisions

were being made and to understand the deeper decision-making processes that customers were making when deciding on core recommendations to put forward to Sydney Water.

3.8 Debate sessions

On Day 1, a series of debate sessions were conducted with customers. Debate sessions focused on providing customers with alternative decisions (essentially, polar opposite choices) and asking customers to 'argue' their point of view to try and persuade others to 'switch sides' during the debate.

The sessions were interactive in nature. Customers were asked to sit and formulate their arguments either for or against a specific position as a small group at their tables. Following this formative stage, a customer representative for each position was selected and they were asked to 'convince' members of the opposite position to 'move' over to their side of the argument (the debates were conducted with all participants from each 'side' standing separately from one another. As arguments were presented, customers were encouraged to move around the room - to close the physical gap between themselves and a group with a different point of view).

The core outcome from the debates was thematically analysed, which focused on understanding the underlying themes which drove specific arguments. The analysis was conducted with a focus on assessing why specific narratives, points of view or arguments were adopted, as opposed to simply understanding what was said.

Debate sessions, rather than traditional questioning, were used, as this approach:

- **Allows customers to emotionally engage with the topic**, rather than the rational engagement which is traditionally elicited from a question-and-answer approach.
- **Enables immediate reflection by customers, in the room** (as they decide whether or not to shift their view and move to the 'other side'). In-room, or immediate reflection is highly valuable, as it is a pure reflection of decision-making processes, as opposed to delayed decision making or considered thought, which is often influenced by a range of biases and external factors.
- **Facilitates group cohesion** – an interactive exercise on Day 1 which requires respectful and thoughtful interaction is critical to establishing a group bond and legitimising diverse, and sometimes opposing views.

The outcome from the debate sessions was the development of the 'Customer Windows for Decision Making', which were used to drive deep understanding of needs across Day 2 – Day 4.

3.9 Decision Framework (the Triangle)

One of the core challenges across the session was to ensure that customers were making decisions and providing advice which was based on a deep understanding of the trade-offs associated with specific options, as opposed to more immediate and surface level decisions based on initial perception and likability.

Additionally, for the consultation to be a success, it was critical that Sydney Water understand the rationale and reasons for recommendations (the why behind the recommendations) and not just the recommendations themselves. Without understanding why specific recommendations have been made, it is not possible for Sydney Water to provide a clear and accurate rationale for any investment approaches to IPART.

Given these considerations, a framework was developed, in consultation with Sydney Water, to guide customers' thinking and to assist customers to articulate why they were making specific recommendations and how they expected these recommendations to be enacted by Sydney Water.

The framework used was designed to ensure that customers considered three core elements when making recommendations or deciding on their preferences as part of any consensus reaching exercises.

The framework had three axes and was identified in sessions as 'the Triangle':

1. **Performance**: This was defined as the desired performance of any specific intervention/ investment/service/action area – with customers understanding the type of performance outcomes from presentations, education and engagement across the course of Day 2. Customers were able to choose the level of performance that they desired – from high to low, with the understanding that their decision related to 'performance' would impact the overall balance of the Triangle in terms of the positioning of the other two axes against performance.

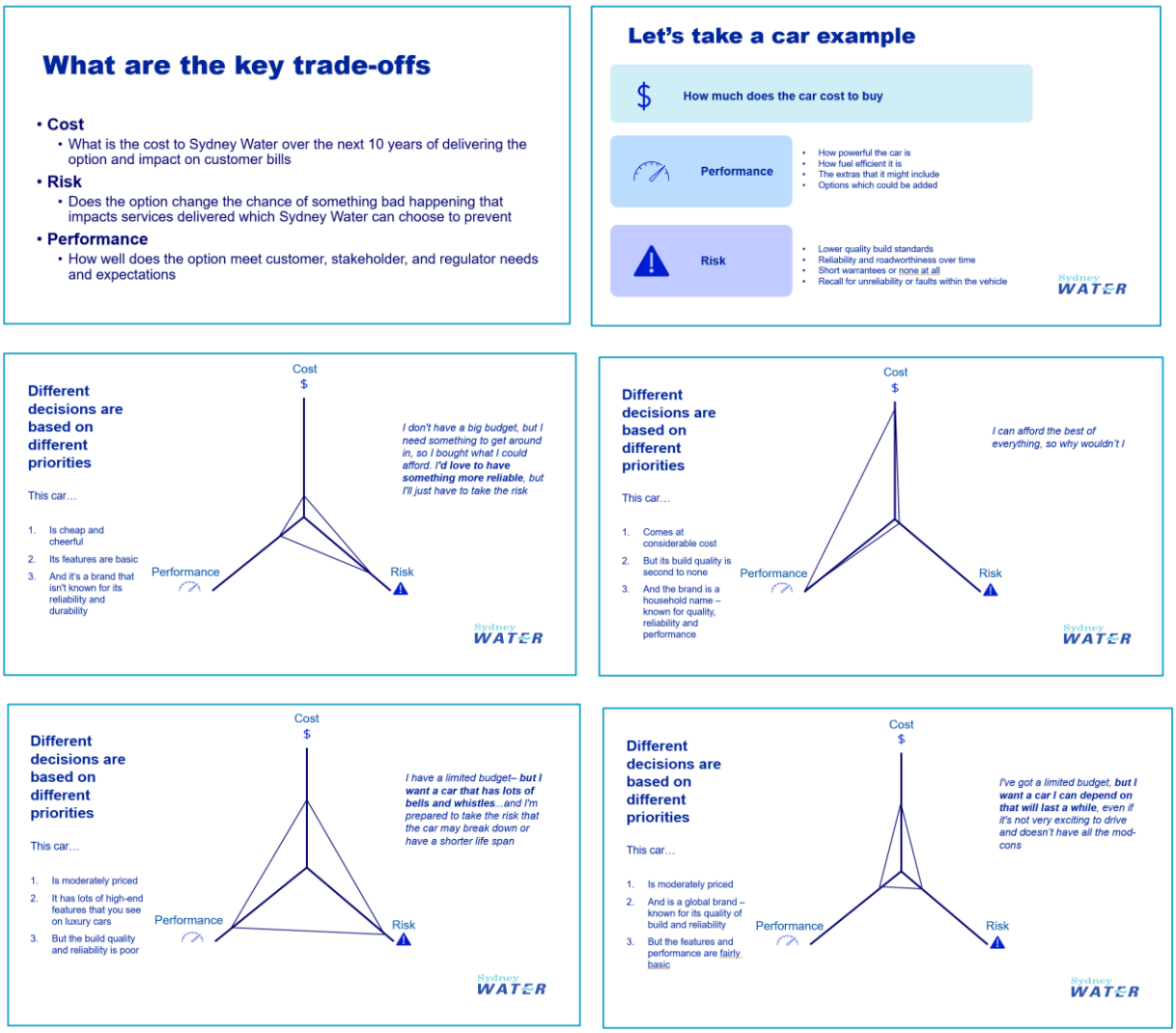
2. **Risk**: This was defined as the risk that customers were willing to take in relation to a specific intervention/investment/service/action area. Risks were identified throughout the course of the consultation across a range of theme areas and specific investment opportunities. The risk axis ranged from low to high.

3. **Cost**: This was defined as a total cost, on the average bill, to provide services which matched the desired performance or risk levels. Increased costs to the average bill for different levels of performance and risk were provided to customers on Day 3 and Day 4 as part of the final consensus process and recommendations.

Over the course of the four days, customers 'practised' using the Triangle in their daily lives as part of the homework tasks. During these tasks, customers were encouraged to make a purchase decision using the Triangle and bring the rationale and Triangle structure back to the session on the weekend to discuss it with their moderators and the broader customer group in the room.

Below is an outline of how the Triangle was introduced to customers (noting the example of a car purchase was used).

Figure 6. Slide content from customer panel – Key trade-offs, car examples using the Triangle.



3.10 The L-Scale: Love it, Like it, Live with it and Loathe it

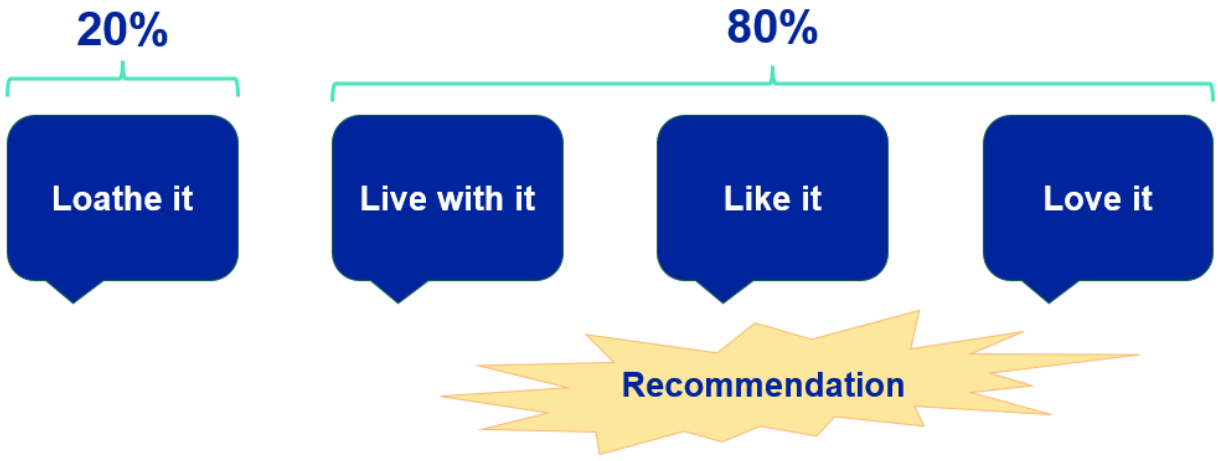
The L-Scale was used during the sessions as a way of reaching a decision without getting 100% agreement, which in large groups can be challenging. This scale is used widely in community

engagement and recognises that true collaborative decision-making doesn't require everyone to love the decision, nor even like it.

The aim of collaborative decision-making is for people to collectively get to the point where they all have a decision they can 'Live with'. As a threshold for this exercise, customers agreed that a consensus would mean no more than 20% 'Loathe' and therefore 80% 'Accept' the option selected. The recommended option was the one with the least amount of 'Loathers'.

It was also agreed with customers that those who loathed the recommended option would have the opportunity to express why they "Loathe it" and what they needed to see happen to change their position to one where they could at least "Live with it".

Figure 7. Slide content from customer panel – The L-Scale and recommendation threshold



3.11 Reporting notes

- Any mention of Greater Sydney includes the Blue Mountains and Illawarra regions.
- Direct quotes from the qualitative research have been included to reflect findings in the report where relevant, with quote source provided.

4 A learning day

Customers were provided with a comprehensive overview of how Sydney Water operates, what it does and how it is regulated. Customers also undertook exercises designed to get them thinking about water and why it is important to them. These exercises included:

Ripples Exercise:

This exercise was designed as a warmup exercise to get customers thinking about the world of water and wastewater and what it means to them in different settings. It reflected a similar exercise undertaken in Phase 1 and produced similar results.

Figure 8. Slide content from customer panel – Ripples exercise

Customer Priorities:

Customers were shown customer priorities from Phase 1 and were asked to vote on what they considered was the most important for Sydney Water to focus on.

Customers were then asked why they felt certain priorities were more important than others. They were then asked to think about the trade-offs they were considering when making their choice. These trade-offs were then used in Days 3 and 4 to help with understanding customer decisions and recommendations.

Figure 9. Slide content from Day 1 of the customer panel – Customer priorities from Phase 1

Voting results (customer priorities):

Customers were asked to vote on their top priority for Sydney Water over the next five years. As with Phase 1, **Maintaining water quality and cleanliness (30%)** and **Keeping bills affordable (20%)** were the two main customer priorities.

Reducing water loss by improving stormwater management (14%), increasing water savings and reducing usage through community-based water saving programs (9%), improving natural waterways and habitats to protect the environment (9%) and enhancing the water supply networks' resilience to drought (6%) were other important customer priorities.

Triangles:

On Day 1, customers were introduced to the concept of the risk/performance/reward Triangle. This, essentially, was a way of balancing the costs of delivering a service, with the risks of things going wrong and the expected level of performance. More specifically:

Cost refers to the amount Sydney Water spends to deliver services. Increasing costs may improve performance, reduce risk, or both.

Performance means the level of service that Sydney Water delivers. Improving performance often comes at higher costs.

Risk refers to the likelihood of variation to a planned performance level. Reducing risk may come at a higher cost.

The application of the Triangle through the sessions is discussed in more detail in the following chapter.

Participant Questions:

Finally, throughout Day 1, customers were encouraged to ask any questions they might have about Sydney Water, how it operates and how it is governed.

Customers were provided with a comprehensive overview of the responsibilities of Sydney Water to help them understand the investment challenges. This included information about the conditions it operates under, the external factors impacting it, the regulatory environment governing how it interacts with the community and the services it delivers.

After being provided with this information, customers were invited to ask questions to improve their understanding. The questions shed light on the general level of knowledge and understanding customers have about Sydney Water. They also provided insight into what customers consider important when thinking about water and wastewater.

Customers asked over 150 questions during Day 1, which were analysed and classified into key themes. Responses to key questions were then provided back to customers at the beginning of Day 2.

Governance

> “On the Operating Licence - how can it not be renewed? As there is only Sydney Water given there is no competition?”
>
> **Residential customer |** Day 1
>
> “How do councils and Sydney Water work together - what is the working relationship?”
>
> **Residential customer |** Day 1

Profits and Spending

> “How does the 'profit' work - why isn't this being used by Sydney Water to improve the system rather than pay 'government'?”
>
> **Residential customer |** Day 1
>
> “Do Sydney Water run the desal or buy water from there?”
>
> **Residential customer |** Day 1

Who pays?

> “When there is growth into new areas do developers and new homeowners bear this cost?”
>
> **Residential customer |** Day 1

Technical capability

"What is the feasibility of capturing water from the North Coast and transporting it to Sydney? Similar to the Bradfield scheme?"

Residential customer | Day 1

Water quality

"Why can water taste be inconsistent across Sydney? Is taste standardised?"

Residential customer | Day 1

Water Resilience

"Who sets water restrictions, WaterNSW or Sydney Water?"

Residential customer | Day 1

"What do floods, fires and drought do to the quality of drinking water?"

Residential customer | Day 1

These questions, and others asked over the four days, are now in an FAQ document which is available for all to access on the Sydney Water website and appears in Chapter 10 of this report.

5 Sydney Water overall Triangle and Trade-off windows

5.1 Context

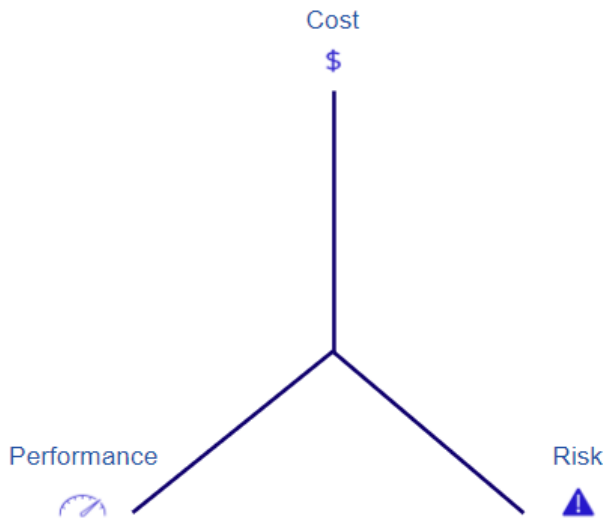
When making complex decisions, it is helpful to have some decision-making principles, or guiding lights, to help us navigate the pros and cons of the available options.

Having a set of principles can provide a framework for evaluating situations, analysing information, and making the best choice possible.

5.2 Triangle

Throughout the four days, customers were asked to think about the things that Sydney Water needs to trade-off when deciding how to spend the revenue raised from customer bills. This was designed to help them make recommendations to Sydney Water around where its focus needs to be and what is most important to customers.

Figure 10. Slide content from customer panel – Triangle template from Day 1



Designing a trade-off Triangle for Sydney Water overall

The Triangle was designed as a way of helping customers articulate their preferences regarding how to balance different considerations. It was also used to help reveal the trade-offs customers are making.

As an exercise on Day 1, customers were asked to produce a Triangle for Sydney Water and the services it delivers (note this exercise focused on all services, rather than a specific service area).

It is worth noting that this was a hypothetical exercise presented to customers on Day 1, actual dollar values, risk implications and performance metrics were not presented at this early stage of the engagement. This exercise was used as a way to explore how customers make decisions and to uncover what is important to them when making trade-offs between cost, performance and risk in a water and wastewater service delivery setting. In other words, where they landed in terms of a Triangle was less important than how they got there.

Customers were warmed up for this exercise using a number of non-water-related practice examples. Cars was one example where customers were asked to draw a Triangle for different types of cars and were also asked to come up with the Triangle that would best reflect their needs if they were to buy a car today.

A few examples include: a Ferrari, which customers described as ‘high cost, high performance, high risk’ and a Toyota Corolla, which was described as ‘low cost, low performance and low risk’.

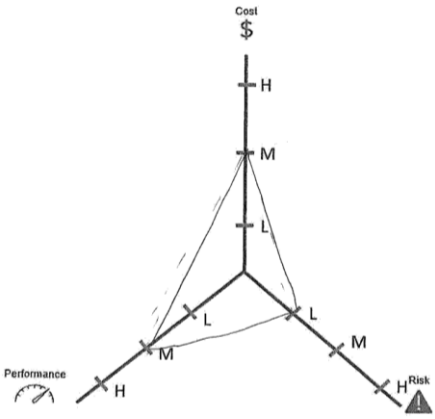
For further practice, customers were also asked to use the Triangle for an everyday purchase as part of their homework after Day 1 and were then asked to share how they did this on the following day. Customers used the Triangle when purchasing a variety of products including phones, blenders, and vacuum cleaners.

Cost, Performance and Risk for Sydney Water as an organisation

Thinking about Sydney Water at a wider organisational level, the majority of customers indicated an openness to cost increases and a willingness to pay more than they currently do if it ensured that risks to the network and environment were minimised and that at least a moderate level of performance was achieved.

This culminated in the majority selecting a ‘medium cost, medium performance, low risk Triangle’ as their preferred setting for Sydney Water.

Figure 11. Photo of a medium cost, medium performance, low risk Triangle drawn by one of the customers on Day 2



When asked why this Triangle was preferred, most said they didn't want Sydney Water to go "all in" and deliver the 'Rolls Royce' level service in all areas. Instead, they would prefer moderate, incremental improvements.

They wanted Sydney Water to prioritise areas that were urgent and business critical and to seek out improvements where possible, but to not 'go overboard' and chase 'expensive pipe dreams'. Ultimately, they wanted Sydney Water to take a sensible, efficient, non-wasteful approach that maximised the benefit for the community without hitting them with exorbitant costs.

Some more affluent customers indicated that they were willing to accept a higher cost profile in order to maximise performance, but also recognised their privileged position, and pointed out that not everyone would be able to afford this. Because of this, these customers were happy to go with a middle cost, middle performance, low risk profile due to these concerns.

Customers advocated strongly against compromising on risk. In their minds, low risk infers high ongoing quality and sustainability, which they view as highly desirable. With regard to risk, customers have a heightened level of concern (and in some cases suspicion) about Sydney Water, especially given that it operates as a monopoly.

The fact that there is no opportunity to switch to an alternative provider was front of mind for customers and further amplifies this sense of unease. This, combined with the essential nature of Sydney Water's services, means customers have limited appetite for accepting any more than a very low level of risk. Overall, there was a clear appreciation for the fact that water services are essential for life and are something that could not be compromised.

Many customers argued that a low level of risk was non-negotiable in any case and was not up for debate. They argued that Sydney Water is subject to a considerable amount of regulatory oversight and scrutiny and that it would not be allowed to accept a higher risk setting anyway.

Some customers relaxed their position on risk later in the engagement when different risk levels were described in terms of actual impacts on customers and the environment (such as more days where it is unsafe to use beaches or waterways). Once the risks were clearly defined, some customers expressed an increased level of comfort with them, as they could see minimal direct impact on them.

However, overall, a lack of clarity around what the risks actually might be is one of the primary challenges for customers when trying to pinpoint their level of risk tolerance. They noted that there will always be a high degree of uncertainty associated with future risks. Customers recognise that no one really knows what new risks could emerge in the future (COVID-19 being a clear example of this) and this uncertainty makes customers feel uneasy about Sydney Water accepting a higher risk setting at a strategic, organisational wide level.

One area where customers were less risk averse was with customer service. Many customers were prepared to accept a higher level of risk when it comes to non-critical customer service, especially if this meant other more important areas like water security were taken care of.

"Customer service, while it's important, it's less important than getting us clean, quality water, all the time, every time."

Residential customer | Day 1

"I don't mind sitting on the phone for 10 minutes now, if it means I'll get clean water in 10 years' time."

Residential customer | Day 1

Transparency and accountability were two things that were also discussed at length by customers throughout the four days. For many customers, accepting a higher cost was conditional on there being a high level of transparency and accountability.

Comments such as, "If I pay for it, I want to make sure I get it," and "How do we know that they [Sydney Water] will actually change anything, and not just pocket the cash?" were common.

Some spoke about the need for ongoing communication from Sydney Water to reassure customers that they are getting value for money.

"If I agree to this [higher cost] I don't want my money going into some black hole, where I never hear about it again, I want my creek cleaned up or at least to know that other people's creeks have been cleaned up or that mine is next on the list."

Residential customer | Day 1

"Don't just take the money and say, 'trust us' show us what you did with it."

Residential customer | Day 1

The backgrounds of the customers participating in the engagement varied substantially and, as a group, were a very good representation of the wider Greater Sydney community in terms of demographics. By this we mean, there was a broad spectrum of ages, cultural backgrounds, education levels, political ideologies, personal values and financial and socio-economic profiles.

This was shown in both the arguments for and against a medium cost / medium performance / low risk Triangle. For example, customers with a strong environmental ethos were generally willing to select a high-cost position, if it meant environmental benefits were maximised. They were also highly likely to reject positions where they had to sacrifice environmental outcomes in return for lower water bills.

On the other hand, customers who were less well off financially, or did not have such a strong environmental ethos, tended to prioritise keeping bills as low as possible even if this meant sacrificing performance.

5.3 Trade-off windows

As an organisation, Sydney Water needs to demonstrate, not only operational efficiency, but also a deep understanding of their customers' values and priorities. Placing a set of customer-informed considerations, or trade-off windows, at the centre of decision-making can significantly enhance the quality of the decisions by:

- **Prioritising the most relevant customer outcomes** by ensuring that the projects and areas of investment that are most important to customers are considered first.
- **Building greater trust and transparency;** openly incorporating customer perspectives demonstrates a level of respect for the customer and encourages engagement.
- **Providing a clear framework** which ensures that decisions have a consistent alignment to customer values and expectations.
- **Enhancing communication;** the considerations provide a foundation for communicating decisions and their rationale effectively back to customers.

Developing a core set of customer-informed considerations to guide Sydney Water's decision-making will ultimately help Sydney Water to deliver services that resonate with the community it serves.

Understanding what the key considerations are is only the first step. There is also a need to understand the tensions between them and how customers balance these. How do customers trade off these considerations when they conflict with each other? In what situations do specific considerations take priority over others?

Building an understanding of this required customers to obtain a deep understanding of the landscape Sydney Water operates within. This meant thinking about, and developing a good understanding of:

- What the customers have identified as priorities for Sydney Water,
- The budgetary constraints within which Sydney Water needs to operate,
- The external and environmental factors influencing what Sydney Water does,
- The regulatory and governance conditions Sydney Water operates under,
- Future growth projections and the technological landscape.

Throughout the engagement, Sydney Water shared substantial amounts of information with customers to ensure they were well educated on the above matters and able to articulate the considerations that are most important to them from an informed position.

How the customer considerations were identified: The reasons and rationales customers applied on Day 1, when designing their Triangles (for Sydney Water as an organisation), along with the questions they asked, were recorded and analysed as part of the design phase for Day 2.

This data was thematically grouped and distilled down to create a list of common guiding principles that customers typically apply when considering the levels of cost, performance and risk that they are comfortable with. These were called trade-off windows.

All windows were discussed in-depth and applied during exercises throughout Days 2, 3 and 4. They were applied both at on overall organisational level (when discussing the Triangle on Day 1) and when talking about the specific actions that Sydney Water could take (such as water supply security and preventing pollution on Days 3 and 4).

Customers were asked to treat these windows like a continuum and identify which end of the continuum closely reflected their preference. One thing to note is, for some windows, one end of the continuum was potentially more costly than others. This is important as cost sensitivity had a considerable degree of influence on which end of the continuum customers chose, particularly as bill impacts were introduced.

Complicating this further was that, for some windows, the more costly end of the continuum flipped under different time frames. For example, focusing on the future and paying to prevent problems may be the more costly option in the short term, but it often becomes the cheaper option in the long term.

What we tended to find is that customers, who were more financially secure, found it easier to think about the long term, whereas the more cost sensitive were less able to do so. This was reflected in the discussions and had a big influence on how people approached the window trade-offs.

Window: Take actions now or in the future?

Figure 12. Slide content from the customer panel debrief report – Focus on the now vs Focus on the future.

Focusing on the now vs focusing on the future in this context can be interpreted in several ways. Should Sydney Water act now? Or should it delay and wait for a more opportune time in the future? Customer discussions in the customer panel sessions about this trade off often focused on bills, and whether to keep the bills low now or increase them to prepare for the challenges of the next ten years and beyond.

In principle, customers want to focus on the future. Most said that taking action now to address challenges, such as population growth and climate change, was more preferrable than taking a wait and see approach. When talking about this preference, many spoke about preventing problems in the first place and addressing them early before they get out of hand and become more expensive to address.

> "We have to think long term. It's like you were saying earlier, we are still paying for decisions someone made 50 years ago now."
>
> **Residential customer |** Day 2

Some argued that Greater Sydney had got to a point where deferring or putting off spending had gone on long enough and was a major contributing factor to Sydney Water being in the challenging position it is currently in. Many customers were averse to "Kicking the can down the road" any longer as they believe this will exacerbate the current challenges.

> "What if those old jokers building the [harbour] bridge said, 'yeah, sure two lanes each side should be enough', we're lucky they thought about the future."
>
> **Residential customer |** Day 2

Customers were typically more concerned about the long-term impacts of delaying investment and worried that this might amplify costs, potentially making bills significantly more expensive over time.

Despite this strong preference for a future focused approach, keeping bills affordable (focus on the now) was still a moderating factor that influenced whether customers were prepared to finance large improvements now or would prefer smaller incremental improvements (and smaller bill impacts).

A willingness to pay more (to take a more future focused approach) was often contingent on the extra funding being spent wisely on the right things and in an efficient way. They also wanted spending to be planned carefully and for there to be a good level of communication and transparency around what the goals and objectives are for the additional funding.

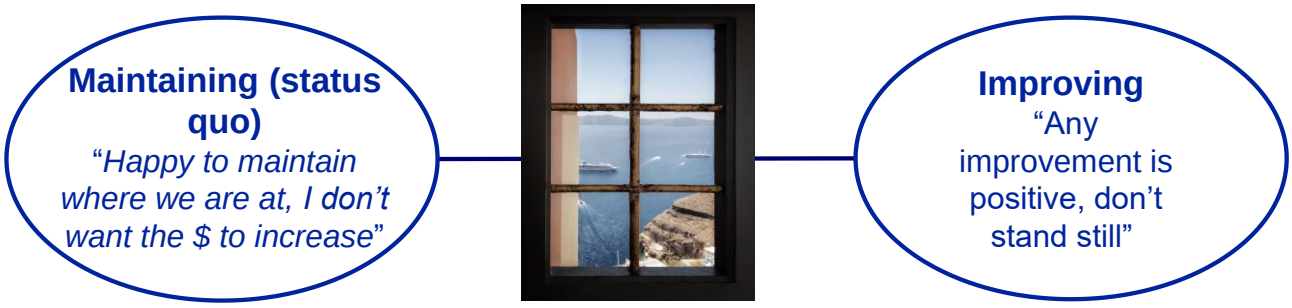
A minority of customers argued that Sydney Water should not be raising bills at the current time, due to range of cost-of-living pressures so many households currently face. They thought that Sydney Water should wait for a more opportune time when customers are more able to afford it. Other panellists often argued that this was being short-sighted and would lead to greater costs in the future. These arguments swayed a number of customers to take a more future focused approach, although some were steadfast in their views about not raising bills now and argued that it was not fair and that other ways of financing future growth need to be found.

A small number of customers argued that, as the future was impossible to predict, it was easier to just react to the challenges as they occurred to avoid wasting money on preventing things that might not occur. This view was very much a minority view. Other customers talked about the long-term nature of the investments decisions Sydney Water needs to make and said that long-term forward planning was critical if these investments were to be successful.

While a future focused approach is preferred by customers, they also indicated that there is a limit to how far this goes, and that a balanced approach was still required. For example, customers were happy for Sydney Water to make investment plans to address known and predictable challenges, such as climate change, population growth, ageing infrastructure, water supply security and the health of the region's waterways, but they still didn't want to see overreach. In other words, they don't want Sydney Water using the argument "we are being future focused" to justify investing excessively or speculatively in areas where the true benefits might be uncertain or superfluous.

Maintaining or improving?

Figure 13. Slide content from the customer panel debrief report – Maintaining (status quo) vs Improving.



Reflecting on Sydney Water overall, without focusing on any particular action or outcome, most customers would prefer that Sydney Water focus on improving, rather than maintaining, the status quo. Arguments for improving included a view that Sydney Water should always be looking to improve, given that if it just focuses on maintaining the status quo, then it will eventually fall behind.

Those who preferred improving over maintaining tended to mean incremental, or sustainable improvements. They didn't like they idea of trying to improve everything all at once as that would be too ambitious and cost too much all at once. They would rather Sydney Water "chip away at it", making small improvements that maximise the return (in terms of customer outcomes). This idea of maximising return on investment was important to customers and there was a clear desire for fairness and proportionality with regard to cost increases versus improvements.

> "The cost has to match the improvement; you can't charge everyone a 20% increase for a 2% improvement".

Residential customer | Day 2

Overall, the preference for improving was not as strong as with the previous future focused window. Customers, who prefer Sydney Water to focus on maintaining rather than improving, expressed satisfaction with the current service levels and do not feel there is a need to change things. They were typically more cost sensitive and argued that the potential gains of trying to make improvements were not great enough to justify the costs. There was also some apprehension about pursuing improvements that might increase the risk of service levels going backwards and they wanted Sydney Water to prioritise areas that are critical to protecting current service levels.

Some of these customers were also aware of challenges, such as climate change and population growth, and recognised that maintaining the status quo will get more difficult in the future and that trying to improve beyond the status quo might be too ambitious. Some had no desire to improve anything until the maintenance 'bucket is filled' and the risks of an ageing network are addressed.

"Look I think the standard we have here is quite good. Much better than Bangladesh where I am from anyway. If [in the future] it is going to get harder to stick to this standard, like he [the MC] said, then let's worry about not going backwards before we look to make things better when they are already good."

Residential customer | Day 2

On Day 3 and Day 4, the costs of improving vs maintaining were presented in dollar terms to customers for specific action areas. The initial preference for improving was much less pronounced, with some customers questioning whether they were prepared to pursue improvements or if they were actually comfortable to live with the status quo if it meant more affordable bills.

"I'd suggest improving is always a good idea, however there are times like bushfires and COVID, where we didn't improve, we maintained, which I completely accept."

Residential customer | Day 2

"We don't need the dream list you just need those slight improvements while keeping the expenditure low."

Residential customer | Day 2

Quality or Quantity?

Figure 14. Slide content from the customer panel debrief report – Quality vs Quantity

Quality vs quantity is a complex question for Sydney Water. During droughts, it might need to restrict water use to achieve long-term sustainability. In droughts or weather conditions such as floods and bushfires, quality also comes under threat and advanced, more expensive treatment may be required.

Much of the discussion about quality vs quantity focused on the challenge of water security. Does Sydney Water prioritise making sure water is of a high quality, or does it focus on maximising the amount of water that is available?

Customers acknowledge that addressing the quantity-quality trade-off is difficult and that Sydney Water needs to prioritise both aspects simultaneously. Customers also recognised that both could directly affect each other.

Overall, there was no clear preference for one over the other. Where customers were positioned on the continuum is context specific and depends on the challenge being addressed. In most cases, there are minimum standards and expectations around quality which customers do not want compromised (e.g., for the sake of public health).

That being said, customers also acknowledged that there was no point having high quality water if there wasn't enough to go around. Ultimately, few customers were prepared to sacrifice one over the other and argued that it was reasonable to expect that Sydney Water deliver enough high-quality water to satisfy the population.

> "I have a problem with putting quality versus quantity I feel like they should be the same thing, if you compromise quality, you won't be able to live, same thing with quantity."
>
> **Residential customer |** Day 2
>
> "There's no point having a thousand litres of water that are perfect when we need a million litres."
>
> **Residential customer |** Day 2

"I'm all about quality but are we too high in the quality? We're saying we need to hit 100% drinkable. But not all of it needs to be drinkable, so can we lower that and do something else which benefits quantity."

Residential customer | Day 2

Focus on the individual benefit or the community benefit?

Figure 15. Slide content from the customer panel debrief report – Individual (I get something) vs Collective (Our community)

The trade-off between individual needs and aspirations, and the collective good is a complex interplay between personal autonomy and a broader responsibility to the community.

When asked, most customers argued strongly in favour of focusing on the collective benefit. Overall, caring about the community, and not just the individual, is seen as the right thing to do morally. As such, asking where people stand on this spectrum is influenced by a degree of social desirability bias. Customers often expressed that taking an individualistic stance was being self-centred and selfish yet, when put into practice, many would focus on their individual needs first.

It is worth noting that financial standing significantly influenced where individuals land on the individual-collective continuum. Those with greater financial security enjoy the freedom to prioritise the collective good, whereas individuals facing financial constraints might prioritise immediate needs, leading to seemingly more individualistic choices.

A few customers also noted some additional grey areas where taking an individualistic approach might inadvertently lead to improved outcomes for the collective. For example, individuals might conserve water to reduce their bills, which indirectly contributes to overall water security.

The nature of the challenge or outcome being discussed was also important. For example, when it came to environmental challenges, people with a strong environmental ethos were very outspoken about taking a collective approach. For those where environmental needs were less important, it was easier to take an individualistic approach.

Additionally, customers who felt an initiative disadvantaged them disproportionately were much more likely to defend an individualistic approach.

"It might be ok for you, but you are only paying $50 or $100 more, I pay Sydney Water $30,000 a quarter, so this is a much bigger deal for me."

Residential customer (also a developer) | Day 2

"It's very un-Australian if you don't think of the collective, you've got to think of other people in the community."

Residential customer | Day 2

"If the main outside my home bursts I can't afford to pay to fix that, but I can afford to pay my bill."

Residential customer | Day 2

Focus on prevention or focus on responding?

Figure 16. Slide content from the customer panel debrief report – Pay to prevent vs Pay to respond

This trade-off considers whether it is better to prevent problems from happening in the first place, or to focus on reducing the time to respond to problems and addressing issues quickly once they have occurred. While not the same, it was aligned to the future vs now trade off, with prevention feeling future focused and responding feeling more focused on the now.

Customers were somewhat torn between the two options, although the majority leant towards doing more to prevent problems. These customers felt like this was a more responsible, sustainable approach and a socially desirable response. They also felt, in the long run, it would be more economical, and they argued that it was cheaper to take steps to avoid a mess occurring, than it is to have to clean it up after it has happened.

"It takes me a second to flip this table, but it'd take 25 mins to clean it up."

Residential customer | Day 2

Those who preferred to respond to challenges were more pessimistic about Sydney Water's ability to deliver outcomes that would prevent the worst situations occurring. They also worried that the future was highly unpredictable and, even if Sydney Water took a strong preventative approach, unexpected incidents would still occur that Sydney Water would need to respond to anyway. They felt it was more responsible to wait and see what happens and deal with these problems as they occur, rather than to try and guess what will occur in the future.

> "If you focus on responding, then at least you know the money is spent on real problems."
>
> **Residential customer |** Day 2

Early conversations around this trade-off tended to focus on the example of responding to burst pipes. While Sydney Water could pay to have additional crews available to address the worst days (where there are a lot of leaks and breaks), this would also mean that customers would need to pay to have crews sitting idle when there are fewer leaks or breaks in the network.

> "Pay to prevent. We must be very careful to prevent disasters."
>
> **Residential customer |** Day 2
>
> "Education and prevention I assume will cost less and provide greater benefits."
>
> **Residential customer |** Day 2

Sydney Water's or the community's responsibility?

Figure 17. Slide content from the customer panel debrief report – Sydney Water's job vs We all have a part to play

For any public sector organisation that is planning for the future, the question: "Who is responsible for this?" looms large. This trade-off was a core focus of discussions around water resilience and preventing pollution. It brought into tension the question of who is responsible for addressing challenges facing Greater Sydney.

Customers often asked whether the challenge was too big for individual customers to make on their own and whether Sydney Water should take responsibility for it. Alternatively, should customers contribute more so that Sydney Water does not need to invest as much. This discussion was also linked to earlier discussions around whether the individual or the collective were ultimately responsible.

Thinking about specific challenges, customers argued that outside of not littering or flushing the wrong thing down the toilet, there was little individuals could do to prevent pollution of waterways, so most felt that this was primarily Sydney Water's responsibility. However, the challenge of water resilience was somewhat different, with customers recognising that conserving water could mean Sydney Water does not need to do as much to boost the supply side.

There was a recognition that, for some challenges, Sydney Water could only be expected to do so much. That being said, customers taking a greater share of the responsibility was often contingent on Sydney Water educating the community about what was needed or taking some responsibility as well. In other words, even if Sydney Water was not to make significant investments, customers still expect it to take a leadership and educator's role when it comes to addressing key challenges, like pollution and water security. In essence, customers were happy to contribute but were not willing to go it alone without the support of Sydney Water.

An interesting tension point with this trade-off was noted for situations where customers are required to pay significant amounts to address a problem. Sometimes, in these situations, contributing financially reduced their appetite for taking on any other form of responsibility. For example, customers who were willing to pay extra to enhance water security suddenly became less willing to reduce their water usage. Common arguments were that if they are paying more for water security, it doesn't seem fair that they must reduce their water usage as well.

As with other trade-off windows, customers argued that if they are expected to take responsibility, then they want transparency and accountability around the outcomes achieved as a result of their efforts or contributions.

> "So you make me pay that, but you still want me to have short showers and let my garden die, then what is the point in paying the extra what am I getting for it."
>
> **Residential customer |** Day 2
>
> "I think there's two camps, the people that want to just pay money to make it go away and those of us willing to get our hands dirty. Consult with me, I need to give you my feedback, although I'm ready to pay for things, I'd much rather do my bit."
>
> **Residential customer |** Day 2

Prioritise protecting or progressing

Figure 18. Slide content from the customer panel debrief report – Protecting vs Progressing

Protecting what we currently have, or trying to progress forward and do things better, is a traditional argument that goes hand in hand with many public sector ventures. For customers, this trade-off balances safeguarding or preserving the familiar against embracing or venturing into the unknown.

While some customers champion stability and reliability, others advocate for advancement and innovation, pushing for broader offerings and proactive approaches to future challenges. Customers debated whether it is better to spend on existing things that they want to protect, such as water quality, places to swim and no supply interruptions, or whether their focus should be on progressing or broadening what Sydney Water does and where it invests.

The discussion often went beyond mere financial considerations. It also delved into values and risk tolerance. Those prioritising protection often value safety and certainty. They seek to minimise disruptions and potential harm, placing a premium on proven track records and established systems. They might fear unforeseen consequences associated with untested solutions, or venturing into unexplored territory, particularly with new or untried technology or innovations.

While this window is similar to the maintain vs improve window, customers were more likely to argue that Sydney Water should prioritise the outcomes it is currently delivering or that it has expertise in, rather than trying to deliver things "outside of its wheelhouse".

Those who valued progressing did not like the idea of standing still and preferred being proactive. They saw progressing as a way of being on the front foot when faced with new challenges and did not like the idea of falling behind. These customers were more future focused and preferred to act now, rather than waiting for a more opportune time to do so that may never come.

Customers discussed finding a balance between the two and felt this has more about satisfying both ends of the continuum, rather than trying to choose a position and stick to it. They suggested that focusing on both sides meant:

- Maintaining core services at a high standard without any slippage in standards.

- Sensibly targeting the immediate and most critical needs first, like ageing infrastructure, population growth and water supply security, rather than tackling niche challenges, or looking for exciting, flashy or high-tech solutions.
- Piloting innovative new technologies or approaches in a controlled environment first to establish a robust business case before attempting widespread adoption.

"You need to do both [protect and progress]. It's good to innovate, but you can't go off chasing the tech for the sake of it, then forget to fix the broken pipes."

Residential customer | Day 2

"Progressing is improving and improving is always good because you can look to the future."

Residential customer | Day 2

Take a focussed or broad approach

Figure 19. Slide content from the customer panel debrief report – Focus on the biggest need/impact vs Focus on the network/focus on the whole

This trade-off focused around whether more effort should be dedicated to communities that are most in need (focused) or whether Sydney Water should look to maximise the amount of people who benefit (broad). Most customers prefer that Sydney Water takes a broad approach and focuses on objectives that benefit as many people as possible.

These customers often expressed that the limited reach of a focused approach could mean that a smaller number of challenges are addressed. They also questioned how this could be done equitably and they asked questions around who would benefit, who chooses who receives benefits and whether that choice is fair and reasonable, or if there are more worthy recipients of Sydney Water's attention. Customers felt a broader approach would cast a wider net where more challenges would be addressed and fewer questions about equity and fairness would arise.

Taking a focused vs broad approach was a worthy consideration early on in the engagement but did not tend to feature as prominently in discussions around preventing pollution. It was seen in

previous phases that customers do not like to see small or privileged groups receive an unfair advantage.

For example, many customers were not happy about customer bills being used to fund recycled water irrigation projects for golf courses, as this was seen to only benefit a small number of wealthy individuals. They often struggled to see that this would reduce the draw on the water supply and ultimately benefit them through improved water security.

> "It's not economically viable to do it now."
>
> **Residential customer |** Day 2
>
> "Keep the big picture in mind."
>
> **Residential customer |** Day 2

6 Preventing Pollution

6.1 Context

Customers were briefed on the three key outcomes identified through previous phases of the engagement that are driving how Sydney Water plans to operate in the next five years, and where Sydney Water will spend, to ensure that its activities align with the needs of its customers, now and into the future. These are:

- **Water quality and reliability:** Sydney Water will deliver safe, secure water now and in the future.
- **Customer experience:** Sydney Water will keep customers informed and supported and will continue to meet customer expectations of excellent service.
- **Environmental protection:** Sydney Water will support healthy waterways that are safe and clean for nature and recreation, recover stormwater and support cool, green public places, and reach net zero.

With limited time for engagement, it was determined to focus on customer preferences regarding preventing pollution and water supply security, given these areas would potentially have the largest customer bill impacts.

Customers were advised of a necessary increase in their quarterly bill of between $32 and $53 to cover infrastructure investment for Sydney Water to meet its legal and regulatory requirements and minimum service levels. Therefore, any further investment towards customer priorities preferred by panel customers would be in addition to the required quarterly bill increase.

As part of the discussion around preventing pollution, customers were presented with further background information about how Sydney Water manages wastewater to prevent pollution of the environment and protect public health by:

- Collecting, transporting and treating customers' wastewater, which is around 600 billion litres worth per year (a volume greater than Sydney Harbour).
- Having over 2 million customer connections to Sydney Water's wastewater system.
- Managing 27,000 km of pipes, and more than 29 treatment plants.
- Building one new plant at Upper South Creek in Western Sydney.
- Educating customers, so they know what's OK to put down the drain, and what's not.

Customers were given examples of what activities Sydney Water could do to deliver higher levels of Prevent Pollution performance, including:

- upgrading treatment plants to improve performance and serve more customers. Planning and delivering wastewater treatment plant upgrades can be time consuming and costly, so there are some practical limits to how quickly cost-effective upgrades can be made.
- relining, maintaining and fixing more pipes than it does now to prevent blockages and overflows.
- detecting, responding to and fixing more wastewater leaks than it does now, and fixing issues before they affect the environment, with the internet of things (IOT) devices and CCTV inspections, for example.
- reducing the volume of stormwater that gets into our systems, to prevent wet weather overflows, and fixing pipes so stormwater can't get in.
- restoring more riverbanks and creating wetlands, so they can naturally filter out pollution and offset wastewater or stormwater impacts.
- catching more litter in waterways from stormwater.
- installing more quality improvement devices on wet weather wastewater overflows.
- fixing more wastewater pipes to reduce wet weather overflows.

It was explained to customers that, even though Sydney Water have a very big network and invests a lot to maintain pipes and operate treatment plants, pollution can still occur. There's always going to be a risk of environmental impacts. This can be due to:

- overflows or faults in private plumbing (these are the pipes between your house and the main Sydney Water pipe).
- Sydney Water's pipes can overflow if they are blocked by tree roots, wet wipes, fats and oils and other debris. They can also overflow if too much water gets in during wet weather.
- treatment plants will have worse performance if they get an influx of water during wet weather, or if population growth in their catchment means they have more wastewater to treat than they were designed for.
- Sydney Water doesn't have all waterways protected with stormwater quality improvement devices (SQIDs) and it can't catch all the litter from a catchment – so litter and sediment can still enter waterways.

Customers were informed that Sydney Water currently spends at least $90 to $100 a quarter from the average customer bill to maintain and improve wastewater and stormwater to prevent pollution, improve reliability and protect against failure.

However, Sydney Water could spend more money to protect and enhance the environment by improving the way it manages the wastewater and stormwater systems to prevent pollution and protect against failure. This could include:

- upgrading wastewater facilities to ensure they meet ongoing environmental compliance requirements.
- spending to reduce the amount of stormwater that gets into the wastewater system during rain events, causing overflows into waterways.
- Invest more in maintaining pipes to reduce dry weather overflows.

Customers were presented with a set of different cost, performance and risk profiles. They were asked to consider their preferred approach and their willingness to pay for additional efforts to prevent pollution of Greater Sydney's waterways.

Figure 20. Slide content from the customer panel – Performance / Cost outcomes

Additional $ per average quarterly bill	Performance Outcomes
Between $25 and $30 *(this is in addition to the $90 that an average customer currently pays on their bill to prevent pollution)*	• Sydney Water treatment plants are upgraded quickly to meet the standards set by the EPA. • Sydney Water significantly reduces **wet weather overflows** compared to current performance, and overflows are reduced even in substantial wet weather • Sydney Water prevents the highest risk **dry weather overflows** from its network of pipes • There are between 200 and 300 pollution or other incidents that cause environmental harm; however, incidents are small, are resolved quickly, and there is limited impact on the environment . • More than 110 stormwater devices, expertly maintained, removing up to 2000m³ of litter and debris from stormwater
Between $15 and $20 *(this is in addition to the $90 that an average customer currently pays on their bill to prevent pollution)*	• Sydney Water treatment plants are upgraded slowly meaning that EPA standards are breached before the upgrade is made • The volume of wet weather overflows is reduced compared to current performance, some overflows occur in some parts of the wastewater system during moderate to heavy rainfall. • There are more than 300 pollution or other incidents that cause environmental harm, with one or two high impact events. • There over 100 stormwater devices, frequently maintained, removing up to 1,500 m³ of litter and debris from stormwater
Between $5 and $10 *(this is in addition to the $90 that an average customer currently pays on their bill to prevent pollution)*	• There is increasing volume and frequency of wet weather overflows from many parts of the wastewater network after even just light rain. • Many wastewater treatment plants don't achieve EPA standards for several years • There are 450 or more dry weather network overflows each year. Several large, high impact events occur every year • There are 100 stormwater devices, and 1,000 m³ of debris is removed from stormwater

Figure 21. Slide content from the customer panel – Risk Levels

Level	Risk
High	• Some swim sites are not safe for swimming after periods of rainfall. About 85% of Beachwatch and Harbourwatch sites are good or very good, but extended wet weather sees more sites decline and become poor. • There are three or more high impact environmental incidents every year, that have impacts on water quality, water recreation, and aquatic life for several days afterwards • About 80% of Sydney Water's wastewater treatment plants comply with key environmental performance standards. There are detectable changes to waterways downstream of several treatment plants. • Across Sydney, most urban waterways are rated poor or very poor
Middle	• Some swim sites are not safe for swimming after periods of heavy rainfall. More than 85% of Beachwatch and Harbourwatch sites are good or very good, and sound maintenance of our wastewater system means performance is more resilient after wet weather. • There are one or two high impact environmental incidents every year. • About 90% of Sydney Water's wastewater treatment plans comply with key environmental performance standards. • There is no overall change in the rating of urban waterways across Sydney, but some specific sites improve and may gradually recover over time.
Low	• Swimming and water recreation is safe at most sites after even moderate to heavy rainfall. Almost swim sites are rated good or very good. Ongoing maintenance of our systems means we can confidently predict swimming performance even in significant wet weather. There are also more recreational sites across Sydney. • Sydney Water avoid high impact environmental incidents because they actively upgrade, manage and monitor the highest risk assets. • All Sydney Water treatment plants comply with key environmental performance standards and there are no negative impacts downstream. Some waterways see improvement downstream because the quality of our discharges is good. • Some waterways improve their health and more are rated fair or good because there are fewer major and chronic impacts

Please note: For this exercise, risk was defined as the chance that something would happen to affect the customer priority of healthy waterways. The consequence of each risk level was also described.

6.2 Customer Preference

Customers at their tables determined the tables' preferred cost, performance, and risk profiles. These were then presented to the other tables within the room. Customers were then asked to consider each option and their willingness to pay for additional efforts to prevent pollution in Greater Sydney's waterways.

The options below were presented to the room to vote on using the L-scale.

Figure 22. Summary of Cost / Performance / Risk Options considered by customers

	Option A	Option B	Option C	Option D
Cost	Medium	Medium	Low-Medium	Low
Performance	Medium	Medium	Medium	Low
Risk	Medium	Low	Medium	High
	20% Loathe	28% Loathe	22% Loathe	33% Loathe
	80% Accept (i.e. Live with / Like / Love)	72% Accept (i.e. Live with / Like / Love)	78%% Accept (i.e. Live with / Like / Love)	67% Accept (i.e. Live with / Like / Love)

Note: Not all figures add to 100% due to rounding. Option C was developed by customers.

When it comes to preventing pollution, Option A (medium cost, medium risk, medium performance) recorded the greatest level of 'Accept' at 80% and the lowest level of 'Loathe' at 20%. All other options had less than 80% 'Accept' and greater than 20% proportion of 'Loathers' based on the L-Scale definition of consensus.

Customers were concerned that the current state is not acceptable, given that they heard EPA standards were being breached. Others had experienced highly degraded waterways and wanted to avoid this at all costs.

Those in favour of a maintenance approach were comfortable with the current standards. They argued that the quality of waterways isn't 'too bad' currently, they didn't use waterways regularly and felt that having to avoid swimming for a few days after heavy rain was not a major imposition.

These views showcased customers prioritising their individual experience over the collective, and this even included customers who were strong advocates of taking a collective approach. Also worth noting is that customers who prioritised 'maintaining' had rarely experienced any major pollution or lived in areas where it wasn't a major problem.

Most customers also valued preventing over responding. The main reason for this was that responding is typically seen as more expensive, particularly in the long run. Customers talked about it being easier and cheaper to take measures to avoid a problem, than it is to have to clean it up. Others argued that it is hard to predict where problems occur, so investing considerable funds and effort into preventing pollution may still result in polluted waterways.

As part of Day 2, customers had considered their Triangle preference without the cost impacts detailed. On that basis customers collectively considered pollution as unacceptable, and preferred a high performance, low risk profile. The introduction of realistic bill impacts on day 3 and day 4 significantly changed the sentiment of some in the room.

For most, the $15-20 bill increase was acceptable given the improvement in performance and the risk. Most saw it as a relatively small impact for a desired outcome. However, others considered the cumulative impact of a bill already increasing between $32 and $53 to cover necessary infrastructure investments was too much burden in the current financial environment.

As mentioned earlier, customers who were more financially secure found it easier to think about the long term, whereas those customers who were more cost sensitive were less able to do so. This was reflected in the discussions and influenced how people approached the window trade-offs.

The following table describes what the likely outcomes of the agreed medium cost, medium performance, medium risk profile are.

Table 3. Actual outcomes of a medium cost, performance and risk profile

Medium Cost	Medium Performance	Medium Risk Description
Between $15 and $20 (*on top of $90 that an average customer now pays on their bill to prevent pollution)*	• Sydney Water treatment plants are upgraded but EPA standards are sometimes breached before the upgrade is completed. • The volume of wet weather overflows is reduced compared to current performance. • Some overflows occur in some parts of the wastewater system during moderate to heavy rainfall. • There are more than 300 pollution or other incidents that cause environmental harm, with one or two high impact events. • There over 100 stormwater devices, frequently maintained, removing up to 1,500 m^3 of litter and debris from stormwater.	• About 90% of Sydney Water's wastewater treatment plans comply with key environmental performance standards. • Some swim sites are not safe for swimming after periods of heavy rainfall. • More than 85% of Beachwatch and Harbourwatch sites are good or very good. Sound maintenance of our wastewater system means performance is more resilient after wet weather. • There are one or two high impact environmental incidents every year. • There is no major change in the rating of urban waterways across Sydney in the short term, but some specific sites may gradually recover.

Other insights regarding Preventing Pollution

There was a belief amongst some customers that Sydney Water needed to help customers take more personal responsibility to reduce wastewater pollution. For example, customers suggested that Sydney Water continue to improve its education about not flushing wet wipes. Others noted the need to educate customers about fats, oils and greases. Some customers said Sydney Water needed to increase its social media presence to communicate with younger customers.

Customers also indicated that Sydney Water could provide more information about pollution management and waterway health, so they could make better informed decisions in the future about performance, cost and risk. Customers asked questions about the environment's tolerance for different types of impacts, the link between water quality and fishability, what the consequences for the environment are of different types of EPA breaches, and information on the overall health of waterways, using easy to understand indicators.

Some customers also suggested that Sydney Water needs to work more closely with business customers to reduce pollution, and partner with other organisations, such as the EPA and Councils, to respond to environmental pollution incidents more effectively.

It was also suggested that Sydney Water continues to invest in research to understand new and cost-effective ways of managing its pipes and treating wastewater.

6.3 Trade-off windows

Key trade off windows influencing customer perceptions of the pollution prevention options presented included:

Focus on improving over maintaining?

Customers, who prioritised improving over maintaining, were concerned that the current state is not acceptable. Some pointed out that current EPA standards were being breached, which they felt was unacceptable. Others had experienced highly degraded waterways and wanted to avoid this at all costs. Those in favour of maintaining were comfortable with the current standards. They argued that the quality of waterways isn't 'too bad' currently, they didn't use waterways regularly and felt that having to avoid swimming for a few days after heavy rain was not a major imposition.

> "If people 30 years ago just maintained current pollution levels, we would not be able to swim in the river."
>
> **Residential customer |** Day 3

Focus on the individual experience or the collective?

Customers prioritised their individual experience over the collective. This even included customers who were strong advocates of taking a collective approach. Also worth noting, is that customers who prioritised 'maintaining' had rarely experienced any major pollution nor did they live in areas where it was a major problem.

> "If we reduce pollution, even on an individual level, then that will reduce costs."
>
> **Residential customer |** Day 3
>
> "I believe we should maintain standards. Standards exist for a reason. If it were me, I'd say high performance, low risk, high cost but I am thinking of the community, affordability and moderation."
>
> **Residential customer |** Day 3

Focus on prevention or focus on responding?

Most customers also valued preventing over responding. The main reason for this was that responding is typically seen as more expensive, particularly in the long run. Customers talked about it being easier and cheaper to take measures to avoid a problem than it is to have to clean it up. Others argued that where problems occur is hard to predict, so that investing considerable funds and effort into preventing pollution may still result in polluted waterways.

> "If we can prevent things from happening it will cost a lot less than taking action later on."
>
> **Residential customer |** Day 3
>
> "Just because everyone else is putting up prices, you can't really say that Sydney Water is not allowed to if there are things they must improve. That's just stupid...it's not practical."
>
> **Residential customer |** Day 3

7 Water Supply Security

7.1 Context

Customers were briefed on the three key outcomes identified through previous phases of the engagement that are driving how Sydney Water plans to operate in the next five years, and where Sydney Water will spend, to ensure that its activities align with the needs of its customers, now and into the future. These are:

- Water quality and reliability: Sydney Water will deliver safe, secure water now and in the future.
- Customer experience: Sydney Water will keep customers informed and supported and will continue to meet customer expectations of excellent service.
- Environmental protection: Sydney Water will support healthy waterways that are safe and clean for nature and recreation, recover stormwater and support cool, green public places, and reach net zero.

With limited time for engagement, it was determined to focus on customer preferences regarding preventing pollution and water supply security given these areas would potentially have the largest customer bill impacts.

Customers were advised that there would be a necessary increase in the quarterly bill of between $32 and $53 to cover infrastructure investment for Sydney Water to meet its legal and regulatory requirements. Therefore, any further investment towards customer priorities preferred by panel customers would be in addition to the required quarterly bill increase.

Within each customer outcome there are several focus areas. For water quality and reliability these are – water quality, water continuity, water conservation and water supply security.

Customers were then provided with a background on what water supply security means:

- Ensuring Greater Sydney's drinking water supply is secure with regard to population growth and climate change.
- Water security is a combination of providing supply sources, transferring this water supply across the catchment, as well as reducing the drinking water demand through water conservation and including leakage reduction. This is supply and demand – each of them work differently and both are reflected in the cost and choices.
- When Greater Sydney has enough water to meet the long-term needs of the city, the impacts of drought are less. This means less time in restrictions and less likelihood of harsh restrictions.
- Water conservation reduces supply security risk by lowering Greater Sydney's drinking water demand, however, the benefits can take a long time to be seen.

- New water supply sources can lower supply security risk quickly. However, they can be expensive.

Customers were then presented with the water supply security situation:

- Dam levels are currently (at the time of the research) around 87%.
- Currently, $65 of the average quarterly bill is used to cover water supply security.
- The Sydney Desalination Plant currently operates, providing drinking water to the city.
- Greater Sydney's total drinking water demand now exceeds the amount of water Sydney Water can draw long-term from dams and the Sydney Desalination Plant.
- This means Greater Sydney is vulnerable to drought and we are likely to need water restrictions for longer when it happens.
- With climate change, the amount of water Sydney Water can get from dams will continue to reduce over time.

While Sydney Water can't predict when or for how long the next drought will be, it is likely that factors such as climate change and population growth will impact on how long the water in our dams lasts. It is expected that by 2050, Sydney Water will have expanded its customer base from 5.3 million customers to 7.5 million customers.

Greater Sydney's current drinking water demand is around 540 billion litres per year. This is expected to increase to over 600-670 billion litres per year by 2050 with population growth. Currently, Greater Sydney can sustainably draw 510 billion litres per year over the long-term from our dams, rivers and Desalination Plant to supply Sydney's drinking water needs. However, due primarily to climate change, this is expected to fall to 475 billion litres per year by 2050. This means there is a gap between what is used now, compared to what Sydney Water can supply and this gap is likely to widen with population growth and climate change as we move toward 2050.

Sydney Water monitors demand and plans new supplies when needed, such as new desalination plants and Purified Recycled Water. In line with the Greater Sydney Water Strategy, dams are not part of the plan for new supplies of water. New water supplies are helpful as a drought response, so long as they're built before the drought starts. New supplies can add between 10 – 100 billion litres per year of drinking water, depending on which option is selected. However, they take time to build – up to seven years. New supplies are also expensive, with costs recovered through customer bills over the life of the assets.

With this context, customers were then presented with the following four water supply security options to consider.

Figure 23. Slide content from the customer panel – Option 1 – No new water supply and current levels of water conservation

	Risk	What High risk looks like	What does Sydney Water do	What do customers need to do
Low bill increase $5 - $10 Per quarter (To maintain the current state of the water supply)	**High**	Approximately 4 years of drinking water supply in dams in a harsh prolonged drought The gap between supply and demand remains and gets worse over time due to population growth. The drinking water supply remains vulnerable to droughts and extreme weather and gets worse We spend more time in water restrictions than we currently do and this gets worse over time Increased chance of higher-level water restrictions, which gets worse over time Reduced ability to cope with extreme weather events like heavy rainfall, potentially leading to water restriction events, which gets worse over time	**Sydney Water does not build new drinking water supplies** in the next ten years **Sydney Water continues to provide water conservation programs** to those who ask **Sydney Water fix leaks** based on repair difficulty and customer disruption	Overall, **reduce average drinking water consumption by around 5%** all the time over ten years (at all times, regardless of whether there is a drought). • Each household on average does 1 less clothes wash per fortnight, fixes 10% household leaks, does 25% less outdoor watering • Businesses reduce their use by 5%

Figure 24. Slide content from the customer panel – Option 2 – No new water supply and increased levels of water conservation

	Risk	What medium-high risk looks like	What does Sydney Water do	What do customers need to do
Low bill increase $5 - $10 Per quarter (To maintain the current state of the water supply)	**Medium High**	Approximately 4 years of drinking water supply in dams in a harsh prolonged drought **The gap between supply and demand remains and stays at this level over time** thanks to enhanced water conservation. The drinking water supply remains vulnerable. We spend more time in water restrictions than we currently do Increased chance of higher-level water restrictions Reduced ability to cope with extreme weather events like heavy rainfall, potentially leading to water restriction events	**Sydney Water does not build new drinking water supplies** in the next ten years **Sydney Water continues to provide water conservation programs** to those who ask **Sydney Water delivers an enhanced leakage program**, where leaks are prioritised for repair based on water lost and customer disruption	**Overall, we reduce our average drinking water consumption by around 10% over ten years** (at all times, regardless of whether there is a drought) • Each household on average does 1 less clothes wash per week, fixes 50% household leaks, does 35% less outdoor watering • Businesses reduce their use by 10%

Figure 25. Slide content from the customer panel – Option 3 – New water supply and current levels of water conservation

	Risk	What low-medium risk looks like	What does Sydney Water do	What do customers need to do
High bill increase $15 - $20 Per quarter (To increase water supply)	**Low – Medium risk**	Approximately **5.5 years of drinking water supply** in a harsh prolonged drought, from building a new water supply **The supply and demand gap is fixed but deteriorates over time** with population growth meaning as the city grows in the long term we will need to plan and build new water supplies We spend less time in water restrictions than we currently do Reduced risk of higher-level water restrictions than currently Good ability to cope with extreme weather events like heavy rainfall	**Sydney Water builds additional water supply in the next ten years** equivalent to 90 billion litres per year. **Sydney Water continues to provide water conservation programs** to those who ask **Sydney Water fix leaks** based on repair difficulty and customer disruption	Overall, **we reduce average drinking water consumption by around 5%** all the time over ten years (at all times, regardless of whether there is a drought). • Each household on average does 1 less clothes wash per fortnight, fixes 10% household leaks, does 25% less outdoor watering • Businesses reduce their use by 5%

Figure 26. Slide content from the customer panel – Option 4 – New water supply and increased levels of water conservation

	Risk	What low risk looks like	What does Sydney Water do	What do customers need to do
High bill increase $15 - $20 Per quarter (To increase water supply)	**Low**	Approximately **5.5 years of drinking water supply** in a harsh prolonged drought, from building a new water supply **The supply and demand gap is fixed and remains at this level over time** while water conservation is successful, so the need for additional new water supplies in the long term is less likely We spend less time in water restrictions than we currently do, and this improvement lasts a long time Reduced risk of higher-level water restrictions than currently, and this improvement lasts a long time Good ability to cope with extreme weather events like heavy rainfall, and this improvement lasts a long time	**Sydney Water builds additional water supply in the next ten years** equivalent to 90 billion litres per year **Sydney Water continues to provide water conservation programs** to those who ask **Sydney Water delivers an enhanced leakage program**, where leaks are prioritised for repair based on water lost and customer disruption	**Overall, we reduce our average drinking water consumption by around 10% over ten years** (at all times, regardless of whether there is a drought) • Each household on average does 1 less clothes wash per week, fixes 50% household leaks, does 35% less outdoor watering • Businesses reduce their use by 10%

7.2 Customer Preference

For water security, performance was locked as medium, so that customers were only trading off risk versus cost. Therefore, the use of the Triangle was less appropriate. Customers were simply asked to trade off risk against cost, with performance locked at medium. As a result, this table is different from the table shown for preventing pollution.

Figure 27. Slide content from the customer panel debrief report – Preferred Water Security Option

	Option A	Option B	Option C	Option D
Water Supply Actions	Action 1 - No new water supply	Action 1 - No new water supply	Action 2 – Build new water supply	Action 2 – Build new water supply
Water Conservation Actions	Action 3 – Current water conservation	Action 4 – Extra water conservation	Action 3 – Current water conservation	Action 4 – Extra water conservation
Risk Outcome	High	Medium High	Medium Low	Low
Additional $ per average quarterly bill	Between $5 and $10	Between $5 and $10	Between $15 and $20	Between $15 and $20
L Scale Result	64% Loathe 36% Accept (i.e. Live with / Like / Love)	53% Loathe 47% Accept (i.e. Live with / Like / Love)	14% Loathe 86% Accept (i.e. Live with / Like / Love)	17% Loathe 83% Accept (i.e. Live with / Like / Love)

Note: Not all figures add to 100% due to rounding.

In options A and B, Sydney Water takes no additional action with regard to investing in new water supply, whereas the average cost per quarter increases by $5-$10. The risk profile is higher for

Option A, as customers carry on with their current water conservation measures. This differs from Option B, where the risk profile is slightly less, due to customers increasing their water conservation efforts.

In options C and D, Sydney Water does take additional action with regard to investing in new water supply and the average cost per quarter increases by $15-$20. The risk profile for these two options is also lower as a result. In Option C, customers carry on with their current water conservation measures and the risk profile remains higher than Option D, where customers increase their water conservation efforts above their current levels.

Many customers were unable to live with Option A and Option B. The key reason for this was the risk profile of medium-high to high was seen to be too much. The fact this came with a price tag of between $5-$10 for no obvious improvement also turned them off these options. There was also the thought that the difference between $5-$10 per quarter and $15-$20 was not that large given that it could see a notable improvement in the risk profile.

Reasons customers tended to prefer Option C over Option D included:

- Feeling dubious about people changing their behaviour in Option D. They questioned whether this was realistic and how it would be monitored.
- Doubts around whether customers would stick to reduced usage when Greater Sydney is not in a drought.
- Not feeling like there was a substantial difference between Option C and Option D (in terms of risk) and preferring to not have to take action themselves (that is Sydney Water's job).
- Arguments that if they are paying more, they should not have to increase conservation efforts as well, as that is what they are paying to avoid.
- Being unwilling to change their water usage e.g. still wanting to water their gardens and have long showers.
- Doubts around whether the behaviours required in Option D were actually sustainable for customers.

Most customers (86%) could at least live with Option C, which represents a medium to low-risk outcome. In this scenario, Sydney Water would invest in new water supply options, but customers would also continue to use water at the current levels of 185 litres per person per day. The predominant reasons included:

- **Less uncertainty:** Customers are more confident that new infrastructure will be the most reliable way to improve the water security risk profile, than efforts to improve water conservation. There were still concerns over whether building new water infrastructure would be possible given a lack of space for new dams and the challenges involved with bringing new desalination plants and Purified Recycled Water online.
- **Efficacy of building new water infrastructure:** Customers have greater confidence that new water supply infrastructure will make a difference, whereas there is considerable doubt that water conservation efforts will make a real difference.

- **Inevitable need:** Prior to panel conversations, customers had not realised the risk Greater Sydney faces with regard to securing its water supply. Customers expressed concerns (and in some cases shock) about how much water would be required to service future populations and that natural water supplies are decreasing quickly due to climate change. The perceived urgency to do something was elevated as a result of learning this, although there was also the view that this information was not widely known and that Sydney Water should do more to inform the community about these risks.

  Customers recognised that eventually the people of Greater Sydney will need to pay for new water infrastructure. Many argued it was better to do this now than to wait till things get catastrophic. Some also note the significant challenges involved with planning and installing new infrastructure. Customers felt it was better to start work now than wait, as it is quite possible that it could take longer than expected.

  "I feel they need to tell people about this stuff [future risks to water security], educate us about it, they are probably too scared to admit that things aren't as rosy as people think."

  Residential customer | Day 4

- **Behaviour change is seen as short lived and unsustainable:** Customers were dubious about people's ability to reduce their water usage. While they could see short-term improvements could be made, they did not see these as being sustainable in the long term and that people would regress overtime. They argued that relying on people to do the right thing was much less secure than building new infrastructure.
- **Limited motivation or desire to change behaviour:** Many customers indicated that they don't like the idea of having to change the way they use water. They either don't want to be inconvenienced or feel they are already highly conscious of their water use and couldn't reduce it much further. While they would be prepared to change if they had to (in drought), building new infrastructure felt like an easier, less painful option. Some also argued that many customers would not be fully aware of the need to reduce their water use, especially if they don't perceive an immediate impact on themselves or think they won't be able to make a difference.
- **Loss aversion:** It was clear that some customers generally disliked the idea of losing something they already have. This often led them to say that paying a little more might be less impactful than changing established habits.
- **Cognitive dissonance:** Changing behaviour can require effort and disrupt routines, leading to mental discomfort. Many customers would prefer to avoid this discomfort even if it means paying more.
- **Lack of perceived control:** Customers often talked about not feeling like they have significant control over their water usage. For example, they don't have a good idea of how

much water they currently use, don't know what else they could do to reduce it, or they simply underestimate how much they currently use.

- **Perceived cost-benefit analysis:** Several customers mentioned that investing in new infrastructure was more of a one-time cost, while changing behaviour could require ongoing effort or investment in water-saving devices, making the latter seem more expensive in the long run.

7.3 Trade-off windows

Key trade off windows influencing customer perceptions of the water supply security options presented included:

Sydney Water's responsibility not the community's

Underpinning this was the view that if customers are going to pay for new water supply solutions, then they should not have to reduce their water usage as well. They feel that they should experience some benefits from the higher bills and if they still have to reduce their usage, then they feel this is missing.

> "So, you make me pay that, but you still want me to have short showers and let my garden die, then what is the point in paying the extra what am I getting for it."
>
> **Residential customer |** Day 4

Focus on the collective rather than the individual

Some customers also doubted the ability of the community to focus on the collective by reducing their water usage and would feel more comfortable if Sydney Water took greater responsibility. There was a strong sentiment that, if Sydney Water wants people to contribute, then it is its job to educate the community. Many acknowledged that the challenges facing Sydney Water are highly complex and, for the community to be able to contribute meaningfully, it is Sydney Water's job to educate the community.

> "People won't reduce their usage. You can see how neighbours behaved in the last drought."
>
> **Residential customer |** Day 4

Focus on the future rather than the now

'The future is more important than now' was a common sentiment amongst customers. Many customers felt uncomfortable with taking no action at all, particularly those with a stronger future focus. They appreciated the risks being posed by climate change and population growth and were concerned about the potential for a rapid decline in dam levels in the future.

> "We have to think long term. It's like you were saying earlier, we are still paying for decisions someone made 50 years ago now."
>
> **Residential customer |** Day 4

Focus on improving, rather than maintaining

Sydney Water should invest in new water supply options rather than leaving it to chance and hoping for the best if a harsh drought were to occur. Customers were concerned that a focus on the status quo meant Sydney Water would eventually fall behind in supply. However, customers saw incremental improvements as the goal, as opposed to trying to address everything, everywhere, all at once.

> "Well, they could just do what they are doing now. But then in 10 years' time, the population has grown by 20%, climate change has ramped up and we don't have the water we need."
>
> **Residential customer |** Day 4

Focus on preventing rather than responding

Sydney Water should invest in new water supply options to prevent future water security issues, rather than waiting for problems to occur. This is to some extent aligned with the future versus now trade off. It was considered that, in the long run, it would be cheaper to take steps to avoid a water supply issue occurring, than it is to have to clean it up after it has happened.

> "It is so much more cost effective to do it now in preparation then waiting until the problem is significant and try to catch up."
>
> **Residential customer |** Day 4

8 Concerns of Preferred Options

8.1 Context

For the decisions discussed in the previous chapters, obtaining a perfect consensus is only possible when one of the options presented is remarkably compelling, where there is little or no downside and no negative trade-offs that the customers have to make.

The choices and options presented to customers in this engagement are not like this. If it were, the decisions would be easy and there would be no practical need for engaging too deeply with customers.

Each option had a clear, real and notable cost to customers, both financial and non-financial. As a result, a 100% consensus was not practical nor realistic to expect. For each option a proportion of 'Loathers' was expected. The objective was to minimise those who took a 'Loathers' position and select the option that the greatest proportion of customers who could live with.

For the sake of reaching a consensus, we needed no more than 20% of customers loathing an option. The two options shown in the previous chapters were the final consensus options the customer panel chose to recommend to Sydney Water.

8.2 Concerns amongst 'Loathers'

Those who said they loathed the consensus options that the majority could live with, were asked why (in this chapter they are referred to as 'Loathers', 20% of customers Loathed Option A for Preventing Pollution and 14% Loathed Option C for Water Supply Security). At the heart of this cohort's thinking was a focus on the financial impact of increased costs. These 'Loathers' rationalised the need to avoid increased costs, with arguments about keeping things the way they are, (e.g. "the status quo is fine", "the risk is off in the distance", "we don't have to worry about that now" etc). Given the financial impact there was no willingness amongst 'Loathers' to shift position.

For 'Loathers', the strong focus on 'bill-shock' may always have been present, however, in the current economic climate (high inflation, increasing interest rates), it appears amplified above what it would normally be. They likened it to the trade-offs that individuals and households make every day. They gave examples, such as not dining out in order to make sure there is money to pay their rent and buying instant coffee instead of going to the local coffee shop, so they have enough money to fill their car up with petrol. Because individuals are making hard choices daily, there is a perception that the same logic should apply to Sydney Water.

They argued that the question "is this really, really necessary right now?" should be central to everything Sydney Water proposes. These 'Loathers' did not believe that this question sat at the heart of Sydney Water's decision-making and felt that a trade-off had not been adequately

considered. Because of this, these customers felt that the additional proposed expenditure could end up being frivolous rather than important.

For some (when considering the options for preventing pollution), there was also a realisation that investment priorities should be traded-off / prioritised within the full context of expenditure on all priority areas. At that point, they had not seen the potential cost for delivering improved 'water resilience' and were concerned how much this cost would be. As a result, they erred on the side of caution and looked to avoid allocating too much cost to preventing pollution. In this sense, they were placing a higher priority on 'water security' as this is felt to be a more essential, non-negotiable priority.

'Loathers' did not, however, express a belief that pollution should be tolerated. Rather they felt that focusing on the status quo (which they were comfortable with) was a legitimate and acceptable approach given the current economic climate.

Financial impacts were the primary reason for taking a 'Loathers' position:

- **Bill-shock:** At an overarching level, 'Loathers' felt the absolute cost / percentage increases presented in the consensus positions were too much for individuals and households to tolerate without it having a negative impact on their day-to-day lives. Once people move past the 'initial bill-shock' commentary, they focussed on three other implications, which started 'small' (but, noticeable) and led to a degree of emotional catastrophising.
- **An unavoidable increase in related day-to-day costs:** Concern there would be a broader ripple effect leading to an increased cost of living that could impact customers in multiple ways. For example, if water becomes more expensive for everyone, it will impact businesses, and the increased cost which businesses experience will inevitably be passed on to consumers. For these customers, the perceived impact of cost increases is much broader than what they feel they may see on their bill, it is considered potentially far-reaching and impacting multiple facets of their life.
- **Other services and providers will follow-suit:** Others took it a little further and described a more complex 'jigsaw puzzle'. There was a concern that if, Sydney Water was given permission to increase its costs, this would open the floodgate for other utilities / services to do the same – they mention electricity, gas, internet, rents, mortgages etc. They essentially see this as the start of a domino effect.
- **Negative impact on community cohesion:** Some 'Loathers' felt that the pressure of the cost of living was already so high, that if any of the above happened, it could negatively impact community cohesion. They argued that it could drive a sense of anger, which would increase crime / shoplifting (as people become less able to afford necessities such as food) and increase things like people driving off at petrol stations. There was a sense that some parts of the community were at 'breaking point', and that this could tip them over the edge. One person took this even further and suggested there 'could be riots and horrible stuff happening'.

'Loathers' rationale for advocating for a no investment / no additional cost position was that they felt the status quo is 'adequate' and 'fit for purpose':

- Once the initial cost conversation was explored, 'Loathers' often justified their position through the belief that the current regime is 'fit for purpose' now and, should, therefore, be fine for the future (perhaps not indefinitely, but at least for 'now'). Maintaining the status quo is perceived to be low-risk status and they feel this reduces the need to do anything more than what is currently being done. There is a resulting disbelief that anything irreversibly negative or impactful would happen if the status quo was simply maintained. There is a sense that Greater Sydney is already in a 'low risk' environment, and that this will continue without the need for additional intervention.
- **Noticeable historical improvements signal there has already been investment, which reduces the perceived need for more:** 'Loathers' also cite examples of 'improved waterways' over the last decade (Sydney Harbour, the Parramatta River). For example, 'you can eat fish out of the Sydney Harbour, you can swim in the Parramatta River'). This sense of improvement contributes to the belief that 'everything is ok' – "if Greater Sydney is doing so wonderfully, why do they need more?".
- **Ambiguity of EPA breaches reduces urgency:** A few 'Loathers' rationalised their position by questioning the legitimacy of an EPA breach. They questioned whether the risk of EPA breaches was even important given that breaches had already occurred, or were already occurring, without them noticing. Because of this, they had a relatively high level of tolerance for an 'ambiguous breach' (where customers have low proximity to the breach or where the impact of the breach is unknown).
- **Further investment feels like a 'luxury' rather than necessity:** Because 'Loathers' tend to feel that, currently, the risk profile is low, there is a belief among 'Loathers' that any focus on improving the system now was to deliver a luxury or 'nice to have' outcome rather than a 'necessity' (which ties in with 'cost of living crisis' concerns discussed previously).
- **A tolerance for deferred investment:** Some 'Loathers' expressed a preference for investments to be delayed until the next five-year window to allow the cost-of-living crisis pressures to have a chance to ease. Broadly, they considered system improvement less important now than dealing with the cost-of-living crisis, and that the status quo would be sufficient to get Greater Sydney through the next five years without causing irreversible damage. The economic outlook currently is not ideal and given that pricing decisions come up every five years, they would prefer that these decisions are reviewed 'when the economy improves'.

In the context of defending the status-quo in order not to experience cost increases, the concept of risk or potential risk is distant and lacks legitimacy:

- **'Loathers' experience to date has been one of no negative impacts on water quality and availability during pollution events:** They don't feel like they hear about pollution events, they don't see them, there has been no change in their life and interactions with water because of any negative events. Because of this, they find it hard to relate to the concept of the 'impact' of a pollution event and heavily discount the potential to experience any negative outcomes. The entire concept of risk and negative outcomes felt artificially constructed and distinct from reality.
- **Some 'Loathers' argued that investing to further minimise risk was pointless or a 'fool's errand':** They argued that this was because 'there is no such thing as nirvana' and that some waterways will never be swimmable, no matter what Sydney Water tries. The main waterways will always be ok and even if Sydney Water went the extra mile to do things like clean up the Cooks River, they wouldn't swim in it anyway. Many 'Loathers' didn't value improving small waterways and creeks and felt that few people cared about improving small sites.

"Even if they fixed up Cooks River, I'm not swimming in it."

Residential customer | Day 4

"What small waterways and creeks are we talking about? Who cares about these small sites?"

Residential customer | Day 4

When risk has low proximity, the concept of increased cost in this area is met with scepticism by 'Loathers':

- Ultimately, 'Loathers' struggled to see a realisable benefit for investing in preventing pollution and few believed that delaying or not investing in this area would result in any negative outcomes. Because of this, they do not believe that any additional revenue would benefit Sydney Water customers, and instead they are suspicious of Sydney Water and that the additional funds could be returned to the Government or paid out to Sydney Water executives as bonuses or salaries.

Loathing the option because it was not doing enough:

- It is important to note that some of those that said they loathed the consensus option did not do so for the reasons discussed above. They instead identified as 'Loathers' as they felt the consensus option did not go far enough in terms of delivering better outcomes for Greater Sydney. It was common for these customers to have a very strong social conscience. Compromising on the future, not doing enough to prevent pollution or secure the water supply, were simply not acceptable and they were not agreeing with the "it's too expensive" argument. It is also worth noting that, in some cases, these customers' strong social conscience also led them to feel torn about whether they should support the options presented. They wanted a greater level of action from Sydney Water, but they were also concerned about the social impact of more expensive bills on financially vulnerable customers.

8.3 Concerns amongst 'Live with it'

Those who said they could 'Live with it' were also asked why this might be and what could be done to shift them further along the L-Scale. Overall, 53% of customers would live with the Prevent Pollution consensus (Option A) and 15% of customers with the Water Security consensus (Option C).

The reasons for this position were largely the same as those identified by 'Loathers', but with different levels of emphasis. The core issue amongst 'Loathers' was the financial impact of increased costs. Amongst those who would 'Live with it', there was as much concern about cost as there was that the option was not doing enough to prevent pollution or ensure water security.

Many of those who would live with the Prevent Pollution consensus option believed the current state was unacceptable and had experienced degraded waterways and preferred a higher performance/low risk option. They also wanted a greater level of action from Sydney Water, but they were concerned about the impact of more expensive bills on the financially vulnerable. However, they recognised any improvement was better than the current situation and were willing to trade off their preferred position to reach a consensus. There was limited interest amongst this cohort to retain the status quo.

> "I would prefer we shoot for a high performance and low risk option. But I know that others in the room and the community are feeling the pinch financially. So, I can live with this option to at least get some level of improvement."
>
> **Residential customer |** Day 4

The proportion of those who indicated they would live with the Water Security consensus option was comparably lower than for Prevent Pollution. For some of these customers there was both an unwillingness to undertake any further water conservation measures, while also paying an

additional $15-20 on their quarterly water bill. They were also concerned that others would not moderate their own behaviours to achieve a low-risk outcome. So, while they might prefer a future with a lower level of risk, they preferred this be the responsibility of Sydney Water rather than themselves.

> "If I am paying more on each quarterly bill, I don't see why I have to also reduce the amount of water I use around my home. I am paying more to avoid that."
>
> **Residential customer |** Day 4
>
> "If we have to pay more it is really then Sydney Water's responsibility to ensure our continued access to water."
>
> **Residential customer |** Day 4

As with "Loathers' a key concern amongst those who would 'Live with it', for either Prevent Pollution or Water Security, was the financial impact of increased costs. They expressed largely the same concerns – the cumulative impact of quarterly bill increases, the current economic climate, as well as bill increases amongst other utilities/service providers. While some customers felt they could absorb bill increases, there was concern for those who were not as financially secure.

> "Before we even consider paying more to prevent pollution or ensure secure water supplies the bill is going up. All bills are going up. It's not just the water bill in isolation."
>
> **Residential customer |** Day 4
>
> "We can broadly cope with the cost increase for these outcomes but that may not be the case for everyone else."
>
> **Residential customer |** Day 4

There was an expectation amongst those who would live with increasing investment in preventing pollution or water security, that programs would be put in place to support those who were financially stretched and likely to need assistance.

> "They have to ensure that people don't go bust trying to pay for their water bills, particularly at times like this."
>
> **Residential customer |** Day 4

9 Glossary and bibliography

9.1 Glossary

The following table provides a reference point for acronyms used throughout this report.

Table 4. Glossary

Acronym	Descriptor
CALD	Culturally and Linguistically Diverse.
CCRG	Customer and Community Reference Group
CEWG	Customer Engagement Working Group
EPA	NSW Environment Protection Authority
EWON	Energy and Water Ombudsman NSW
First Nations	First Nations refers to people of Australia who associate as being a person of Aboriginal and/or Torres Strait Islander origin and/or descent.
Greater Sydney	Greater Sydney (including the Blue Mountains and Illawarra).
IPART	Independent Pricing and Regulatory Tribunal.
ODIs	Outcome Delivery Incentives
Residential customer	General member of the public that includes both homeowners and renters.
Triangles	The framework used to ensure that customers considered three core elements (cost, performance, risk) when making recommendations or deciding on their preferences as part of consensus reaching exercises.
Windows	A set of customer-informed considerations or trade-off windows at the centre of decision making.

10 Customer Questions

Throughout the four days, customers were encouraged to ask any questions they might have about Sydney Water, how it operates and how it is governed to improve their understanding of the environment in which Sydney Water operates and the challenges it faces in delivering customer led priorities. This chapter contains the key questions asked across the four days. Questions cover the following broad themes:

- Environmental protection
- Customer service
- Cyber security
- Dams
- Education
- Governance
- Profits and spending
- Regulation
- Technical capability
- Desalination
- Water quality
- Water recovery
- Pipes, leakage and network maintenance
- Water security
- Who pays

1) Environmental Protection

What is Sydney Water doing about climate change?

Variations in climate have a direct impact on our customers, our network and our services. Sydney Water is responding to climate change by adopting adaptation and abatement initiatives to help us sustain a reliable and resilient water supply now and for the future.

- Abatement initiatives are the actions we're taking to address the causes of climate change and prevent further impacts.
- Adaptation initiatives are the actions we're taking to address the actual or expected impacts of climate change.

In other words, we are addressing the existing effects of the problem and trying to solve it by taking targeted action as quickly as possible.

You can learn more about our plan in the Our path to net carbon zero and beyond publication available on Sydney Water's website.

How is Sydney Water achieving net zero?

Sydney Water has ambitions to reduce net carbon emissions across the business to zero by 2030, and across its supply chain by 2040. We are working towards this goal by implementing sustainable technologies, renewable energy projects and circular economy principles realised

through innovative collaborations with our utility partners, industry, government, the private sector, universities, the research sector, suppliers and our customers. We are using energy more efficiently, while increasing the production and use of renewable energy.

How does Sydney Water enforce fines to prevent pollution?

Sydney Water doesn't issue fines for pollution. Pollution of natural waterways, as well as air, land and other resources, is monitored by the NSW Environment Protection Authority (EPA) and local councils. The EPA can issue fines and clean-up notices.

How does Sydney Water support its business customers in protecting the environment?

Water is a limited natural resource, and businesses use about 25 per cent of the water supplied in Greater Sydney. Our Business Customer Representatives work directly with our major customers to help businesses save water and minimise their impact on our environment and waterways through initiatives such as the WaterFix Commercial water-efficiency program and our online water monitoring program. The Business Customers team is qualified in all aspects of trade waste requirements and will issue a connection agreement which determines the processes required for compliance. Our seven-point plan also provides a useful framework for businesses to develop a resource management plan to structure and prioritise their water management. More information on the support Sydney Water provides to its business customers is available in the Your Business section of our website.

What percentage of Sydney Water customers were affected by recent flooding and drought?

Drought and floods affect us all in some way. Residents in the Hawkesbury-Nepean region were significantly affected by the recent floods. During the last drought, we asked all residents to conserve water. Water restrictions, which focus on reducing outdoor water use in drought, apply to all of us.

What happens if Sydney Water breaches Environment Protection Authority (EPA) guidelines?

Breaching an EPA guideline, or environmental protection licence (EPL), can result in the EPA issuing Sydney Water with clean-up and prevention notices or enforcement action. This can include:

- formal warnings
- official cautions
- penalty notices
- legally binding pollution reduction programs attached to an EPL

- enforceable undertakings or prosecutions in the event of a serious case.

The EPA has a series of policies to help guide any action against Sydney Water, ensuring the EPA's compliance and enforcement activities and actions are consistent, fair and credible. As a last step, it also takes into account a range of factors in deciding whether, how, and in what court, to prosecute.

What influence does the Environment Protection Authority (EPA) have to dictate remedial and NSW capital expenditure?

The EPA influences Sydney Water's capital expenditure by setting the standards Sydney Water must meet for the safe transport of wastewater through our pipes, the treatment of wastewater, and its release into the environment. The costs of operating Sydney Water's systems to meet these standards are built into their operating costs and capital investment needs, which are recovered from customer bills.

The EPA can also use its regulatory powers to audit Sydney Water's operations, such as how it responds to incidents. The audit recommendations can influence how Sydney Water operates and the costs it incurs, because it might need to roster more staff to respond to a given incident. If a major incident causes significant environmental harm, the EPA might prosecute Sydney Water. Sydney Water can be fined or required to fund other actions which restore the environment.

The EPA can also take part in other processes that influence the overall investment, including the following:

- contribute to the Government's submission to the Independent Pricing and Regulatory Tribunal (IPART) once Sydney Water has put forward its recommended prices for customers over a given five-year period
- contribute to the review of Sydney Water's Operating Licence, which sets minimum standards of performance for customer services and asset management.
- participate in land-use planning approval processes that govern major new developments, such as new wastewater treatment plants.

However, ultimately, the decision rests with IPART as to how much capital expenditure Sydney Water is allowed to invest. IPART determines whether the investment is needed, and whether Sydney Water's plans are cost effective.

Does Sydney Water charge customers a percentage of their bill to improve waterways and pollution?

Sydney Water currently charges customers a percentage of their bill to improve waterways and reduce pollution. Sydney Water's investment into, and maintenance of, the wastewater system (including removing harmful chemicals from wastewater before releasing it back into waterways and oceans) accounts for about 30 per cent of an average bill, and a smaller amount is used to manage recovered resources, such as biosolids. While preventing pollution is a vital part of improving waterways, it is not the only component of waterways management.

Depending on where you are in Greater Sydney, your stormwater services may be managed by Sydney Water or your local council. If your stormwater is managed by a local council,

your Sydney Water bill will not include costs for stormwater services. Where councils are responsible for stormwater services, they will be funded through a portion of council rates paid by property owners.

Sydney Water invests a smaller amount of money to manage and upgrade parts of the trunk stormwater assets it owns. This includes managing waterways that are in a natural or semi-natural state, and naturalising or returning stormwater channels to a more natural state at the end of their life and investing in wetlands around them, when site conditions are suitable. Sydney Water will have more stormwater and waterways responsibilities in new areas in Western Sydney.

Sydney Water also works with the NSW Government, local councils, and community groups to improve the coordination of waterways management. Collaboration complements the management of the wastewater and stormwater operations, making the process more coordinated and cost effective. Community education also plays an important role in this area.

What are current pollution levels? What's the baseline now, and what is the prediction?

Assessing pollution levels is complex because waterways can be affected by wastewater discharges and stormwater from urban areas. In outlying areas, mining and farming can have an impact on pollution levels. Sydney Water's aquatic monitoring reports assess the impact that its wastewater treatment plants have on the receiving environment, as well as measuring trends in the quality of wastewater discharged into the ocean or rivers.

Sydney Water has recently made its monitoring programs more comprehensive. Sydney Water also conducts monitoring programs to understand the impact of wet weather overflows and stormwater on waterways, so Sydney Water and councils can target the most cost-effective investments in reducing pollution and improving waterways health.

Is there a tolerance for high-risk pollution events in the natural environment / systems where Sydney Water operates?

The environmental impact of different types of incidents or operations depends on the nature of the receiving environment. For example, Sydney Water discharges primary-treated wastewater from its large treatment plants at North Head, Bondi and Malabar. The wastewater is piped several kilometres out to sea and discharged at depths of up to 100 metres, then dispersed via the vigorous Eastern Australian Current. Long-term monitoring has demonstrated that these wastewater discharges have not had a measurable impact on the receiving environment. However, discharging this type of wastewater in a river, like the Hawkesbury Nepean River, or even at the shoreline would not be acceptable because there is less water to disperse the wastewater, the receiving environment is more sensitive, and there are more people using the environment. Sydney Water measures the impact of all its treated wastewater discharges through aquatic monitoring programs.

What is primary treatment?

Primary treatment is the most fundamental step in wastewater treatment, and it refers to removing some of the most visible matter from our wastewater. In the primary treatment process, screens trap solids and rubbish that have entered the wastewater system, and the trapped debris is removed. Other examples are sand and grit collected from the bottom of tanks, and oil and grease which are trapped and removed.

2) Customer Service

How much leakage occurs throughout the network and how are repairs prioritised?

Our level of leakage was 129 ML/d in 2023. This is considered economic under the terms of our Operating Licence. By world standards, Sydney Water rates in the top 10 per cent of water utilities for managing water losses and we are constantly working to improve our performance. All reported and detected leaks are assessed by Sydney Water teams to determine necessary actions and our crews work round-the-clock, when necessary, to minimise disruptions to our customers. We are improving our response time and repair methods by:

- Deploying smaller area-based teams to locations where higher levels of leaks occur, minimising water loss and improving response time to visible leaks
- Optimising our resource scheduling so leaks with higher water loss are prioritised
- Deploying innovative tools to allow repair of water mains and installation of new valves under pressure, which can avoid the need for network shutdowns and reduce the volume of water lost in draining pipework for repair
- Adopting innovative approaches, like our leak detection dogs and leak alerts sent from our new digital meters.

Does Sydney Water have or project numbers for an environmental cost of water leaks?

Sydney Water currently relies on the economic cost of water in assessing whether to spend more money to reduce water leaks. That means that leaks are repaired when the cost of the water lost exceeds the cost of repair. One objective of this customer engagement program is to understand what value should be placed on social and environmental costs that could be allowed under the Independent Pricing and Regulatory Tribunal's determination based on the preferences put forward by our customers.

Who is responsible for low water pressure?

Sydney Water is responsible for low water pressure. We understand the inconvenience this causes our customers, and we work hard to prevent low pressure. When it does happen, we work to restore pressure as quickly as possible.

What services (e.g. plumbers) does Sydney Water offer for leaks? Are they cheaper?

Sydney Water provides a range of water conservation services, such as WaterFix Residential, WaterFix, Concealed Leaks, and Business Online Monitoring. Leak detection, advice and repair are a core part of these services. Our WaterFix Residential service has been operating for over 20 years and has helped residential customers save over 300 million litres of water – the equivalent of 120 Olympic-sized swimming pools – significantly reducing water bills.

Sydney Water's programs are reasonably priced, with some discounts offered on relevant programs for pensioners and customers in hardship. When offering repairs, customers are given the choice to compare our quotes with those offered by their local plumber. We also contact customers if we notice abnormal water use patterns that may indicate they have a leak.

Does Sydney Water supply water for agriculture – what's the split between different types of use?

Sydney Water does supply water for agriculture. We supply recycled water directly to agricultural users, such as Elizabeth Macarthur Agricultural Institute at Menangle and Picton Farm. Some agriculture, like market gardens, use our drinking water supplies. We also supply around 12 billion litres of recycled water for replacement flows from Warragamba Dam which is used for environmental water and irrigator extractions. Some irrigators downstream from our tertiary wastewater treatment plants get access to reliable, high-quality flows from our plants.

What are corporate usage statistics? Who uses more water?

The top 10 individual water users are all non-residential (or business) customers. However, residential customers make up about 70% of daily water use across our network, and they use about half a kilolitre a day per property. So, while some non-residential customers use a lot individually, residential users make up the bulk of our customer base. For privacy reasons, we haven't included the names of the business customers.

High individual water users include the manufacturing sector, mining, and food production.

Are we going to get more urban beaches operating (e.g. Cooks River, Parramatta River, Lane Cove River)? Will we be able to swim anywhere in the future?

Through Sydney Water's Urban Plunge program, we are working with local councils and the NSW Government to understand which sites can be safely activated for swimming. For example, Sydney Water is working with the Parramatta River Catchment Group to open a new swim site at Bedlam Bay. At some sites, we are identifying what work needs to be done to improve water quality. This can include fixing parts of the wastewater and stormwater system or repairs to private plumbing. As Sydney Water collaborates and better manages the urban waterways, accumulates data and provides more information to customers via up-to-date websites, we will be able to open more swim sites. However, not all sites will be suitable for swimming. Past practices in some parts of

Sydney Harbour mean some locations will only be suitable for wading, while fast currents or snags make some river sites too dangerous for swimming.

3) Cyber

How does Sydney Water handle cybersecurity? What are the risks of a hack?

Sydney Water's infrastructure is classified as critical water assets under the amended Security of Critical Infrastructure (SOCI) Act 2018 (the Act) and we have a responsibility under the Act to protect our systems. Cybersecurity risks for Sydney Water range from a simple hack into our system, to the release of customer data, to control of parts of our systems. To prevent any and all of these scenarios, Sydney Water operates with many controls on its digital network to ensure cybersecurity threats are detected as early as possible.

For drinking water and wastewater, how is hacking prevented? Is there a backup server to get back functionality if a hack occurs?

Cybersecurity is vital to protecting Sydney Water's critical infrastructure from cyberattacks. Sydney Water has introduced multiple layers of protection, or barriers, to prevent a hacker from reaching our digital network. The digital network includes both operational technology systems used to provide water and wastewater services, as well as information technology systems used to operate the business. Sydney Water also applies proactive strategies across its entire area of operations to prepare for, detect, respond to, contain and eliminate any cybersecurity threats that may be present.

4) Dams

Why can't we just build more dams?

Dams rely on rainfall to maintain supply, which increases our vulnerability in drought. They also cause extensive environmental damage to the catchment behind them. Building a new dam for Greater Sydney would also be very costly – it would need to be built a long way from existing dams, and large pipes and pumps would need to be built to transport that water back to Greater Sydney. Consequently, it is more cost-effective to build rainfall-independent water supplies, such as desalination and purified recycled water, because they can be built near customers and provide additional value by being able to provide water even in severe drought.

What is the cost difference per litre between dam and desalination?

In 2020, the Water Services Association of Australia undertook a study to compare the levelised, or over a lifetime, costs of different water supply options. The study found that desalinated water costs around 2.7 times that of surface water in dams.

Can Sydney Water influence the building of new dams and how would that influence bills over time?

Water efficiency has been key over the last 20 years in delaying the need to build new infrastructure and keeping bills low, but now our systems are at or near capacity. While we're investigating new rainfall-independent supplies for the city, we're also increasing our water conservation program to reduce leakage and encourage customers to use less water. The overall aim is to ensure we can delay infrastructure construction as long as possible.

Are our dams used for flood mitigation?

Dams in the Greater Sydney network operate to provide for Greater Sydney's water supply needs. Warragamba Dam, Greater Sydney's largest water supply source, is not used for flood mitigation. Operating rules for dam water releases are set by water-sharing plans developed by the Department of Planning and Environment and approved by the government of the day.

5) Education

Does Sydney Water have education programs in place i.e. in schools, TV commercials, etc.?

Sydney Water supports education programs in schools and universities and provides resources to assist teachers and students learn about water's journey to and from their homes and understand what makes water a precious resource.

Sydney Water frequently runs advertising campaigns to remind the community of water's role as a precious resource and the community's role in saving water as we get closer to drought. Sydney Water also uses social media to increase people's awareness of water, including the following:

- The natural water cycle
- Cooling and greening initiatives
- Improving water quality to create more swimming spots across Greater Sydney
- Other activities which help ensure the overall liveability of our city.

More information can be found here.

Beyond the online resources, the community education program includes delivery of free in-school educational events. Over the past few years, the events took place mainly in preschools and primary schools. In 2024, Sydney Water is extending its program to include secondary schools. Sydney Water also delivers community education initiatives by providing guest speakers at community groups.

More information on our educational resources can be found here.

Additionally, we run tours at sites for community organisations and universities, as well as for our own employees.

We have a community education team working with our Wonders of Water van that visits shopping centres, public spaces, and community events throughout the year. Our website outlines the location of the Wonders of Water van. We often speak at community group meetings such as Rotary groups, volunteer organisations, and TAFE/Universities.

In the 2022/23 financial year, we completed 143 events in total reaching 46,000 people directly.

What's the cost to educate the community vs cost to pay for system upgrades?

Community education is a vital, ongoing, relatively low-cost tool to raise awareness around certain activities and their impact on the water supply. Infrastructure upgrades deliver long-term solutions across generations, including increased capacity in response to our growing cities. Infrastructure upgrades fall under major capital works, and are, therefore, much more expensive.

Sydney Water currently delivers community education programs to raise awareness of "the unflushables", water conservation and using tap water rather than bottled water. While community education is a vital activity, it can't achieve all the benefits of infrastructure upgrades. For example, community education on what we can and cannot safely flush down toilets and put down drains can help reduce overflows from Sydney Water's wastewater pipes. However, it can't fix faulty or ageing pipes, or prevent tree roots from entering sewer pipes in very dry weather.

Likewise, education can reduce the load of some types of pollution coming into Sydney Water's wastewater treatment plants to make existing processes more effective. However, it won't upgrade the capacity of the plants so they can treat wastewater from thousands of new customers across our growing cities.

6) Governance

Is Sydney Water a private company?

Sydney Water is a NSW State Owned Corporation. Major shareholders are the NSW Treasurer and NSW Minister of Finance.

How do we know that pricing is competitive? What's the process to ensure customer bills aren’t excessive?

The Independent Pricing and Regulatory Tribunal (IPART) is Sydney Water’s economic regulator.

IPART monitors the prices Sydney Water charges residents and businesses for water, wastewater and stormwater services, as well as the investments Sydney Water makes to deliver those services. IPART ensures that Sydney Water does not over-charge customers for the cost of its investments.

IPART undertakes an extensive review of Sydney Water's prices and investments every five years. The next review will be between September 2024 and June 2025. This process provides opportunities for customers to make written submissions to IPART or voice concerns at a public forum where IPART outlines the draft decisions it has made for Sydney Water's prices.

How do you measure the quality of works performed by Sydney Water?

There are a range of processes in place to ensure that all work undertaken and managed by Sydney Water meets required standards. These include the Operating Licence set by our regulator, the Independent Pricing and Regulatory Tribunal (IPART), and audited annually. This includes a requirement to have an accredited asset management system in place.

Sydney Water also takes the advice of external standards authorities when considering equipment and components, including Standards Australia. There are also Water Industry Standards managed by the Water Services Association of Australia, which include technical and equipment standards. Sydney Water must also comply with SafeWork requirements.

For those working on certain important drinking water assets and sites, an additional accreditation is required under the Australian Drinking Water Guidelines. Work by external service providers is procured via competitive tendering, as for any large infrastructure business. Service providers need to be pre-qualified, or they need to demonstrate all the relevant licensing, track record, and skills.

What different responsibilities do WaterNSW and Sydney Water have?

WaterNSW has two separate functions:

1) WaterNSW is responsible for supplying Greater Sydney's bulk water needs. Sydney Water purchases this water from WaterNSW's dams, thereby funding WaterNSW.

2) WaterNSW is also responsible for providing water directly to rural NSW residents and businesses.

WaterNSW is, therefore, responsible for protecting Greater Sydney's water supply catchment, supply of the raw water, and operating and maintaining bulk water storage facilities such as Warragamba Dam.

Sydney Water is responsible for taking the raw water supplied by WaterNSW and treating and supplying water that is suitable for drinking. Sydney Water is also responsible for receiving, treating, and discharging wastewater back to the environment.

Who sets water restrictions and what criteria are used to determine when water restrictions are introduced?

The NSW Minister for Water is responsible for setting water restrictions. Sydney Water is responsible for implementing the restrictions and providing advice to Government on their design based on customer engagement and what we know about how our customers use water. Multiple factors influence whether to introduce water restrictions including dam levels,

weather forecasts, rainfall, and inflows into our dams. More information on how Sydney Water responds to drought can be found in the Greater Sydney Drought Response Plan.

Who is the Customer and Community Reference Group (CCRG)? Who makes sure they represent us?

The CCRG is a group of independent members representing various views and interests of our customers and their communities.

The CCRG is chaired independently, ensuring the group upholds its objective, which is to ensure that Sydney Water's decisions are in the best interests of customers. The CCRG is also a requirement under our Operating Licence and its effectiveness in meeting the requirement is audited periodically by our regulator, the Independent Pricing and Regulatory Tribunal.

There are 12 CCRG members. Some members represent groups (such as the Ethnic Communities Council of NSW, Total Environment Centre, Council on the Ageing NSW, Urban Development Institute of Australia, Public Interest Advocacy Centre) and others are individuals representing our broad customer base.

Membership of the CCRG was advertised through an open expression of interest. The Independent Chair was appointed first, then members were selected by a panel including the Independent Chair and Sydney Water Executives.

Our Managing Director, Board members, and General Manager – Customer and Stakeholder Engagement attend formal CCRG meetings. The CCRG can ask questions to Sydney Water Executives or management, either directly or through the Independent Chair.

You can read more about the CCRG, the members and the minutes of their meetings on the Sydney Water website.

How is the Independent Pricing and Regulatory Tribunal (IPART) appointed and is there an ombudsman?

IPART's Tribunal, the regulator's decision makers, are appointed by the NSW Government's Minister for Customer Service. However, IPART is required to act independently from Government in line with other agencies, such as the Independent Commission Against Corruption. The Tribunal employs people to provide research, analysis, advice, and recommendations, and it bases its decisions on this information, including any decisions involving Sydney Water.

The Energy and Water Ombudsman, New South Wales (EWON) provides its services to all Sydney Water's customers. EWON can provide independent advice and assistance to Sydney Water customers at any time and can facilitate external resolution of a dispute.

Does Sydney Water change its policies depending on who is in government?

Sydney Water does not change its operating licence based on who is in government. However, we are accountable to the Portfolio Minister (NSW Water Minister) and two Shareholder Ministers (the NSW Treasurer and NSW Minister for Finance), as well as our

Board and customers. We can be impacted by Government and Cabinet decisions and / or policy, with one recent example being the inclusion of Sydney Water and Hunter Water into the NSW Constitution. Any government directives must comply with the State Owned Corporations Act 1989, which governs our commerciality and social responsibility.

Does the Sydney Water Act stipulate an order of priorities or just list the three broad areas?

The Act lists three principal objectives for Sydney Water:

- To be a successful business, including operating at least as efficiently as comparable businesses, maximising the net worth of the NSW Government's investment, and exhibiting a sense of social responsibility by considering the interests of the community in which it operates.
- To protect the environment by conducting its operations in compliance with the principals of ecologically sustainable development.
- To protect public health by supplying safe drinking water.

There is no order of priority among these objectives.

How do councils and Sydney Water work together – what is the working relationship?

Sydney Water works closely with councils where there are common interests, particularly around waterways health and supporting cool, green public open spaces. Councils and Sydney Water both own parts of the stormwater network, so work together to manage it. We work together on catchment organisations, such as the Parramatta River Catchment Group. Councils and Sydney Water also cooperate with each other when undertaking repairs, to minimise disruption. This is a positive working relationship, where both organisations are constantly working through who is better placed to deliver services for customers and the community in the most cost-effective way. Councils and Sydney Water also work together to ensure new developments have the necessary water services.

Does Sydney Water negotiate with the Independent Pricing and Regulatory Tribunal (IPART) or is IPART's decision final?

IPART's decisions are final. However, IPART's decision-making process involves a period of consultation where Sydney Water and other parties (including individual customers) can submit their views on whether IPART has properly understood or considered an issue in reaching its conclusions. This occurs in IPART's five-year review of Sydney Water's pricing and planned investment. For IPART's next review of Sydney Water, customers will be able to submit their views and comments between November 2024 and April 2025.

Also, in unusual circumstances, IPART may review a decision ahead of the five-year timeframe.

What happens if Sydney Water spends money on something that wasn't included in its expenditure plan or doesn't spend money on things that were in its plan?

The Independent Pricing and Regulatory Tribunal process allows Sydney Water to deviate from its proposed expenditure plans. The price review includes a 'true-up' process that mostly matches what was a reasonable amount for Sydney Water to have spent to what Sydney Water asked for. If Sydney Water doesn't spend money included in the plan, that money will be returned to customers as a bill adjustment. If Sydney Water spends money that wasn't included in the plan but is required, prices will be adjusted at the start of the next customer bill period to recover the expense.

Is once every five years sufficient for the Independent Pricing and Regulatory Tribunal (IPART) to fairly assess pricing?

The process of determining prices is resource-intensive and, consequently, is scheduled for every five years. If circumstances change significantly, IPART can conduct an earlier review. The process involves Sydney Water engaging with its customers to find out what's important to them. Customers inform Sydney Water's price proposal which we prepare and submit to IPART. IPART then consults with the public and reaches a decision.

How have interest rate increases and debt-servicing costs affected price increases and the next five-year proposal?

Part of our debt portfolio is still locked in at relatively low interest rates, but this funding will continue to expire every year and roll onto new, higher rates. However, we work hard to keep borrowing costs as low as possible:

- We have changed banks to one offering more favourable terms.
- Wherever possible, we source debt through the state funds manager, NSW Treasury Corporation, to keep the cost of funds as low as possible.

With Sydney Water's current level of debt, higher interest rates are expected to add about $41 a year to the average customer bill, even if Sydney Water held capital spending and borrowings at the same level as over the past five years. This increase has been factored into the base bill increases we include when we discuss with customers what combination of service levels, risk and cost they want us to deliver.

Over what period of time does Sydney Water currently prioritise capital expenditure?

Our Long Term Capital and Operational Plan captures our key infrastructure and operational decisions to 2050.

Is net zero mandated by the Government or is it a Sydney Water decision?

The NSW Government has recently established legislation that requires the state and its agencies to work towards a target of net zero emissions by 2050. The Government has issued an expectation that Sydney Water, as a State Owned Corporation, will operate its

business in a way that is consistent with the NSW Government's net zero 2050 targets, including a plan to fast-track emissions reduction over the next decade.

7) Profits and Spending

What does Sydney Water do with the funding it receives from the NSW Government?

The 5 per cent of our income that comes from the NSW Government on a regular basis is money recouped for Community Service Obligations (CSO). CSOs are social programs provided by Sydney Water on behalf of the NSW Government, and we are reimbursed for the costs of these programs, as well as lost revenue.

CSOs include concessions we provide to pension cardholders, the exemption we provide for certain property types like churches and charities, and the Payment Assistance Scheme credits we provide to customers experiencing payment difficulties. Approximately 11 per cent of our properties belong to pensioners. The Government covers the concession to pensioners so the broader customer base doesn't have to, keeping bills fairer for everyone.

The CSO payment is reviewed each year based on how much total assistance is required. The payment is expressed as a percentage rather than a dollar figure, which is why it stays at around 5 per cent of Sydney Water's revenue.

The NSW Government can also help fund Sydney Water's investments on a case-by-case basis, reducing the costs our customers are required to contribute.

How much has the Government invested in Sydney Water over the past 20 years and how much dividend has been paid to the Government over the same period?

The NSW Government has invested $900 million into Sydney Water since June 2003. Sydney Water has used a combination of this funding, funds from borrowings, and cash generated from operations to fund $21 billion of capital investment in our infrastructure assets over the same period.

Sydney Water, via legislation governing state-owned corporations, must maximise the NSW Government's investment into its operations. Sydney Water achieves this objective through the payment of dividends back to the NSW Government. Sydney Water has made dividend payments totalling $8.6 billion since June 2003. These dividend payments are then used by the NSW Government to help provide other government services, such as education and healthcare to the people of NSW.

The above figures are adjusted for inflation using the value of today's money.

Do costs and bills increase because dividends are given back to Government?

Sydney Water is owned by the NSW Government in accordance with the 1994 Sydney Water Act. Each year, NSW Treasury agrees with the Sydney Water Board of Directors on the objectives, performance targets, budgets, and treatment of profits. This agreement is tabled to government and is known as the Statement of Corporate Intent (SCI). This document is available on our website and our performance against it is detailed in our annual reports.

The net profit after tax delivered by Sydney Water is:

1) Distributed to the NSW Government to fund hospitals, schools, and childcare.
2) Re-invested into Sydney Water to ensure the business remains sustainable.

Our most recent SCI targets a 61 per cent dividend payout ratio. This is done in accord with NSW Treasury's Capital Structure Policy and Financial Distribution Policy for Government Businesses. This strict policy ensures Sydney Water remains financially sustainable.

An important element of this policy is the gearing ratio, which is the amount of debt the company holds compared to shareholders' equity.

In essence, this is like re-financing a mortgage on your home, except the Government aims to hold 60 per cent of the ownership in debt and 40 per cent in equity. This ratio is important as it maintains our credit rating. Too much debt and the business is not sustainable, too much equity and the Government loses money it could otherwise have spent on essential services.

This ratio is informed by the Independent Pricing and Regulatory Tribunal through its Weighted Average Cost of Capital (WACC) method, which compares us to other water businesses of similar risk. This estimate is frequently reviewed.

Between 2018 and 2021, dividends between $500 million and $900 million were made to move from a 50 per cent to a 60 per cent gearing ratio. Now that we have reached 60% debt, we forecast annual dividends of $100 million to $300 million per year based on net profit after tax.

Can Sydney Water over-collect revenue and what's the process of returning money to customers if it does?

Sydney Water can over-collect and under-collect the revenue that it needs to operate its business. This can occur for a variety of reasons.

For example, the weather may be drier than expected, resulting in Sydney Water needing to invest more in ensuring its systems are operable. Since Sydney Water's prices are regulated, it may not have the means to recover the money it needs and may need to reprioritise funding from other areas, such as the dividend it would otherwise give to Government.

In the same circumstance, the drier weather may mean residents and businesses in Greater Sydney use more water. Sydney Water recovers its funding based on the amount of water

used by its customers. Therefore, drier weather may also mean recovering – or even over-recovering – the additional money needed to maintain its systems.

Where the amount is material, determined in discussions between Sydney Water and its regulator, there is often an opportunity to return over-recovered money or recoup under-recovered money every five years. Customers experience this through a bill that is lower than it would otherwise be, or higher if Sydney Water under-recovers money.

Does Sydney Water outsource contractors / plumbers when demand is high to reduce cost and improve performance?

Sydney Water, like any corporate business, has to assess on a daily basis the balance between using its own resources and outsourcing to a private company to deliver the required service levels in the most efficient way. While managing cost is important, outsourcing can help ensure we always have the right knowledge and skills available for our valued customers even when demand for service response is high.

Sydney Water currently works with a range of privately owned companies to plan for and deliver new infrastructure and maintain some existing services.

How does Sydney Water manage its budget to agreed funding?

The Sydney Water Executive and Board approve annual budgets at the beginning of each financial year. Budgets are reviewed and monitored against actual spend every month by Sydney Water's finance team, business group leadership teams, program managers (where appropriate) and our Executive prior to being reported to our Board. Key risks and opportunities in meeting the budget are highlighted to the Executive and the Board through Sydney Water's monthly forecasting process.

While Sydney Water generally aims to track to the Independent Pricing and Regulatory Tribunal's (IPART) agreed funding for the five-year period, it may have to vary its expenditure where there is a significant change in circumstances. For any change in expenditure, Sydney Water must show IPART that the money is being spent efficiently and on the right things using the best available information at the time.

When we have water restrictions in place how does it affect Sydney Water's bottom line?

When Sydney Water's customers use less water than was forecast at the beginning of a five-year Independent Pricing and Regulatory Tribunal (IPART) period, Sydney Water recovers less money than forecast. In accounting speak, we under-recover revenue. The need for water restrictions is one reason this may occur. Other reasons include population and / or development growth below forecasts.

When Sydney Water under-recovers revenue, this can reduce its bottom line in the short term. IPART's framework currently allows Sydney Water to recoup some of this back from customers over the following five-year period.

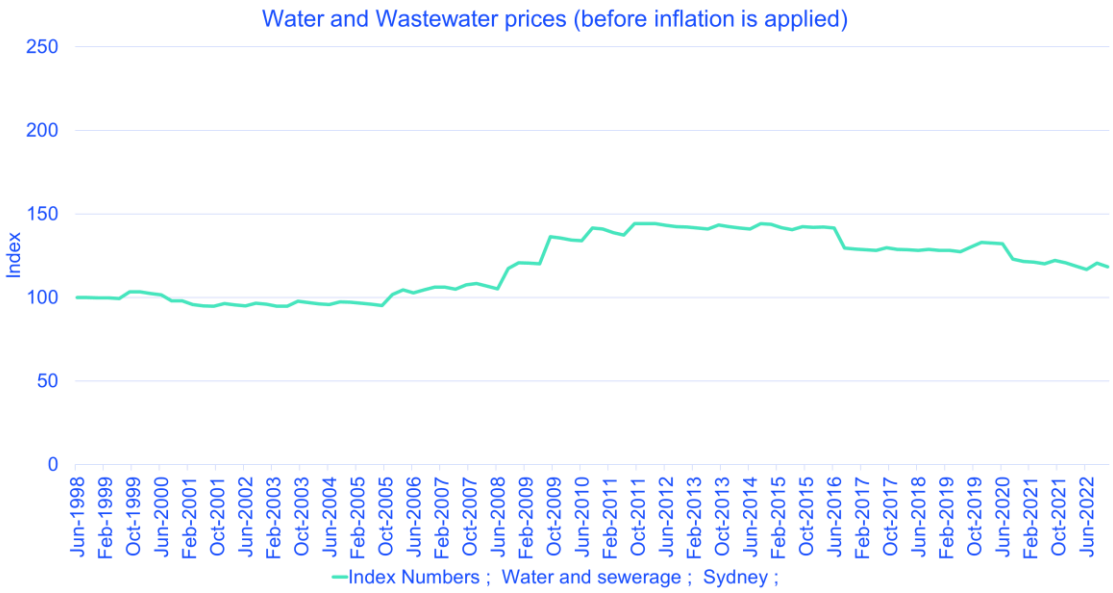
Why hasn't Sydney Water been putting money aside gradually over time for building infrastructure and does it have emergency funds available?

Sydney Water, at the direction of the Independent Pricing and Regulatory Tribunal (IPART), has historically only recovered the money that it needed to fund the operations and capital investments that were needed at a given point in time. This was to ensure that the users and beneficiaries of those investments paid for them. For example, Sydney Water has historically only begun to recover the costs of building a new water treatment plant after the plant was turned on to provide drinking water to Sydney Water's customers. Setting money aside would have meant charging customers more in the past than Sydney Water would have needed to operate the business at the time.

Sydney Water regularly plans ahead to determine the best use of customers' money in building new infrastructure while ensuring performance continues to be met. If Sydney Water decides to reduce investment over a five-year period, performance-related outcomes decline. The forecast bill increases presented to customers reflect the most efficient way of delivering customer outcomes, including other sources of revenue, such as infrastructure contributions.

In the last five years, Sydney Water has increased infrastructure investment to service new customers, while maintaining existing performance levels. An example of this is the current delivery of two new water reservoirs in Oran Park to service 84,000 new customers in South Western Sydney.

For more information please visit:
https://www.sydneywatertalk.com.au/hub-page/major-works
https://www.sydneywatertalk.com.au/projects



The above graph shows an increase in bills during the late 2000s. What happened?

Customer bills increased at that time due to costs associated with building the Sydney Desalination Plant.

This results in bills which sustain at a higher level over a long period of time. This is so the costs of these large assets are spread across those who benefit from the use of it (in this case, to provide water).

8) Regulation

How can Sydney Water's operating licence not be renewed?

Sydney Water's Operating Licence is regularly reviewed by the independent regulator, the Independent Pricing and Regulatory Tribunal (IPART), to ensure our licence continues to meet its objectives and remains fit for purpose. IPART also audits our performance against the licence each year to ensure that Sydney Water continues to meet its required standards.

Our licence may be cancelled by the Governor of the day in very exceptional circumstances, as set out in the Sydney Water Act 194 (NSW). These exceptional circumstances include:

- if Sydney Water was to stop carrying out our required functions under the Act
- if the Minister believes Sydney Water to be in significant breach of its responsibilities
- if there have been multiple criminal convictions against Sydney Water.

In the event that any of these exceptional circumstances arose, the Governor could choose to transfer responsibilities back to a government department or to another organisation. To date, Sydney Water's Operating Licence has never been cancelled.

If Sydney Water loses it licence, can Sydney Water privatise the supply of water?

In 2023, the NSW Constitution Act 1902 was amended to limit the circumstances in which Sydney Water and Hunter Water and their services could be sold into private hands. The amended Act currently states that Sydney Water and Hunter Water, and their main undertakings, may "not be sold or otherwise disposed of, unless authorised by an Act of Parliament".

The Government regulates Sydney Water through an Act. But also, the regulators, NSW Health and the Environment Protection Authority, and the Acts they operate under. How do we get an assurance of quality?

Sydney Water is directly regulated by NSW Health (which regulates the quality of drinking water), the NSW Environment Protection Authority (which regulates environmental outcomes), and the Independent Pricing and Regulatory Tribunal (which regulates costs and the delivery of other service-related outcomes).

The assurance of service quality and outcomes customers receive, and the risks and costs customers pay are considered in detail through the processes each of these regulators undertake regularly. These regulators typically set rules for Sydney Water to operate in which consider impacts on current and future generations.

How is the statement of expectations kept constant if it is from the Minister? How often can it be changed?

The Statement of Expectations https://www.sydneywater.com.au/content/dam/sydneywater/documents/Statement-of-Expectations-Signed_2022.pdfis issued by the Treasurer on an annual basis. The Statement is signed by the Treasurer, Finance Minister, and Water Minister.

The Statement of Expectations' purpose is to help Sydney Water ensure its strategic direction aligns with the Government's expectations.

See more here: parliament.nsw.gov.au/tp/files/187269/Sydney Water Statement of Corporate Intent 2023-24.pdf

Is it the case that Melbourne Water is owned by users and, if so, does extra money go back to the consumer if there is an overrun?

Melbourne Water is a water wholesaler. The NSW equivalent is the bulk water services provided by WaterNSW. Melbourne Water, WaterNSW, and Sydney Water all operate under the same economic framework (owned by their respective State Government, profits made go to dividends that are paid to the respective State Government).

This economic framework is widely used for other water utilities (such as Hunter Water, South East Water, and Yarra Valley Water which are two metropolitan water retailers in Victoria, and South Australia Water). It is also commonly used for regulating energy transmission companies.

Why doesn't the State Government fund infrastructure built by Sydney Water?

Sydney Water recovers most of its costs from its customers (people of Greater Sydney) because they are the users and beneficiaries of the services that Sydney Water provides. If the Government was to fund these services through taxes, then taxpayers across NSW would be paying for Sydney's water services.

However, the NSW Government does sometimes help fund Sydney Water's investments. This reduces the amount that customers are required to contribute.

9) Technical Capability

Is Sydney Water putting in new technology / infrastructure to reduce wastewater and improve quality?

Sydney Water works with the Government, councils, and developers to make sure new developments have the right pipes and assets available to provide water services to new residents and businesses. All residential developments in NSW are required to gain compliance with sustainability standards. Specifically, as developers introduce more water-efficient appliances, less wastewater is produced. We also work with the NSW Government to plan the big city-scale water and wastewater infrastructure that our city needs in the future. This includes planning for recycling.

Does Sydney Water learn from overseas or interstate?

Sydney Water continues to learn from other utilities around the world, and our people attend and present at a range of technical conferences and online events across Australia and around the world.

Sydney Water also learns from water utilities across Australia through our Water Services Association of Australia membership. One of the biggest lessons we've learned recently has been from the water shortage in Cape Town, South Africa. It has reinforced how important it is to plan ahead and to consider the impacts of climate on surface water supplies and the need to adapt. As a result, Sydney Water has now developed the Greater Sydney Drought Response Plan which sets out how Sydney Water, WaterNSW, and the NSW Government will work together to respond to droughts in the future.

How does Sydney Water compare to other water utilities?

Sydney Water is constantly benchmarked against other water and wastewater utilities in Australia. Overall, there are some areas where Sydney Water performs better than its peers and areas where it does not. The urban water utility national performance reporting framework shows that Sydney Water has one of the lower operating costs for water supply and wastewater per customer, as well as one of the lowest numbers of water and wastewater complaints per customer. Sydney Water also has the lowest property connection sewer breaks and chokes per 1,000 properties.

What is the feasibility of capturing water from the North Coast and transporting it to Sydney?

Water is costly to transport over long distances, and there would be significant ongoing costs maintaining and operating such infrastructure. Before we could investigate this idea, Sydney would have to demonstrate that it considered and implemented all other options to ensure it is efficiently using its existing water supply.

Water providers in the North Coast region are also investigating options to improve their water security, as they rely heavily on local rainfall and small local storages to meet their demands.

Does Sydney Water generate its own electricity from hydro for running pumping stations?

Sydney Water has investigated this in the past, with ideas including regenerating electricity as water flows back down from reservoirs after previously being pumped up there. It has been found that there hasn't been a strong enough business case for this. Importantly, the safety and quality of drinking water has to be the highest priority, so integrating power generation equipment would need to be very carefully managed at a higher cost than “normal” pumped storage.

However, Sydney Water does generate its own electricity from water and wastewater treatment facilities using hydroelectricity schemes and wastewater using biogas which reduces the cost of purchasing electricity from the grid.

Besides desalination, what other options are being used globally that Sydney Water could learn from?

Desalination is the most common large-scale water supply alternative to dams across the globe. Other options at different scales include purified recycled water, localised onsite reuse systems (Hydraloop), stormwater harvesting and reuse, and small-scale desalination plants. Water conservation also plays an important and effective role in increasing water-supply resilience in the long term.

10) Desalination

Does Sydney Water run the desalination plant or buy water from it?

The Sydney Desalination Plant is privately owned and operated. Sydney Water buys water from that facility.

Which areas are getting desalinated water?

A map is available on our website https://www.sydneywater.com.au/water-the-environment/how-we-manage-sydneys-water/water-network/desalination.htmlshowing which areas receive water from the desalination plant.

How much desalinated water is Sydney Water producing each day?

Sydney Water pays Sydney Desalination Plant (SDP) for drinking water supplied from the plant. SDP is privately owned and operated. Its shareholders look after the operation and maintenance of the plant.

Production from the desalination plant can vary to meet the city’s needs up to a maximum of 250 million litres per day.

With climate change impacting rainfall more and more, is the plan to build more desalination plants?

Sydney Water uses the best available information on climate change to understand how inflows into existing dams may change in the future. This information has been used alongside other information, such as growth forecasts, to work out how much additional water supply may be needed, be that through desalination, purified recycled water, or recycled water. The Sydney Desalination Plant at Kurnell is currently the only rainfall independent source of drinking water for Greater Sydney and has been running continuously since 2019. The Government is investigating options to have its capacity doubled to ensure there is enough drinking water for a growing city.

Will desalination harm the environment when the water is taken out of the ocean and when brine is returned?

The tunnels that bring water into and out of the Sydney Desalination Plant (SDP) ensure that the water comes in and out of the plant at slow speed. The flow rate of seawater entering the intake tunnel is quite slow – less than one metre per second – and substantially less than seawater currents in the area. This allows the local marine life to swim out of the tunnel and not get drawn into the plant. The water returned from the plant into the ocean is twice as salty as it was coming in.

Nozzles on the outlet tunnel make sure the water mixes rapidly and returns to normal seawater salinity and temperature so as not to have an adverse effect on the local marine environment.

11) Water Quality

Why can water taste be inconsistent across Sydney?

The taste of drinking water can vary for several reasons, including seasonal factors, changing water source, and changes in the operation of our network. Taste can also vary from the plumbing within your property or building and the length of time it sits without use within this pipework. All Sydney Water drinking water, regardless of its source or taste, meets the Australian Drinking Water Guidelines and is safe for drinking.

Is there room for improvement in water quality?

Sydney Water ensures all water supplied meets the Australian Drinking Water Guidelines. However, variation in raw water quality can mean that your water tastes and smells slightly different. These guidelines are updated from time to time to reflect new findings and Sydney Water responds by ensuring drinking water can be delivered to the new standard by either operational improvements or investing in facility upgrades.

Sydney Water is working to ensure the quality of drinking water is maintained into the future, as climate change is likely to further impact the quality of our raw water sources. Where there is room for improvement, Sydney Water needs to balance costs associated with upgrading its treatment facilities with the benefits to customers from improved water quality.

Who supervises Sydney Water to test quality and cost – is it independent?

Sydney Water's monitoring programs are agreed with NSW Health, and water-quality performance is routinely reported to NSW Health. Australia's National Association of Testing Authorities (NATA) accredits our laboratory and field sampling teams. NATA members receive a globally recognised, peer-reviewed and government-endorsed accreditation that provides a unique level of assurance to members, their clients, and the community. We report our results and process to NSW Health.

In addition, Sydney Water demonstrates best practice through implementing various management systems, which are based on certified international standards and to the satisfaction of its regulators including infrastructure, drinking water, wastewater, recycled water, the environment, and work health and safety. These management systems are audited annually through an independent process. The Independent Regulatory and Pricing Tribunal (IPART) also reviews Sydney Water's costs and sets the price that customers pay for drinking water.

How do we base and measure the quality of our water? What are we comparing it to?

Sydney Water tests the water quality against the Australian Drinking Water Guidelines. Drinking water is tested against both health and aesthetic values, such as colour, taste, and smell, from the Australian Drinking Water Guidelines to ensure Sydney Water meets its regulatory obligations, as well as customer expectations. Water is tested at various stages throughout the filtration process to inform treatment and long-term trends. Water quality reports are produced on a quarterly and annual basis and are available on Sydney Water's website.

Currently, 10 per cent of customer bills go toward water quality. But Sydney Water plans to put 3 per cent of new spend toward water quality. Does this mean water quality will be reduced in the future?

The forecast increase in infrastructure spend is in addition to what Sydney Water would normally spend on water quality. The 3 per cent has been allocated to support drinking water quality, with a major focus on upgrading the capacity of Sydney Water's water filtration plants to ensure they continue to meet drinking water compliance requirements. Sydney Water will continue to spend 10 per cent of your overall bill towards treating your water, and testing it at every stage, so you know it is safe.

12) Water Recovery

How much recycled water is used for irrigation?

Good irrigation relies on access to reliable sources of water. Where irrigation is required for urban parks and gardens, the most reliable source of water is often drinking water, as there is existing infrastructure. While recycled water may be more appropriate, in many cases it is expensive to build new infrastructure which would then need to be managed separately. It can be hard to recover these costs from users, even though recycled water might have broader benefits for a cooler, greener environment. In outer areas of Sydney, agricultural irrigators will often use river water for irrigation. Because it is not treated, it is cheaper than drinking water or recycled water. Irrigators who access water from the environment require a licence from the NSW Government, and they pay fees depending on how much water they extract. Some informal agricultural recycling occurs downstream of some of our wastewater treatment plants, where irrigators have a reliable supply of highly treated tertiary wastewater.

Is recycled water being mandated for new developments in Sydney?

Connecting to recycled water is not mandated. However, all residential developments in NSW are required to gain compliance with sustainability standards (also known as BASIX) as part of the development approval process. The water component of BASIX aims to reduce drinking water use from each new home to a set target. To comply, a development must nominate what water saving features it will implement to meet the target. This includes recycled water, rainwater tanks, and plumbing fixtures like showerheads and taps. While optional, some type of alternative supply is usually selected to achieve the target. Most developments will select a rainwater tank as it is less expensive than recycled water.

Does Sydney Water remove microplastics from water? Does it test and remove PFAS and PFOS?

The Australian Drinking Water Guidelines provide values for known contaminants of drinking water that may present a health risk, but there is no guideline for microplastics.

Sydney Water, WaterNSW, and NSW Health reviewed the risks of microplastics in our drinking water catchments in 2017. Based on current evidence, the risk to Sydney's water supplies, given the largely protected nature of our catchments, was likely to be low in drinking water.

The NSW Environment Protection Authority (EPA) is currently undertaking a PFAS investigation program to better understand the extent of PFAS use and contamination in NSW. Sydney Water and WaterNSW have assessed, based on the best available knowledge, there are no sites of high-risk activities associated with PFAS in Sydney's drinking water supply. As a result, the risk is low.

What happens to the impurities from wastewater?

For treated water, any residuals are either reused via land applications or sent to landfill as a last resort.

For wastewater treatments, any organic residuals are processed and recycled as biosolids, and inorganics are removed and sent to landfill. Sydney Water and the NSW Environment Protection Authority are looking at options to recycle these.

When we produce advanced treated water via reverse osmosis, it creates a brine (salty water) stream. We dispose of this via our coastal wastewater treatment plants.

How is stormwater captured?

There are a range of different ways stormwater can be captured. Rainwater can be captured before it hits the ground by rainwater tanks. At the street and community level, tree pits, raingardens, wetlands and bioretention basins can capture stormwater by diverting it into vegetated areas and releasing excess water slowly into surrounding soils and streams. We can also harvest stormwater by collecting it in larger wetlands, ponds, or tanks, and treating it.

What percentage of Sydney's drinking water comes from purified recycled water?

No drinking water in Sydney Water's supply comes from purified recycled water. Sydney Water recently opened its Purified Recycled Water Discovery Centre at Quakers Hill to demonstrate how the PRW treatment technology works and to educate customers. As its purpose is as a demonstration facility only, water from the plant is not used in the drinking water supply.

Sydney Water currently supplies approximately 20% of Greater Sydney's potential non-drinking water demand (e.g. parks, gardens and some businesses) with 40 billion litres of recycled water each year. This has avoided the need for customers to use almost 12 billion litres of drinking water for non-drinking water needs.

13) Pipes, Leakage, and Network Maintenance

How much water is leaked due to damaged pipes? What is the cost to fix and improve pipelines vs cost of leaked water?

Our level of leakage was 129 ML/d in 2023.

By maintaining its network of pipes, Sydney Water can reduce the volume of treated water that is lost and unused through its pipe network. As this water is purchased from WaterNSW and then undergoes treatment prior to being sent through the pipes, it incurs a cost upfront. This is a cost that Sydney Water cannot recover from customers, so it makes financial sense for Sydney Water to spend money on activities that reduce water leaks.

This can continue up until the point where the total cost of fixing the pipe is the same as the cost that Sydney Water pays for the treated water that would otherwise continue to leak. Any activities that go beyond this are dependent on the expectations of Sydney Water's customers. The cost to maintain pipes varies and depends on the location of the pipe, its

size and how accessible it is to undertake proper maintenance without disruption to customers and the community.

How are pipes maintained, what's the cost and life expectancy?

Sydney Water's pipes are maintained using a variety of methods. These include reactive repairs to leaks, rectifying and repairing pipes that are faulty, as well as routine checking of pipes to keep them functioning.

The cost to maintain pipes varies and depends on the location of the pipe, its size, and how accessible it is to undertake proper maintenance without disruption to customers and the community.

The life expectancy of pipes is around 100 years. However, this depends on the extent that maintenance of pipes is carried out.

How does Sydney Water manage water during floods, and does it capture flood water for future use?

Sydney Water and local councils have joint responsibility for individual stormwater-management facilities in suburbs. Stormwater systems drain water away from our suburbs to prevent nuisance flooding. Councils lead local flood planning committees, and Sydney Water is represented on these in areas where we have stormwater systems. We will implement works to alleviate local flooding when the need is identified by local flood planning committees. In new development areas in some parts of Western Sydney, we are planning stormwater harvesting schemes that will make better use of water in the landscape.

In the Hawkesbury Nepean River, the SES is responsible for the emergency response to large flood events. WaterNSW manages Warragamba Dam. During large flood events the amount of water generated exceeds dams' maximum capacity, so some water has to be released downstream.

How is maintenance and upgrade work conducted on Sydney Water filtration plants?

Sydney Water designs its treatment plants with parallel treatment processes so that we can take an individual treatment process offline one at a time for backwashing (cleaning). This allows Sydney Water to maintain the overall supply performance of the plant while still allowing for routine operations and maintenance.

Additional proposed investments in pre-treatment infrastructure will improve the efficiency of the treatment processes and allow the treatment plant to operate under broader raw water quality conditions.

14) Water Security

Have we got enough water to service the growing population?

There is an increasing demand on our water services. The ability of our current drinking water supply to meet the demand of a growing city is at a tipping point. We currently rely on dams for 85 per cent of our water supply needs. The severity of the last drought demonstrated the need to increase our rainfall independent supplies. This will help us manage drought, climate change, and a growing population.

Will Sydney ever run out of water?

Sydney Water plans its water supply network system to avoid having supplies going below minimum service levels, though it still could happen under severe and extended drought. To minimise the risk of this, we need to continue to build new supplies to manage growing demands and support more efficient use of water. Sydney Water has an adaptive plan – the Greater Sydney Drought Response Plan (GSDRP) – to help us better respond to potentially more severe droughts due to climate change, so we can make timely decisions to make the most of the available supply until a significant rainfall event occurs.

What do floods, fires, and drought do to the quality of drinking water?

Floods and fire can affect the quality of raw water in our dams, which means our water filtration plants must work significantly harder to meet Australian Drinking Water Guidelines standards. In some instances, it will mean we will reduce the volume of water supplied from these plants to maintain drinking water quality. In rare instances, this can lead to us asking customers to reduce their demand to take pressure off affected facilities. Floods cause increased flows which can wash sediments and nutrients into our dams. During drought, the hotter conditions can lead to algae blooms and turnover of the water. Water quality at the bottom of our dams is poorer, filled with sediment and organics that settle to the bottom.

In recent years, drought and bushfires have impacted our drinking water catchments which were followed soon after by drought-breaking rains and floods, reducing our treatment plant capacity and requiring the Sydney Desalination Plant to supplement supply. Through these extreme events, Sydney Water continued to deliver safe drinking water to our customers.

What is in place to manage the security of water supply?

The NSW Government has set the long-term directions for Greater Sydney's water supply in the Greater Sydney Water Strategy. Sydney Water has developed its Long Term Capital and Operational Plan to respond to this strategy. We have also jointly prepared a response to drought with WaterNSW called the Greater Sydney Drought Response Plan. Sydney Water will invest in additional water conservation activities and new rainfall independent water supply sources to ensure we continue building resilience in our water services.

If it does not manage the dams or desalination plant, what is Sydney Water's role in water security?

Sydney Water provides safe, high-quality drinking water to 5.3 million customers every day across Greater Sydney, the Blue Mountains and the Illawarra. WaterNSW and the Sydney Desalination Plant (SDP) are bulk water suppliers. If Greater Sydney's water demand is projected to grow, either due to population growth or behaviours, then Sydney Water needs to plan to ensure that we can meet customer needs, either through better use of existing supplies (e.g. contractual arrangements) or through new supplies. A Ministerial direction in January 2021 transferred responsibility for the planning and delivery of new water supplies to Sydney Water from WaterNSW. Sydney Water is best placed to investigate all options rather than individual ones from other suppliers. We do, however, work with WaterNSW, SDP and the NSW Government to investigate supply options.

Is there redundancy in the system to allow for unpredictable events?

Sydney Water's infrastructure is classified as critical water assets under the amended Security of Critical Infrastructure (SOCI) Act 2018 (the Act) and we have a responsibility under the Act to protect our systems. The Act imposes numerous protective security and all hazard management obligations upon Sydney Water, including the requirement to maintain a documented risk management program that must be approved annually by the Sydney Water Board. As a result of these obligations, Sydney Water continues to implement redundancy measures to protect the integrity of the network and customer data in response to unpredictable events.

A significant part of a water bill is fixed costs. What are the incentives to save / preserve water?

Typically, customers receive a quarterly bill. This includes service and usage charges. Most commonly, residential customers will have a water service charge, a wastewater service charge and a water usage charge.

The wastewater service charge is the bulk of the cost for an average residential customer. This charge includes an assumed amount of usage because it is not practical to measure the wastewater homes produce. This means this charge is fixed. For non-residential customers, they pay a service charge based on the size of their connection and a wastewater usage charge.

Customers have an incentive to save and preserve water through the water usage charge. All customers have control of their water usage. The current cost of water is $2.67/kL. If the average residential user (200kL/year) reduced their use by a third, they could save $178 a year.

Sydney Water has seemed to manage extreme weather / drought so far. What has changed that requires new infrastructure?

As Australia's largest city on the driest inhabited continent in the world, we can't rely on rainfall alone. Prolonged dry weather, drought conditions and intense rainfall have shown us how quickly our water supply can deplete and replenish and have its quality negatively impacted. Greater Sydney is also experiencing population growth and currently has a shortfall of sustainable water supply, that is projected to increase over time.

Due to our reliance on Warragamba Dam, Greater Sydney currently has the lowest rainfall independent water sources of any major city in Australia, at only 15 per cent. That 15 per cent comes from the Sydney Desalination Plant which opened in 2010, the most recent significant investment in Sydney's drinking water supply.

We need to invest now to transform and integrate our water, wastewater, stormwater, and recycled water systems to ensure the continued reliability and improved resilience of our systems for generations to come. We intend to increase the amount of rainfall independent supply within our water supply system to 60 per cent over time, through purified recycled water and desalination schemes. Building additional supply in this way diversifies our supply sources, reduces our reliance on dams and can save customers up to $2 billion. Our investments are intended to avoid the economic impacts that very severe water restrictions would have, not only on Greater Sydney, but on New South Wales.

15) Who Pays

Do business customers pay the same amount on their bill as residential customers?

Residential customers pay a certain amount on their bill to cover the cost of water and wastewater services. Non-residential customers, including customers associated with commercial and industrial properties as well as large apartment buildings, pay a different amount depending on their service connections and type of business operated at the property.

The bill for a non-residential customer includes charges for being connected to Sydney Water's water, wastewater, and stormwater networks, as well as usage charges for water and wastewater. Some non-residential customers also have charges for managing and treating trade wastewater from their property.

The charges for water and wastewater vary between each non-residential customer and depend on the size of the customer's meter, how many properties share the meter, the number of meters at the property and the amount of wastewater discharged.

Of the total revenue Sydney Water collects, approximately 25 per cent is from non-residential customers whereas 75 per cent is from residential customers.

In regard to growth into non-service areas, do developers and / or new homeowners bear this cost?

At the moment, if the growth is part of the NSW Government's growth release program, then Sydney Water pays and costs are recovered through customer bills. In the future, some of these costs will be recovered in advance through customer bills. However, the remaining costs will be paid for by developers as they connect to Sydney Water's network, reducing the amount customers would otherwise pay overtime.

A developer or landowner can apply to the NSW Government to bring forward release of precincts in growth areas ahead of schedule. Once this is approved, the developer will forward fund the infrastructure for their development and Sydney Water would consider reimbursing the developer based on the number of new customers who connect to the network.

More information is available in Sydney Water's Growth Servicing Plan.

In regard to infrastructure contributions, why can't Sydney Water set aside a budget from its profit for this?

Simply setting aside a budget from Sydney Water's profit for funding the cost of connecting water to new developments will not solve the issue. This is because the profit to fund this will need to be generated from every other existing customer, raising everyone's bills, including those of customers who do not or will not be living in new developments.

This then becomes a question of who pays. The options are:

1) State Government (taxpayers)
2) existing customers
3) local councils (local council rate payers)
4) developers.

The NSW Government re-introduced infrastructure contributions to be paid by developers, prioritising the principle that those who create the need for the service pay for it.

These costs are not expected to be fully or even partly passed on to home buyers. The Productivity Commission found that the maximum price a new apartment or household will sell for will be determined to a large degree by the broader housing market, with consideration of the property's characteristics and location.

The reintroduction of the costs charged to developers would encourage development in areas where it costs less to provide water services.

In regard to infrastructure contributions, who makes the decision about this charge? Do they mean that customers can expect reduced bills?

The approach set by the Independent Pricing and Regulatory Tribunal (IPART) allows Sydney Water to start recovering costs from developers from 1 July 2024. This will reduce the amount of revenue Sydney Water requires from customers by 16 per cent and has been

reflected in its future bill estimates. In other words, without the application of infrastructure contributions, customer bills would be higher in future.

Is it mandatory for developers to put individual meters on apartments so residents pay for their own usage?

It became mandatory from 1 September 2014 for new or significantly renovated buildings to have individual metering. The NSW Rental Tenancy Act also states there must be a meter issued by a water authority in order to pass on usage costs to tenants. Some older-style buildings can have meters installed but, in some cases, the pipework is too interconnected to be able to accurately measure each unit separately.

All water usage charges are the same – currently $2.67 a kilolitre. Water service charges vary between residential and non-residential accounts based on the size of the pipes. For buildings where there are no individual meters, the water usage is billed to the strata, who then recover the costs from unit owners.

How does Sydney Water recover its funding between residential versus commercial customers?

The revenue Sydney Water collects from its customers is determined by the number of customers or households connected to Sydney Water's network and the average water and wastewater use per household. If a business or commercial customer requires a higher than average use of water, discharges a higher volume of wastewater, and has a larger meter size, their bill will be adjusted to reflect the additional service usage.

Of the total revenue Sydney Water collects, approximately 75 per cent is from residential customers and 25 per cent is from non-residential customers.

Is there scope to reduce bills as dividends to customers?

The money that Sydney Water receives from customers (including the portion that is allocated as a dividend to the NSW Government) is part of the Independent Pricing and Regulatory Tribunal's framework. However, on agreement with the NSW Government, Sydney Water can reduce the dividend it expects to pay over the following five-year period. This will effectively reduce customers' bills.

If customers pay for capital upgrades, do we get a stake in Sydney Water?

The NSW Government owns Sydney Water.

Customers pay for tap water, wastewater transport and treatment, not owning the assets or parts of the business itself. This is the same as the price you pay for goods and services in your everyday life.

Does the State Government contribute to the cost of new legal and regulatory requirements?

The Independent Pricing and Regulatory Tribunal's framework allows Sydney Water to recover the costs of meeting new legal and regulatory requirements through customer bills.

For example, many of these requirements relate to protecting the environment, so customers contribute as the beneficiaries of a higher quality environment.

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